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Graham & Doddsville

An investment newsletter from the students of Columbia Business School

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Editors:

Ryder Cleary
MBA 2019

Gregory Roberson, Esq.
MBA 2019

David Zheng
MBA 2019

Frederic Dreyfuss
MBA 2020

Sophie Song, CFA
MBA 2020

John Szramiak
MBA 2020

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CSIMA COLUMBIA STUDENT
INVESTMENT MANAGEMENT
ASSOCIATION

Issue XXXVI

Spring 2019

Yen Liow, Aravt Global



Yen Liow

Yen Liow is the Managing Partner at Aravt Global LLC. Mr. Liow directs the firm's research process and actively researches many of the investments in the portfolio. Mr. Liow was previously a Principal at Ziff Brothers Investments (ZBI) and a Managing Director at ZBI Equities, ZBI's equity market-neutral fund in New York. Mr. Liow joined ZBI in 2001 and ran a team that oversaw ZBI Equities' investments in the media, telecom, energy, and agriculture sectors.

Prior to ZBI, Mr. Liow was a Consultant at Bain & Company in its San Francisco, Sydney, Singapore, and Beijing offices.

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Bill Stewart, Stewart Asset Management



Bill Stewart

William P. Stewart is the Executive Chairman and a founder of Stewart Asset Management, LLC. He began working on Wall Street in 1955 as an employee on the floor of the New York Stock Exchange. Subsequently he worked for Spingarn, Heine & Co. as an Investment Analyst, before going on to Pyne, Kendall & Hollister, later known as Riter, Pyne, Kendall & Hollister. He became a Research Director at the firm, then President of the investment banking subsidiary, and finally Chief Executive officer. Riter, Pyne grew to become the tenth largest NYSE member firm in the years he was

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John Hempton, Bronte Capital

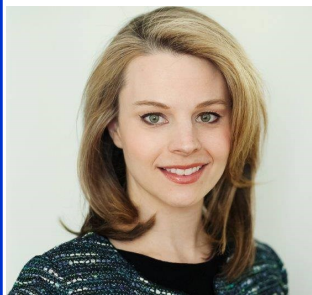


John Hempton

John Hempton is the Founder and Chief Investment Officer of Bronte Capital. Prior to founding Bronte in 2009, he was the youngest Partner at Platinum Asset Management and Head of the Financials group. He was also previously an Analyst and Executive Assistant to the Chief Executive Officer at ANZ Bank, Chief Analyst of Tax Policies in the New Zealand Treasury, and has also served in various positions at the Australian Treasury. Mr. Hempton earned a B.A. in Economics from Adelaide University.

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Welcome to Graham & Doddsville



Meredith Trivedi, Managing Director of the Heilbrunn Center. Meredith leads the Center, cultivating strong relationships with some of the world's most experienced value investors and creating numerous learning opportunities for students interested in value investing.



Professor Tano Santos, the Faculty Director of the Heilbrunn Center. The Center sponsors the Value Investing Program, a rigorous academic curriculum for particularly committed students that is taught by some of the industry's best practitioners. The classes sponsored by the Heilbrunn Center are among the most heavily demanded and highly rated classes at Columbia Business School.

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We are pleased to bring you the 36th edition of Graham & Doddsville. This student-led investment publication of Columbia Business School (CBS) is co-sponsored by the Heilbrunn Center for Graham & Dodd Investing and the Columbia Student Investment Management Association (CSIMA). Since our Winter 2019 issue, the Heilbrunn Center hosted the 2019 CSIMA Conference.

Our first interview is with Yen Liow, founder and managing partner of Aravt Capital. Yen discussed with us the value of having worked under a couple of investment legends, the importance he places on systems design, and why he only focuses on a specific set of investment opportunities to compound growth over a period of years. Yen shared with us a couple of his "horses" (i.e. durable compounders) in Black Knight (BKI), GoDaddy (GDDY), TransDigm (TDG), and Constellation Software (TSE: CSU).

We were also lucky to profile Bill Stewart, founder of both Stewart Asset Management

and W.P. Stewart and Company, the latter of which was sold to AllianceBernstein in 2013. Mr. Stewart shared why he focuses on predictable earnings, how he comes up with an earnings multiple, and what he thinks of the retail industry. He also discussed his views on ADP and Disney.

Finally, we had an engaging conversation with John Hempton of Bronte Capital. John is well-known for his public (and accurate) calls on both Herbalife and Valeant. John discusses his approach to finding fraudulent companies, why switching costs matter, and the benefits of global scale. He specifically discussed Mattel and provided additional color on his variant perception on Valeant.

We continue to bring you stock pitches from current students at CBS. In this issue, we feature the winning pitch from the 2019 Pershing Square Challenge where Mingming Wu '20, Laurent Liu '19, and K.Y. Yong '20 recommended a long with friendly activism for Dollarama (TSX: DOL). CBS contin-

ued its winning tradition at the UCLA Credit Competition with a first-place pitch by Mitchell Aulds-Stier '20, Karthik Kasibhatia '20, Angela Qin '20, and James Shen '20. The team won with a long pitch on Dean Foods' 6.50% Senior Unsecured debt. We also feature pitches by graduating Value Investing Program students Michael Wooten '19 and Tyler Redd '19, who are pitching longs on Align Technology (Nasdaq: ALGN) and Carsales.com (ASX: CAR), respectively.

We thank our interviewees for contributing their time and insights not only to us, but to the investment community as a whole.

- G&Dsville Editors



Value Investing Program Class of 2019



Jan Hummel, Paradigm Capital AG, with Professor Tano Santos, Faculty Director of the Heilbrunn Center for Graham and Dodd Investing

22nd Annual CSIMA Conference - February 2019



Action-packed annual CSIMA Conference schedule



Best Ideas panel with Joseph Fleury '14, Dennis Hong, and Adam Wyden '10, moderated by Kristin Gilbertson



Fireside chat with David Zorub '03 and Ted Seides



Conference attendees have a conversation



Fireside chat with Susan Byrne and Jason Zweig



Understanding Management Teams panel with David Simon '85, William Thorndike, and Tracy Travis '86, moderated by Cheryl Strauss Einhorn



Columbia Business School

The Heilbrunn Center for
Graham and Dodd Investing

SAVE THE DATE

29th Annual

Graham and Dodd Breakfast

**A Discussion with
Cliff Asness of AQR Capital Management**

Presented by:
The Heilbrunn Center for Graham & Dodd Investing

Friday, October 11, 2019
8:00 a.m. to 9:30 a.m.

The Pierre
2 East 61th Street
New York, NY

For inquiries, please contact: valueinvesting@gsb.columbia.edu

Yen Liow, Aravt Global

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Yen Liow

Mr. Liow earned a Bachelor of Laws (Hons.) and Bachelor of Commerce from the University of Melbourne in 1994 and a Masters of Business Administration (George F. Baker Scholar) from Harvard Business School in 2001.

Mr. Liow lives in Manhattan, New York with his wife and two children. Mr. Liow serves on the Finance and Audit Committee of the Trinity School (NYC), is a board member of the Success Charter Network and is a board member of We.org (Tristate area). Mr. Liow is an Adjunct Professor at Columbia Business School and guest lectures regularly at universities around the country.

Graham & Doddsville (G&D): Could you start by discussing your background and how you got into this business?

Yen Liow (YL): I'm Malaysian-Chinese Australian. I was born in Kuala Lumpur, Malaysia, but I immigrated to Melbourne, Australia in 1976 when I was four years old. My dad was a dentist and my mom was a teacher. They didn't know much about business, but I fell in love with it at a really young age. My best friend's father was a gentleman named Peter Gunn; he was a self-made transportation magnate in Australia and I was very fortunate that he took me under his wing and became one of my key mentors when I was young. At the age of 15, Peter essentially helped inspire the next 25 years of my life.

I started working when I was 14. I worked every summer and took every opportunity I could find to learn about business. It was mostly a lot of manual jobs that eventually led to professional internships and opportunities. I bought my first stock when I was 14 (it was Santos, an Australian Oil & Gas company) and have been investing ever since.

For my undergraduate studies, I did a double degree at the University of Melbourne in Commerce and Law. I originally started with a triple degree – I also studied Actuarial Sciences for the first few years – but I wised up to the fact that it was far too much work and I wanted to have some fun.

After that I went to Bain & Company. I started off in their Sydney office and then went to their San Francisco, Singapore and Beijing offices over the course of five years. Bain was an amazing, diverse set of practical experiences. But the most important part for my development was the two years that I spent consulting with Dell Computers. Dell's stock price grew tenfold over that period. I learned an unbelievable amount about hyper-growth and what world-class execution looks like, which had an important impact on my focus and philosophy as an investor. After Bain, I went to Harvard Business School where I graduated as a Baker Scholar in 2001.

During the summer in between my first and second year at business school, right at the peak of the dot-com bubble, the startup that I was interning at shut down. I was fortunate

to get a summer internship at Ziff Brothers Investments for the remainder of the summer. Ziff Brothers really opened my eyes to the professional investing world. I thought hedge funds were traders, which was not appealing at all to me. What I found at Ziff was a great group of people who did deep and creative research. Ziff had a learning culture in which I spent the next 13 years helping to build an amazing business. Eventually I ran their Technology Media Telecom, Agriculture, and Energy groups.

Ian McKinnon was the portfolio manager there. He was one of the greatest human beings, coaches and mentors one could ever wish to work for. Ian had a huge impact on my career and remains a close friend.

While I was with Ziff Brothers, I also had the opportunity to spend time with Eddie Lampert, who opened my eyes to case studies. I asked him how he developed such an incredible business acumen so early in his life, and he shared with me that he spent a substantial part of his twenties and thirties purposefully training by studying the best investments in history through a case study methodology. I took that on. We started doing cases internally at Ziff and taught our approach at Harvard Business School in 2008, and continued the process at Columbia Business School in 2013. The case study methodology was the most important part of my personal development and is one of the cornerstones of Aravt Global's creation.

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Yen Liow, Aravt Global

In 2013, I was a bit over 40 and I had to scratch the itch - to find out what it would be like running my own investment firm. So, in February 2014, we launched Aravt Global.

G&D: What's the inspiration behind the name?

YL: Aravt means the number "ten" in Mongolian, which was the smallest unit in Genghis Khan's army and represent our humble beginnings. Genghis Khan's army had 200,000 cavalrymen who conquered 10 million square miles of the Earth over 30 years in the 13th century. This is relevant to investing because you can't do something of that scale by picking fair fights. You can't just do common things. The central premise of Genghis Khan's strategy was unfair fights. Genghis Khan was successful because he hated putting his men in harm's way, and that is the first principle of Aravt Global. We just don't back situations where the win rate is even. You can't compound capital if the odds are not well in your favor. We're looking for unfair fights, where a company's advantage is substantial and repeatable.

G&D: Can you talk a little bit about the other principles that guide Aravt Global?

YL: Albert Einstein said that compound interest is the most powerful force in the universe. We agree – we think compounding is the most important framework in investing. Our business model, portfolio and structure is built around it. We focus on horses, a sub-genre of durable compounders that grow more

briskly than the broader market.

Over ten years ago, my team did a deep empirical study on stocks that compounded at north of 20% on five- and ten-year rolling periods over the last three decades to try to understand what drove performance. We wanted to deeply understand the patterns and if they could be repeated.

"We just don't back situations where the win rate is even. You can't compound capital if the odds are not well in your favor. We're looking for unfair fights where a company's advantage is substantial and repeatable."

This led to over a decade of examination and dissection through the case study methodology. Over the past few years, we have integrated that knowledge into the processes and culture that define how we approach our business. Let me share a few of the elements with you.

The first and most important element is *game selection*. We had to decide where to focus our efforts.

Most of the market will revert to the mean over time. That is one of the most important laws of economics – that excess profits get eroded away

by competition. We focus on the small percentage of stocks that resist those forces, primarily economic monopolies and functional oligopolies. That is where we spend all our time and resources. The inefficiency we exploit is the absence of mean reversion.

When I started my career, I thought I needed the largest possible investment universe to find opportunities. We have learned that in fact the opposite is true. We needed to find a rich vein of repeatable inefficiency in a finite universe that we could focus on, so when price dislocation occurs we could exploit it. When the universe is too big, that is an unachievable goal. At least it was for me.

What we focus on is durable growth businesses that can compound free cash flow or earnings per share at a healthy rate, which we describe as between 15% and 25%. Durable growth businesses are more predictable businesses. As investors, we are studying history to try to predict the future. In situations that are highly dynamic, which I would define as lower quality businesses or lower quality industry structures, there is a loose link between history and the future. As such, your ability to predict is low, regardless of how many hours you spend researching.

When you spend your time in durable businesses that are highly moated, the opposite is true. Our job is to find situations where history does hold, and to constantly ensure that new dynamics do not jeopardize the durability of

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Yen Liow, Aravt Global

that moat. When the moat breaks down, our ability to predict breaks down. When our ability to predict breaks down, it is hard to know what to do with volatility. Is it opportunity or is it risk? Our portfolio is highly durable and easier (but still not easy) to predict. When volatility hits, at worst we hold through, and at best we exploit it. It's a profoundly different place, and that is all about game selection. Simply put, our stocks may be volatile at times, but our businesses, in general, are not.

In game selection, we also focus on the replication phase of a business life cycle. There are three stages we view as the life cycle of a normal business: proof of concept, replication and maturation. The first phase has explosive outcomes, both up *and* down. It is very hard to predict however, with very wide outcomes. We focus on the second phase: on businesses that have won their niche and can replicate over long periods of time.

The second element is *systems design*. We've created a firm, a culture and a process to support our game selection. Great systems design allows for engineering tolerance. When we are dealing with capital markets, we need to have tolerance for a lot of imponderables – mistakes, randomness, stress – but still be able to perform. Our organization is built around purposeful preparation and error minimization.

Built into that systems design is having a purposeful culture. None of us have a Bloomberg terminal. We have an

outsourced trader, in Vancouver. We don't generally trade the same day we make decisions. These are culturally important factors. We have four analysts on our team, plus me as the portfolio manager. We only need a few great ideas each year for our portfolio to stay healthy and well-stocked. There is no need for immediate reactions on anything that we do. There was a 20 month period where we only bought one stock. It is really hard to build a culture and process where the whole team deeply understands the important distinction between intense research activity and value-added portfolio activity.

After another detailed study of market returns three years ago, we cut off both tails in our portfolio. Specifically, we don't pursue the extreme upside one-year stocks, because we don't need to - we found that tremendous short-term downside risk exists there, and it usually doesn't let us size and stay well-invested for long periods of time. We adjusted our focus to the compounders that can still compound at 20%, 30% or 40%, and where we can be bigger for many years. We still get the occasional up 75% to 100% stock in a year, but our performance is not dependent on it.

This brings us to the third area, which is *portfolio concentration*. We developed a search algorithm that narrows our universe of 3,000 or so stocks into a far more defined universe of 200-300 companies that qualify for what we do. We then deploy capital into the best 15-20 of those ideas. This concentrated portfolio allows us to hold the bar high

and be patient in deploying our work.

G&D: How does valuation play into your approach?

YL: *Valuation discipline* is the fourth element. We don't invest in all types of growth stocks, but in a specific type that we call 20/20s: 20x forward earnings for 20% intrinsic value per share growth. Now, obviously valuation is not as simple as that and 20/20s is not all that we do, but it is the central tendency of our portfolio. One central premise we believe is that over time, the compounding of our long portfolio will revert to the underlying earnings power growth of the businesses we own. If we have done our underwriting well, the 20/20s will not only give us downside protection into volatile markets, but also the room to stay deeply engaged with our large investments for many years, which I believe is the hardest part of riding horses.

While valuation multiples matter a lot in the short-term – they drive stock performance tremendously in years one through three – in years three and beyond, the impact of a change in multiples, unless extreme, fades when it comes to long-term capital compounding.

The fifth element is *duration and capture*. All of what I've described allows us to hold our investments for long periods of time. We focus on growth stories that can replicate for many years on end. Roughly a third of our portfolio is almost five years old (the age of our fund), a

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Yen Liow, Aravt Global

third is two-and-a-half to five years old and a third is younger than two-and-a-half years. The 20/20s combined with our game selection allow us to be sized bigger in our names and stay big for long periods of time. Four of our five oldest investments are still in our top five largest holdings, and all five are within our top ten.

One of the important benefits of duration is tax-efficiency, which really adds to our limited partner's total return over time. It also allows us to have tremendous return on time, which is my next point.

Once you pull all of this together, we're given a lot more time to do our work in the *diligence process*, which is area number six. Our portfolio construction allows us to spend many months on individual ideas. Our process is both quantitative and qualitative. The quantitative components involve breaking down all our theses into clear articulations of growth drivers and what we're playing for over long periods of time.

Qualitative research involves a tremendous amount of primary research. We do our own primary research in house, are supplemented by investigative journalists and have an in-house forensic accountant. We are comfortable spending a lot of time on our research as we believe if we've selected the ideas well upfront in our process, then it's a question of *when* – not *if* – our inventory gets deployed into our live portfolio.

Contrast that with a high velocity portfolio, where the work that you do becomes obsolete quickly. Our insights compound and can stay fresh in our actionable inventory for many years on end. That builds patience into our process, but it also permits us to spend a tremendous amount of time on our research.

“We compare investing to a professional full-contact sport, and all professional sports have a high training-to-playing ratio.”

The final element is *training*. We train deeply, as investing is a game that never ends or stops adapting. We compare investing to a professional full-contact sport, and all professional sports have a high training-to-playing ratio. We think it's absolutely critical to have a high training-to-playing ratio. We train a tremendous amount, and I still think it's not enough.

The case studies I mentioned are an integral part of our training. We generally don't do investment case studies on a single case basis. We're looking for patterns, not single idiosyncratic outcomes. Clusters of cases are very important, and we generally do them in batches of three to six. Contrast learning is also very important, as understanding the counter case will highlight even more what the differences were.

G&D: How do you evaluate management and how does it fit into your investment process?

YL: Management is very important to us, because management is the allocator of all of a firm's resources and, over a five- or ten-year holding period, they've allocated the majority of the capital of a firm. We look for specific factors in assessing management, with the simplest test being ethics. Are we dealing with an ethical management team? Do they have a reputation for doing shareholder unfriendly things? The term we use is: is the management team handshake worthy or not?

One mistake I made earlier in my career was investing in questionable management teams, believing that a cheap valuation more than made up for management. We just don't expose ourselves to that risk anymore and seek to invest in and support high quality people.

G&D: Do you hedge your long portfolio with shorts?

YL: Our long and short portfolios are each designed to be standalone portfolios and not hedges, pair-trades, or specific offsets. We look to create a portfolio of high-quality ideas on both sides. Indeed, we are in the early stages of launching a long only strategy.

G&D: How does the broader economy factor into the investment decision process?

YL: I think the first and most important rule in risk

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Yen Liow, Aravt Global

management is awareness. Macro tells us what kind of environment we are currently in, but it's difficult to predict macro outcomes and a low return on effort. However, trying to understand where we are in the cycle informs broad risk positioning and tells us how much of our balance sheet we should deploy at the edges. But we are fundamentally bottoms-up in filling our portfolio.

G&D: Does your process change at all in environments like Q4 of last year? Is there more of an added incentive or rush to get into names when you see that the market's down 10%, 12% in a quarter?

YL: Absolutely. We bought three stocks in one day. We did not put the entire positions on in one day, but we started slowly loading positions as soon as we saw the market get emotional and the IRRs becoming attractive. So, yes, we bought a lot of stocks in the fourth quarter last year. This was unusual for us and, again, we don't really need to. But software went on sale, so we picked up a few stocks that came into our strike zone. Our process allows us to act if we are provoked.

That's also why we focus so much on training. It's one thing to have implicit gut instincts, but it's another thing to have explicit knowledge. Case studies and deep pattern recognition let you take the implicit and make it explicit. In our business, the toughest moments happen at the bottom of the Nike swoosh, when the stock price of one of our investments is under a lot of pressure. In that moment, is

it opportunity or is it risk? The more explicit you make implicit insights, the better you will be able to take appropriate action and think clearly during times of stress. Trust me, it is still really hard at those moments, but at least you have a fighting chance.

G&D: With the market now back around all-time highs, do you find the current landscape for finding long ideas much tougher than it was maybe three or four months ago?

YL: Well, three or four months ago it was amazing. But we're still finding interesting ideas, and frankly the best part about what we do, again going back to our systems, is that we don't need to find many. As long as there's durable growth at reasonable prices, we can engage – or not at all. We are happy owning what we've got. We don't have to buy a single stock. There's nothing forcing our hand; our portfolio should continue to compound healthily. We're comfortable with our visibility of it. Will it get hit in a recession? Of course, it'll get hit in a recession. But can we hold through in a recession? We can hold through in a recession.

G&D: Do you have any new positions in your portfolio that you think are really good examples of "horses" – durable compounders that you think can grow 20% or 30%?

YL: One investment that we made last year is Black Knight (NYSE: BKI), which is a SaaS company in the U.S. mortgage servicing industry. When you get a statement with what you owe on your mortgage, your

balance etc. – it may be a Bank of America loan, but it's operating on Black Knight's software. The business was originally formed in the 1960s, but was fully spun off from Fidelity National Financial (NYSE: FNF) in 2017.

We believe Black Knight has a near monopolistic position in mortgage servicing software, which is over 80% of total EBITDA. It has three basic business lines. The first is mortgage servicing software, in which it has 62% market share in first-lien mortgages, going to 70% and 19% market share in second-lien mortgages, going to 30%. There is a runway for continued market share gains in both segments, but especially in second-lien. It also has mortgage origination software where it's the second largest third-party platform after Ellie Mae. The final business line is a solid data and analytics business that competes against CoreLogic.

We love subscription-based business models. Why? Because they are generally easier to predict and project. We love subscription growth businesses and this is one of the best we have seen. Black Knight is also the lowest churn subscription business we own, which is also a very strong indicator of business quality. In the last 10 years, only one significant customer left its platform (post GFC), and that customer recently came back to Black Knight after years of trying to do it internally. It also has strong pricing power, high returns on capital and an amazing management team.

One of the reasons we invested now is that we're in

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Yen Liow, Aravt Global

the midst of a once-in-a-generation regulatory change. Post-GFC, the government significantly increased regulations for mortgage servicing and originations. This increased compliance cost and increased risk of immense fines for non-compliance actually increased Black Knight's competitive advantage.

Additionally, Black Knight's software is regarded as the heart and lungs of many banks' mortgage operations. It's very painful, if not nearly impossible, to rip it out and replace. We love businesses that are deeply embedded in its customers' businesses.

All of this is being combined under a new leader, Anthony Jabbour. Anthony was previously the COO at Fidelity National Information Services (NYSE: FIS) and has the experience of running a business multiple times the size of Black Knight. We think the world of him. He's ethical, aligned, capable and hungry. Moreover, the chairman of Black Knight is Bill Foley, who's a legendary capital allocator who has compounded capital at high-teens for over three decades. We think the combination of Bill and Anthony puts us in a position of tremendous stewardship at a reasonable valuation.

Black Knight trades at 24x 2020 EPS, compounding its value per share at high teens. We think that endures for many years to come.

G&D: When you are looking at a software company, do you sit down and actually test the software out?

YL: In general, yes, we try to take a first-person look at the software. But frankly, we're not making judgments on the quality of the software. We don't believe that's an edge. Even if we got the most experienced software developer to tell us if it's a good or bad design, that's only part of the equation in software businesses. Sales and distribution is equally as important as the product itself.

"We love subscription-based business models. Why? Because they are generally easier to predict and project. We love subscription growth businesses and [Black Knight] is one of the best we have seen."

Black Knight's software is relatively older than some of its peers – it's one of the original SaaS companies, actually – but it's just so sticky... it's not something that banks can easily change. We're trying to understand software from the client's perspective which gives us insight into its pricing power, stickiness and distribution model.

G&D: How dependent is this business on the housing cycle?

YL: Black Knight has almost no correlation with the housing cycle. While mortgage originations obviously move up and down, the vast majority of

Black Knight's revenue is based on the number of mortgages (i.e. stock) which is very consistent and normally grows 1-2% per year. Even into deep cyclical troughs, like today, the negative revenue impact on Black Knight is quite minimal. Even on the mortgage origination side, which is 6% of revenue, Black Knight has contractual minimums. The balance sheet is levered around three times, which enhances equity returns, but it's a business that can handle leverage.

G&D: Any other recent additions that you're excited about?

YL: GoDaddy (NYSE: GDDY) is a really fun one. This is another subscription, high-recurring revenue business. And it has a dominant position in their market – it has about ~23% of all domain registrations and roughly half of new domain registrations in the U.S. Its competitive advantage comes from its name recognition and superior organic search ranking, which gives GoDaddy the lowest customer acquisition cost in the industry.

The industry doesn't really compete on price when it comes to domain registration, since it's a fraction of the cost of running a business. While domain registration is a lower margin business, it's an extremely important on-ramp that allows GoDaddy to upsell and cross-sell higher margin products. Once GoDaddy has its foot in the door with a small-medium business ("SMB"), it then sells services such as website content management software, hosting

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services, productivity tools and telephony. GoDaddy has world-class customer care that is extremely good at managing customer relationships and upselling products that actually help customers succeed. GoDaddy's so good at this that its customer care team is actually a profit center, not a cost center.

We think GoDaddy has tremendous secular tailwinds behind it. The internet and the need for businesses to have an online presence is growing robustly domestically and internationally. GoDaddy operates in both jurisdictions and its opportunity to continue to expand internationally is enormous. There are about 500 million independent SMBs in the world. GoDaddy has only 18.5 million customer relationships today, meaning there's a huge opportunity to grow the number of customers it serves. On top of that, its customers are only spending \$150 per year at the moment with GoDaddy, so there is also opportunity for further penetration with existing customers.

GoDaddy is led by one of the most capable management teams we've seen. Scott Wagner, who is the former CEO of KKR Capstone, decided to leave KKR to run GoDaddy. He recruited top notch talent and brought several members of his KKR team over with him, which makes the management team bench very deep. Scott also owns over \$130 million of stock, so he's well aligned with shareholders.

We think Scott is a fantastic allocator of capital and that the

stock has a reasonable valuation. It is currently trading at 20x current FCF. We see this company compounding free cash flow per share comfortably in the 20s for many years to come.

G&D: We noticed that you recently added Fox. What are your thoughts on linear vs. OTT content creators vs. pure distributors, and how do you see that landscape unfolding?

“Content is at an interesting juncture. Content is both niche and scale; Fox is niche and Netflix is scale. I think content is completely shifting to one of those extremes, with nothing in between. Netflix is currently spending \$13 billion a year on content. Practically no one else can spend at that level, with maybe Disney and Amazon being the exception.”

YL: Charter Communications (NASDAQ: CHTR) is one of our oldest and largest holdings. The beautiful part about Charter is that it's content agnostic. Charter is a pipe – the most valuable, hard to replicate, fastest pipe – into

the house. It's a great asset. We think it should grow free cash flow per share at 30% for years.

Content is at an interesting juncture. Content is both niche and scale; Fox is niche and Netflix is scale. I think content is completely shifting to one of those extremes, with nothing in between. Netflix is currently spending \$13 billion a year on content. Practically no one else can spend at that level, with maybe Disney and Amazon being the exception. But it's a really expensive game to take on.

The other option is to go in the exact opposite direction. Fox has must-watch TV: Fox News is its most important property with its broadcast network being number two. This is the whole reason why Rupert Murdoch sold most of Fox's assets to Disney. By the way, not many business titans build and break up their empires in their lifetime. I have to tell you, a sell decision at that scale is truly amazing. That takes extraordinary discipline. But Rupert clearly saw how the strategic context was unfolding. You have to be one or the other, scale or niche, and if you're neither you're dead, so he repositioned his company. The Fox broadcast network pivoted from general entertainment to mostly live sports, and Fox News continues to be one of the most important channels in any cable bundle. Both are absolute must-watch live TV. They're at risk of linear subscriber decline, sure, but these are among the last men standing and they have tremendous pricing power.

(Continued on page 12)

Yen Liow, Aravt Global



Angela Qin '20, James Shen '20, Karthik K.S. '20, and Mitchell Aulds-Stier at the Fink Center after winning the UCLA Credit Competition.

G&D: With training and learning being such an integral part of Aravt's investment philosophy, are there any key insights you've learned by studying excellent managers?

YL: Of course. We are students of excellence in general. There's just an energy that gets released by studying excellence. That's why people are so in awe of sports – you are literally viewing excellence at pinnacle moments. You get to see excellence clash. That is incredible stuff.

One of the reasons I love investment management so much is that I'm literally getting paid to study business excellence. Two of the best business managers in the world today are Nick Howley at TransDigm (NYSE: TDG), an aerospace company, and Mark Leonard at Constellation Software (TSE: CSU), a vertical market software company. These companies are both serial acquirers, and these CEOs are both outstanding capital allocators. TransDigm has compounded at 30% for 12 years and Constellation has compounded at almost 40% for 12 years.

We studied them and their businesses to try answering two simple questions: How can an external capital allocator sustain such extreme performance, and can it be replicated into an investment firm? The first and most important decision they made was with their game selection. They chose an excellent market. That's why it was so important to us when we created Aravt that we're specific on where we spend our time.

Mark chose vertical market software, which is characterized by highly repetitive, subscription-based businesses with low churn, high barriers to entry, small niches, and tons of companies. He found a vein of high-quality businesses and had deep insights on how to run them better.

For Nick, it wasn't necessarily aerospace in general. His insight was specifically that aftermarket proprietary aerospace components, although not subscription in nature, are subscription-like. The barriers to entry there are extremely high, so niches are created and driven by FAA regulations. For a substantial part of TransDigm's aftermarket business, there literally is no second-source provider. As the life of a plane or of a platform is 20 to 50 years, that's how long TransDigm ends up providing the parts - and on a regular basis too, through normal wear-and-tear and regulatory upgrades. It creates subscription-type characteristics in an industry that's grown revenue seat miles at 5.5% per annum for 30 years.

With game selection, not only did they start in fantastic industries, but they're very clear on what they look for in their acquisitions. Constellation has done 400 deals and TransDigm has done 65. To our knowledge, they have a near zero loss ratio. How is that even possible in situations of external capital allocation? It's because they're very disciplined with what they look for, how they underwrite and how they implement

positive change. We obviously think TransDigm and Constellation are fantastic businesses. We've owned both for five years and they're both still top-five positions for us. In addition to that, we've tried to weave a lot of what Mark and Nick do into different parts of our own firm's culture and portfolio design.

G&D: You mentioned earlier that time allocation is very important for your firm. Could you talk more about that, as well as about your own personal time allocation?

YL: We have a cadence to our organization; I believe all organizations should have a cadence. It operates more smoothly that way and requires less tactical decisions. We have an accountability meeting at 8:30 every Monday morning where we review the week back and the week forward for every team member. If there's a position that's being pitched, either for our inventory or our live portfolio, then it's a two-hour meeting on Thursday that we keep blocked as a placeholder in the team's calendar. The first Monday of every month is an entire portfolio review, long and short. When we meet, we're purposeful about agendas and we always start on time.

Separately, we have dedicated, concentrated time for training – whether it's process, case studies or something else. We usually have two retreats a year, with one R&D dive during one of the two retreats. We do ongoing training all the time for process. The process training for all of last year was on primary research. We

(Continued on page 13)

Yen Liow, Aravt Global

brought in investigative journalists and trained our team on outreach, email formation, how they should attend trade conferences and how they should interact with management teams and primary sources... we spent the whole year training on it. High performance requires breaking processes down to their core elements and rebuilding them to improve execution. We do this all the time with our processes.

My own time is a blend of proactive and reactive. Generally speaking, I don't take any meetings or calls in the morning. I think if you can be highly focused, creative and engaged for three solid hours a day, then you're going to do very well in life. My highest quality time is between roughly 7:00 in the morning and 2:00 in the afternoon, so I protect that time at all costs. We don't trade day-off, so I don't really have to fixate on news flow first thing in the morning. I journal in the mornings, and I pick one or two substantive pieces of work that I need to get done and I spend my mornings doing them.

G&D: You seem to be the type of person who would think about shaping the granular details of your environment for maximum output. What are some of the things you found to be disproportionately effective in controlling your environment?

YL: First thing, you need to manage your email and all of your devices. Get your smartphones out of your office. Turn off the screens blinking at you. Regiment how often you touch email. That's a

huge one because it's unbelievably disruptive to your concentration. Texting and IM is even worse. I work in 25- and 45-minute chunks, and then I take breaks. I manage those chunks proactively.

Some people like open environments, but I personally can't do deep thinking with a lot of noise around me. We're an office culture where doors get closed when required and open when they're not. You want to be on offense, not defense with your space. I have a "do not disturb" sign on my door and I use it. I silenced the ringer on my office phone. Flow state doesn't last for more than two, maybe three hours in a day. Physically, it can't. So you need to have control of your environment and what you let come into it.

G&D: Do you have any advice for students interested in investment management?

YL: I have five pieces of advice. The first and most important one is "ea", which is the Polynesian word for personal sovereignty. You have to completely own your journey. Be accountable for your training and your path and don't cede that responsibility to anybody. Be proactive and relentlessly invest in your own training. The quality of your lives literally depends on this decision. You have to own it.

Second, do a speed-reading course. We read a lot in this business. Effective reading is a highly learnable skill and it takes less than eight hours to become good at it. It is a huge advantage over time. Besides all of the work-related reading

I do daily, I try to read 70-100 books a year. I do not read this much because I was born with any special skill – it was a skill I learned 25 years ago and I make time to use it.

My third piece of advice is to do case studies. Deeply study the best and worst investments in history. Even better, do it with a bunch of friends. Learn in clusters. This business is about pattern recognition. The more cases you do, the more you can create conviction around pattern recognition. This is how you learn in dog years. You need to be deeply prepared for luck to be successful.

Fourth, be prepared for the emotional side of this game. I don't think anyone can fully express to you how emotionally demanding this business can be at times, and if you are not emotionally aligned for the game, it can be very painful. It's the best business in the world for those who are curious and emotionally resilient. There are lots of ways to make money, but it is really important to find one that fits well with the way that you are built emotionally. You have to discover it as early as you can. Markets are a very expensive place to find out who you are. I think authenticity and self-awareness are absolutely crucial for success and the more time you are introspective about what drives your emotions, the stronger you will be. I don't think this is something you can work out in school. It is something you just have to come to the business to learn. Finally, do not fear your

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Yen Liow, Aravt Global

mistakes. When you enter this industry, you will fail more often and with fiercer intensity than you ever have before. Do your best to fall forward. Learn and move on. Most of what I have shared with you today was learned from mistakes I have made (and I have made a lot of them). Just do not let them stop you.

Having said that, I think investing is the best business in the world. You're getting paid to learn. I literally think it is Disneyland for curious and competitive adults. It's a true privilege to be in it. Come in with your eyes wide open, but have fun once you've selected your game appropriately.

G&D: Thank you so much for your time.

Dollarama (TSX: DOL) - Long with Friendly Activism 1st Place — 2019 Pershing Square Challenge (May 2019)



Mingming Wu '20

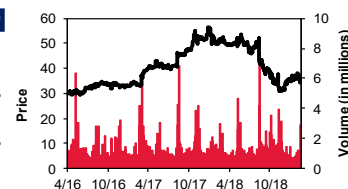
Mingming is a 1st year MBA student at CBS. Prior to CBS, she worked at Canada Pension Plan Investment Board in Toronto, covering global consumer and health care equities, and later at the endowment of Memorial Sloan Kettering Cancer Center in New York.

Mingming Wu, CFA
MiWu20@gsb.columbia.edu

Laurent Liu
YaLiu19@gsb.columbia.edu

K.Y. Wong, CFA
KyWong20@gsb.columbia.edu

Trading Stats (CAD'M except per share)	Financials (CAN' M)	FY16	FY17	FY18	FY19
Market Capitalization	Revenue	2,650	2,963	3,266	3,549
Enterprise Value	Gross Profit	1,033	1,161	1,301	1,393
FYE 02/2020 P/E	GPM	39.0%	39.2%	39.8%	39.3%
Avg. 3M Daily Volume	Operating Profit	549	646	756	804
Float	OPM	20.7%	21.8%	23.1%	22.7%
52 Week High / Low	Net Profit	385	446	519	549
Current Price (4/29/2019)	NPM	14.5%	15.0%	15.9%	15.5%



Recommendation

We are recommending a long in Dollarama ("DOL") with friendly activism. Our 4-year price target is C\$81.5, representing +97% upside and 18% IRR.

Business Description

Founded in 1992, DOL is Canada's largest dollar store chain with 1,225 stores and 71% market share. It sells general merchandise (46%), consumer products (39%), and seasonal products (15%), with 8 fixed price points from \$1 to \$4. The company is still managed by the founding family (Rossy), which holds a 7% ownership.

There is no superior class voting structure and the shareholder base is diverse.

Industry Overview

The Canadian dollar store market started in the 1990's, decades after the US dollar industry (started by Dollar General in 1939). It is therefore relatively unpenetrated and has been growing at a 5.9% CAGR over the past 7 years. Major players are DOL (1,225 stores), Dollar Tree Canada (225), Your Dollar Store with More (112), Great Canadian (121), and Buck or Two (50), totaling 1,733 stores. Alongside industry growth, DOL has taken market share from its smaller peers. Its market share among dollar store chains has grown from 59% in 2011 to 71% in 2019.

Recent Development

DOL recently missed sales and EPS consensus by 2%, and revised down its SSSG guidance from 4% - 5% to 2.5% - 3.5% in Sep 2018. Share price experienced further weakness after Spruce Point published a short report in Oct 2018, which claimed "Our analysis shows that this target (i.e. management's guided runway to 1,700 stores) is unrealistic, and that the market is already bordering on oversaturation."

Our Variant View

- We disagree with Spruce Point. Using US dollar stores to benchmark with DOL, Spruce Point used either Dollar Tree or Dollar General to estimate DOL's runway and ignored that DOL is a market leader with 71% market share (much higher than DLTR / DG's individual market share). Under our Activist Proposal #1, we use the overall US market to estimate the Canadian market potential, and then use the 71% market share to estimate DOL's potential runway.
- We have identified two additional value creation drivers - implementing a zone pricing strategy and building a distribution center. We believe DOL could realize our estimated runway if it adopts Proposal #2 and #3.

Activist Proposal

1) Accelerate store opening from 65 to 130 per year.

- Current situation: in 2017, the management guided a runway to 1,700 stores through opening 60 - 70 stores per year until 2027. This suggests that expansion speed would be lower than previous years'.

	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Historical store no.	463	521	564	603	652	704	785	874	955	1,030	1,095	1,160	1,225
Net growth rate	16.3%	12.5%	8.3%	6.9%	8.1%	8.0%	11.5%	11.3%	9.3%	7.9%	6.3%	5.9%	5.6%
Net stores opening	65	58	43	39	49	52	81	89	81	75	65	65	65

- Our analysis shows that management has underestimated the TAM and the runway could be beyond 1,700 stores. As the US dollar store industry started 5 decades in advance, we use the current penetration rate of the US as a proxy of the CA industry's potential. The US has 8x more residents than Canada, but 17x more dollar stores. Using US as a benchmark, Canada could harbor 3,443 stores and Dollarama could grow to 2,437 stores, assuming its 71% market share remains constant.
- We propose that Dollarama should accelerate store openings from 65 to 130 per year to dominate the best retail locations before peers do, particularly Dollar Tree Canada. In 2017, DLTR claimed it saw the potential to grow its store base in Canada from 225 to 1,000. Per our conversation with DLTR IR, the



Laurent Liu '19

Laurent is a 2nd year MBA student at CBS. He started his career with BCG covering consumer retail and telecommunication clients, and eventually co-launched a US\$125M growth stage equity boutique fund investing in FinTech and EdTech.



K.Y. Wong '20

K.Y. is a 1st year MBA student at CBS. Prior to CBS, he worked at buyout PE firm EmergeVest focusing on the industrial sector in Europe and Asia. In the coming summer, he will intern at APG Asset Management and Robeco, covering global emerging markets equities.

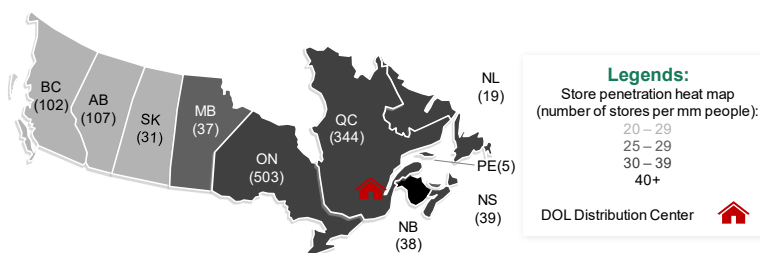
Dollarama (TSX: DOL) - Long with Friendly Activism

expansion plan in Canada is not DLTR's priority now as DLTR is turning around Family Dollar. "Dollar Tree is just so busy with fixing Family Dollar – once it finishes, it will get more aggressive in Canada.", an industry strategist explained.

- This initiative is practical. Financially, opening 130 stores requires \$91mm capex, which can be well covered by the company's net profit of \$549mm in FY19. Operationally, our discussions with former district managers confirmed that DOL is highly efficient in opening stores and has the human resources capability to handle faster store opening. DOL also has strong expertise in finding real estate and can leverage its strong relationship with a board member, who is CEO of SmartCentres REIT.

2) Adopt zone pricing

- Current situation: DOL has universal pricing, which means the same products have the same prices across the nation. This ignores differences in purchasing power across provinces (median income difference is as high as 33% across provinces) and operating costs (e.g. Alberta's minimum wage is 25% above Quebec's; labor cost accounts for 10 - 12% of a store's sales). Charging the same prices for different provinces not only means leaving money on the table, but also makes it less economical to open stores in areas with high operating costs.
- We propose that DOL adopt zone pricing, a retail practice that divides the market into different zones based on demographics and competitive dynamics, with different pricing in each zone. Based on our interviews with four pricing experts, adopting zone pricing could result in margin expansion of 50 - 500 bps.
- Zone pricing has been successfully implemented by other retailers, including Family Dollar, Walmart, and Target. There will be initial costs to implement it (est. C\$11mm), with the majority being software investment. However, the net benefit could be C\$59mm in the first year.
- Convincing management should not be a hurdle - "[Zone pricing] is a concept that we're not against. But for the moment, it is theory.", said Neil Rossy, CEO of DOL, during the 12/6/2018 earnings call.



3) Optimize logistics network

- Current situation: DOL only has one distribution center (DC) in Quebec, creating two issues: (i) the single DC model creates difficulty in penetrating the west. The heat map shows that the further away from the distribution center, the lower the number of stores per million residents (denoted by level of darkness); (ii) logistics costs are high, especially for western stores. DOL imports over 50% of goods outside N. America, mostly from Asia. These imported goods are first shipped to British Columbia (BC) and then transported to the Montreal DC through train. The DC later redistributes the goods back to stores in BC, creating inefficiencies.
- Benchmarking with both Canadian and US dollar stores shows that another DC is necessary to efficiently serve the entire country. Dollar Tree Canada, with only 225 stores (1/6 the size of DOL), has two DCs in BC and Ontario. Looking at US dollar stores, each DC at Dollar General serves 967 stores on average, while DOL's DCs serve 1,225. Family Dollar's DCs are 277 miles away from stores on average, while DOL's are 726 miles.
- We suggest building a DC in British Columbia to serve BC, AB, SK, and MB. Developed with consultation of logistics experts, our cost-benefit analysis points to net annual savings of C\$2mm in transportation costs if the sales in the 4 western provinces are held constant. Factoring in store expansion and assuming sales in the 4 provinces double, the net annual savings could be C\$17mm (after C\$40mm capex).

Valuation

- Assuming a forward P/E multiple of 22x, we derive a 4-year target price of C\$81 under the activist base case. Even without activism, an investment in DOL represents 11% IRR. Under a bear case scenario in which new stores are well under management guidance, SSSG becomes 0%, and multiple contracts to 16x, then the IRR is -6%. This suggests an attractive risk/reward profile, with 4x active-to-passive return ratio.

	Bear	Base - Passive	Base - Active	Bull
#1: New Stores	20	65	130	140
#2: Change in Avg Trans. Size 19' - 23'	0.0%	3.0%	3.7%	4.0%
Change in Volume of Trans.	0.0%	0.0%	0.0%	0.5%
Avg. SSS Growth	0.0%	3.0%	3.7%	4.5%
#3: Gross Margin (with DC Savings)	37.6%	38.7%	39.7%	40.8%
2023E EPS	\$2.00	\$2.88	\$3.62	\$4.02
Forward P/E	16.0x	22.5x	22.5x	24.0x
Stock Price	\$32.0	\$64.8	\$81.5	\$96.5
Investment Return	-27.1%	55.7%	96.9%	132.6%
IRR (4-year)	-6.2%	11.5%	18.0%	23.0%

Key Risks and Mitigants

- Management may not adopt the plan.** Our view: the Rossy family has the experience of successfully partnering with professional investors to create value. The founder sold 80% shares to Bain Capital in 2004 but still continued to hold the CEO role. 3 out of 9 directors on the board are former or current employees of Bain Capital, even though Bain fully exited in 2011, proving the family's openness to professional investors if they're able to create value.
- Quebec government could oppose shareholder activism.** Our view: Quebec government usually only intervenes when labor interests are harmed under activist campaigns. Our plan involves no layoffs or compensation changes, thus should not face resistance.
- Economic downturn.** Our view: this risk is mitigated, as our regression analysis indicates negative correlation between dollar store performance and macroeconomic factors.



Michael Wooten,
CFA '19

Michael Wooten is a 2nd year MBA student at CBS and a member of the Value Investing Program. Previously, he worked as an Associate at Corrum Capital Management and as an Analyst at Reicon Capital. Last summer, Michael was an intern at WEDGE Capital in Charlotte.

Align Technology, Inc. (Nasdaq: ALGN) - Long

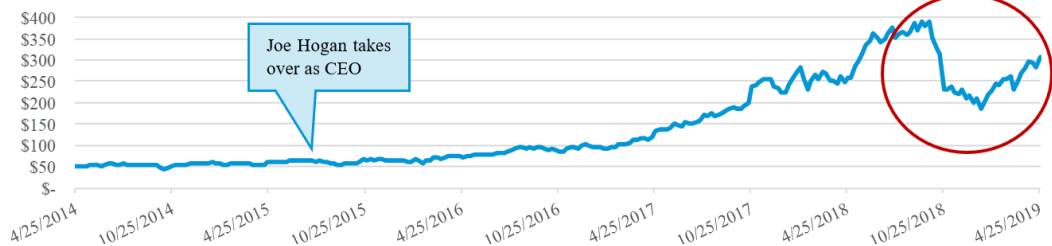
Michael Wooten
MWooten19@gsb.columbia.edu

Key Trading & Operating Statistics

Ticker:	ALGN	Market Cap:	\$ 25,436.5M	ROIC (5Y Avg.):	24.9%
Sector/Industry:	Medical Devices/Software	Net Cash:	\$ (617.1)	ROE (5Y Avg.):	22.9%
Recommendation:	BUY	Enterprise Value:	\$ 24,819.4M	5Y Avg. Revenue Growth:	24.4%
Share Price:	\$ 318.0	2018 Revenue:	\$ 1,966.5M	5Y Avg. Gross Margin:	75.3%
5Y Target Price:	\$ 632.5	2018 EBITDA:	\$ 521.3M	5Y Avg. EBIT Margin:	23.7%
Total Return Potential:	99%	Net Debt/EBITDA:	-1.2x	2019E Forward Multiples (Consensus)	
Annualized Return:	15%			P/E	58.6x
Bear/Bull:	\$ 200.0 \$ 1,000.0	S/O (millions):	80	EV/EBIT	44.1x
Upside/Downside:	5.7x	Short Interest %	3.8%	EV/EBITDA	39.4x
52 Week Range:	\$ 398.9 \$ 177.9	LTM Total Return:	23%	EV/Revenue	10.2x

Source: Bloomberg 04/26/2019

ALGN 5-Year Chart



INVESTMENT THESIS – BUY:

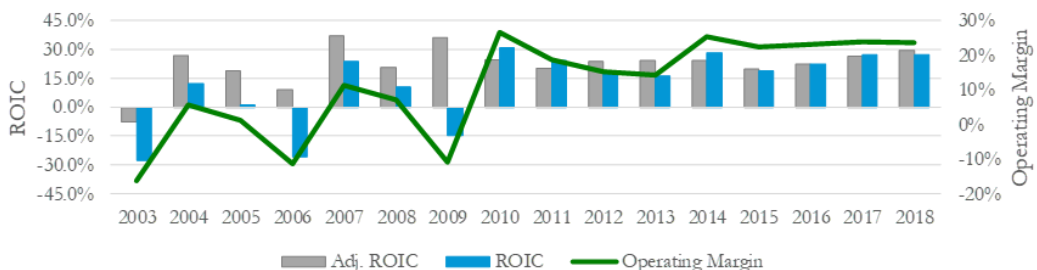
I recommend **buying** shares of Align Technologies, Inc. (“ALGN” or the “Company”) due to the Company’s entrenched position as the dominate market leader in the fast-growing, yet underpenetrated industry of clear aligner braces. ALGN’s valuation is justified given the Company’s durable competitive advantage and the overall attractiveness of the total addressable market (“TAM”). The recent pullback in ALGN’s shares provides an attractive entry point for long-term investors to purchase a great business 20% below its 52-week high.

ANATOMY OF A GREAT BUSINESS: (Attractive Unit Economics + Large TAM) x Durable Moat = Great Business

- **Attractive Unit Economics** – ALGN has **75% gross margins**, getting close to 80% on Invisalign products. Now that the company has reached scale and is almost fully automated, the SG&A leverage means for every \$1.00 revenue earned, \$0.20 can be reinvested into the business or returned to shareholders. As a capital-light business, its ROIC is very attractive. Adjusting for excess cash, the **ROICs are >40%**. If ALGN is able to use machine learning/AI to eventually replace doctors in the treatment process, or even some portion of cases, then ALGN would be able to eat part of orthodontists’ 75%+ margin while reducing the treatment cost to end-consumers.

- **Large TAM** – provides a runway for the company to continue reinvesting in the business at high returns on incremental invested capital (i.e. ROIC x Retention Ratio = Sustainable Growth Rate). **~60%-75% of the global population** suffers from malocclusion (misaligned teeth). ALGN is the largest provider of clear aligners, with ~70-80%+ market share, yet **clear aligners only represent 15% of orthodontic case starts**. With recent innovation, **ALGN can now treat 75-85% of cases**. There are 300M people who could benefit from Invisalign in markets that ALGN is already in. Currently ~12M actively seek annual treatment.

- **Durable Moat** – this is the most important characteristic of a great business because it allows a company to tap the full potential of the Large TAM without losing its Attractive Unit Economics. **ALGN’s moat is more than a patent** (or 894 patents). It’s comprised of a bunch of small things that, when added up, will be very difficult for competitors to overcome. See below for more details on competition.



Align Technology, Inc. (ALGN) - Long (Continued from previous page)

INVESTMENT SUMMARY:

ALGN is a highly innovative technology company with fully integrated end-to-end digital workflow capability. It also runs the largest 3D manufacturing operation in the world, and which is almost fully automated. ALGN has two primary operating segments: 1) Its Invisalign® System (~85% of revenue), and 2) Scanners and Services ("Scanner") led by ALGN's iTero® brand (~15%). Scanners are computer-aided design & computer-aided manufacturing ("CAD/CAM") machines that dental professionals use for many treatment applications and is fully integrated with the Invisalign System. Invisalign is a Class II medical device regulated by the FDA to treat patients that suffer from malocclusion.

The Company has enjoyed explosive topline growth of ~25% over that last 5 years, largely attributable to greater adoption by orthodontists, ("Orthos") and general practitioner dentists ("GPs"), and very strong international growth led by China, which grew 91% YoY in 2018. International accounts for ~50% of ALGN's revenue, with China representing 8%. The adoption and interoperability of iTero and other scanners has been another significant growth driver for the Company as over 50% of cases are now submitted digitally because it's faster and easier.

Smart phones and Instagram have increased vanity, representing a global tailwind for ALGN as people become more self-conscious about their appearance. Adults who would not have considered treatment for malocclusion using traditional braces increasingly likely to seek treatment due to the more aesthetically pleasing alternative of clear aligners, led by Invisalign. I believe this trend will lead to continual adoption of clear aligners.

Income Statement	2014	2015	2016	2017	2018
Revenue	\$ 761.7	\$ 845.5	\$ 1,079.9	\$ 1,473.4	\$ 1,966.5
Growth	15%	11%	28%	36%	33%
Gross Profit	578.4	640.1	815.3	1,116.9	1,447.9
Gross Margin	76%	76%	75%	76%	74%
Operating Profit/Loss	193.6	188.6	248.9	353.6	466.6
Operating Margin	25%	22%	23%	24%	24%
GAAP Net Income	145.8	144.0	189.7	231.4	400.2
Net Margin	19%	17%	18%	16%	20%
GAAP EPS Diluted	\$ 1.77	\$ 1.77	\$ 2.33	\$ 2.83	\$ 4.92
Growth	127%	0%	32%	21%	74%
WA Diluted Shares	82.3	81.5	81.5	81.8	81.4
Total Trained Doctors	2014	2015	2016	2017	2018
Total Doctors	94,035	103,830	115,510	132,010	151,665
Case Volumes	2014	2015	2016	2017	2018
North America	338.5	398.4	469.4	631.6	780.7
International	139.5	184.8	239.8	344.8	499.9
Total Case Volume	478.0	583.2	709.2	976.4	1,280.6

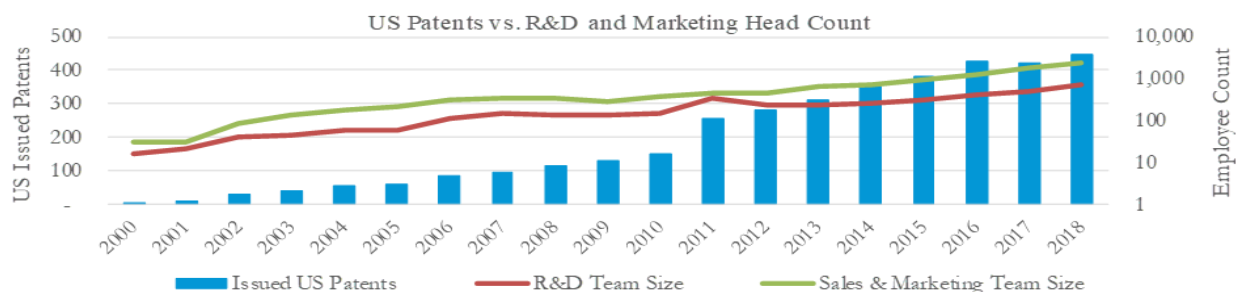
Balance Sheet	2014	2015	2016	2017	2018
Cash	454.7	527.3	640.3	721.5	735.4
Current Assets	657.2	732.0	953.0	1,157.0	1,302.5
Non-Current Assets	182.9	275.3	383.4	580.9	740.9
Total Assets	840.1	1,007.3	1,336.4	1,737.9	2,043.3
Current Liabilities	201.8	271.7	354.3	497.8	692.1
Non-Current Liabilities	33.4	39.0	46.4	129.7	107.5
Total Liabilities	235.2	310.7	400.8	627.5	799.6
Equity	752.8	847.9	995.4	1,150.4	1,252.9
Total Liabilities & Equity	988.0	1,158.6	1,396.2	1,777.9	2,052.5
Cash Flow	2014	2015	2016	2017	2018
CFO	226.9	238.0	247.7	438.5	554.6
CFI	(201.6)	(166.4)	72.8	(248.3)	6.9
CFF	(66.4)	(100.8)	(95.5)	(135.5)	(369.5)
Net Cash Flow	(43.1)	(32.2)	221.6	60.2	187.3

COMPETITION & MOAT ANALYSIS:

ALGN is currently facing significant competition in the wake of key patent expirations in 2017-2018. While ALGN is no stranger to competition. Patents have historically been an important competitive advantage because they protected ALGN's process technology around the use of software, allowing digital automation of the treatment planning and manufacturing process. Because competitors could not use the automation techniques to create a series of aligners (~44-50 per case), competing products had to be manufactured manually and were very limited in efficacy and efficiency. Now that those patents have expired, there has been an onslaught of new entrants in the market and more are expected in 2019.

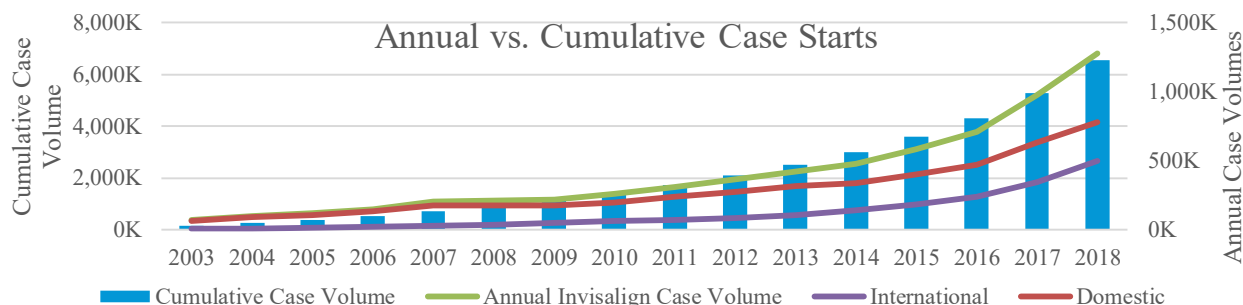
The Bear theses on ALGN all look the same: clear aligners are a commodity and patent expirations will bring competition, eroding ALGN's market share and collapsing the Company's lofty valuation. Full stop. **ALGN's moat is more than a patent.** Plastic might be a commodity, yet ALGN uses a patented material (SmartTrack) for its aligners, so even that might be a stretch. The process of accessing patients, creating a doctor-approved treatment plan, and then turning that plastic into a series of unique Class II medical devices is anything but a commodity. The Company's competitive advantage began with its patented process technology, but it has now evolved into a much more complex web of little things, creating a virtuous cycle.

In short, ALGN's aggressive defense of its patent portfolio allowed the Company to have a massive first-mover advantage. Under CEO Joe Hogan's strong leadership since 2015, ALGN's focus on TAM expansion through innovation has accelerated as embodied by the Company's sentence "the best defense is a great offense". ALGN's innovation separates it from the competition as Invisalign is the only clear aligner product on the market that can treat complex cases, including kids and teenagers with immature dentition (i.e. not done growing). Competitors can only treat minor cases which represent a small portion of the market.



Align Technology, Inc. (ALGN) - Long (Continued from previous page)

While treating **6.8 million patients** since inception, the Company gained deep knowledge on large-scale manufacturing of highly-customized devices in a very short timeframe (< 2 weeks), and with a low margin of error. ALGN now manufactures hundreds of thousands of aligners per day. For comparison, ClearCorrect and Smile Direct Club have only treated hundreds of thousands of patients (according to their websites). This is important because case data collection plays a key role in creating better treatment plans and the automation process and ALGN has made >150M unique aligners since 1999. Akin to the way Google's search engine gets better over time, ALGN uses data analytics and machine learning to improve its software. ALGN gets smarter with more data it collects and a virtuous cycle follows as Invisalign treatments become more effective and efficient through continual R&D.



VALUATION:

My **~\$630 5-year price target** is based on a probability-weighted average of 5 scenarios: **1)** Blue Sky (\$3,000 PT, 2.5% weight); **2)** Bull (\$1,000, 22.5%); **3)** Base (\$650, 40%); **4)** Bear (\$250, 20%); and **5)** Super Bear (\$150, 15%). ALGN currently trades at an eye-popping 58x 2019E P/E, 39x EV/2019E EBITDA, and 10x forward EV/Sales. As a long-term investor with a 5Y+ time horizon, stock price volatility does not bother me. True risk is permanent loss of capital when you sell.

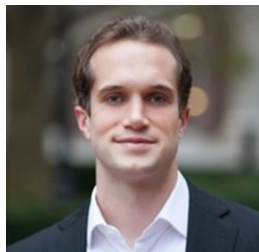
My Base Case assumes there will be 13.7M case starts in 5 years, with clear aligners used in 50% and ALGN serving 40% with an ASP of \$1,200. The valuation equates to a 32x P/E or 7.0x EV/Revenue multiple.

In my Bear Case scenario of 15% 5Y EPS CAGR, **ALGN's P/E multiple would have to be cut in half (i.e. 30x) in order for this investment to lose money** over 5 years. If ALGN's EPS compounds at 20% and the P/E multiple is reduced by 30%, ALGN's stock will generate an 8% annualized return, likely outperforming the S&P 500.

The Blue Sky scenario has ALGN displacing Orthos & GPs by using A.I. and digital automation to dominate the market. ALGN recently added Microsoft's Corporate VP of A.I. and Intelligent Cloud Business Development to its board. Eventually the DTC market will take hold, and when it does, ALGN is perfectly positioned to benefit. I estimated ALGN would have 80% of clear aligner market share and ~70% of total orthodontic case starts, while also increasing ASP by eating some of the doctors' 75%+ margin. The \$3,000 PT represents a 7.5x EV/Revenue multiple and 25x P/E multiple.

My **margin of safety** is rooted in: **A)** my belief that ALGN's durable competitive advantage is intact despite patent expirations; **B)** the size and underpenetrated nature of the TAM despite increasing levels of industry adoption, and **C)** the fact that ALGN has historically compounded revenue in excess of 13% in every 5Y period despite periods that include the Great Recession, intense competition (e.g. 2006), and initial technology that could only service a small fraction (25-35%) of the overall TAM. ALGN is a much stronger business today than it has ever been.

Scenario	Price Target	Probability	Weighted
Super Bear	\$ 150	15%	\$ 23
Bear	\$ 250	20%	\$ 50
Base	\$ 650	40%	\$ 260
Bull	\$ 1,000	23%	\$ 225
Blue Sky	\$ 3,000	3%	\$ 75
Blended 5Y Target		100%	\$ 633



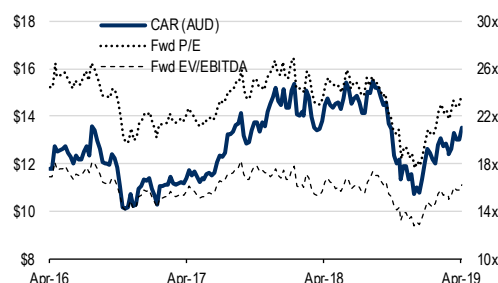
Tyler Redd '19

Tyler is a 2nd year MBA student at Columbia Business School. Prior to CBS, Tyler was a Senior Analyst at Privet Fund Management, a small-cap activist fund, and a Financial Institutions M&A Analyst at Raymond James. While at CBS, he interned at Aravt Global and Sunriver Management. Tyler is a member of the Value Investing program.

Carsales.com Ltd (ASX: CAR) - Long

Tyler Redd, CFA
JRedd19@gsb.columbia.edu

Capitalization (AUD Ms)	Vs. NTM		Key Statistics					
	Metric	Cons.						
Price	\$13.50		ADTV (\$Ms)	\$12.8				
FDSO	243.8		Sell-Side B/H/S	9 / 3 / 2				
Market Cap	\$3,291	23.7x	Div. Yield	3.3%				
Net Debt	413		Short Interest	6%				
Enterprise Value	\$3,704	16.3x	52 Week High/Low	\$16.45/\$10.56				
Historical & Forecast			2017	2018	2019E	2020E	2021E	2022E
Revenue (AUD Ms)	\$372	\$444	\$506	\$561	\$614	\$672		
Vs. Consensus			3.1%	5.8%	7.6%			
Adj. EPS	\$0.49	\$0.54	\$0.54	\$0.63	\$0.72	\$0.81		
Vs. Consensus			0.6%	4.9%	8.9%			
Look Thru EBITDA Growth	6%	14%	9%	14%	12%	11%		



Opportunity Summary

Over the past ~12 months, CAR has produced weak consolidated results driven by cyclically-linked poor performance from the company's non-core display advertising and auto finance segments. While these headlines have driven the ~25% peak-to-trough decline in the stock, CAR's *core competency, its ability to drive actionable leads to Australian auto dealers, continues to expand*. Dealer and private seller revenue are growing at HSDs while CAR's 4x web traffic lead vs. the combined sum of its Australian auto peers is widening. The market's overreaction provides the opportunity to acquire at a reasonable price (1) a dominant online platform which has built up unassailable network effects in a large market and (2) a portfolio of nascent, 20%-50% annual growth, international marketplaces. **I arrive at a 6/30/22 base case price target of AUD\$22.5 per share, providing a 75% total return and a 21% IRR opportunity.**

Business Description

CAR is Australia's dominant online portal to access the largest pool of buyers and sellers of autos. *The U.S. analogy is if CarGurus, Cars.com and Autotrader were a single site which generated roughly 2x their current EBITDA margins*. Carsales monetizes its platform through listing fees, fees for actionable leads as well as through display advertising. The company also has a partial stake in an Australian auto finance company where its lender partners take the balance sheet risk. Carsales operates less mature, high-growth auto marketplaces in South Korea, Brazil, Chile, Argentina and Mexico where it has #1 or #2 market positions in each geography.

Variant Views

1) Recent weakness in non-core display advertising and auto finance is largely linked to challenging Australian economic conditions.

CAR's stock declined ~25% from its August 2018 peak after reporting weak FY2018 earnings at the end of August. While CAR's core domestic segments (dealer and private seller leads) have continued to perform well, the company's Display and Finance segments have suffered. Poor performance within both segments is



YoY Revenue	2H17	1H18	2H18	1H19
Display	6%	4%	2%	(16%)
Finance	(1%)	23%	24%	(4%)
Dealer	6%	7%	8%	8%
Private	28%	21%	22%	12%
International	78%	66%	573%	521%
Total Revenue	9%	9%	29%	17%

Driving short-term stock performance

Driving long-term value creation

linked to cyclical conditions within the broader Australian economy which will eventually reverse. Declining Australian home prices has led to weakness in the rest of the economy, including new car sales which recorded a full-year decline for the first time since 2014. Economic weakness has flowed through to ad spend which was down 7% in 1Q19. Auto OEMs and new car dealerships have reduced their marketing budgets, directly impacting CAR's high incremental margin Display revenues. At the same time, Australian credit conditions have tightened, particularly in auto lending where YoY originations have been negative YoY since mid-2017. CAR's *unique competitive position in Australian online auto sales will allow it to continue to generate an increasing number of finance leads and capture a high share of Australian auto-related ad spend as the economy turns*.

2) CAR's core Australian auto classifieds business remains a dominant, capital-light marketplace which can compound earnings in the HSDs.

- Highly attractive metrics:** CAR's core domestic business generates 55%+ EBITDA margins and >300% returns on tangible capital.
- Established network effects:** On the supply-side of its marketplace, 95% of Australian dealers list on Carsales.com, and the company has the largest pool of dealer inventory in the country. On the demand-

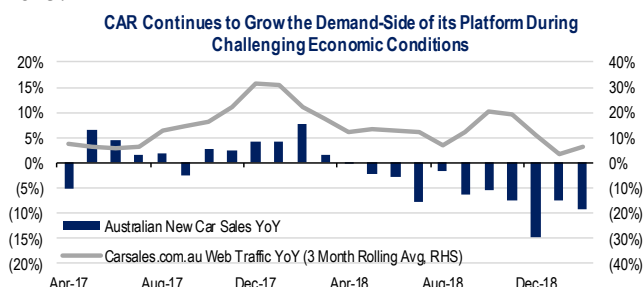
Carsales.com Ltd (ASX: CAR) - Long (Continued from previous page)

side, CAR dwarfs competitors in terms of consumer aggregation and generates the highest ratio of website unique visitors relative to home market population of any of the international auto classifieds. This high quality pool of potential leads is what allows Carsales to effectively monetize its dealer base.

- (iii) **Pricing power:** Carsales regularly achieves pricing increases. Similar to other dominant marketplaces, CAR is able to increasingly monetize power users though providing additional tools and features.
- (iv) **Growing intrinsic value through cycles:** Carsales continues to grow web traffic and post YoY growth in dealer and private listing revenue despite challenging Australian economic conditions.
- (v) **Multiple failed market entries by competitors:** CAR has fended off multiple well-funded entrants. Most recently, Carsguide.com relaunched as a 50%/50% JV between News Ltd and a consortium of auto dealers. The renewed company offered free leads for a period of time but was still not able to permanently dent CAR's model.

	Feb-19 Website Visits	Avg. Visit Duration	Feb-19 Minutes Visited	Minutes: Carsales vs. Competitor
Australian Auto Verticals				
carsales.com.au	11.0	7:45	84.9	
carsguide.com.au	4.6	2:59	13.7	6.2x
pickles.com.au	1.1	8:40	9.2	9.3x
drive.com.au	1.5	1:36	2.4	35.6x

Source: Similarweb



3) The value of CAR's stakes in rapidly scaling international auto marketplaces is underappreciated by investors.

Carsales is unique among the global auto marketplaces (more akin to the general classifieds "Big Three," Schibsted, Naspers and eBay) in owning a portfolio of #1 market position, international businesses. Webmotors, CAR's 30% owned Brazilian marketplace (accounted for under the equity-method), is Brazil's #1 auto vertical, grows revenue 30%+ annually, and is generating 60%+ incremental EBITDA margins. SK Encar, CAR's 100%-owned South Korean marketplace (Carsales only recently consolidated SK Encar's results after acquiring the remaining 50.1% stake it did not already own), continues to grow ~20% annually while producing ~50% EBITDA margins. In total, CAR's international auto marketplaces operate in economies which are 4x the size of the Australian market. These international subsidiaries are likely to grow revenue and EBITDA at a 20% and 30% CAGR, respectively, and represent 30% of CAR's value by 2022.

	Home Market Population (Ms)	Private Consumption (AUD Bs)	Monthly Visit Minutes/ 1K Internet Users	Total Revenue (AUD Ms)	Revenue (AUD)/ Population	Revenue/ Private Consumption
Mature Peer Auto Classifieds						
Carsales Core Domestic	25	\$997	446	\$296	\$12.05	2.97bps
Auto Trader UK	66	\$2,331	412	\$593	\$8.99	2.55bps
Est. Total of US. Auto Peers	326	\$17,564		\$3,083	\$9.46	1.75bps
Average of Mature Marketplaces			429		\$10.17	2.42bps
CAR's International Growth Assets (South Korea/Brazil/Chile/Argentina/Mexico)						
Sum	643	\$4,276		\$114		
Consumption Weighted Average			37		\$0.34	0.27bps
CAR International Avg. Vs. Mature Average			9%		3%	11%

Source: Similarweb, World Bank, US auto peer filings

Investment Playbook

Negative Australian cyclical conditions will normalize at some point. In the meantime, CAR's core Australian marketplace compounds earnings at HSDs while its international marketplaces grow at a 20%+ CAGR. High growth international assets contribute to 25%+ of EBITDA by FY2023 which generates a modest valuation re-rating for the total company.

Valuation

I utilize a sum-of-the-parts analysis incorporating NTM metrics (FY2023) to arrive at a 6/30/2022 base case price target. A 15x multiple on Core Domestic EBITDA is at the lower range of the multiples of mature global peers. 18x and 25x multiples on SK Encar and WebMotors 2023 EBITDA are below the valuations of rapidly growing peers such as Schibsted's recent spin. As a sanity check, the 6/30/22 price target of AUD \$22.62/share represents a 25x multiple on my FY2023 EPS estimate of AUD\$0.90.

Key Risks

- (i) Shifts towards programmatic ad spend may hurt CAR's ad pricing. I model lower growth than historically experienced.
- (ii) CarGurus announcing they will enter Australia would be a negative ST for CAR's stock. However, Auto Trader UK has shown just how difficult it is to unseat a dominant #1.
- (iii) Gumtree (Australia's largest horizontal) has had success in private market auto listings.

(Look through metrics, \$Ms AUD)	FY2023	Multiple	Value	% of Total Value
Core Domestic EBITDA	\$ 242	15.0x	\$ 3,628	64%
Domestic Investments + Finance EBITDA	27	7.0x	189	3%
Total Value of Domestic Businesses			\$ 3,817	68%
SK Encar EBITDA (Korea)	61	18.0x	1,105	20%
WebMotors EBITDA (Brazil)	24	25.0x	608	11%
Other International Revenue	38	3.0x	113	2%
Total Value of International Businesses			\$ 1,826	32%
Enterprise Value			\$ 5,643	100%
FY2022 Net Debt			(59)	
Market Capitalization			\$ 5,584	
6/30/22 Target Price per Share			\$ 22.62	
Total Return (Including Dividends)			74%	
IRR			21%	



Mitchell Aulds-Stier '20

Mitchell is a 1st year MBA student at CBS. He was previously an Associate with PNC Mezzanine Capital. Mitchell will be interning with DG Capital Management and Sycamore Advisors.



Karthik Kasibhatla '20

Karthik is a 1st year MBA student at CBS and was at the Fixed Income Prime Brokerage at Barclays in New York prior to Business School.



Angela Qin '20

Angela is a 1st year MBA student at CBS. Previously she worked at Mizuho Securities Asia in the Fixed Income Trading department. Angela will be interning at TCV over the summer.



James Shen, CFA '20

James is a 1st year MBA student at CBS. Previously he worked at HSBC in the fixed income trading team and balance sheet investment team. James will be interning at Cornerstone Research over the summer.

Dean Foods 6.50% Senior Unsecured – Long 1st Place - 2019 UCLA Credit Pitch Competition (March 2019)

Mitchell Aulds-Stier, CAIA

mauldsstier20@gsb.columbia.edu

Karthik Kasibhatla

skasibhatla20@gsb.columbia.edu

Angela Qin

cqin20@gsb.columbia.edu

James Shen, CFA

JShen20@gsb.columbia.edu

Recommendation

We recommend buying DF 6.50% 2023 Senior Unsecured bonds at the current price of \$66. The bond offers a compelling risk versus reward profile due to the following: i) Dean Foods is accelerating progress on cost cutting initiatives, ii) long-term industry demand and cost stabilization, iii) the market has overlooked actionable growth opportunities, and iv) DF is cash flow positive, has ample liquidity for the near-term, and strong liquidation value.

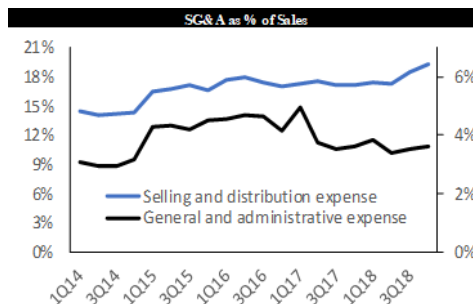
Business Description

Dean Foods is the second largest US-based processor and distributor of dairy products. Its products include branded and private label fluid milk (68% of 2018 sales), ice creams (14%), and creamers, etc. DF operates 58 production plants around the country and a fleet of 5,000 trucks. DF's 2018 revenue was \$7.7bn, and adjusted EBITDA was \$136mm. Recent updates: on February 26, 2019, DF did the following: i) engaged Evercore to explore strategic alternatives, ii) announced dismal Q4 earnings primarily driven by increases in transitory, fuel, and resin costs, and iii) suspended its dividend to preserve cash to affect turnaround initiatives. The bond price fell 6% on the news.

Investment Thesis:

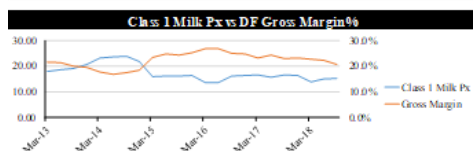
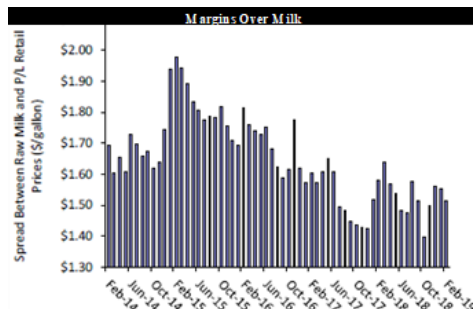
i) DF is Accelerating Progress on Cost-Cutting Efforts

Dean Foods started implementing \$150 million in cost cuts in 2018 and aims to finish the initiative by 2020. The initiatives include: 1) facility rationalizations, 2) implementing a flatter, leaner and more agile organizational structure, and 3) optimization of spend management. The market may have priced in a worst-case scenario given the sharp decline in margins (23% in 2017 to 21% in 2018) and EBITDA decline. However, DF's cost-cutting initiatives have accelerated in Q3 as DF closed down plants (7 plant closures in 6 weeks (3Q18); 14 total facility closures in the past 18 months). Given its improved cost-cutting efficiency, DF is expected to generate 100bps improvement in gross margin and 40bp in G&A margin improvement, which should improve EBITDA and cash flow.



ii) Long-Term Industry Demand & Cost Stabilization

While DF's volume softness has continued (private label milk declined by ~3% and branded by ~5%), DF's pricing of both branded and private label as well as margins over milk all appear to have stabilized since October per IRI data. This indicates that the pricing battle among large grocers has at least temporarily subsided. Additionally, margins over milk have stabilized. On the cost front, oil price stabilization should help control transportation, logistics, and resin costs. Moreover, US farmers have over-supplied milk for the past few years. The supply of milk has been rising at 1% vs. demand shrinking by 2% YOY. The improvement in milk production per cow should mitigate the inflationary impact and stabilize future milk prices.



iii) The Market Has Overlooked Actionable Growth Opportunities

Dean Foods has a track record of growing nascent brands. For example, DF rapidly scaled its 2002 acquisition of Silk from \$30mm to \$350mm of revenue over the course of three years. Silk eventually became a \$2bn revenue brand before it was sold in 2013. DF acquired multiple similar scale, emerging brands last year amid a shift in consumer preference, including: 1) Good Karma Foods: Flaxseed-based milk alternatives (\$18mm annual sales), 2) Uncle Matt's: Organic Juice Maker (\$10mm annual sales). Market share of milk alternatives was approaching 10% in 2018 and CAGR is expected to be 5-10% over the next several years as alternatives take share from dairy milk.

Dean Foods 6.50% Senior Unsecured – Long (Continued from previous page)

iv) CF Positive, Ample Liquidity & Liquidation Value

DF was cash flow positive in FY2018 and, as of February 22, 2019, DF had over \$144M of liquidity. Additionally, DF owns critical milk processing infrastructure given that it controls 1/3 of the U.S. milk capacity (58 processing facilities and 5,000 refrigerated trucks, of which it owns the majority); as such, there is a high probability that DF will be maintained as a going concern OR most of its assets will remain in use, irrespective of which corporate entity owns the assets. Primary research indicates that DF's truck fleet, which is principally comprised of high mileage 28-foot refrigerated trucks (i.e. 'Reefers' w/ mileage of roughly 250-300k and approx. 5-7 years of age), would yield between \$40k and \$55k in a Ch. 7 liquidation. Also, over 50% of the liquidation value comes from cash and A/R. As a going concern, even with a 50% valuation discount to peers (5.0x EBITDA), DF's bondholders would likely recover close to market value of the bonds. Lastly, the Company has \$83M in NOL's and tax-loss carryforwards that would enhance bids in a distressed sale.

Sr. Unsec. Bond - Recovery in 363 Sale						
Assumed 363 Multiple	Exit EBITDA					
	150.0	175.0	200.0	225.0	250.0	
	4.00x	24.2%	31.4%	38.5%	45.7%	52.8%
	5.00x	34.9%	43.9%	52.8%	61.7%	70.7%
	6.00x	45.7%	56.4%	67.1%	77.8%	88.5%
	7.00x	56.4%	68.9%	81.4%	93.9%	100.0%
	8.00x	67.1%	81.4%	95.7%	100.0%	100.0%
	9.00x	77.8%	93.9%	100.0%	100.0%	100.0%

FINANCIAL HIGHLIGHTS					
\$ in Millions	2015	2016	2017	2018	2019E
Net Sales	\$8,122	\$7,710	\$7,795	\$7,755	\$7,718
Adj. EBITDA	\$400	\$467	\$326	\$136	\$153
CapEx	\$163	\$145	\$107	\$115	\$100
Net Debt / EBITDA	1.9x	1.9x	2.7x	6.5x	5.7x

Liquidation Analysis (CH 7)			
	12/31/2018	% Salvage	Recovery
Cash	24.2	100%	24.2
A/R	589.3	90%	530.3
Raw Materials Inv.	101.6	50%	50.8
Finished Goods Inv.	153.9	70%	107.7
Other Current Assets	39.1	20%	7.8
PP&E	1,006.2	40%	400.0
Goodwill & Intangibles	197.5	5%	9.9
Total	2,111.8		1,130.8
	Balance	% Recov.	Recovery
<u>Secured Claims</u>			
Senior Secured Revolver	19.3	100%	19.3
A/R Facility	191.6	100%	191.6
<u>Administrative Expenses</u>			
Trustee, Legal, Advis. Fees	50.0	100%	50.0
<u>Unsecured Claims</u>			
Sr. Unsec. Bonds	700.0	64%	444.7
Trade Payable	699.7	64%	444.5
Total Recovery	1,660.6		1,150.1

PP&E Liquidation Breakdown						
	Gross PP&E	% of Gross	Est. Cum. Deprec.	Est. Book Value	Est. Salvage%	Est. Recov.
Land	162	5.8%	0	162	65%	106
Buildings	643	22.9%	438	205	40%	82
Leasehold Improv.	84	3.0%	57	27	0%	0
M&E	1,874	66.7%	1,276	597	36%	213
Construction in Prog.	45	1.6%	31	14	0%	0
Total	2,808	100.0%	1,802	1,006	40%	400

Capital Structure & Covenants

On Feb. 22, 2019, DF completed an amendment of the credit agreement for its receivables facility, which included an extension of the maturity date from Jan. 2020 to Feb. 2022. DF also refinanced its ABL revolver. Under the new \$265M ABL facility, DF must meet a 1.05x fixed charge coverage ratio, which is tested when liquidity is less than \$100M or, once DF pledges certain of its facilities, the lesser of 50% of the borrowing base and \$175 million. Because FCCR is defined as EBITDA less CapEx to fixed charges, DF will likely be unable to meet a 1.05x FCCR and is thus unable to draw on the revolver fully. However, DF has ample near-term liquidity (>\$144M) available.

Capital Structure						
US\$ Millions	12/31/18	Market Value	Book Lvg.	Market Lvg.	Maturity	Coupon
<u>Subsidiary Debt</u>						
\$450mm Receivables Facility ⁽¹⁾	190	190			Feb-22	1.05% - 1.45%
Capital Leases and Other	2	2			-	
Total Subsidiary Debt	192	192	1.4x	1.4x		
<u>Dean Foods Debt</u>						
\$265mm ABL Revolver ⁽²⁾	19	19			Feb-24	L + 2.25% - 2.75%
Total Secured Debt	19	19	1.6x	1.6x		
6.5% Senior Unsecured Notes due 2023	700	462			Mar-23	6.50%
Total Dean Foods Debt	719	481	6.7x	4.9x		
Total Debt	911	673	6.7x	4.9x		
Less: Cash and Cash Equivalent	24	24				
Net Debt	887	649	6.5x	4.8x		

Key Risks and Mitigants

1) Continued Vertical Integration

Among Retailers: WMT could continue building its in-house dairy processing given the benefits of vertical integration as well as its: i) better / more cost-effective distribution capabilities, and ii)

larger and more efficient dairy processing plants (average DF vs. WMT plant production is gallons: 40M vs. 125M). However, WMT's shareholders would likely not be pleased with such poor use of capital (razor-thin margins and capital-intensive business that should be out-sourced).

2) Continued Price Competition Among Retailers and Private Label Risk: While pricing has stabilized in recent months according to IRI data, with retailers challenged by online and grocery delivery competitors, such retailers may resume their pricing war for foot-traffic drivers such as bread, eggs, and milk. This could drive increased penetration of DF and non-DF private label, further deteriorating DF's branded product offering (primary research indicates that DF breaks even on private label).

(1) \$110mm of outstanding letters of credit; (2) Springs to September 15, 2022 if Dean Foods has not (i) repaid the existing Senior Notes with cash, revolver borrowings or proceeds under Receivables Financings, (ii) refinanced the (iii) extended the maturity of the Senior Notes to a date no earlier than 5 1/2 years after February 22, 2019; (3) Security for the revolver includes substantially all assets of Dean Foods and the guarantors, other than the equity of Dean Foods' subsidiaries who are sellers under the Receivables Securitization Facility and the receivables sold thereunder.

Bill Stewart, Stewart Asset Management

(Continued from page 1)



Bill Stewart

there. The firm was sold in 1973. He joined Ruane Cunniff and Stires as Vice Chairman.

In 1974 he founded W.P. Stewart & Company as a broker dealer and investment advisor, which became a publicly traded company on the New York Stock Exchange in 2000. At the time it went public, the firm had \$12 billion in assets under management in separate accounts, as well as US and European registered mutual funds. From the firm's founding in 1974 to 2013, the year in which the firm was acquired by AllianceBernstein L.P., W.P. Stewart & Co. outperformed the S&P 500 Index by an average of 430 basis points annually, net of fees.

After the sale of W.P. Stewart & Co. to AllianceBernstein in 2013, Bill formed WPS Advisors Ltd., a Bermuda company. A group of analysts was assembled to pursue an investment philosophy similar to the one that earned Bill's clients over 16% a year after fees for the 38-year history of W.P. Stewart and Co. The new business was domesticated to the US in 2017, as Stewart Asset Management, LLC, an SEC Registered Investment Advisor. Over the four and a half years since its inception, the new firm has continued to grow its clients' portfolios at a rate slightly faster than its predecessor did. Initial clients of the new firm

have now more than doubled their investment.

Graham & Doddsville (G&D): Could you tell us about your background and how you got into investing?

Bill Stewart (BS): I got into investment management by accident. I initially took a temporary job on the floor of the New York Stock Exchange as a page boy in 1955 while I was waiting to start college at the University of Maine. It turned out that I liked what I saw on the floor and I decided that I should learn that business. At the time, I was planning to be a Forest Ranger and had no interest in investing. But after watching the money being made by smart investors, I decided that if I played it right, I could buy my own forest. In time, along with others, I was eventually able to buy several of them as well as a farm and turn them over to conservation groups to manage in perpetuity.

G&D: What was it about your time as a page that made you realize this was the industry you wanted to be in?

BS: It was a time you probably can't even imagine. There were no phones on the open floor, let alone cell phones, because no electronic communication was permitted. There were telephones around the rim of the floor, but nothing in the middle, nothing at the posts. If you wanted to do serious trading, you had to physically be on the floor to see your counterparts and deal with them directly. I saw some smart guys doing things I thought were interesting, while making a lot of money at it;

hence I figured I ought to learn something about this industry.

I started going to night school in the city instead of attending the University of Maine. I went through various floor positions at the Exchange, started developing a business, and became a broker on my 21st birthday. I learned enough about research to go out and start seeing companies, visiting management, doing spreadsheets, and writing up reports on stocks I liked. I was selling these ideas to dentists, pharmacists and furniture dealers.

The market environment was relatively quiet. IBM was the stock of the decade, growing at 14% a year and trading at 50 times earnings, the average ratio for good quality growth at the time. Many companies were growing at 7% per annum and trading at around 25 times earnings, much higher than today. IBM was at the top of the list of what we considered high-quality growth companies, along with National Cash Register, American Home Products, Merck, Pfizer, Abbott and General Foods.

This was around the time when Ben Graham said that he would only invest in high-quality growth companies if he could, but generally speaking they were too expensive, and he'd have to amortize a lot of P/E ratio. He took a 7-year look, and if he envisioned a market multiple of 17 in the terminal year and was paying 50 times up front, amortizing that was too big a headwind. So, he concentrated on what came to be called value stocks.

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Graham published a formula with his idea of fair P/E ratios relative to underlying growth rates: $8.5 + \text{twice the future growth rate}$. I began to look for companies that were priced below his recommended levels and tried to work out for myself what constituted an appropriate P/E ratio. My Security Analysis course at the New York Institute of Finance was taught by one of Graham's partners at Graham-Newman, and he was basically teaching Graham & Dodd's philosophy. I took his teachings to heart and started building out a very concentrated portfolio of companies, only eight different businesses, albeit in different industries to provide some diversification.

G&D: Is that portfolio construction still what you're trying to attain?

BS: Roughly 5-10 years after that first portfolio, I realized I needed to have a bigger investment universe. Having a portfolio of eight companies is maybe a little bit too concentrated, so we increased our portfolio size to 15-20 companies. In fact, we still have 15-20 stocks in our clients' portfolios today, consistent with what we've done for more than 40 years.

I adopted a value approach, but one that requires highly predictable earnings growth, with the goal of having a very concentrated portfolio with aggregate earnings that go up every year. That means that if you pay too much, it still gets cheaper next year. That's our hedge. In a cyclical, you never know when the next cycle will occur, and you can be out of

phase for a long period of time.

Going back over 50 years, we've never had a sharp fall in earnings power behind our clients' portfolios - what Buffett calls "look-through" earnings. Our portfolio proved to be much less cyclical than the S&P 500, for which the annual rate of earnings change, up or down, can be very dramatic. The look-through earning power growth behind our clients' managed accounts has averaged about 15% a year for over 40 years now and has never declined. That earnings growth drives performance in the long run.

"At the time, I was planning to be a Forest Ranger and had no interest in investing. But after watching the money being made by smart investors, I decided that if I played it right, I could buy my own forest."

Our goal has always been to double our clients' money every five years, which is compounding at a little less than 15% a year and we've done that since we've been in business. At my old firm, we ended up with an average of 16.2% appreciation per annum after fees for 38 years. As of last week, we were at 16.3%

growth per annum, net of fees, since we started Stewart Asset Management four-and-a-half years ago. Our initial clients in the new firm have already just about doubled their capital.

G&D: Was there anything in particular that convinced you that predictable earnings growth was the way you wanted to look at investing?

BS: When I first started out, I took lots of courses on analysis and accounting and thought I could find great value. Some things worked but other things didn't - and I really disliked the ones that didn't work. Earnings shortfalls were almost always the reason an investment didn't work out. Everything we do when investing people's capital is based on compounding. The whole reason for being in the investment world is to compound money. We all know that 7% per annum doubles in about 10 years and 15% a year more than doubles in five years. I want that magic working for me all the time.

The thing that screws up compounding is down years. In order to harness compounding, I wanted to make sure I didn't have those down years in earnings. There are only two variables in this business: future earning power and future P/E ratio. I believed and still believe that we can get a pretty good handle on future earning power in a very limited number of leading businesses. P/E ratios are considerably more volatile and tougher to accurately forecast - though we try. In all 38 years at my last firm, W. P. Stewart & Co., we had about 15% to 16% compounded growth per

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annum in underlying earnings power, basically more than doubling every five years. The after-fee rate of return for our portfolio was similar. The performance of the portfolio followed the performance of earnings; to be sure, they weren't the same in every year because they can get out of whack with each other, but over the long run that's what it averaged out to.

This method works, and it's a simple one. First, you find a small group of great companies and get to know them very, very well. Then, you evaluate them. We have a strict appraisal system and we forecast earnings over five years. For 99% of the public companies, you can't do that very well because they're very volatile, but a few of them are pretty predictable. These companies typically have a commanding position in their markets and showcase great profitability as well as a high degree of predictability. They also have great management in depth and wonderful balance sheets. When a business meets these criteria, you can start appraising value five years out.

Once we find a business that we like with predictable earnings growth, we'll then work with the spreadsheets. We use all our qualitative work and interviews with management to try to estimate earnings in five years' time, as well as the terminal growth rate. We then evaluate a prospective premium or discount versus the market as a whole, for which we also forecast a multiple. Right now, it's an easy 17x, in line with the historical average and probably a little lower than it

should be with the low interest rates we have today. If we say a company is going to be worth a 30% premium, we'll use a 22x multiple in the model in the terminal year, and then discount the resulting value, plus accrued dividends, back to present value. We discount at 8% to 10% even if the Treasury market yields less than 3%. So that's probably too high a discount rate. But that's a margin of safety and it goes back to Graham and Dodd. You want a margin of safety in everything you do.

"Everything we do when investing people's capital is based on compounding. The whole reason for being in the investment world is to compound money."

We then want to buy stocks well below their fair present value as a further cushion. This is not a science but more of a guessing game. We try to make the best guesses we can, but you need those cushions.

G&D: Can you go into more detail on what you call the appraisal system? When you're digging into a company, what does it look like?

BS: You might start out with the addressable market, then get to how many units a company will sell, what the value per unit is, and what the margins are going to be. Ultimately you build a five-year model and come up with a final

earnings power projection. It comes down to earning power per share.

We then take a market multiple and, because our companies typically grow twice as fast as the overall market, are market leaders, have great balance sheets, and have outstanding management teams, we'll come up with a premium multiple. In a few cases there might be a discount, but generally speaking it's a premium.

Mathematically, if a company is growing twice as fast as the market, the near-term P/E multiple premium amortizes very quickly because the earnings grow.

Typically, we've been giving the growth businesses we invest in a 10% to 50% premium to the market, depending upon how well we think things are going to go for that company five years from now. I guess the highest terminal multiple we have is 26x for Amazon, in five years. It's currently at about 60x our idea of current capitalizable earning power.

G&D: In terms of earnings predictability, how do you analyze a company like Amazon, which five years ago looked much different than what it does today?

BS: Obviously, Amazon Web Services is huge and is the most profitable division now. These situations are dynamic, so you make the best guess you can and try to be more on the conservative side when figuring out what all these things are likely to be worth, but the lovely part about a

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model is that it's not fixed. It may be a five-year model, but you can change it every day. What you're really doing is laying out your decision tree and adjusting it. You can come back saying, I think I got this a little high, or that a little low. It's not fixed. In essence, we're always operating with the best guess we can make. If it changes weekly, it changes weekly. It doesn't usually change weekly, but it could. Nobody's got a lock on what's right, a model is only a model and it's not fixed in stone.

Sometimes, nothing's changed but you changed your mind. That's good. The purpose of the process is to bring out our best guesses. Everything we do is guessing. I think we all get a little carried away with the science of the matter, because there are lots of formulas, whereas you're essentially making a guess.

In essence, we're looking at investment opportunities as a businessman would look at them. We're thinking about buying a business today for \$100 million and figuring out whether or not we could sell it for \$200 million five years later. We make reasonably conservative guesses, and as I've mentioned we have succeeded in growing look-through earnings behind our clients' portfolios every single year. That's very important. We try to have one of the two big variables reasonably under control.

G&D: Coming back to Amazon, are there certain assumptions that you and your team think about in terms of what the company will look like in five years?

BS: Absolutely. For example, take the retailing section, which is huge, but where the margin is only about 7%. For marketplace products sold by 3rd parties, they don't take in the sales price of the products sold, but they record their commission on the sale, which starts out at 100% gross profit. That business is booming for them. Now they invest a lot of it away, but you have to try and make an assumption about actual future earnings power.

"Frank [Rooney] was one of the great retailers and I learned a lot from him. We'd drive around the country, go into the parking lot of a shopping center, and he could tell me the average annual income of the people who shopped there just by the size of the grease spots in the parking lot."

Web Services is another big operation as we discussed, and they're also getting into retailing with their own stores, which may, in effect be mini distribution centers. It's very dynamic, which is one reason why we still assign Amazon a relatively high multiple of 26x

in year 5 which, by the way, isn't really that high. We have capitalizable earnings per share of a bit more than \$140 in the model's terminal year, 2024. A terminal multiple of 26x gives us a price that, discounted back at 9%, yields a present value of \$2,250. That's why it's our largest position and has been for a long time. MasterCard is our second largest position and, including at my old firm, we've owned MasterCard since they went public.

G&D: Before we go into individual positions, can you talk more about your analytical process and the way you make assumptions? Do you have analysts by sector in your firm?

BS: We have 5 investment people, excluding me, and we always have a team of two on each investment: one does primary coverage, and another is the backup, to ensure continuity. We have a small operation, but it works. Each analyst is a generalist and is getting out there asking questions, visiting management, digging around.

G&D: You ran a firm for 38 years before this and now you have this new firm, which is only four and a half years old. Can you talk about what prompted the change?

BS: I had partly retired from the old firm in 2001 and then fully retired in 2004. Yet, by 2007 the new management was having some problems and the board asked me to come back. Initially I didn't want to, but I did come back and stayed with them until AllianceBernstein purchased the company in 2013, which

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was probably the appropriate thing to do. They seem to be happy at AB.

After the sale, I wanted to go back to retirement, which I did for a few months. Then the former CEO of W. P. Stewart & Co. and I thought we might start a new investment manager. I love being in the market trying to figure out what's happening next ; but these very smart young people at Stewart Asset Management are doing the heavy lifting now, not me.

G&D: How important is management when it comes to looking at a stock?

BS: Ben Graham always said "don't count management twice". The projected numbers will reflect the management's performance, which means you don't have to re-evaluate management.

That being said, I learned as a young analyst that management is not a given. It's dynamic. The management team changes, individuals change, policies and procedures change, unforeseen challenges develop, opportunities occur. I think you've got to look people in the eyes, talk to them, and get a feel for their personality. To me, investing is all about people. Good managers doing a great job. I want to know that management is going to achieve its plan, and I need to make a judgment on that. There are people you end up trusting and other people who, when you walk out of their offices, the hair on the back of your neck is standing up. I think good management is vital.

You don't put an extra point on or take a point off, but management gives you conviction. We always ask ourselves "Do we want to be in this business?" Coming back to what I already said, when you're investing you have to think as a businessman buying a business, and then ask yourself "Do I want to be in this business with these people? Did they seem like they've got their heads screwed on right? Are they long-term thinkers or are they opportunists?" That's the type of thing you want to know. Then, if the questions are answered positively and you want to be in this business with these people, you end up asking if you want to be in this business with these people *at this price?* You apply the whole appraisal process and get to your discounted present value – what Graham used to call "fair value," a price that a share seems likely to sell at on the way up or down within a reasonable period of time.

This process is very different than the one from the typical value shop, where you're primarily looking at the balance sheet and underlying earning power. They're often seeking a discount to tangible value, which is also a very valid way to play. Such shops usually have a huge number of stocks and use good theory in general, so if they're wrong on some names it averages out. We take the opposite point of view. We have a very narrowly -focused portfolio where we have to be right more often. Sticking with really fine, particularly well-managed businesses helps us do that.

G&D: Are there any instances where you had conviction in a

management team and it just didn't work out?

BS: Oh, sure. I'm always telling our guys, success in this business is three steps forward and two steps back. You don't just keep marching on in a straight line, although thankfully we've had far more successes than failures.

G&D: How long do you typically hold an investment for?

BS: My horizon is 10 to 15 years on average, and at least 5 years. We held major positions in retailing for the better part of 20 years - great growth businesses like Walmart and Home Depot in their dynamic growth years. My best ever would be Melville Corporation: 26 years at 26% per annum. It was phenomenal.

Melville went from a little shoe chain headquartered in New York to becoming the 10th largest retailer in America. That was a great story. My interest started when I saw an article in the Times saying Frank Rooney had been appointed President of Melville. I knew it was a sleepy shoe retailer and the only thing it had going for it was its strong balance sheet. I called Frank to congratulate him on his new job but also asked him "What is a smart Wharton School graduate like you doing at a crummy old shoe company?" He said, "Well come on up and I'll tell you." They had their office in Midtown Manhattan. I got in a cab and went over there, and he explained to me how shopping centers were pushing Main Street off the map and would go up all over this country.

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Frank already knew that Saks, JCPenney, Sears and the likes would become the anchors in these centers. But nobody dominated the space between the anchors yet.

So, he figured, if he could control a shoe company, that would be a good place to start, because everybody needs to have shoes. Eventually, his goal was to dominate the space between the anchors like nobody else had done, and through multiple acquisitions, including chains like CVS and Marshalls, and fast store growth, he did it.

G&D: At what point did you sell your position in Melville?

BS: I sold my position in 1972, having held it for about 11 or 12 years. It went to 40 times earnings and I felt it was too expensive. I wrote a report saying I loved the company but the price was too rich. And then it fell down to about 12 or 15, during the big crash in 1974 and it briefly dropped to \$5 a share. We bought back a lot more stock and then it went to the hundreds from there.

Frank retired at 65, following the institution of a rule defining 65 as the mandatory retirement age that he established 20 years earlier. At that point, we sold all of our stock. Frank, by the way, went on to work for Warren Buffett for the next 18 years or so. I called to congratulate him on his 80th birthday and he said, "You know what Warren just gave me for my birthday? A new 20-year contract."

Frank was one of the great retailers and I learned a lot

from him. We'd drive around the country, go into the parking lot of a shopping center, and he could tell me the average annual income of the people who shopped there, just by the size of the grease spots in the parking lot.

G&D: Do you have an opinion on the future of brick-and-mortar retailing?

BS: Brick-and-mortar retail is gradually declining. Yet, I'm looking for the next thing that's going to happen. On one hand, some shopping center developers are putting medical centers in, and other things like that, which I think is working well. Some retailers are developing stores as mini distribution centers as part of the evolving omni-channel trend.

On the other hand, you are seeing some disrupters, like Restoration Hardware. They are creating stores that attract you. You want to go there because, for example, they've got a restaurant and people to show you how to decorate your home. People go there as a destination, and they can't get that from Amazon. Best Buy is becoming another destination store. Both are omni-channel operators.

Restoration Hardware is doing well and growing very nicely. Our guys here are taking a look at it and are planning another visit with the company next week. It seems they are trying to do something different. They've opened maybe a couple dozen stores around the country, which are attracting people from a wide area. It's a destination. You go there, drive there, spend

several hours and have lunch. It might work, I don't know.

The CEO has a vision and I wrote a letter to him the other day. I want to get more flavor on his vision. They only have a small percentage of the market right now so if he's successful, it could be one of those companies that enables you to make a 10x, 20x return on your money in future decades.

I also see some things that bother me, such as stock buybacks. RH bought stock back at a good price and it has gone higher, but there's a lot of debt. When they were in their high-growth phases, companies like Walmart, Home Depot, and Walgreens just focused on building their businesses and put all their cash flow into that. They didn't try to buy much of their own stock because they needed every penny to build another store, another distribution center. Yet Restoration Hardware borrowed a lot of money and seems to be a little bit capital constrained now, despite a huge addressable market.

They seem to have a winning formula, but the debt may be constraining growth. They're only growing sales at 7% or 8%, why not 12% or 15%? It's still a relatively small company, but I like to spot opportunities at that stage.

I think Costco knows just how to do it. It's been a major position of ours for years. A large part of its profits come from the fees that they charge for all those membership cards being renewed every year, which constitutes a recurring

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revenue stream. That's a beautiful story. Amazon is now following that concept with Amazon Prime and delivering an awful lot of stuff for the money.

G&D: Do you think there are pockets of retail that are still insulated from Amazon?

BS: I'm sure there are, although I'm not sure what they are. I'd love to find out. Williams-Sonoma seems to be doing a good job. Drugstore businesses on the other hand will probably face more competition from Amazon.

Retail is a big part of the economy and it's constantly changing, which provides opportunity. I think there's always going to be opportunity in retail. I'm not sure where it is. I would hope that our young analysts shake the trees. I'm not doing that. I read books and magazines and keep my eyes open, looking for ideas, but I'm not shaking the trees nowadays - though I do attend virtually every research meeting in person or by conference call.

I can tell you that there's probably 20 stocks out there that are going to double in the next year. Big stocks. I don't know what they are though, which keeps me going. It's such a fascinating business.

G&D: How do you harmonize finding an opportunity but also placing a high degree of importance on predictability?

BS: You have to have predictability. We're not just buying a concept; we're buying established businesses. We look for leaders in their field.

We're looking for great management, a great balance sheet, and a high degree of predictability. Obviously deciding what's a high degree of predictability is subjective and I don't want to attach too much scientific methodology to it, but we need to be able to make a best guess. Like anything else, it takes open eyes and hard work.

"The average baseball hitter can only hit about .255 and that's been the average...for years and years. Yet a couple of guys can hit the ball a lot better, and they make the big bucks. I think our business is similar."

G&D: You've held ADP for a while. What do you like about the position?

BS: ADP is one of our major positions - our seventh or eighth largest position. I've owned it for decades. It has recurring revenue and is the largest player in the payroll and HR services business. It's very well managed, with a lot of lovely recurring revenue that increases gently. It's a very fine business, but the negative there is that it's grown so big that the growth rate is going to be slower. Revenue growth is going to be about 6.5% per annum for the next five years, which may be the slowest of anything in our investment universe.

Nevertheless, we are still looking for faster earnings per share growth, because the business mix is changing, and they should double their earnings over the coming five years.

G&D: Do you think there are any threats to that business?

BS: Maybe no major threats, but there are still some minor ones, mostly from the four or five other companies doing it. Also, there are new ways to provide these services that are being introduced by various software vendors all the time. Yet ADP has a commanding market position and they are holding or even increasing their market share, even though they have to fight for it.

The nice thing is it's a relatively small part of anybody's expense. And once you've got their system, taking it out to save a few percent on this thing, which is a tiny cost anyway, may not be reasonable. The inertia there is a positive, although there are definitely people shooting at them. They're good at reinventing themselves and coming up with new ways to answer their market's demands, or even attack new ones.

They weren't doing HR for a long time, but they moved into that field and it's working well for them. It's a stock you keep. I would've said 10 years ago they couldn't pass the test and continue growing at the size they're at now, but they keep finding ways to do it. That's why we still hold a sizeable position.[^]

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G&D: Could you share your view on Disney, which I think is also among your largest holdings?

BS: We recently increased our position in Disney, which looks like it could be a relatively slow grower yet is still a very strong company. It is dominating in its business. They may be over the top regarding streaming as they're putting billions into it now, but within four or five years it could pay off very handsomely for them. I'm not suggesting they're going to be as big as Netflix, but they're going to be a serious competitor in five years, especially given their very broad base around the world.

They have their basic growth business with the movies and parks that generates a lot of money, and we think that the new streaming business is going to have fair growth and will make them a better company in five years. Yet they have a relatively low multiple of 14.7x this year's earnings, while we think they'll be worth 17x 2024 projected EPS. That gives us a discounted present value of about \$160. Furthermore, if they do what they say they can do and actually succeed, it'll probably be a 24x multiple by 2023-24. But right now, it's selling at 8.9x our 2023 earnings forecast. With the shares at around \$113, there is a lot of appreciation potential there.

Disney is a company which is probably a lot better than people think it is. We have good friends in Hollywood who really know the industry well and they think that Disney's management is

terrific. This is why it looks attractive to us, even with relatively modest top-line growth. Their margins are going to be under pressure over the next two years, maybe three, because of the new operations. We have to look through that because if we were to wait until they're already successful, we'll miss most of the prospective gain. If they mess up, we might lose a little bit, but if they are successful, we will make a lot. It's a great global company, one of America's best, with a lot of good properties. That's why it's our fourth largest position.

G&D: Do you have any favorite investing reading material?

BS: Philip Fisher's book *Common Stocks & Uncommon Profits* is obviously great. Everyone should read MacKay's *Popular Delusions and the Madness of Crowds* to see how crazy markets can get sometimes. Charles Ellis' *Classics* is a very worthwhile compendium of instructive stories put out by the CFA guys.

I read quite a few trade magazines to see what's going on. I also try to read blogs on businesses we're interested in. For example, I've been trying to follow the Boeing 737 issue by going through pilots' blogs to see what's happening and what they think is right or wrong.

G&D: What do you think has been the biggest change in investment management since you first entered the industry?

BS: I think the fundamental reason for investing hasn't changed at all: people put money at risk to make a return. And people haven't changed much. Yet, the size and scope of this business has changed phenomenally.

My dad used to say that every once in a while, the market has to shake out the grocery clerks. It was grocery clerks then, hedge funds now, but they act the same way and panic when the market's down. But instead of selling when the market's down, it's time to buy things cheaply. And when the market is up, it's time to think about selling. Human beings tend to go the other way. That's why having great conviction in what Graham called a fair "central value" for each current and prospective investment is so important.

Human emotions are still the same, but there is just tremendous efficiency today. You can now execute orders in milliseconds or even nanoseconds, and we have lots of trading machines working with algorithms nowadays, but I still think it's the same game played on a much bigger, broader, and faster scale. Looking for great growth like we saw in Walgreens, Walmart, Amazon, Alphabet, Apple or Home Depot is the reason I am doing this. I'm not here to try beating the next buyer down the street by an eighth of a nanosecond or trade a thousand times a day to make it up. Automated trading is fantastic, but it's a different business.

Furthermore, there is a huge move towards passive investing

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because most people can't beat the averages but, honestly, a few people can. The average baseball hitter can only hit about .255 and that's been the average, within a couple of points, for years and years. Yet a couple of guys can hit the ball a lot better, and they make the big bucks. I think our business is similar, and there will still be people flocking to the investors who can do it well. Typically, though, those individuals stop taking new clients when they get to a certain size, because size can be a restraint.

I think opportunities to invest in good companies still exist. True, you can't really buy good businesses dirt cheap anymore, but you can buy them at a reasonable price. I like to think in terms of earnings yields and compare it to a 10-year T-Bond, whose 2.6% yield is going to be fixed. Compare that to buying an average S&P 500 stock at 18x current earning power, which is a 5.6% earnings yield today, it can double earnings to provide an 11.2% earnings yield in 10 years (or an average earnings yield of about 8.4% over the coming decade). That's a lot of edge in favor of stocks.

G&D: Do you have any advice for MBAs going into investment management?

BS: If you have the right mindset, it's a wonderful business. It's constantly challenging and fascinating. You are visiting the companies you're investing in and it means meeting smart people, seeing great businesses being built by a team or a man or woman who has fresh ideas.

I would say it's business school cases in real time. The best part of the business was always growing with the companies that we invested in and visiting them regularly. Of course, the other side of the coin is that stocks go up and down, and always will, which can be both exciting and depressing. Personally, I find it exciting and interesting. It is never boring - frightening sometimes, but never boring.

So many people are stuck in jobs in which they are advancing well financially but are not happy. They're bored yet they stick with it because they can't afford to leave. I made lots of money, thank God, but I've always had challenges and always had fun. In this business, you have the opportunity to never get bored. For sure, there are 20 big stocks out there that are going to double next year, and the challenge is to go out and find them. I think that challenge is wonderful, and you never get all the way there. You can always improve your methodology, there's always room to do a little bit better, to go an extra mile. If you're talking to a company that you've really got a good story from, you want to check with a competitor, talk to customers; you can always go deeper and learn more. The job is never done.

Developing conviction is possibly one of the two or three most important things you can do when you're forecasting the future and you do that every day. You're never going to be right all the time, so when you're wrong, you bite your tongue and then go on to the next prospect.

This is a fun business as far as I'm concerned. I know there are people who are miserable in it, but you've got to feel it's the right place for you. I've had a lifetime of fun doing this, met wonderful people and helped a lot of clients substantially improve their prospects in the process. What could be better?

G&D: Thank you so much for your time.

John Hempton, Bronte Capital

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John Hempton

Graham & Doddsville (G&D): Can you start with your background and tell us how you got into the investment business?

John Hempton (JH): I started my career as a Treasury official in the government department that advises on tax policy. I was working for Ken Henry, one of the two geniuses I've worked for in my life. He was the most influential government official in Australia over the last 30 years and was responsible for much of Australia's economic positioning. He was running the tax policy division at the time I became the internal expert on tax avoidance – or accounting tax guru – which later benefitted my career greatly.

I became interested in money management because I had a friend who inherited some money and had a bad financial advisor. I started thinking about how to help her manage her money better and did a lot of research on stocks and portfolio theory. I also started a personal account on the side. I did many stupid things in my personal account, but it was a time when mistakes were forgiven due to a strong market.

I kept applying to jobs in fund management but was unsuccessful no matter how hard I tried. Then one day I was on the ferry in Sydney, coming back from the beach, and a woman sitting next to me turned out to be a headhunter. She liked me and immediately arranged an interview for me. I literally got off the ferry and walked into an interview with Kerr

Neilson, an investor frequently likened to Warren Buffett.

Kerr worked at BT Australian Funds Management in the 1970s and became the best-performing fund manager in Australia. He left BT to start Platinum Asset Management in 1994, which George Soros invested \$400m in as seed investor. George eventually took his money out at \$2bn, with Platinum displaying the best performance within Australia.

Having Platinum as my first interview was lucky. I went into the interview completely unprepared and started ripping into NTT Docomo. NTT Docomo had invested \$217m in an Australian company called Davnet, which I believed to be a fraud, and which later went to zero. Now, NTT Docomo was the dominant mobile phone company in Japan, and \$217m is not a diabolical amount of money. But it was a diabolical sign, a sign of stressed capital allocation. Unbeknownst to me at the time, NTT Docomo was Platinum's largest holding. A good piece of advice for fund management interviews is to work out what a fund manager's largest holding is and, if you can spell out the bear case properly, you'll probably get the job. I walked out of that interview with the job.

G&D: That's fascinating. How would you describe your investment philosophy?

JH: The first question Kerr Neilson asks on any business is, "What makes you want to own this in the next two years, five years, and ten years?" In

my case, it is usually a company that makes a widget that is a small yet important part of a bigger thing, has high switching costs, and has incrementally improved over time. I call this the trifecta. There's an old saying for this: "There are riches in niches."

Warren Buffett does this all the time. Buffett talks about the six big non-insurance businesses that were about 70-80% of the non-insurance profits at Berkshire. One of them, International Metalworking Companies, makes tiny cutting tools that go on the end of blades. If you can make a cutting tool that speeds the whole factory up, you can charge a lot of money. You get pricing power from being a small part of the bigger thing, and the switching cost is high because you have to reprogram all the computer-driven blades. IMC has a 45% operating margin, which is almost twice the margin of Apple. It's an astonishingly good business.

Another example of a great market is the seed business, in which Monsanto, Corteva, and Syngenta are the three big players. Their goal is to mix two closely related species to create offspring that are better than either parent and are either infertile or marginally fertile. Because the hybrid is essentially infertile, farmers using the more efficient seeds must keep buying seeds, which allows for private sector-funded R&D. This R&D is relatively efficient: over the past 50 years, US corn yields are up by about 10x. Better seeds give companies more pricing power, and with more pricing power companies can

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spend more on R&D, creating a virtuous circle.

Another attractive company in an attractive niche is Givaudan. Givaudan is based in Switzerland and is the world's dominant flavors and fragrances company – a small part of a bigger thing. For example, if you buy a tub of yogurt, the flavor is critical; if the flavor changes one day, customers might switch brands. Selling the flavors to the yogurt company turns out to be a very profitable business with unexpectedly high switching costs.

The last example is Spirax-Sarco, which makes steam traps, the cast metal bits we use to separate steam from water. They have a margin comparable to Apple's because it's a trifecta business. That's an iconic business to me.

G&D: Does the company have to be a small part of a bigger thing?

JH: Yes, and I will give you an example. The worst business model I have ever seen is that of Tornos, a company based in Switzerland that makes high-precision blades including Swiss-type lathes, machines used to work materials such as metal or wood in specific pieces. Their biggest customer is Rolex, which has 180 Tornos machines for making watch parts. As such, you can say that Tornos makes products that are a big part of a small thing.

Tornos has several problems. The first is that these lathes are absolutely beautifully made and basically don't wear out. The second is that anybody who has a Tornos lathe can

make any component for a Tornos lathe. Consequently, there is no maintenance required; the lathes repair themselves. The third problem is that Tornos' customers are the most sophisticated precision manufacturers in the world. They can work out what it costs to make a lathe and negotiate on price. Finally, capital equipment is a highly cyclical business. Tornos provides a piece of capital equipment used to manufacture capital equipment without any maintenance stream and which is bought by sophisticated people with very strong buying power. It's a truly horrible business.

"In my case, [I usually want to own] a company that makes a widget that is a small yet important part of a bigger thing, has high switching costs, and has incrementally improved over time. I call this the trifecta. There's an old saying for this: 'There are riches in niches.'"

The worst kind of business is one with a combination of high capital costs, low running costs, and competition, because at some point the competition *will* come, there *will* be excess supply, and the price *will* drop to the marginal cost. An example is the telephone industry, which

almost went bust. Now the question is what will happen in the mobile industry. The marginal cost of a mobile phone call looks like zero. Even though internet capacity keeps going up, there's no excess capacity in mobile yet so that has been saving mobile companies. But imagine 5G does everything that is promised – which is infinite bandwidth for your mobile – and the excess supply drives the price to zero. It's a high fixed cost business and everyone could go bust.

G&D: Are there any other things you look for in a company?

JH: Steve Mandel at Lone Pine said the very best businesses in the world reach a global scale and share the benefits of that scale with their consumers. Charlie Munger only owns three stocks directly: Berkshire, NewsCorp, and Costco. For Costco, he bought a position large enough to be guaranteed a seat on the board, and the outcome has been astonishing. It has reached a global scale and has shared the benefits of that scale with its consumers. Costco has a 12% gross margin and a 2% net margin. That's pretty hard to compete with. If you are a distributor and set up shop on Amazon, the fee for Fulfillment by Amazon is about 15%. Amazon is developing on a global scale and also shares the benefit of that scale with its customers. But Costco has a cost structure that beats Amazon's.

G&D: How do you find companies that fit the investment criteria you described?

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JH: We find them in different ways. Many times, we find them by accident. We like to scan for companies that have a massive margin. Sometimes, it's a really good business that fits one of our models.

Sometimes it's a cyclically good business. At one point BHP, a company that digs up dirt and loads it onto a ship, had a margin of 65%. Put another way, BHP had a higher margin than Louis Vuitton, which sells \$3,000 handbags but has a lot of SG&A and thus a net margin of only about 20%. Of course, BHP's margin was cyclically high because there was a shortage of iron ore capacity.

The most common explanation for massively high margins is high priced selling through distributors. The business model of many companies is to find a group of trusted intermediaries who advise customers to buy the company's product despite the high price, with the company kicking back a part of that profit to the intermediaries.

My favorite example is Trex, a company that makes plastic decking. With a wooden deck, you need to paint or oil it every year. Otherwise, it will rot and fall off. Now, if you hire a guy to fix the deck, he will give a quote on the wooden deck and suggest this plastic product which removes the need to regularly oil the deck. He will then quote a price that is a bit more expensive than the timber decking and will even show you the quote from the decking company, but he will be getting a kickback. Trex's gross margin is 43% and EBIT margin is 25%. In other words,

Trex, which makes plastic decking, has the same margin as Apple. Trex's return on assets is 27% and return on equity is 47%, and both of these metrics are increasing.

Another example is a Finnish elevator company called Kone. Elevator companies make all their money on maintenance except in China, where all the money is made on capital equipment. Elevators have maintenance schedules, and the person buying the elevator wants the lowest price for the elevator but doesn't care about the maintenance

"The problem with the distributor model is that it's a fantastic business until it's not. These businesses are fragile because the customer is getting ripped off, and the day Good Morning America runs a story on them, everybody who bought one of these things will feel like an idiot."

contract. This makes the elevator business very profitable, because the person that installs the elevator doesn't pay for the maintenance.

The problem with the distributor model is that it's a fantastic business until it's not.

These businesses are fragile because the customer is getting ripped off, and the day Good Morning America runs a story on them, everybody who bought one of these things will feel like an idiot.

G&D: What do you do if something stands out but doesn't fit into one of your categories of business models?

JH: If I can't fit it into a model I understand, I just ignore it.

G&D: Bronte's website states that the firm's aim is "To bring originality back into the investment process." What does that mean to you?

JH: One of the weirder things about our firm is that we usually don't use the sell side. We really try to find every position ourselves. When it comes to brokers, the best signals come from the most crooked brokers, as a crooked broker is a really good sell signal. The broker in The Wolf of Wall Street would have been my best friend because it's easier to find shorts through crooked brokers.

The only time I use the sell side is when it doesn't agree with me. The only brokerage notes I've read this year are the various sell cases on GE. The reason is that I'm instinctively long GE. Ultimately, the short thesis is that the incentives are terrible inside GE: the top had an incentive to bake their numbers for years, with the top five people at GE having been paid a billion dollars over the last 15 years. My problem with this is that most of these businesses are now valued at less than 1x-1.5x sales. They

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should be worth more than that. Manufacturing the dominant jet engine in the world is going to be a profitable business because there are only two jet engine manufacturers and there will not be another entrant for a while. Internal incentives were the undoing of that company. The older I get, the more I realize incentives are more powerful than I recognized.

G&D: What do you consider to be good management?

JH: There's a Warren Buffett view of the world which is to buy good companies at reasonable prices and hold them for very long periods of time. However, it's very hard to work out what a good company is. The biggest problem that management of such companies has is what to do with the excess cash. Sometimes, management mistakes position for genius. They think that the golden goose is there because they are such good managers, but in fact they're just in the right place. They then go buy something inferior and discover it's almost impossible to buy something as good, then all sorts of bad things happen.

Additionally, companies that are in decline do stupid things. Bob Dylan once sang, "When you've got nothing, you've got nothing to lose." I wrote about Mattel over the weekend. Mattel is in a difficult position; they have a couple of things going their way but have one massive thing going against them. The biggest thing going their way is that people are getting richer, and richer people spend more on keeping

babies happy. In China in particular, the one child policy translates into a four-grandparent policy. The one big thing going against them is a new competitor: computer games. To be blunt, computer games are better than toys.

Though Mattel was dealt a bad hand, they still played their hand poorly. When the PlayStation One came out in 1994, then CEO Jill Barad figured that she had to get into the computer game business. While the company's girls toys were doing okay, they could see the boys toy division going away. Because Mattel wasn't going to be able to build a computer game business, they went to buy one instead. Mattel was highly valued at the time, so they offered stock to computer game companies. Every computer game company that Mattel approached said no, and the reason was Mattel couldn't offer a currency that the computer game company was willing to accept. This is like if newspapers offered eBay stock; eBay would look at them and say, "No, we're out to destroy you."

Eventually, in 1998, one company agreed to accept Mattel stock. It was a company called the Learning Company that made silly computer games like Space Invaders, where a six plus a five fell down and you had to type I I, or you would get wiped out. The Learning Company was a fraud: it had fake accounts and fake stores, but it had a feel-good story because it was computer games and education. Basically, they were bringing nothing in exchange for 25% of Mattel in stock.

About a year and a half later, Mattel sold the Learning Company for one dollar. Mattel gave away 25% of its stock but its stock dropped 75%. The reason was, in addition to the bad capital allocation decision, it was a sign that the business was going down. The company had revealed its own weakness.

G&D: It seems like you have a natural tendency to be skeptical. Can you tell us how you became interested in fraudulent companies?

JH: As Ronald Reagan said, "Trust but verify." If you start off with tax avoidance, you work out that people are liars. In 1999, after I joined Platinum, there were many obviously fraudulent technology stocks in Australia. This was the height of the dotcom bubble, and at the height of any bubble there are always frauds. One of them was called VoiceNet, which was the most important stock in my entire career even though I could only short about half a million dollars' worth of it. VoiceNet claimed to be a speech recognition software company and even made it into the Australia index.

VoiceNet claimed to have a lot of sales in Chile and claimed to have one of the big Chilean telephone companies as a customer. One of my friends spoke Spanish and we decided to ring every investor relations department of every Chilean telephone company and try to confirm that VoiceNet actually sold software. It turned out they didn't. We later confirmed that VoiceNet had a computer shop in Santiago selling shrink-wrapped

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software, with the sales signed off as software sales.

VoiceNet did a one-month road show with another company called Lernout & Hauspie, which had a \$3bn dollar market cap. Now, I can't tell if a company is a fraud right away, but if I spend a month on the road with the company, I would work it out. Plus, if a company stayed on the road with a fraud, then that company must be a fraud too; that was my logic.

Lernout & Hauspie was the stock that changed my life. It was the biggest tech stock in Continental Europe and was one of the hottest darlings of the dotcom era. It made speech recognition software and had both Microsoft and Intel as investors. It's pretty hard for a tech stock to fool Microsoft and Intel, yet it managed to do just that. They had this room with a whole wall of computers and you talked into a microphone and the computers would do the speech recognition. Then they put your sample through a translation program, and the program would convert it to another language. They were demonstrating the Holy Grail of speech recognition in 1999. It turned out all that was done by a man behind the curtain, literally the Wizard of Oz. The man behind the curtain just typed it in; everything else was an illusion. This introduced me to a community of short sellers.

G&D: Are there short positions that haven't materialized? How do you factor timing into your decision to short a company?

JH: We don't actually have very good timing mechanisms. We short really dodgy companies, companies that are worth close to zero. The problem is that normal math rules don't apply here; the most you can make is 100% because a fraudulent company valued at \$5bn will not make you 10 times the money as a fraud valued at \$500m. But if management is good at telling lies, they can go up 10 times. My favorite example of that is a gold company I once shorted. This was a Mark Twain gold mine: a hole in the ground with a liar on top.

"Additionally, companies that are in decline do stupid things. Bob Dylan once sang, 'When you've got nothing, you've got nothing to lose.'"

The first indication of fraud was that the CEO started his career working for Stratton Oakmont, which is the broker of The Wolf of Wall Street. But I wanted to be really sure, so I hired a professional panner to pan the creek below the hill, because if there's gold in the hill, then there must be gold in the creek below the hill as the hill had been eroding for years. The panner panned for a day and found no gold. After this, I shorted this gold company to the tune of 5% of the fund.

Nine times out of ten, that company is going to go to zero very fast and I'm going to make 5%. But one time out of ten, the CEO will lie. If the

CEO says there is ten million ounces of gold in the ground – up from one million ounces – and the market believes him, that stock is going up ten-fold. I started 5% short and quickly found myself 50% short. My fund is down from 100% to 55%, and the fund is now almost 100% short, which means I'm going bust on a single stock.

It could have been even worse. The biggest gold mine fraud in history was Bre-X, which said it had 180m ounces of gold in the ground. None of it was there, but the stock went to \$30bn. It ended when the Chief Geologist fell out of the helicopter and his body was eaten by tigers in the Indonesian jungle. That's a true story. Even though the company was a fraud, I would've been wiped out if I were short Bre-X. You can't be short a stock and survive a 200x increase.

There is actually no way you can time shorting. What we do is we only have 20 bps positions and our big, hairy, audacious goal isn't to time it, but to find every such company in the world and play the average. Our shorts look terrible if you look at them individually, but if you look at them on average, they look great. If a company has a lot of debt, it has a hook to reality since the debt needs to be repaid one day, but many companies have no hook to reality.

G&D: What led you to short Valeant?

JH: Valeant was complicated in many ways. The first problem was that we regarded several

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people involved in Valeant as fraudsters. We keep a database of bad characters for the short side and we follow them from company to company. One of the directors of Valeant had been the director of a company called Heart Tronics, whose other principal is currently in jail. That director never disclosed this on her career history, and she wasn't obliged to: SEC law tells you how far you have to go back with directorships. Yet, the fact that she had been a director of a fraudulent company was enough for us to take a solid look.

The second thing was that Valeant was trading at 10x revenue. Sun Microsystems was trading at 10x revenue at the end of the dotcom era, and subsequently went from \$64 to \$2. In an interview, Scott McNealy, cofounder of Sun, once said, "At 10x revenue, to give you a ten-year payback, I have to pay you 100% of revenue for ten straight years in dividends. That assumes I have zero cost of goods sold, zero expenses, and zero R&D for the next 10 years, yet I can maintain the current revenue run rate. What were you thinking?" It's one of my favorite quotes.

Additionally, though Valeant was making a loss, their adjusted accounting said they were making a 55% margin. There aren't that many companies that make a 55% margin. Google makes roughly 20% and so does Trex, which we discussed earlier. At 55% margin and 10x sales, we tried to work out what the company was telling us to ignore in the adjusted accounting. We found out that they were ignoring

genuine expenses, not just things that were one-offs. At this point, we knew that they were lying to Wall Street.

"Drugs are a fat margin business that people will lend to at very low interest rates for long periods of time. Even if you're insolvent now, you might be solvent in the future, because sometimes things do go right. Donald Trump getting elected is something that went right for Valeant because it meant less pressure from the US government on drug prices."

Valeant still had businesses that enjoyed such margins. The Wall Street Journal found out that ripping people off on Syprine was extremely profitable, but it was also unsustainable; it was so unethical that the U.S. government became their enemy.

G&D: Did you short Valeant when you found out about Philidor, the fraudulent specialty online pharmacy that sold Valeant drugs?

JH: No, unfortunately. We shorted at \$130 on the way up. We then shorted a bit more. It went from \$130 to \$257, and then back to \$9. We exited at \$15, which was still fine. I think it should go bust, but surprisingly or not, they're well-funded. It's very hard to go bust when people will roll your debt without looking.

I find it bizarre that people are still lending to Valeant. Drugs are a fat margin business that people will lend to at very low interest rates for long periods of time. Even if you're insolvent now, you might be solvent in the future, because sometimes things do go right. Donald Trump getting elected for Valeant because it meant less pressure from the US government on drug prices.

G&D: Can we discuss Herbalife and how you ultimately decided to go long there? Can you also comment on the previous discussion regarding third-party intermediary structures?

JH: Yes. Herbalife came about a different way. When I was young, I taught Economics at a University in Western Sydney for a year. I lived on the outskirts of Sydney in a house owned by an Avon lady. She was the most successful Avon lady in the Southern Hemisphere and was selling about \$250,000 worth of Avon per year in the late 1980s. The outskirts of Western Sydney are much like the Inland Empire area in California. It's about an hour and 20 minutes' drive from town, so the husbands were away 11 hours a day, and the wives were left stuck in suburbia with two

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kids. And if an Avon lady knocks on their door, she would of course get invited in, because the client is lonely. This lady sold vast amounts of makeup, but what she was really doing was selling makeup plus social reassurance. The real product is the social reassurance and community feeling.

Herbalife fit that model perfectly. Bill Ackman says that weight loss products cost twice as much at Herbalife than at Walmart, so one would rationally buy them at Walmart. In reality, customers are buying weight loss products plus the real product of social reassurance.

Once I recognized the model – which I knew worked – and realized that the company was honest, I went on to prove it. The easiest way was to get to know some senior distributors and have a look at their downline. If a customer orders \$5,000 and never orders again, that looks like the hypothetical customer Bill Ackman invented. If a customer orders \$70 a month for five years, that looks like the customer I had in mind.

Bill Ackman also assumed that all the downstream distributors are being ripped off. If the downstream distributors buy \$10,000 worth of Herbalife one year after another, they are clearly not being ripped off. The company publishes the distributors' retention rate. When Mr. Ackman started talking about Herbalife, the retention rate stood at 49%. It's now about 65%. Part of the increase was due to reforms that got rid of the rip-off

merchants, but most of it was because people fail at being a Herbalife distributor, but if they do stay, they stay a long time. So over time, the proportion of distributors who stay will increase.

I also asked distributors what their retention rate was with downstream distributors. I have seen the books of seven senior distributors and every one of them had a book that was better than the company's. Of course, there is a selection bias since people with good books are more willing to show them. Still, it remains that a business that sells physical goods along with community support often proves to be a very good model because it implies high switching costs.

I was perfectly happy having an oversized position and ended up selling a lot as the stock went up, although I regret almost every sale. But it's an open-ended fund, and if we had 25% in Herbalife, I might have had a hard time explaining that to my clients.

G&D: Thank you so much for your time.

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Contact Us:
 RCleary19@gsb.columbia.edu
 GRoberson19@gsb.columbia.edu
 DZheng19@gsb.columbia.edu

Graham & Doddsville Editors 2018-2019



Ryder Cleary '19

Ryder is a second-year MBA student. During the summer, he worked in Equity Research at JP Morgan. Prior to Columbia, he was a Captain in the Infantry branch of the US Army. Ryder graduated from the United States Military Academy at West Point with a BS in Systems Engineering with a mathematics concentration. He can be reached at RCleary19@gsb.columbia.edu.



Gregory Roberson, Esq. '19

Gregory is a second-year MBA student and a member of Columbia Business School's Value Investing Program. During the summer, he worked in the Investment Banking Division at Goldman Sachs & Co. LLC. Prior to Columbia, he worked as a corporate attorney specializing in mergers & acquisitions and corporate finance. Gregory studied finance and economics at the University of Cincinnati and received both his JD and LLM (Taxation) from Georgetown University Law Center. He can be reached at GRoberson19@gsb.columbia.edu.



David Zheng '19

David is a second-year MBA student. He spent last fall through this summer working as a Consumer Analyst at Balyasny Asset Management. Prior to Columbia, he was a Portfolio Manager at Peak6 Investments focused on single-stock volatility and special situations. David studied economics, political science, and business institutions at Northwestern University. He can be reached at DZheng19@gsb.columbia.edu.