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Graham & Doddsville

An investment newsletter from the students of Columbia Business School

Inside this issue:

Omaha Dinner	P. 3
Value Investing Reception	P. 4
Stadium Capital	P. 6
Student Investment Ideas	P. 20
Neal Nathani	P. 26
Chris Weldon '12	P. 35

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Fall 2016



Alex Seaver



Brad Kent

Stadium Capital Management

Stadium Capital Management, LLC was founded in 1997 and specializes in investing in micro/small-cap public companies using a rigorous, research based, long-term oriented investment strategy.

(Continued on page 6)



Neal Nathani

Neal Nathani of Totem Point Management

Neal Nathani is the Chief Executive Officer, Managing Partner and Portfolio Manager for Totem Point, where he is responsible for investment decisions across a variety of equity sectors, including the technology, telecommunications, business services, consumer, and media sectors. Prior to co-founding Totem Point in 2013, Mr. Nathani was a Senior Analyst at Axial Capital, a Long/Short equity fund seeded by Julian Robertson. Prior to Axial, Mr. Nathani was a Partner at Venesprie Capital, also a Tiger-seeded fund. He joined Venesprie from

(Continued on page 26)



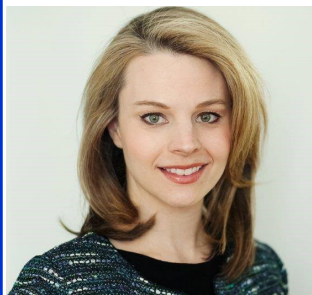
Chris Weldon

Chris Weldon '12 of Stamina Capital

Christopher Weldon is the Founding Member and Portfolio Manager of Stamina Capital LLC. Mr. Weldon founded Stamina Capital, LLC in 2016. Prior to founding Stamina Capital, Mr. Weldon worked as a senior analyst at Aravt Global, a long/short equity hedge fund manager from 2013 to 2016. Before joining Aravt Global, Mr. Weldon was a founding partner at Incline Global, a long/short equity and opportunistic credit fund from 2012 to 2013. Prior to Incline Global, Mr. Weldon served as a consultant to both Viking Global and Hound Partners, both long/short equity hedge funds. Prior to his time investing in public markets he spent three years working as an associate at Oak Hill Capital, a private equity firm from 2007 to 2010. Prior to Oak Hill Capital, Mr. Weldon

(Continued on page 35)

Welcome to Graham & Doddsville



Meredith Trivedi, the Heilbrunn Center Director. Meredith skillfully 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. The classes sponsored by the Heilbrunn Center are among the most heavily demanded and highly rated classes at Columbia Business School.



Professor Bruce Greenwald, the Faculty Co-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.

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We are pleased to bring you the 28th 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 Spring 2016 issue, the Heilbrunn Center hosted the seventh annual "From Graham to Buffett and Beyond" Omaha Dinner. This event is held on the eve of the Berkshire Hathaway shareholder meeting and features a panel of renowned speakers. Additionally, Professor Bruce Greenwald was honored with a Lifetime Achievement Award.

In this issue, we were fortunate to speak with four investors from three firms who provide a range of perspectives and investment approaches. Despite differing strategies and processes, all see unique benefits from deep research and having an extended time horizon for investments.

Alex Seaver and Brad Kent of Stadium Capital Management discuss their concentrated, value-oriented approach to small-cap

investing. The two partners detail their transition from private equity investing to the public markets in order to find more attractive opportunities. The team discusses the evolution of Stadium's strategy, the methodical research and valuation process, as well as the firm's reluctant, but ultimately successful activist campaigns.

Neal Nathani of Totem Point Management shares his perspective on utilizing industry trends and rigorous research to find value and growth investment opportunities. Neal discusses what he learned in evaluating business quality from witnessing the dot-com bubble and in building complementary teams from watching Wayne Gretzky. Neal also shares an investment idea, Analog Devices (ADI), a semiconductor company that is at reduced cyclical risk and is not commoditized.

Chris Weldon '12 of Stamina Capital discusses the launch of his fund, the evolution of his investment strategy, and the transition in skills and temperament needed to go from an analyst to a portfolio manager. Chris shares his experience

investing in compounders, identifying quality transitions, and how Stamina will benefit from both by utilizing an extended investment horizon.

Lastly, we continue to bring you pitches from current students at CBS. CSIMA's Investment Ideas Club provides CBS students the opportunity to practice crafting and delivering investment pitches. In this issue, we feature ideas from a Women's Investment Ideas Club event, the 2016 Pershing Square Challenge, and the 2016 Ross Investment Competition. Jocelyn Doman '17, Maria Muller '17, William Hinman '17, Mark Shohet '17, Kenneth Chan '18, Anton Korytsko '18, and Alexander Teixeira '18 share their ideas for Live Nation Entertainment (LYV), Skyworks Solutions (SWKS), and AMERCO (UHAL).

As always, we thank our interviewees for contributing their time and insights not only to us, but to the investment community as a whole, and we thank you for reading.

- G&Dsville Editors



Bill Ackman and Mario Gabelli '67
presented as panelists at the May 2016
Omaha Dinner



Meredith Trivedi with Professor Bruce Greenwald
at the Value Investing
Program Welcome Reception

“From Graham to Buffett and Beyond” Omaha Dinner 2016



Panelist Mario Gabelli '67 interacts with other speakers at the Omaha Dinner



Panelist Bill Ackman shares his views at the Omaha Dinner



Budge & Carol Collins. Budge serves on the Heilbrunn Center Advisory Board



Ajit Jain mingles with other investors in Omaha



Professor Bruce Greenwald moderates a panel discussion with Bill Ackman, Mario Gabelli '67, Jan Hummel, and Tom Russo

Bruce Greenwald's Lifetime Achievement Award Presentation & Value Investing Program Welcome Reception



Bruce Greenwald gives a speech after accepting his Lifetime Achievement Award



Ben Ostrow '17, Evan Zehnal '17, and Marc Grow '17 at the Value Investing Program Welcome Reception



McCoy Jen '17, Nick Yuelys '17, Elizabeth Broomfield '17, Alexandra Cowie '17, and Audun Nordveit '17



Mark Shohet '17, Noah Scherz '17, Nielsen Fields '17, Kevin Barberich '17, and Dan Yu '17



Bruce Greenwald speaks with students and alumni at the Value Investing Program Welcome Reception

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20th Annual Columbia Student Investment Management Association Conference

February 3, 2017

A full-day event featuring some of the most well-known
investors in the industry, including keynote speakers:

David Abrams of Abrams Capital

Mohnish Pabrai of Pabrai Investment Funds

Presented by:

The Columbia Student Investment Management Association
and

The Heilbrunn Center for Graham & Dodd Investing

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Stadium Capital Management



Alex Seaver

Alex began his career at Goldman, Sachs & Co in New York in 1982 in Corporate Finance and Mergers & Acquisitions. Alex subsequently spent 10 years in the private equity and venture capital industry in the Bay Area at Hambrecht & Quist and InterWest Partners. In 1997, Alex co-founded Stadium Capital Management, LLC, where he is a Managing Partner. In 2005 Alex also co-founded Coliseum Capital Management, LLC, where he remains an owner as well as a member of the firm's Advisory Committee. Alex is also an investor and/or board member in a variety of earlier-stage private companies, primarily through Gold Bench Capital, LLC, which Alex also co-founded.

Alex graduated from Harvard College cum laude in Economics in 1982, and The Stanford University Graduate School of Business in 1986, where he continues to be a guest lecturer in Investments/Finance as well as in Corporate Governance. Alex is married to Christine Noyer Seaver, also Stanford GSB '86. Alex and Christine lived in Palo Alto, CA from 1984 until 2001 when they moved back east to Connecticut with their four children.

Mr. Kent is a Managing Member and co-Founder of Stadium Capital Management, LLC. Mr. Kent serves on

the Advisory Committee of Coliseum Capital Management, LLC, an investment firm based in Stamford, CT that focuses on special situation and distressed investments in smaller capitalization companies.

Prior to forming Stadium Capital, Mr. Kent was a general partner of InterWest Partners where he focused on non-technology acquisitions, recapitalizations, and late-stage venture capital investments. From 1989 to 1992, Mr. Kent was a Project Manager for William Wilson & Associates, a commercial real estate firm where he was responsible for developing, financing and leasing office development projects. From 1987 to 1989, Mr. Kent was a member of the Morgan Stanley Merchant Banking Group.

Mr. Kent earned a B.A., with distinction, in Economics and a M.S. in Industrial Engineering from Stanford University in 1987 and a M.B.A. from Harvard Business School, with high distinction (Baker Scholar), in 1993.

Graham & Doddsville (G&D): Could you tell us more about your background and how the two of you started working and investing together?

Alex Seaver (AS): When I graduated from undergrad at Harvard in 1982, I went to work in M&A and Corporate Finance at Goldman Sachs, a

program that was still a novelty. There were six of us in the program and there were two or three the year before. The program grew exponentially when they realized that slave labor was a valuable resource. It turned out to be a great win-win for everybody. We were knuckleheads out of college, quickly learning the lingo and working on interesting deals. Back then, Goldman was a very small firm; it was a partnership and had a very collegial atmosphere. I had an opportunity to stay there beyond the analyst program to be a "lifer." As much as I loved the people I worked with there, it wasn't what I wanted to do, so I applied to business school and decided to attend Stanford.

I attended Stanford GSB in the mid-1980s, so it was a very interesting time for venture capital and technology out there. In spite of what was probably a natural orientation to value investing, I was enamored with the venture capital industry, but I didn't know how to break into it. As a finance guy in the land of electrical engineers, I thought I had absolutely no qualifications and, at least back then, it felt as though you really did need an engineering background. I made a decision to try to break into venture capital a different way and at the time there were several, very successful, Silicon-Valley-focused merchant banks, with both investment banking and principal investing operations, such as Hambrecht & Quist, Robertson Stevens, and Alex Brown. These merchant banks catered to the emerging growth companies of Silicon

(Continued on page 7)

Stadium Capital Management

Valley, but they also took advantage of the proximity and relationships to deploy capital. H&Q in particular had a pretty big venture operation, with over \$500mm of capital. Back then that was a lot of money, especially in venture capital. I went to Hambrecht & Quist and made a deal to spend some time in investment banking, because I had some training at Goldman Sachs, before ultimately moving into the venture investing business there. I also made the best decision of my life in 1986 and married my classmate and love of my life for thirty years, Christine. I'm not sure how I convinced Christine to marry me, but somehow she fell for it. First piece of advice: marry up.

Less than a year later, a pure investing/venture firm, InterWest, recruited me. InterWest was interesting because it invested in areas outside of what I thought venture funds liked. The firm not only made more traditional venture investments but had a major focus in non-tech companies. There weren't many firms like that, who invested in various phases of development, from venture investments in technology companies to LBOs of mature non-tech companies.

Brad Kent (BK): I am from Oregon originally and I was a member of Stanford's class of 1986. Stanford had a program to study for an undergraduate and graduate degree at the same time, so I was an economics undergraduate and industrial engineering masters student and I finished both degrees a year later in 1987. I actually started in the

investment business as a junior at Stanford, working part-time for one of the pioneers of venture investing, Melchor Venture Management in Los Altos, reviewing business plans for them.

“First piece of advice: marry up... second... hire people who are smarter than you are.”

When I graduated with my Masters in 1987 and all the consulting firms and investment banks came to recruit, I knew my number one priority was to be an investor.

Morgan Stanley hired me for its merchant banking group, which consisted of an LBO fund and a venture fund. I thought I was going to work on the venture fund, but I ended up working on LBO investments. Morgan Stanley had just raised what I think was the largest private equity fund at the time, \$1.5 billion, which sounds quaint now. I worked on a number of LBO transactions, ranging from \$200 million to \$3 billion in enterprise value.

I did not intend to go back to business school. I knew I wanted to continue investing, although I didn't care much which asset class. I liked the investment mindset and conducting investment research. But I wanted to go back to the west coast with Melissa, who would become my wife. A partner at Morgan Stanley introduced me to a guy named Howard Wolf. His real estate firm mostly built

suburban office buildings in the Bay Area. It sounded pretty interesting to me. Real estate is obviously a very different asset class, but it is a similar investment analysis to a private equity deal. The cash flow generating asset is a property rather than a company, but the analysis is similar. Howard hired me to be a project manager, which was one of the best jobs ever because you do all the same investment work that we do here, but you also get to touch elements of the business with a more creative side. The architect and the broker salesforce reported to me. I got to do the investment work, which we find familiar here, but I also got to work closely with other functions. It was great fun.

In 1991, two things happened. One, the real estate market was terrible so we were not building new office buildings, appropriately. If you are a project manager for a development firm and you are not building, you either find something else to do or you are unemployed. I transitioned to an asset management role, which was fine but not as much fun. Two, my wife decided that she wanted to go to business school. I already had a master's degree and didn't feel a need to seek another one. But if my Melissa was going off to Harvard Business School, I wanted to be there to protect my turf! So we both headed off to HBS in 1991.

I had no interest in changing careers, but my wife got a summer internship for Apple and I needed to work in the Bay Area, so I joined McKinsey. It was a fine

(Continued on page 8)

Stadium Capital Management

experience, but I knew I wanted to be an investor so I started looking for interesting opportunities while I was there.

AS: I joined InterWest in 1987 and in 1991 we needed more resources on the team. I interviewed a number of candidates and in the summer of 1992, a very good friend of mine, who is now the president of the Stanford Alumni Association, Howard Wolf, introduced me to Brad. When Howard heard what we were looking for, he said, "Hey, I've got your guy."

Brad and I met in August of 1992, in the middle of his two years at Harvard Business School. Brad came to work with me and we've been business partners for almost twenty five years.

BK: I started working remotely for InterWest during my second year at HBS and as a result I did not have to recruit.

AS: Brad was working 20 to 30 hours a week for us but still managed to be a Baker Scholar. The second piece of advice I can give anyone is to hire people who are smarter than you are.

G&D: How did the two of you transition from private equity investing to the launch of Stadium Capital?

AS: At Stanford Business School, I took a class with Professor Jack McDonald, where I was also a Case Writer for him. He's a legend at Stanford. He is now in his 49th year as a professor in Investments & Finance. I've

been fortunate to guest lecture in his class for the better part of thirty years. He's also on our advisory committee at Stadium Capital. Most Stanford MBAs who end up in the investing world take his class. It is so popular that they have to use two classrooms, one live and one next door with a video stream.

Part of the attraction is the quality of guest lecturers, present company excluded. In 1985, we had a guest lecture from someone well known in the investment world, but who was otherwise relatively unknown then, a guy named Warren Buffett. I was very affected by his talk but also Jack McDonald's entire course. He is an evangelist for Buffett-style investing and the spectrum of value investing going back to Graham and Dodd. In spite of my desire to give venture capital a shot, this mentality and approach was always in the back of my mind.

Around the time that Brad joined InterWest, we were traveling the country looking at companies that, had they been publicly traded, would have been called microcaps, somewhere between \$50 million and \$500 million in enterprise value. Of course the first thing we would do in evaluating private investments was look at comparable companies in the public market. We began to notice, in the mid-1990s to late-1990s, a pattern of public companies trading at much lower valuations than their peers in the private market. We weren't sure why that was the case. Not all companies were trading at discounts, but it happened often enough that it

got our attention. As we like to say, nobody fools the two of us more than 100 times in a row.

BK: This is different than when we were working separately in private equity, when I was at Morgan Stanley and Alex was at InterWest. In those days, public companies typically traded at higher valuations than the private deals we did. Part of the appeal of private equity, of course, was that you could buy a company at a lower price than the public comps, leverage it, and then make the assumption that it would approach the public valuations later. That was the normal operating procedure. By the mid-1990s, that wasn't the case at all. Money flowed into the private equity business, as you would predict, and almost everything became an auction. In an auction, you'd pay 6x, 7x, 8x EBITDA and we would see public comparable companies traded at 3x or 4x. We started asking ourselves, "Why are we doing this? Why are we paying 8x when we can buy a company just like it for 4x? Is controlling the company worth that premium?"

AS: During this time, we started to talk to some of these smaller public companies because, naturally, they might be attractive take-private candidates in our private equity business. What we discovered was that many of the management teams were nervous about exploring a sale, largely because they feared that the process could deviate and eventually result in a strategic sale in which management loses their jobs. At the same time, if we

(Continued on page 9)

Stadium Capital Management

approached them as pure public market investors, we were welcomed with open arms and a red carpet.

Brad and I were essentially agnostic investors by mentality. If a great, publicly traded business with durable, defensible, and high free cash flow was simply a public market investment opportunity, then so be it. It might not be a private deal opportunity, but it might be a great investment.

We also began to explore why this valuation discrepancy existed. As Brad mentioned, on the private equity side, a lot more people had entered the fray. The market was more competitive and the marginal price setter in private opportunities tended to be an array of very smart private equity firms. These firms were not only competing with each other free-form, they were being choreographed by the bankers to compete with each other. By the end of a process, sophisticated, well-tuned investors were the marginal price setters. The smartest, most sophisticated investors were setting the price, with leverage as a booster.

On the public side, Brad and I discovered a few critical elements that captured our attention. First and foremost, the way that public equities were traded was changing pretty dramatically. In 1997, the order handling rules were changed from trading one-eighth increments to one-sixteenths. It was also generally acknowledged that this was a step towards fractional, or decimal trading and another massive reduction in trading

spreads. This change represented an enormous loss in profitability for the brokerage community.

In what the world calls “microcap” – which ironically would have equated to fat, beefy private equity deal sizes for us in our old business – the public companies were generally considered to be detritus. Given the lower float and liquidity in microcaps, these companies didn’t get much love from the buy-side and sell-side to begin with. Disappearing trading spreads were the nail in the coffin.

“...the Holy Grail for an investor, from our point of view, is to find a less liquid market where there is inefficient short-term pricing behavior.”

The buy-side institutions were dropping coverage of massive swaths of microcaps. At the same time, the sell-side research, which had not been especially good to begin with for these companies, more or less vaporized. The opportunity for us, of course, was that these companies were still public. In stark contrast to our former private equity world, the marginal price-setter in the microcap public market tended to be the least informed and in many cases least sophisticated buyer, with an increasingly myopic, impatient investment horizon and radically different set of

short-term incentives.

Microcap portfolios at places like Fidelity had two to three hundred positions, which in our view makes it nearly impossible to cover individual companies in any depth. We also discovered that portfolio churn was 100% or more, annually. What we observed was a universe of relatively thinly traded public companies, turned over massively by institutions, and little company-specific knowledge given the constraints of portfolios of this size.

When we made calls to buy-side owners to learn more about their views on these companies, it would often take several migrations to find the appropriate portfolio manager. Often the PM was relatively junior, relegated to microcaps as a way to train them so they couldn’t do too much damage. The PMs would earnestly try to answer our questions but even if they owned 10% to 15% of these companies, there typically wasn’t an individual investment hypothesis. You could often hear the papers rattling in the background as they tried to figure out what the company did.

As an example of the odd behavior in this market cap segment, we would often talk to sell-side analysts with sell ratings for companies we thought were actually attractive. We thought they might know something we didn’t. Instead, the head-scratching answer we often got was, “No, no, no. This is a great business. I would own it all day in my personal portfolio. Unfortunately, I have to issue a sell rating because I

(Continued on page 10)

Stadium Capital Management

don't see a near-term catalyst in the next three to six months."

The lightbulbs were going off for us because the Holy Grail for an investor, from our point of view, is to find a less liquid market where there is inefficient short-term pricing behavior. One of our fundamental core beliefs is that markets can be inefficient in the short run but efficient in the long run. The more time we studied the public market, the more we discovered dynamics that tended to create short-term deviations from intrinsic value — there were time horizon issues, there were liquidity issues, there were compensation issues, there were portfolio construction issues. All of this created a situation where buy- and sell-side participants in the microcap segment made decisions that frequently did not seem rational to us. We believed that focusing on this less-well covered, less-liquid market, combined with a longer-term horizon offered a great opportunity for us.

G&D: Even if you had confidence that you found companies trading for a discount, what made you believe this mispricing would correct itself?

BK: That was the dilemma for us. We saw great businesses trading at absurd valuations and thought, "How could this be?" Then we would ask, "If it is mispriced, how is it going to get repriced? Maybe it is mispriced because it is small. But if it is going to stay small, why won't it always be mispriced?"

We back-tested the data and ran hypothetical screens for good businesses trading at low valuations. As it turned out, the economics work. If the companies performed well and continued to be good businesses they couldn't possibly stay at those values, and they didn't. We convinced ourselves that something would happen that would reprice these companies, eventually.

The problem for most investors is trying to figure out when that will happen. That is where most people, especially those who mark to market every day, get caught up. They not only have to figure out whether something is undervalued, they also have to figure out when it will get revalued. Figuring out if something is undervalued is much easier than figuring out how and when something will be revalued by the market. We didn't, and still don't, know how to do that. Instead we looked for a structure that would allow us to release that time constraint. We knew if we could do that we could put ourselves in a business that had an advantage.

AS: The other thing we noticed is that many people were not doing fundamental work. We always travel to meet management teams. We never have meetings in the office. We are always going to learn more when we are in their native habitat. There is also the potential to spend more time than if the management team is rushing between meetings. We might even get to see a facility or to meet more people.

When we meet with management, we have a list of questions that we think any smart, long-term investor would ask. They are the same questions we had pursued as private equity investors.

What kinds of questions? As a thought exercise, imagine the hypothetical of only being allowed to invest \$50 million dollars once in your life, in one business. Tasked with that, what kind of work would you do? How much work would you do? Odds are it would be a lot. It would be your one shot. You'd take your time. You'd talk to customers, you'd talk to the supply chain, you'd talk to competitors. You'd do all the things you felt were important to have conviction along with a price that afforded you a sufficient margin of safety. This investing approach seems like basic plumbing to us but this was radically different than the preparation that management teams we visited had experienced.

We would ask fundamental questions that to us weren't novel, or unique, or esoteric, but simply put the business in a three to five year operating context. Generally the CEOs were blown away. Many had never had investor conversations like that. They had never gone to the whiteboard with someone like us to lay out the current and long-term competitive landscape, or to draw out the organizational chart and how it might look in the future. It seemed as though every other meeting we had, a CEO would say something like, "You know the last meeting we had, the investors hadn't even read the 10-K." We were stunned the

(Continued on page 11)

Stadium Capital Management

first few times we heard that.

The more time we spent doing this, the less interesting our old jobs seemed to be because on the public side, we were no longer dealing with bankers, or lawyers, or accountants, or anybody else. It was simply us, an open field, as much work as we wanted to do, as much time as we wanted to take, and no mandate to be invested.

“The minute you expand your time horizon to be multi-year in orientation, volatility instantly transforms from a problem to a huge potential opportunity.”

We also believed in a focused portfolio. In order to build an appropriately diversified portfolio, it turns out you only need about twelve companies mathematically to have full company diversification. It also turns out that it's a lot easier to stay on top of businesses when the portfolio is more focused. There's no need to have thirty, fifty or three hundred positions; in our view that is just an AUM-gathering contrivance.

G&D: Did you feel like you were losing an ability to research companies thoroughly because of the restrictions on outsiders in public markets?

BK: Coming from the private equity business, we were used to getting full access to inside

company data. There were no insider trading issues. We generally got whatever data we wanted. When we started investing in public companies, we were concerned that we would not have enough information to make good decisions. We thought we would be making decisions on inferior information, but it actually just turns out to be different, maybe even better, information.

What you give up by not getting detailed inside financial information, you gain in the ability to talk to whomever you want. In a private equity process, generally you are constrained as to whom you can contact, both internally and externally. You feel like you get a lot of information, but you only get what they are going to give you. When you are on the public side, you don't get the inside data, but you can talk to whomever you want across the landscape of customers, competitors, suppliers, industry experts, all of them, at whatever pace makes sense.

You can spend several days on rooftops with customers installing telecommunications equipment to learn how they operate and why they chose a certain manufacturer. For a retailer, you can conduct store checks and talk to whomever you want. The company may have a policy that won't let store employees talk to you, but they can't stop you from talking to customers, understanding inventory management, discounting, or the competitive landscape locally. I'd rather know what a hundred of a company's customers think about its

products than have access to the detailed internal financial statements.

The other interesting part of it is that we had no idea how many people would talk to us. Let's say there is a software company and we really want to speak to some of its customers. What are we going to do, get on the phone and call their customers? Sure, let's give it a try. Turns out, many of them do talk to us, at length. Surprisingly to us, most people give us the time to answer our questions. When you do the work to be informed and to be an educated counterparty, they stay with you even longer on a call or at a trade show.

That was one of the big “ah-ha's” for our business. We are not stuck with just public financial statements. There's this whole world of information out there that we can go get. It takes work but it's not hard to find good information, it just takes a lot of time. You may have to reach out to 300 enterprise customers, for example, to have 50 to 100 useful conversations. Those 50 to 100 conversations can tell us a lot about product quality and service, competition and switching costs, or hierarchy of need questions.

AS: We are very methodical about what we do and we are very process-oriented. To make judgments, you have to have sufficient data that is well organized. So we write up every research conversation and management meeting that we have in thorough detail. Over the years we see businesses over and over and

(Continued on page 12)

Stadium Capital Management

we have incredibly valuable time series of information to use. When we go out to visit a management team for a fourth time, we have the full details of the three meetings we might have had over the prior nine years. It certainly helps contextualize management's performance and execution credibility.

G&D: It seems like you are able to capitalize on market swings but how do you manage the emotional component?

AS: When markets are gyrating, our research matters a lot. In order to have conviction about a business, you need to have access to information that matters. So if a company's stock price is down 25% in two days of trading, we are not panicking, looking at the screen. We are actually typically on the phone with the company's customers, around the world.

One of the biggest issues surrounding our business is volatility. If you're invested in a private business, you don't have to deal with volatility; it is not part of your psyche every day. You are not being faced with a green or red flashing number telling you if you are smart or stupid. We know now, with tremendous advancements in research of the brain, that most human beings are wired to be really bad investors. We have a lot of reactions to stimuli that are really bad for investing. Benjamin Graham knew that. Warren Buffett has always known that. But it turns out to be true and we now have the science to back it up. The literature is extensive and fascinating, thanks in large part

to advancements in fMRI technology and brain scans.

People are prone to making pro-cyclical decisions based on emotional centers, alarm and alert portions of the brain that kick in under stress. When you see a stock that you own go down 20% in a day, which happens all the time in our world, it messes with you. Loss aversion is a big deal, people hate losing money, even if the losses are actually temporary.

Now imagine you are a portfolio manager at a large institution with a portfolio of one, two or three hundred positions. One position turns blood red on your screen on a 10x volume day and is down 20% or 30%; since you don't know enough about the business to make an educated choice whether it is an opportunity or a falling knife, you're going to tend to make the decision to sell. By doing so, you are also going to compound that selling volume, which is why these things can move so quickly. The reaction is to think, "Somebody else must know more about this than I do. They're selling this aggressively. I need to get out." Particularly if one's compensation and incentives are near-term in orientation, that investor doesn't want to get stuck with a bad mark in the portfolio, so the position gets flushed.

BK: Of course, the next iteration was to program a computer to do that automatically.

AS: The question is whether volatility is a problem to be solved or an opportunity. The answer depends how you think

as an investor and what your time horizon is. I can imagine that volatility is an important measure of risk if you have short-term needs. The minute you expand your time horizon to be multi-year in orientation, volatility instantly transforms from a problem to a huge potential opportunity. There are all kinds of reasons why a business's stock price can dislocate rather quickly in the near-term and a lot of reasons, if the fundamentals are still right, why it will revalue itself eventually.

We have seen plenty of investors that want to move into small-cap stocks from private markets and then they are totally thrown off by volatility. They will tend to make very irrational decisions. They know something is undervalued but will refuse to invest for fear that it might go down further. If an asset is trading at a steep discount to intrinsic value, the reaction should actually be, "I want to own it. It may get cheaper, in which case, I'll buy more."

The reason we have stuck to this universe of small and microcap stocks for almost twenty years is that volatility is very pronounced. Anybody who pushes the sell button in our world affects the price. Last time we ran the numbers, we found that every quarter, 56% of the companies in our universe see a stock price change of at least 20%. A very large proportion see a stock price change of more than 30% in a given quarter. So if you don't like volatility, this is not your market. If you think volatility is a big opportunity, this is your market.

Stadium Capital Management

G&D: What allows you to embrace volatility when others cannot?

AS: We started our business to manage our own capital in the late 1990s. We had no intention to manage outside money but we wanted the ability to do so if we chose. For almost twenty years, that is still our mantra. We have a lot of our own capital in our strategy and we have an extraordinary group of investors who think the way we do. Probably 75% of our investors by number are exceptional investors in other asset classes like private equity, venture capital, distressed, and even public equities.

“There is no pitch mentality. It is the opposite. It is a desire to seek the truth, whatever that may be.”

We can't be big. Our strategy is to stay in microcaps. If our median market cap has been \$500 million and our core positions average 10% to 12% of the fund, this confines the AUM we can manage. That's another reason why many people don't stay in this business; they want to manage more capital and that's never been core to our aspirations at all.

We also consider cash to be an asset class. It is an active investment decision for us. We don't make macro decisions to go into cash in tough markets, we make individual company decisions. If the individual

company decisions lead to being in cash rather than investing, then we are in cash. Over the past several years, we have probably averaged 50% cash. It has been tough for us because it has been a rising market and environment in which we are not dialed-in to win. It is overvalued, it is rising, and we are sitting in cash. But a lot of this capital is ours; that is how we will always choose to invest.

If you believe that over the next five years the Russell 2000 will compound at 12% to 15%, which is roughly what it has done over the past three to five years, then we should all just buy the Russell 2000 and go home and play golf all day long, because that is the smart thing to do. Maybe then we wouldn't be such lousy golfers. Of course now we see front page news every day about passive versus active management. A lot of this behavior seems pro-cyclical. It is a function of four or five years of rising markets and that's tougher for active managers. Active managers tend to succeed in more volatile markets.

BK: Somehow, many people have convinced themselves that it is true that volatility equals risk, which is convenient in developing an economic model. It follows that something with higher risk should require more return. But then you scratch your head and think, “How are we going to measure risk? Well, the one thing you can measure is the changes in mark to market prices. So wouldn't it be great if we could use that.” But while it is the one thing we can measure, it is not

necessarily the right thing. We hear this all the time. People will ask, “How risky is it?” What they always mean is, “How volatile is it?” We have to ask them to clarify, because risk and price volatility are not the same thing. We get into odd conversations with institutional investment managers because they will talk about their private equity portfolio being less risky than their public equity portfolio even though we know they have similar companies, sometimes even the same companies, in both portfolios. It's just that if you don't mark your private investments, there's no volatility, so it is not as risky. But how does that make any sense?

AS: People would say in the 2008-2009 market crisis, “The draw down in our private portfolio was substantially less.” Really? You had public companies trading for 1x to 2x EBITDA. You had private companies with 4x or 5x leverage, so the equity value should have been marked to zero.

One of the big developments in our world, which Brad eluded to, is the change in our counterparties. Fifteen to twenty years ago, we executed natural trades with often uninformed managers with hundreds of positions. This model has been largely replaced by platform and algorithmic trading. Roughly 70% to 80% of our counterparties today are machines instead of people. The algorithms trigger very quickly.

A company we know quite well that typically trades one

(Continued on page 14)

Stadium Capital Management

to two million shares a day recently announced disappointing earnings and a modest revision to guidance. It was already significantly undervalued but it traded 40 million shares in two days as everybody piled on to get out. "It's a miss. Blow it out. Shoot them all and let God sort it out eventually." That business is now trading for 3x EBITDA.

There are times when we want to speak to other shareholders. Seven out of ten times, there is no one there. The best you can do is to get in touch with a compliance person. That continues to be an opportunity for us and one we could not have expected when we started this business twenty years ago.

G&D: How does your philosophy influence and drive the investment process?

BK: Our process starts with a company idea. We either see a company in a screen of our universe or we get it from somewhere else: a friend, a newspaper article, etc. Once we identify a company that might match our investment style, normally Alex or I will look at the financials and basic business model before putting it through our formal process.

AS: Now that we are almost twenty years into the business, the majority of our ideas are not off blind screens. The ideas are from our own lists. Twenty years ago we didn't have these lists, they're huge now. Plus, we run screens of all different kinds to test for durable free cash flow and high returns on capital. That being said, we miss things. So at least twice a year, we print out single-page

summaries for every US and Canadian company between \$50 million and \$5 billion in market capitalization. We split up the pile in two and Brad and I each go through them one by one.

BK: Once in our official process, someone here will spend the time to go through the financial statements and research the company's market to lay out a "One Pager," which is really closer to forty pages. When we come to our weekly investment committee meeting we can have a discussion based on the One Pager to kill it, to spend time to research it now, or to put it on the watch list, because it might be attractive at a different price.

If we want to continue work on a company it goes into our primary investment research process. This typically includes a CFO call to answer any questions we might have up front regarding the financials. Later, we follow up with a company visit. Obviously, the management team is absolutely critical to our confidence in their free cash flows.

Meanwhile, we continue to add to our primary research. This will almost always include customer calls. Often we attend industry conferences where we can get to a concentrated group of people who know something about the industry. We sometimes hire outside consultants. At the end of that research, which is often after two or three months, we can circle back to the idea in an investment committee with more information.

By the time it gets to this point in the process, we all think it is a pretty good business, or it wouldn't be there. We are frequently checking into the research and if it was going poorly, if customers hated the product, we wouldn't still be working on it. When we revisit a company with additional research, we try to take qualitative issues and information and map those into a financial model. At the end of the day, it has to come out to a price. The model includes various operating scenarios, often three, but sometimes more. We construct the cases so that we can have rational discussions about individual levers.

Alex might think that a company will grow at 2x GDP, given particular tailwinds, and others might disagree. After discussing the levers in various cases, we probability weight all scenarios. Only then do we know the outcome of our valuation. Our order is intentional because we try to be very objective about our assumptions. There are some companies we may really like and we at that time we may be holding a lot of cash, but you don't want to solve for owning something. You want to solve for getting valuation right.

People make this much more complicated than it needs to be. You determine what something is worth and if market participants sell it to us for less than it is worth, we'll buy it. If they want to buy it for much more than it is worth, we'll sell it to them. It's really not more complicated than that. The hard part is, at any time, determining what a company is worth and tracking

(Continued on page 15)

Stadium Capital Management

to see if the valuation should change. We always try to keep our valuation current and let the market do whatever it will do around that price.

AS: The market does provide opportunities often. The truth is, we are not “buy-and-hold.” We buy and we are prepared to hold. That is a major distinction. Going back to our time horizon, we are willing to hold things for many, many years as long as it is trading below what we think it is worth.

BK: We struggle to see the merits of being buy-and-hold. If you think something is worth \$10 and someone will buy it from you for \$15, leaving aside taxes, why does holding it for five years help you? We struggle with that concept. We don’t struggle with the idea that you ought to value businesses using long time horizons, that makes perfect sense to us. But once you determine what a long series of cash flows is worth, what is the merit of making yourself hold it when you don’t have to?

AS: To put it another way, if you believe that a security is worth \$10 and it is trading for \$15, at this price it is trading for a negative expected return, relative to your hurdle rate. That said, for many businesses, we have happily held onto them for five or ten years if we felt they remained undervalued.

BK: That’s because they have traded for less than they are worth. Both of those things change over time. Our valuation could be going up, but as long as the market price

is below that we are delighted to hold.

AS: Third piece of advice: make sure you know what your firm’s core principles are. Every investment business needs to have a set of well-defined core principles that are well understood and consistently applied. Here, one of those core principles is that a business is worth the present value of its future free cash flows.

“The truth is, we are not “buy-and-hold.” We buy and we are prepared to hold... we are willing to hold things for many, many years as long as it is trading below what we think it is worth.”

The process that Brad described is a very lengthy process that involves many steps, almost every one of which is subjective and involves judgement. This is all layered into a framework that we can use rationally to make our decisions. But all the inputs rely on judgments about all the inputs, like growth rates, margins, working capital, and CapEx. We try to imbue all of those numerical assumptions with the realities we’ve studied, with the research we’ve done.

The assumptions we make lead us to a range of prices where we are willing to start buying. Hypothetically, if that initial

trigger to start buying is at \$11 for a \$10 valuation and the stock price has fallen from \$15 to \$11.48, we don’t buy it. We have gone through a rigorous process and if we want to buy it, it might be possible to start down a slippery slope if we’re not careful. When our real price trigger to buy is \$11.00, but we somehow relax the constraints to buy it at \$11.48, then where does this stop? We have to be disciplined, otherwise all hell could break loose.

BK: In a way, you almost run the risk of behaving like a momentum investor. Prices might go up in a position you think is worth around \$10 and you are supposed to sell at \$11, but you feel good because it just had a 30% run. But if you let yourself start thinking like that, pretty soon you have put yourself in an entirely different business. Then you’re in the business of trying to decide if the market will continue to go up.

You have to pick one or the other. You are a value investor or a momentum investor, it’s pretty dangerous to try to be both at the same time. With all the information we had yesterday, we thought it was worth \$10, and we’re selling accordingly. It may have gone up 30%, and who knows, it may go up another 30%. But if you start putting yourself in the position to be momentum investors, that is a different business. There may be people who can do that very well, but that’s not how we operate.

G&D: You mentioned the process of actively refreshing research and valuation. How do you avoid biases when

(Continued on page 16)

Stadium Capital Management

evaluating businesses you have held for long periods or seen many times over the years?

BK: I don't think there is a magic bullet to keep you from having biases. I think one of the best ways to do it is to invest with your own money so you are focused on being right, not necessarily on being invested; at least you get the motivation right. We're not in the business of investing, we're in the business of investing properly. It is our partners' money and it is our money.

So you get the motivation right and then try to check yourself at all times to make sure you aren't holding onto biases. Every time you get new data, you make sure that you are being rational. Sometimes, we realize that we have to do a bit of a reset to make sure. We have to make sure that we are not projecting same-store sales to grow at 3% a year just because we always have. We have to be careful that we are not just staying with the same assumptions in the absence of new data, when the initial assumption might have been wrong.

AS: We try to organize ourselves around that bias potential. There are many firms who have portfolio managers who hear pitches from analysts. Analysts research these ideas and present these ideas in hopes of getting capital because they are going to get measured by their individual performance. That pitch mentality is antithetical to how we operate here.

We invest all of our capital together. So we all have to make decisions as a group.

There is no pitch mentality. It is the opposite. It is a desire to seek the truth, whatever that may be. It seems like the right way to invest and a pure way to think. If that leads us to an answer that says, "Great business, wrong price," the company goes on our watch list and we wait.

Brad mentioned that we hand out pricing sheets after the discussion, after we have talked about the cases and had the debate about assumptions. This is another attempt to make sure that our conversations are as unbiased as possible. For example, Brad might think that we ought to be more aggressive and that we should assign more weight to the upside case and I am more conservative and want to assign less.

But if we saw in advance that this difference in our points of view might have resulted in a price difference of \$0.25 on a \$20 stock, we might think that the discussion doesn't matter. For pricing it might not matter, but it can be necessary to have those tough conversations because something interesting might come up. Brad's views of higher growth for the business could be based on things that I had not previously considered. Or it might stimulate another partner to raise questions or concerns.

G&D: *Part of your process is to engage with management. On rare occasions you have pushed for change as activists. Could you talk about these scenarios and what changed your approach?*

BK: As a general matter, we have tried to avoid being

activist investors. Not because we think there is anything wrong with the business strategy. There are certainly plenty of companies that could use activist investors to demand the corporate governance they already should have. In general, we are supportive of activists, but it is not something we typically want to do ourselves.

First, being an activist investor requires a different staffing model and a lot of resources. In order to have an activist strategy you have to build a much larger team. Second, being an activist puts you in an adversarial position and as a day-to-day life preference, we didn't want to go into work every day and spend our time in adversarial conversations with management teams, boards, and attorneys. That isn't how we wanted to live.

We have roughly 2,500 companies in our market segment and we have maintained the point of view that we are going to be able to find plenty of companies who are already doing things closely aligned with the way we would like them to be done. We'd prefer to just invest in companies with management teams and boards that we believe in. That's worked pretty well for us.

We've invested in over 150 companies and we have done a pretty good job avoiding public conflict. In the last few years there have been a couple of cases where we had to be more active. We were reluctant to do it, but we felt like that these were situations where corporate governance was inappropriate and where

(Continued on page 17)

Stadium Capital Management

we had to exercise our fiduciary responsibility to our investors. We wouldn't seek to do it again, but we'll do it if we have to.

AS: They've been very successful.

BK: Yes, the campaigns were successful, but we still don't want to have to do it again.

G&D: [Do you want to dig into any of the campaigns in more detail?](#)

AS: Sure, we can talk about Insperity (NSP) as an example. NSP is a professional employment organization. The company acts as a co-employer of its customers' employees to reduce healthcare plan premiums and provide shared, outsourced human resource functions. In NSP, we were shareholders for over six years and we were the largest shareholder. We had many interactions with management and colossal amounts of research, with hundreds of B2B customer conversations. Eventually, we became increasingly frustrated with sub-optimization of a great business in a great market. Also, we were frustrated with the governance structure that allowed this to happen. We were concerned about management compensation and perks. Compensation did not appear to be sufficiently tied to the company's performance. The more we dug, the more concerned we became.

There are public letters from March and April of 2014 that lay out our concerns in extraordinarily gory detail. The fact that those letters were

public letters rather than private communications was very different for us. That is not our normal M.O. Typically for an activist, the investment hypothesis is predicated on changing something: the board, the management, the strategy. Our world is not based on that. We want good management, good opportunity, good company, and an attractive entry point by price.

It just turned out, in a couple of long-term investments, we thought we saw big enough upside from the changes we thought were necessary, we had big enough positions that it was an appropriate use of our time, and we could make a difference by raising the noise level. But we only did so after thoroughly exhausting every other possibility.

In Insperity, the management team and board knew exactly how we felt. We tried every angle to avoid a public conflict. But it met all three criteria and we were not getting anywhere privately. I have to look back at the price when we went public with our concerns, but it was close to \$20. We'll take a fair amount of credit for opening up the shades and letting the light in on that one.

In Big 5 Sporting Goods (BGFV), we've been investors for eight or nine years. One of our partners, Dominic DeMarco, has been on the board there since 2011. When we went on the board, the company was valued at around \$8 or \$7.50 per share and it is close to \$17 now. We worked that one pretty hard. As Brad said, there are many companies that need the light

shined on them, particularly in the microcap universe. A lot of companies still have significant legacy founder or family ownership structures. The odds of seeing funky governance dynamics are high.

BK: Most of the time, it is benign. But in some cases it is not.

AS: We've been very successful but selective in our activism. But, I would echo Brad's comment that we are not looking to do it again. We have not screened for situations where we think there is bad governance where we'd want to go in and change it.

G&D: [We saw in your 13-F that you added some relatively large positions recently. Do you want to talk about any of them?](#)

AS: I'll talk about one of them contextually. We have a new core position in a business that we first looked at eight years ago. This goes back to our patience, both entering and exiting. The price was always too high and it had been on our watch list for years. It is an enterprise software business. The company executed a major acquisition and bought a competitor for a pretty big price. It might not be shocking but they stumbled on the integration; it was not fatal, but the company stumbled enough to cause a disruption in expectations. Our view is that the acquisition still makes sense, even though it may take longer to integrate and uncover all the synergies. The stock was hit earlier this year to the point where it began to hit the top end of our buy

(Continued on page 18)

Stadium Capital Management

range, so we began to buy a little bit.

Recently, the company announced a quarter that upset the market and the stock dropped another 30% or 40%. Now, you've got to be careful, you don't buy just because it fell. If the stock price has dropped into our buy range, is the business still worth what we think it is worth? After a lot more work, including about one hundred customer conversations, we determined that the business was trading below our view of intrinsic value. This is also after layering in our typically conservative assumptions to generate additional margin of safety.

This investment decision was not based on the price dropping alone, but the confirmation with research that the underlying value had not deteriorated dramatically. I think that stock is down over 50% from the start of the calendar year and time will tell if our point of view is right or wrong.

G&D: We talked about your universe with respect to company size. Are there other limitations to what you will or won't research?

BK: We always look for areas where we can thoughtfully construct long-term cash flow models. That leaves out some companies where thoughtful models would rely on industry or commodity dynamics that we can't predict. The obvious industries might be those related to the price of crude oil, which we just can't predict three to five years from now. Some might be great businesses over long cycles,

but the things we know we can do to research and underwrite cash flows will be a very small piece of that puzzle. The bigger piece is something that we just don't know and can't know.

“...we saw big enough upside from the changes we thought were necessary, we had big enough positions that it was an appropriate use of our time, and we could make a difference by raising the noise level. But we only did so after thoroughly exhausting every other possibility.”

So, Oil and Gas, probably no. Semiconductor manufacturing, probably no. But that doesn't mean there aren't companies in those industries or connected to those industries where we could get excited. We would be delighted, for instance, to invest in a systems software company that has an Oil and Gas customer base with attractive economics and long-term product cycles.

AS: The half-life of the research has to be long. We've had great investments in software businesses and in shoe companies. The durability of the cash flows, based on our research, is what matters to

us. If we're trying to build a five-year model for a technology company where the product life cycles are three months, and disruption happens all the time, that's a tough one to underwrite.

G&D: Stadium now has a European version of the strategy. What began this process and how does this fit in with the rest of the firm?

AS: We thought about it over the years, mostly because some of our investors encouraged us to do so, both in terms of the market opportunity and the manager set. There do not appear to be a lot of people who do what we do in Europe apparently. We have looked at Europe many times over the years. Then we have typically decided to lie down until the feeling went away because we have always had plenty to do here in the U.S. Ten or twelve years ago we took a very hard look at it. At that time, we satisfied ourselves that there was an opportunity and the ability to do research was reasonably attractive.

Three years ago, an investor of ours requested that we look again and we took the opportunity to refresh our point of view on the number of potential opportunities and where they might be. All the same opportunities had even less friction for research, but the question was, “Who is going to do this for us?”, because none of us was interested in re-potting ourselves in Europe. But we found an exceptional individual in the UK whom we had known for fifteen years and teamed him with an analyst

(Continued on page 19)

Stadium Capital Management

who had been here in Connecticut with us for two years. They are doing an outstanding job scouring the investment landscape in Europe and the UK.

We usually discuss four to six companies every week in our investment committee meetings and at least one or two of them are European companies, sometimes more. As we are developing our knowledge base over there we have invested in a couple of businesses there already. It remains to be seen how much of a long-term opportunity there is for us in Europe. The universe of publicly traded microcap companies is smaller, probably 30% to 40% of the number of companies in the US and Canada. But we are happy we are taking a thorough look.

G&D: Do you have any advice for students or anyone else looking to work in investment management, particularly with a value orientation?

AS: The first question anyone should ask himself or herself should be, "What kind of investor do I think I am?" If seeing red and green flash in front of your face all day long doesn't scare you, if you're prepared to think about volatility as your friend, then the public market is a fun place to be. But you have to be honest with yourself, because it is not for everybody. If you believe that facing a portfolio down 20% in a quarter will wreak emotional havoc on you and prevent you from making smart, rational decisions, then you shouldn't be in this business. Ben Graham said that you need to be prepared to

see your security down 50% and still be OK in order to be a public market investor, and it's still true. There are many ways to invest and you have to be honest with yourself about which one is right for you.

BK: Also, make sure you join an organization that invests in a way that you would invest personally. There are lots of ways to invest and there are organizations that do lots of very different things well, but if you are not suited to what they do well, you could be miserable. That's part of the trick. It is not the easiest business to enter and if you get in by joining a company that isn't a good fit, it might not have gotten you anywhere. It is not just about getting into investing, it is about getting into a place that fits. Make sure you are doing what matches with you and not with someone else.

G&D: Fantastic. Thank you both for your time.



Jocelyn Doman '17

Jocelyn is a second-year MBA student at Columbia Business School. Prior to CBS, Jocelyn worked in communications marketing for Edelman. This summer she interned in digital business development for Paramount Pictures, and is interning in product development and strategy at NBCUniversal this fall.

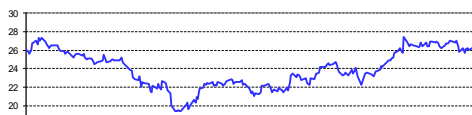
****Editor's note: LYV originally presented in March 2016 at a share price of \$22.73 with a target of \$31, representing a 36% upside.****

Live Nation Entertainment, Inc. (NYSE: LYV) - Long 2016 Women's Investment Ideas Club

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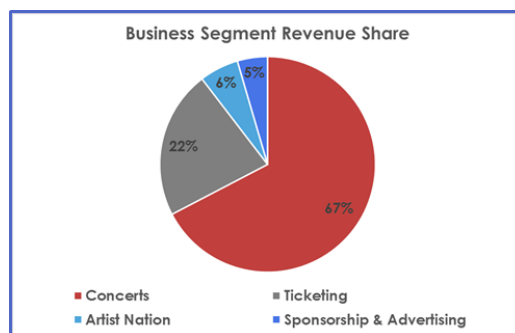
Executive Summary

- **HIGH QUALITY ASSETS:** Leading global live entertainment company across four *harmoniously* integrated business segments (Concerts, Ticketing, Artist Nation, Sponsorships & Advertising), *playing melodic* synergies and economies of scale.
- **IMPROVING ECONOMICS:** Revenue CAGR of 9% through 2018, with EBITDA margins expanding 55bps results in a \$2.95 of FCF per share by 2018, thus *turning up the volume* on FCF generation and ROA.
- **ATTRACTIVE VALUATION:** Target price of \$32.50 a share, representing an 18% upside – I recommend a **LONG** on Live Nation Entertainment, Inc.

CAPITALIZATION		FINANCIALS									
Shares outstanding	202.5	Revenue	2011	2012	2013	2014	2015	2016E	2017E	2018E	
Current share price (10/19/16)	\$27.58		5,384	5,819	6,479	6,867	7,246	8,198	8,773	9,387	
Market Value	\$5,584		Cons.					7,980	8,289	8,718	
Total debt	\$2,045		EBITDA	438	459	505	555	578	658	726	799
Non-controlling interest	\$5		EBITDA Mgn:	8.1%	7.9%	7.8%	8.1%	8.0%	8.0%	8.3%	8.5%
Less: Cash & equivalents	(\$1,305)		Cons.					641	705	761	
Enterprise Value	\$6,319		FCF	28	243	296	138	158	458	454	594
Target Price	\$32.50		FCF per share	0.15	1.30	1.53	0.69	0.78	2.28	2.26	2.95
Potential upside	18%										
KEY STATS			SHARE PERFORMANCE								
52 Week High	29.68										
52 Week Low	18.77										
Short interest	2.6%										
Avg. Daily Volume (mm)	1.24										
Price/2017 FCF	12.29x										
EV/2017 EBITDA	8.71x										
PRIMARY RESEARCH											
Contacts: former board member of LYV, CBS media and entertainment professor											

Business Description

Live Nation Entertainment, Inc. (LYV) is the largest live entertainment company worldwide with nearly 530M fans in about 37 countries, and is the only publicly traded live music company. It operates **four segments**: **concerts** (global promotion of live music events, operation and management of music venues, production of music festivals), **ticketing** (primary and secondary ticketing platforms for live events), **Artist Nation** (management services to music artists and other clients), and **sponsorship & advertising** (creates and maintains relationships with sponsors, offers advertising services), comprising 68.5%, 22.6%, 6.0% and 4.6% of 2015 revenues, respectively. Revenue has grown consistently since the Live Nation/Ticketmaster merger in 2010 at a **CAGR of 6.9%**. With an integrated suite of services in live entertainment, LYV is best positioned to capture incremental value from concert and festival-going consumers. The secular shift toward live tours and music festivals, where LYV has a dominant share, offers superior margins and the opportunity to expand their presence in sponsorship and secondary ticketing. This makes LYV uniquely positioned to *rock and roll* in its growth in the live entertainment space.



Investment Thesis

LYV is a high quality live entertainment company, delivering positive growth and margin expansion, with growing Concert market share and four (4) key factors that are *in tune* to make LYV a high conviction investment at this time:

- 1) **Live entertainment industry trends will drum up consistent revenue growth for LYV.**
 - ◇ Live touring is on the rise and is the biggest moneymaking venture left in music business, which will result in greater concert and festival opportunities and thus revenue growth. Over the past 10 years, live shows

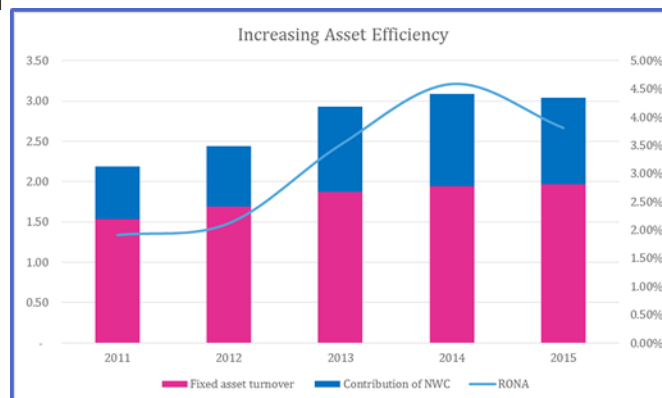
Live Nation Entertainment, Inc. - Long (Continued from previous page)

have expanded to become the main revenue driver for musicians, growing from \$10 billion in 1999 to \$30 billion in 2015 in gross ticket sales. Artists now make the majority of their income (70-80%) through touring and thus are motivated to do live shows. With this upward trend, each concert ticket is bringing a greater return over time while each album sold is bringing a declining return, thus driving the live music business.

- ◇ Millennials highly value experiences and are increasingly spending time and money on them, which will provide continued revenue growth for LYV across its portfolio of music businesses and all events offered in ticketing. Millennials (born 1980-1996) are the largest generation by population in the U.S., and currently produce an estimated \$1.3T in total consumer spending. Since 1987, the share of consumer spending on live experiences and events, such as concerts and music festivals, relative to total U.S. consumer spending has increased 70%. With millennials' increased interest in events and ability to spend, they are driving the growth of an experience-oriented economy, directly benefitting the number of events and thus revenue growth for LYV.

2) The income statement disguises the true cash generation.

LYV has unique working capital dynamics in which they are able to collect money well in advance of paying vendors, consistently increasing the number of days, and ultimately being positive in days of cash cycle. Asset turnover has increased by 50% since 2010 largely as a result of better working capital management. Throughout this growth process, management has shown a consistent ability to deploy capital in a more efficient manner, which has led to a doubling (2x) of return on net assets. I predict the returns will continue to improve in line with the business growth.



3) LYV takes share in the secondary ticket market.

Research and Markets forecasted secondary (aka "resale") tickets for 2016-2020 and concluded the global market for these tickets is expected to exhibit significant growth during this time (19% CAGR by 2020), largely from the associated growth in the number of sporting and live events. LYV is gaining market share in the secondary market, poised as the second largest player after StubHub (approx. 20% vs. 50% market share, respectively). In 2015, LYV's secondary ticketing business delivered 32% growth in gross transaction value over 2014. Both companies grew faster than the overall market in 2015 and LYV will continue to grow its share and drive scale economies – by effectively allowing the company to earn money on ticket transactions twice.

4) LYV is growing its festival portfolio, offering improved margins.

Music festivals are a booming business, growing exponentially because they reflect how fans consume music in a streaming world through sampling in an immersive, social setting, and for promoters, established festivals offer improved profitability versus traditional shows. Since December 2014, LYV has rapidly built out its festival portfolio and now owns four of the top five music festivals in North America by attendance (Lollapalooza, Bonnaroo, Austin City Limits, Electric Daisy Carnival), among others.

Compared to traditional concerts, festivals offer better margins to promoters like LYV. By owning top, established festivals and continuing to broaden its portfolio with successful festival franchises, such as Governor's Ball, Live Nation can continue to *amplify* its margins in the Concerts segment and grow its Sponsorship business, which already produces high margins (68%).

Promoter Profitability: Festival Versus Single Artist Show		
	Approx. Ticket Price	Promoters' Profits
Festival	\$200	\$5-10M
Traditional Sold-Out Show (Single Artist)	\$50-75	\$40-45K

Source: Wall Street Journal, 2015

Valuation

My price target is based on a multiple over the FCF per share for 2018, resulting in a target price of \$32.50 representing an 18% upside. This valuation method is appropriate for LYV given the working capital dynamics of the business. The street overlooks this element and mainly focuses on P&L metrics. I believe LYV sings a compelling long, with a large moat and comfortable margin of safety.

Key Risks

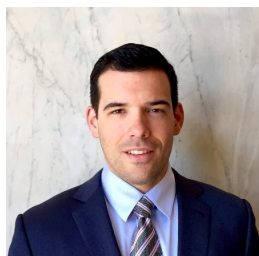
- Potential slowdown in U.S. consumer spending from a global recession could impact LYV's revenues across segments.
- While LYV has a dominant market share in ticketing, new competition could gain on LYV's ticketing position and affiliated business segments.
- Significant event/tour cancellations could result in revenue loss and potential reputation damage.

KEY ASSUMPTIONS			
	Bear Case	Base Case	Bull Case
Revenue CAGR 15-18	5.1%	9.0%	10.2%
EBITDA Margin 2018	8.0%	8.5%	9.1%
FCF per share 2018	2.38	2.95	3.48
P/FCF	10.0x	11.0x	12.0x
Price Target 2017	23.80	32.50	41.76
Upside (Downside)	-13.7%	17.8%	51.4%



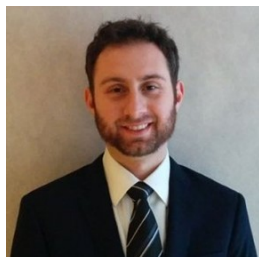
Maria Muller '17

Maria is a second-year MBA student at Columbia Business School in the Value Investing Program. Prior to CBS she worked at Prudential Investment Managers in South Africa on their Africa fund. She spent the summer at T. Rowe Price in London.



William Hinman '17

William is a second-year MBA student at Columbia Business School in the Value Investing Program. Prior to CBS he worked as a Managing Consultant in the Forensic Accounting practice of Navigant Consulting. He spent the summer interning at Red Oak LLC in New York.



Mark Shohet '17

Mark is a second-year MBA student at Columbia Business School in the Value Investing Program. Prior to CBS he was a manager in Structured Finance Transactions at EY. He spent the summer interning at Evercore Partners in New York.

Skyworks Solutions (NASDAQ: SWKS) - Long 2016 Pershing Square Challenge

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Recommendation

I recommend a long on Skyworks Solutions (SWKS) with a price target of \$127, offering 63% upside from today's price of \$78 with desirable upside/downside dynamics. There is a significant revenue growth runway as the dollar content of RF components increases sharply as smartphone technologies progress from legacy 2G products to LTE and 5G. SWKS has excellent operating economics and deployment of capital, coupled with no leverage and a \$1bn war chest of excess cash ready for a strategic acquisition.

Business Description

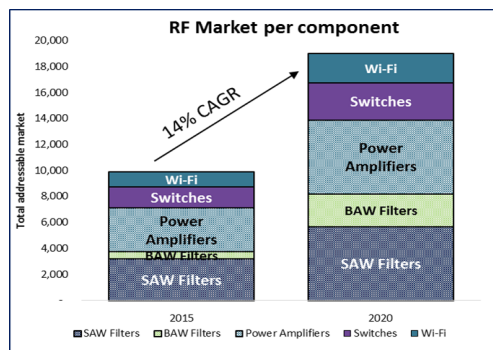
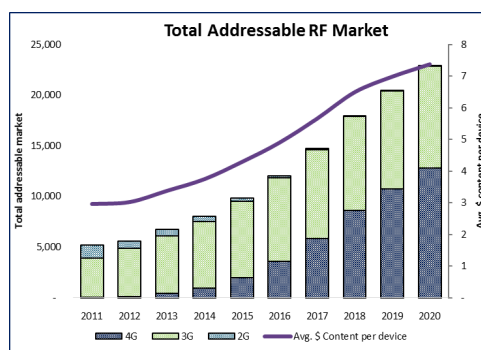
SWKS is an industry leading designer and manufacturer of integrated RF (radio-frequency) technologies for a broad range of electronic devices from mobile phones, to integrated "Internet of Things" products. It operates in three main segments, namely Integrated Mobile (52% of Revenue), Power Amplifiers (26%) and Broad Markets (22%). Their primary segment, Integrated Mobile, is where their true competitive advantage lies. SWKS leads the industry in their ability to produce extremely complex RF integrated circuit boards which are currently in premium smartphone manufacturers' products. By packaging and integrating the different components of the circuit board, SWKS sets themselves apart from their competitors due to their superior technologies and execution. SWKS's main customers include Apple, Samsung and Google. There are only three competitors who are capable of producing RF products comparable to those produced by SWKS's, namely Avago (Broadcom Limited), Qorvo and Murata.

Investment Thesis

1) Market underappreciates revenue growth opportunity

The market has **overreacted to a recent slowdown in Apple smartphone sales** (Apple is 42% of revenues in 2015), and the stock is down 36% from its 12 month high. The market is failing to appreciate the long runway of revenue growth from **continued growth in the dollar content of RF parts in smartphones**, which more than offsets potential declines in unit sales growth over the coming years. Furthermore, SWKS has consistently proven its ability to diversify away from key customers, as it did with Nokia 5 years ago, and as it is proving in the large growth in absolute \$ revenue from other customers.

SWKS operates in a **four-player oligopolistic industry with huge barriers to entry** (i.e. technology, time, dollars), and this scale and expertise means that losing a single supplier may cause unacceptable shortages for OEMs. Exploding demand for streaming data content has necessitated increasingly complex RFFE components. OEMs needs have rapidly shifted from discrete components towards custom integrated solutions and they prioritize performance over price, will not compromise on mission critical components.



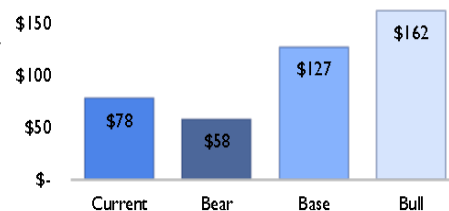
Source: Statista, Jefferies, Broadcomm

Trading Statistics

Share Price	\$78.08	52 Week High	88.52
Dil. Shares O/S	187.5	52 Week Low	54.5
Market Cap	\$14,640	Dividend Yield	1.4%
Plus: Debt	\$0	Fwd. P/E	12.5x
Less: Cash	(\$976)	Fwd. EV/EBITDA	8.9x
Enterprise Value	\$13,664	Short interest	6.1%

Return Expectations

\$200



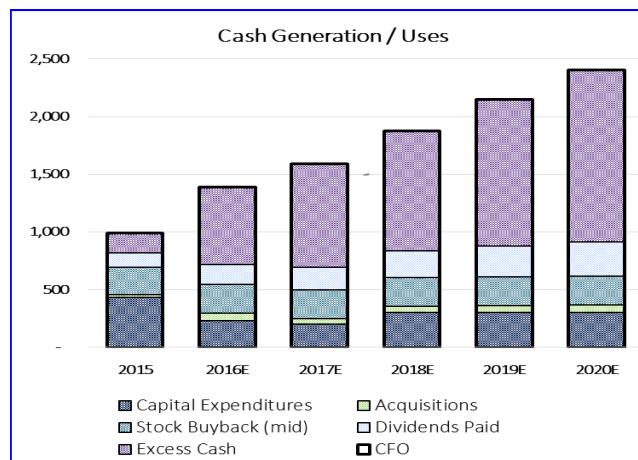
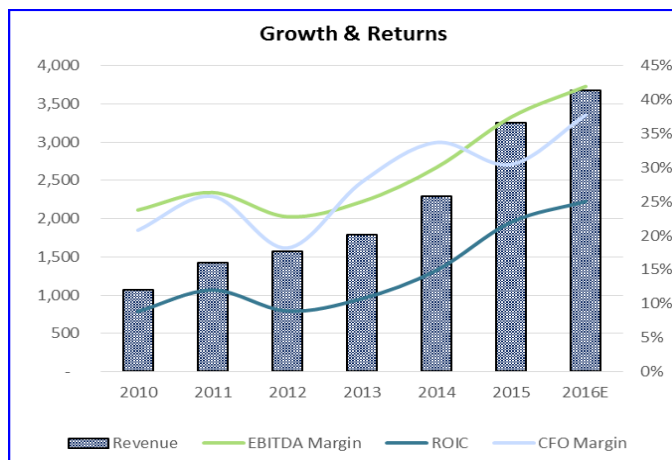
Skyworks Solutions (SWKS) - Long (Continued from previous page)

2) Increased profitability and returns profile

SWKS has excellent **operational economics** with best in class revenue growth (42% in 2015), profitability and incremental returns on capital, all with no leverage. Their unique competitive advantage lies in their ability to package the various RF components in smartphones. They are the most fab-focused (controlling own production) of all competitors, exemplified by their award-winning Mexicali plant.

Management have consistently demonstrated an **excellent ability to deploy capital**, both in respect to returns to shareholders, and in respect to capital expenditures on accretive additions to the business. Most recently SWKS entered into a strategic joint venture with Panasonic, enabling access to high performance TC-SAW filter technology. The company has initiated a new dividend program and has also consistently returned excess cash to shareholders in the form of share buybacks. They currently have \$1bn of cash on the balance sheet which could be used for a **strategic acquisition** in the future.

Source: Company Reports



3) Attractive diversification opportunities:

SWKS has a long runway of **attractive opportunities** to diversify away from integrated mobile in their “Broad markets” segment, where their core competencies in RFFE technology components are used in “Internet of Things” products. SWKS has recently won contracts with Volkswagen, Fitbit and other major manufacturers in this high growth, high margin segment. By 2020 75% of all cars shipped will be connected, and there are big opportunities in a wide variety of industries such as medical, automotive and connected homes.

Valuation

Various valuation models were used in the analysis of Skyworks, including a DCF and comparable analysis. The model was constructed using a bottom-up fundamental analysis focused on the underlying economic drivers of the business. Based on the DCF and comparable analysis methods employed, I estimate a **target price of \$127, 63% upside** as a base case. Potential for multiple rerating once fears of lackluster industry growth subside, and as unit economics improve. Significant margin of safety due to long runway for growth and margin expansion in next five years.

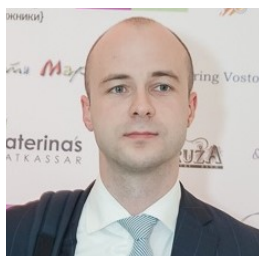
Key Risks

RISK	MITIGANT
Customer concentration: In FY 2015 44% of total Revenues were from Foxconn (Apple's producer)	Proven ability in past to diversify away from key clients (Nokia was a significant customer in 2010/2011) and increased absolute revenue from other customers – Second tier smart phone clients. Furthermore, Apple and Samsung smartphone cycles run in different seasons, diversifying seasonality in sales
Competition: Qualcomm, a semiconductor giant has been researching RF technologies for years and could finally get it right	Qualcomm have yet to develop/acquire appropriate RF technologies, and even when they do it will take a number of product cycles before they become an established name in the parts that Skyworks manufactures
Missing a product cycle (No long term customer contracts in place): Not being included in an Apple or Samsung smartphone would significantly decrease Skyworks revenue for a number of years	There are currently only three main players in the RF front-end market, and if an OEM were to cut one of them out, they would not only depress innovation, but also run the risk of reduced quality in products – Unlikely that an OEM would risk product failure over \$6 of parts in a \$260 smartphone. 3 year visibility on OEM product cycles and once included in a design, have contract for lifespan of that model



Kenneth Chan '18

Kenneth is a first year MBA student at Columbia Business School. Prior to CBS, he worked as a private equity associate at Sun Capital Partners in New York. Kenneth graduated from The Pennsylvania State University with a M.S. and B.S. in Accounting.



Anton Korytsko '18

Anton is a first year MBA student at Columbia Business School. Prior to CBS, Anton was an equities portfolio manager at a Russian pension fund Blagosostoyanie in Moscow, Russia. Anton is looking to work for a value-focused emerging markets investment manager.



Alex Teixeira '18

Alex is a first year MBA student at Columbia Business School. Prior to CBS, Alex worked as a research analyst on the buy-side at Standard Life Investments. Alex intends to work for a value-focused investment manager this summer and after graduation.

AMERCO (NYSE: UHAL) - Long 2016 Ross MBA Investment Competition - 2nd Place Finish

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Recommendation

We recommend a long on AMERCO (UHAL) with a 2-year price target of \$477, offering 40%+ upside from today's price of \$338.

Business Description

UHAL is North America's largest "do-it-yourself" moving and storage operator with a fleet of over 250,000 vehicles and with almost 50 million net rentable square feet of personal storage space under management. UHAL also has insurance subsidiaries, operating in the life insurance and property & casualty insurance segments.

Investment Thesis

1) Strong Self-Rental Revenue Growth Will

Sustain Over the Medium Term

UHAL has grown revenues at an 8.3% CAGR over the past five years; we believe the company is poised to continue growing at a 6-8% rate over the next 3-5 years, driven by secular demographic changes towards renting vs. home ownership, market share gains, modest price increases and improved truck utilization.

Over the past 15 years, the share of households renting vs. owning has steadily shifted from 31% to 36%. The age groups showing the highest change in share of household rentals are 25-29, 30-34, and 35-39: young professionals are gravitating towards urban areas, which has led to more household rentals. Housing Vacancy Surveys and Current Population Surveys have estimated that the average annual growth in renter households since 2010 has more than doubled from previous decades to 1.0 mn households. Renters are 4x more likely to move than home owners, which leads to more rental transactions for UHAL. We believe this trend is a sustainable, secular change that will persist for the foreseeable future and will continue to benefit UHAL.

UHAL has greater than 50% of the self-move rental market; the firm's closest competitors are Avis Budget Group (CAR) and Penske Automotive Group (PAG), both of whom have roughly 10% market share. CAR's rental truck fleet has declined from 32,000 trucks in 2012 to 21,000 in 2015, while we estimate that Penske's has stayed roughly flat at 15,000 over the same time period. Conversely, UHAL's truck fleet has increased from 106,000 to 139,000. It is clear that UHAL has taken tremendous share from both competitors and CAR's decision to continually reduce its fleet size suggests the company is in the process of exiting the business altogether. We also believe that UHAL has taken market share from "Mom-and-Pop" operators, who can't compete with UHAL's dealer network, service quality, and prices. We think UHAL will continue to take market share, which gives us conviction in our above-market growth forecast of 6-8%.

Lastly, UHAL's dealer network and strong brand provide the business with high barriers to entry. UHAL has 19,500 independent dealers and 1,700 company-owned locations, which totals to over 8x more locations than CAR or PAG. This gives the company an exceptional advantage in the one-way move market: renters really

LTM Financial Performance, \$mn

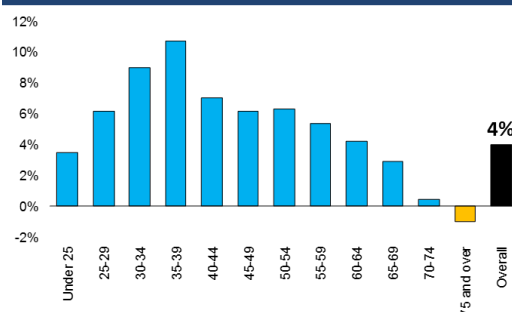
		Margins
Total Sales	3,276	
EBITDA	1,158	35%
Operating profit	867	26%
Net income	184	6%

Trading Summary*, \$mn

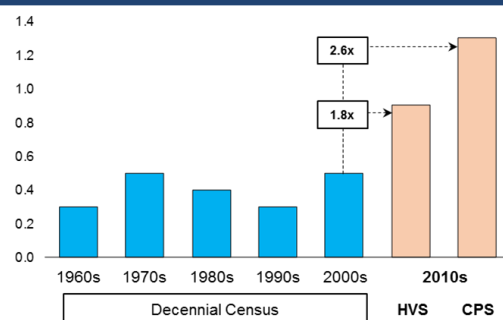
		NTM Multiple
Share Price	338.8	
Market Cap	6,642	12.5
Enterprise Value	8,601	6.7

* as of 10/12/2016

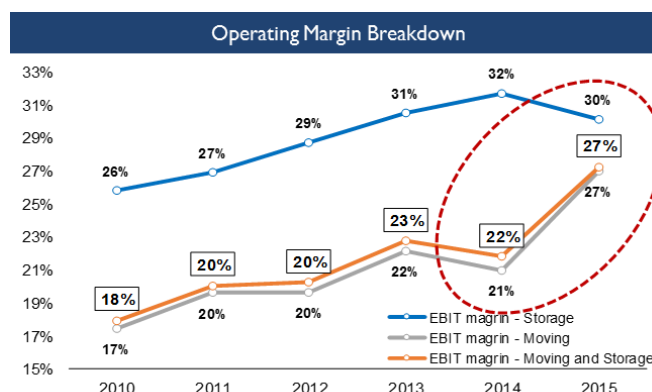
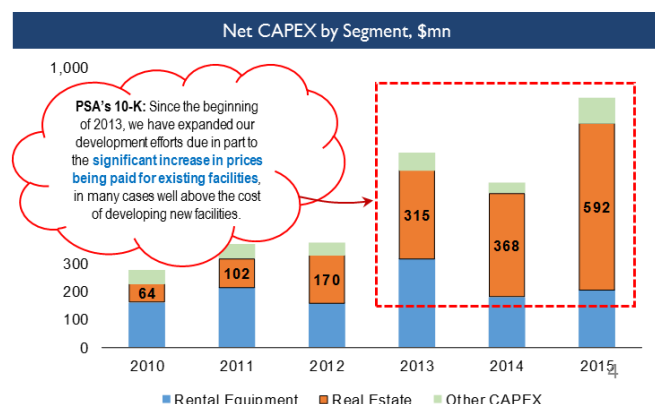
Change in Share of Households Renting, 2004-2013, %



Average Annual Growth in Renter Households, mn



AMERCO (UHAL) - Long (Continued from previous page)



value having a convenient way to drop off the rental truck after moving, and only UHAL's dealer network can consistently provide this convenience. Second, the UHAL brand has been around for 60+ years and is synonymous with self-moving – we believe this is an underappreciated element of UHAL's competitive moat. As UHAL continues to gain market share and cements itself as the dominant player in the market, we think that the company will be able to enjoy more pricing power than it has historically.

2) Expansion into High-Quality Self-Storage Business

UHAL has aggressively invested in its self-storage business over the past several years, which will lead to higher margins, stronger revenue growth, and further improve UHAL's value proposition to its customers.

UHAL has invested over \$1.2bn in its real estate business over the past 3 years, which is about 4x more than the company invested from 2010-2012. The company is aggressively adding to its portfolio of owned self-storage locations (generally through renovations or new-builds), which naturally complements the self-rental business. Roughly 25% of movers choose to use a self-storage facility, and about 80% of renters stay for 12 months or longer. The self-storage market is very fragmented, but UHAL is the 3rd largest player in the market, behind Public Storage and ExtraSpace Storage.

The pure-play public storage REITs generate EBIT margins of roughly 50%; UHAL does not disclose its storage margins, but if we assume they are somewhat similar to the peer group, we should expect significant margin expansion over the next several years as the storage business becomes a larger percentage of UHAL's overall revenues.

3) Compelling Valuation Given the Growth Profile

UHAL trades at a steep market discount (6.7x forward EV/EBITDA and 12.5x forward P/E), despite having attractive return metrics of 11% ROIC and 21% ROE, modest leverage of 2.0x net debt/EBITDA, good growth prospects, and high barriers to entry into its core business.

We believe that UHAL's valuation massively underestimates the company's intrinsic value and can only conclude that the market is uncomfortable with the asset intensity of the core business and potentially believes that UHAL's current margin level is unsustainable. The business earns good returns on invested capital and maintains a modest asset/equity ratio of 3.5x, and for reasons mentioned above we not only believe that UHAL's margins are sustainable, but we also think they will expand over time. As UHAL continues to post strong revenue growth and healthy margin expansion over the next several years, we expect UHAL's valuation to move to parity with the overall market, a roughly 25% increase from current levels.

Main Valuation Drivers and Output					
\$ mn unless stated otherwise	FY2015 A	FY2016 A	FY2017 E	FY2018 E	FY2019 E
Moving revenue growth drivers					
(1) Fleet growth	6.9%	1.8%	3.5%	3.4%	3.3%
(2) Revenue per vehicle growth	1.4%	3.8%	2.2%	2.2%	2.2%
Storage revenue growth drivers					
(1) NRSF growth	10.9%	16.8%	20.9%	10.4%	6.3%
(2) Price per sq ft growth	3.0%	2.4%	2.0%	2.0%	2.0%
EBIT margins forecast					
Moving	21%	27%	27%	27%	27%
Storage	32%	30%	30%	35%	40%
Other	19%	18%	18%	18%	18%
Consolidated financials					
Revenue	3,075	3,276	3,499	3,708	3,914
Growth	8.9%	6.5%	6.8%	6.0%	5.6%
2016-2019 Revenue CAGR	6.1%				
EBITDA	941	1,158	1,276	1,372	1,468
EBITDA margin	31%	35%	36%	37%	38%
2016-2019 EBITDA CAGR	8.3%				
EBIT	663	867	927	1,001	1,077
EBIT margin	22%	26%	26%	27%	28%
2016-2019 EBIT CAGR	7.5%				
Valuation					
NOPAT	709	854	952	1,021	1,091
CAPEX	548	797	666	551	588
FCF	161	57	286	471	503
2019 Target EV/EBIT multiple	10.5				
Current EV to Trailing 12M EBIT multiple is	9.4				
Target price at the end of 2018	477				
Current price	338				
		IRR		2Y Return	
		19%		41%	

Neal Nathani

(Continued from page 1)



Neal Nathani

Williamson McAree Investment Partners, where he was a Partner and Managing Director. Mr. Nathani began his career in Credit Suisse First Boston's Technology Investment Banking Group in Palo Alto. Mr. Nathani graduated magna cum laude from The Wharton School at the University of Pennsylvania. He was an Adjunct Professor of Finance at the Columbia Business School in the Value Investing Program from 2009-2013 and still guest lectures regularly.

Graham & Doddsville (G&D): Could you tell us how you started your career and how you ended up where you are today?

Neal Nathani (NN): I grew up in Canada and went to Wharton for my undergraduate studies. During my senior year at Wharton, I did research with a professor on hedge funds. Thanks to that, I view the world of investing very much in an academic and intellectual light. For my senior research project, I was doing work on long-short ratios as well as how to think about shorting stocks, how to think about hedging positions, and how to think about using quantitative metrics to ascertain the qualitative elements of a business model. That project laid the foundation for me to be intellectually curious about investing.

Around that time, too, I came to New York on a school field trip, and met Julian Robertson for the first time. It was

inspiring just to speak with him briefly and hear how he thought about the world. In many ways, it served as a catalyst for me to get even more interested.

After I graduated Wharton, I went to Silicon Valley as a technology investment banker and worked for Frank Quattrone. I had grown up fascinated by the Commodore 64 and C++ programming, so going out to Silicon Valley during the first technology boom was a great opportunity.

"Sometimes you can take advantage of inflection points and find a growth company that becomes a value stock and a value company that becomes a growth stock."

Those experiences, in many ways, shaped how I thought about the world. I was out in Silicon Valley at a time when there were all these disruptive shifts occurring within technology business models and within the consumer space. That provided the framework by which I've been investing over the last decade, by looking at businesses within the technology or consumer sectors that are going through innovative shifts.

The time in Silicon Valley allowed me to be really objective when analyzing businesses. I saw businesses

that were working, but by the time I left Silicon Valley, half of them were out of business. It allowed me to appreciate businesses that can be great longs and great shorts.

After investment banking, I came to New York and joined a firm called Williamson McAree Investment Partners, which was run by two former senior investment professionals who worked at Tiger Management. This was an opportunity to learn from guys who had themselves been trained in a fantastic environment, and hence really learn about the investment business.

Within the Tiger ecosystem, I learned about growth investing. But I also teach value investing at Columbia. That's emblematic of our process at Totem Point, because I think we're very balanced between being value investors and growth investors. We can swing to both sides of the opportunity set pretty effectively.

G&D: Do you think there are contradictions between growth investing and value investing and, if so, how do you resolve them?

NN: Value investing is about looking at very contrarian names, having margins of safety, understanding asset value, and understanding liquidation value. Growth investing is thinking about the world two or three years from now, and what the revenue and earnings CAGR for a business could be. It's about what kind of multiple you can earn on a business, and how that business is disrupting

(Continued on page 27)

Neal Nathani

certain business models.

I've found that some of the best value investments turn into growth investments. And some of the best growth investments over time become great value investments.

I very much look at the world of investing like I would marketing. In marketing, there's an S-curve that people use. They analyze businesses at an early growth phase, at the maturation phase, at the declining phase, and so on. Sometimes, you can find growth businesses that are in the beginning phase of that S-curve. Sometimes you find the value businesses in the declining phase. And sometimes you can take advantage of inflection points and find a growth company that becomes a value stock and a value company that becomes a growth stock. We've actually used those contradictions and those differences to our advantage, as opposed to shying away.

G&D: Thinking back to when you started Totem Point Management, versus where you are today, do you feel as if your strategy and philosophy have changed at all? Can you also walk us through the major aspects that set you apart from other places?

NN: Our processes are not static, they're evolving. I think also that the team has evolved in a way that is particularly special. I grew up in Canada playing ice hockey. I idolized Wayne Gretzky. Wayne Gretzky was the guy you watched when you were a kid growing up in Canada in the 1980s. He had this really

eclectic line of two Finnish wingers, Jari Kurri and Esa Tikkanen.

These players were very, very different from each other but also very, very complementary in terms of their skills, and they evolved a process over time. Wayne thought about the team by playing from behind the net, as opposed to behind the blue line. He always wanted to think about where the puck was going.

"We're 'backpack guys.' We like getting on the road all the time with backpacks and Birkenstocks. We're at trade shows and events, going to product demonstrations, learning about businesses."

That's how we thought about the Totem Point Management team, too. For us, when I think about our organization and process, it has evolved over time. We've refined it. Our process has made us a little bit different.

In essence, we focus on both the quantitative and qualitative elements of a business, and we put it all in an "Idea Matrix," which we have refined over the past decade. An Idea Matrix scores business characteristics, growth characteristics, management

characteristics, and our variant perception.

We use this scoring system for all of our positions, for both value and growth names, and for our shorts. That's our benchmark by which we grade ourselves.

One of our hallmarks is that we love to focus on industries that are going through structural change or disruption. We have got decades of experience in areas like technology, telecommunications, and consumer sectors that we think are going through a lot of change, but which the market is struggling to predict and price accurately. We love changes of that kind.

The second thing that we really focus on is value-added research. We're "backpack guys." We like getting on the road all the time with backpacks and Birkenstocks. We're at trade shows and events, going to product demonstrations, learning about businesses. We'll go to the Olympics of Printing every four years in Dusseldorf, Germany. For us, it's about really understanding the nuts and bolts of businesses.

Also, we like to stick within our core strategy. In a lot of investment processes, I think people skew when they find different areas of interest. We know what we're really good at, and we know what we're not good at. We haven't really skewed toward the areas that we don't think we're particularly good.

We love thinking about variant perception. We really try to

(Continued on page 28)

Neal Nathani

avoid things like group-think or anchoring. We're always thinking about contrarian ideas, and how we can be different. Some of the names that we initially thought may have been shorts for us turned out to be fantastic longs. We love to be very objective, and not stubborn. We always want to put ourselves in position to play offense.

The last thing we think about are the three Rs: revisit, refresh, and regenerate. In our Idea Matrix, we always think about how we can revisit existing names. Some of our best ideas come from names we looked at three years ago. We don't constantly feel as if we have to go out there and fight for new ideas, because there are names we've worked on in the past, that we scored, and that we think are particularly compelling now as opposed to maybe three years ago.

G&D: You and your team try to take an objective, methodical point of view. How much does qualitative research matter, especially regarding management?

NN: In our Idea Matrix, we measure three things: growth characteristics, business characteristics, and management. They are actually equally weighted in our matrix. In terms of management, it's very important for us to meet the teams and understand the organizations they've put in place. We're investors in these businesses for long periods of time. We're not renting them. Owning something, we feel as if we have to understand the management and how they're incentivized. We spend an

awful lot of time analyzing proxy statements.

I focus on this analysis in my class, especially understanding how people are incentivized and what makes them tick. I like to know the metrics by which management gets paid. Do they get paid on cash flow? Do they get paid on the organic growth rate? Generally, how someone's paid changes his or her focus.

"Software companies are hard. I think that's where it comes to balancing both value and growth investing."

The most interesting thing about the investment management industry is that you've got to put your money where your mouth is. You've got to put the vast majority of your capital into this business because you believe in it. You have high conviction in your research, your process, and your team. So when you find management teams that do the same thing, it's very, very compelling. You feel like they're with you for the long run. If things don't go well, they also feel it. Every year, we can't wait for these proxies to come out to do that work.

G&D: Do you also meet with management if you are short a company? How do you approach that?

NN: I don't think we've ever told a company directly that we're short. What we'll tell businesses is that we're

objective and we're trying to figure out what the business is ultimately worth. We will be candid with our approach, but I don't think we'll ultimately tell them that we're short the business. We've never gotten into a circumstance where we've been actually cornered into saying whether or not we're short the business.

G&D: When evaluating the quality of the business and the returns on capital, how do you think about software companies? This is a sector where, from a traditional accounting point of view, many have negative invested capital.

NN: Software companies are hard. I think that's where it comes to balancing both value and growth investing. There are certain metrics that you can use intelligently with value investing that you can't really use with growth investing. Doing asset tests on a software company is very different from doing asset tests on a semiconductor company, where they have fabrication plants that you can analyze in all different locations, where you know that there's liquidation value.

We try to isolate, once again, a value name from a growth one. We're not comparing a semiconductor company to a cloud software company. We would be debating every single day about what we think the metrics of one are versus the other.

We isolate businesses that we think are value, where we think we can do real analysis of assets, versus ones where we can't really analyze returns on invested capital intelligently,

(Continued on page 29)

Neal Nathani

because there isn't invested capital.

G&D: How do you fight some of the biases and the anchoring regarding companies that you've looked at in the past when you revisit them?

NN: In our scoring system, we try to take relatively qualitative parts of our research and quantitative parts of our research and make them very, very mathematical. Within growth, we'll identify organic growth characteristics, secular versus cyclical, how they're growing the last several quarters, and how growth is inflective.

We'll also study the management. We will go through and look at how the proxy statement has changed, how incentive structures have changed, and how management ownership has changed. In the case of business quality, we ask, "All of a sudden, have their businesses become more recurring than they were three years ago? All of a sudden, have their contracts changed? All of a sudden, have they increased pricing?"

We are constantly monitoring all these elements as well as our variant perception. We keep asking, "What does the rest of Wall Street think versus what we think?"

We go through this process literally every earnings season to update these numbers. If a company scores extremely differently and more compellingly, in terms of risk/reward, then we'll revisit it.

What we do to keep ourselves honest is that we won't

compare a growth name versus a value name; we'll compare a growth name versus another growth name.

On the short side, we'll compare a tactical short — a business that is over-earning — with a similar tactical short.

"Structurally declining business lend themselves to a lot of cash flow work. Many of these old-world companies have complications such as pension issues, dividend problems, high leverage, and covenants in danger of getting breached."

We won't compare a tactical short versus a name we think is an accounting shenanigan. We always try to stay even and balanced in terms of names we're trying to compare.

G&D: You mentioned that you look for overall themes and changes in an industry. How do you typically express this analysis in the portfolio?

NN: On the short side, we're much clumpier and more thematic. On the long side, I like to think about value names versus growth names. We don't do pair trades per se, but sometimes we've dug so deep into a particular vertical that it

offers us great longs and great shorts.

One theme that we've explored a lot since our inception is the world of grocery stores. One company was Empire, a grocery store in Canada. Now they're the owner of Sobeys and Safeway in Canada. Empire was feverishly trying to put out fires on every single front. The company was on the losing end of an escalating price war among large incumbent Canadian grocery stores. They were facing pressure from Walmart and Costco. They have a lack of sizeable discount brands. They were exposed in Western Canada, which has been challenged. Same store sales have declined 3% to 4%. They acquired Safeway's assets in 2013 and have been consistently writing down assets.

We obviously found challenges in that grocery business model. And our work on Empire led us to do work on other grocery stores in Canada. It led us to other businesses like Metro. That work led us to still other businesses that we found in terms of opportunities facing disruption. We've had grocery-store opportunities in the U.S and grocery opportunities in Eastern Europe.

Sometimes, when we dig down deep in an area and find one or two great names, it leads us to extrapolate many, many more. In this case, we unfortunately weren't able to find great names on the long side in grocery stores. Sometimes, that mismatch occurs. Nevertheless, I think when you spend six, seven, eight months

(Continued on page 30)

Neal Nathani

on a particular name, especially on the short side, it does you justice in being able to find other names very quickly.

G&D: How do you think about sizing positions and portfolio construction? How do you manage exposure to individual companies, industries, and themes?

NN: Our average long is around 4% or 5% of capital. Longs can get as big as 10% of capital. We're not afraid of concentration. I'm a big believer in high conviction by concentration. On the short side, we also believe in concentration. We may have a lot more shorts than we do longs, but we probably only have seven or eight themes on the short side. Each theme could represent anywhere from 3% of capital to as high as 10% of capital.

When we think about shorts, it really comes down to conviction, research, and a very, very strong variant perception. We always grade ourselves on our goal of a 50% return over two years, both for our longs and our shorts. But in the world of shorts, you're fighting dividends and borrowing costs. Therefore, the bar is higher to justify our shorts, as we have to overcome these costs. Obviously, we're in an environment where short selling is challenging for many people. I think low interest rates make that a little bit more challenging. We've always found that we've generated a good number of ideas and success from both our value and growth names on the long side, by thinking very tactically, and by being

very differentiated with our themes on the short side. If we feel like we're different and we have high conviction ideas, our themes get pretty big in size.

G&D: When you look at a business model that is potentially flawed or experiencing challenges, but does not have an identifiable catalyst, how do you think about that?

NN: For our short book we'll have maybe 50% of our positions that are in this structural declining phase. We may have 20% in more tactical shorts that we think are over-earning. Then we have a couple percent in what we think are accounting problems. We may have some positions in businesses where their growth rates are being distorted by acquisitions, or businesses that are being hurt by the high-yield markets. We're very, very flexible with how we think about shorts.

“Analog Devices is unlike any other semiconductor company. It's not very cyclical, nor is it very capital-intensive.”

Structurally declining businesses lend themselves to a lot of cash flow work. Many of these old-world companies have complications such as pension issues, dividend problems, high leverage, and covenants in danger of getting breached. For us, monitoring is key to fully comprehend the path by which many of these

things get impacted. We're looking for degradation in the business model.

We want to see businesses where the detrimental markers are getting worse over time and the company will potentially violate some of these covenants. We're also seeking opportunities where we think dividend or cash flow needs will ultimately be the demise for many of these companies.

G&D: You brought up the idea of areas of strength for the team versus areas outside of your core expertise, tending to stay away from the latter. Can you give some examples of places where you tend to not play and the reasons why?

NN: It all depends on what we as a team think we can research and understand, often leaning to areas that are much more secular in nature. We don't make any macro bets here. We have no big currency positions. What we do a very good job at is understanding the structural dynamics of business models and the secular trends that are occurring. We avoid businesses that we think are too cyclical for us. For every single name we have we identify what percent of the business we think is secular versus cyclical. When we analyze our portfolio, we try to isolate how much of the portfolio is exposed to secular issues versus cyclical issues. We monitor this to make sure that we're never imbalanced and have a factor risk that we're dealing with over time.

G&D: When you think about different risks and isolating

(Continued on page 31)

Neal Nathani

specific factors, do you try to hedge out anything that you don't want to capture in the investment?

NN: We generally don't have any strong opinions in currency, so we're always trying to balance that out to the best of our abilities. Aside from that, we don't do that much. Let's say there's a business that has a stub asset that we don't like and we want to hedge it out, we usually don't do that. Nor do we ever get into situations where it's so cumbersome that we have to hedge out a variety of assets. Candidly, we like businesses that we think we understand, sectors we know well, and industries and businesses that we think have lots of structural trends.

G&D: Are there any investments that you want to share?

I spent a lot of time for the past fifteen years, particularly over the past couple of years, in semiconductors. To many people that seems to be a crazy, esoteric area. To us, it's something we do a particularly good job on both the long and the short side. A couple of years ago, we had a very strong opinion that the DRAM cycle was peaking, and we thought many people believed it was doing fairly well. We were very confident in our view, and I spent a lot of time on the short side of that. It was very fruitful. More recently, one name that's been really interesting to us in semiconductors is a company called Analog Devices.

Analog Devices is unlike any other semiconductor company.

It's not very cyclical, nor is it very capital-intensive. The company has had positive cash flow every year for the last 30 years, and because analog companies are not commodities, they're not constantly chasing Moore's law.

Analog Devices has 70% gross margins. Intel has 62% gross margins. Intel, as we all know, is a virtual monopoly. Intel spends 15% of its revenue on capital expenditures. Analog Devices spends 4% on capital expenditures. As a result, the returns on invested capital for Analog Devices have ranged from 45% to 50%.

"This business is hardest when you feel like you need to be emotional or irrational. This business becomes so enjoyable and so satisfying when you can take that away and just make clear, logical, rational decisions."

The business has very high barriers to entry. Analog semiconductors are chips that are highly customizable and are typically produced in small batches going into all sorts of applications. Analog has over 100,000 customers. Many companies make semiconductors that are mass-produced, interchangeable, and highly dependent upon one or

two customers. On the other hand, Analog's business is very, very diverse. When you need a piece of machinery to run for the next fifteen to twenty years, where you require better power or better amplifiers, you're not looking to save a couple cents on a data converter. These aren't businesses that are subject to a significant amount of commoditization.

Within this world, Analog's devices are dominant in data converters and amplifiers. Analog Devices and Texas Instruments together own 80% of the market. A lot of companies have tried to enter this market and have failed. National Semiconductor, Intersil and Microchip Technology all tried to do it. We were attracted to this business for all of those characteristics. More recently, Analog combined with what had been the other poster child of this trade, a company called Linear Technology.

Linear is an incredibly high-quality business. They have 75% gross margins, which allowed the combined gross margins to accelerate into that 70% range. They're very strong in power management, an area that Analog isn't. The product mix, the cross-selling opportunities, and the margin opportunities here are tremendous. They're combining what I believe are two of the real geniuses of semiconductors over the last 30 years. It's a business that we think has earnings CAGR of about 20% over the next couple of years. They can do \$5 in earnings power on a price of \$60. We think that's incredibly attractive.

(Continued on page 32)

Neal Nathani



Elizabeth Gao '17 and Nick O'Sullivan '17 celebrate at the Value Investing Program Welcome Reception

Semiconductor businesses are an area that we know really well and lend themselves to the diligence that we like to do. In many ways, Analog Devices is a value name. It's a business that's growing very, very nicely. But semiconductors go through periods where they're in favor and out of favor. These aren't businesses that are growing like Priceline. They go through cycles. We feel like we're getting the opportunity to buy a business like this where we've got a tremendous margin of safety, where we can do a lot of work like value investors, and take advantage of it.

G&D: You mentioned in some of your letters that you've done work in the virtual reality space. Did this take you to any specific areas of opportunity?

NN: We went into virtual reality when we started doing work in the world of gaming. What's amazing about gaming is that there are 170 to 180 million gamers globally. The average gamer spends anywhere from 25 to 30 hours a week playing games, which is absolutely crazy. The other stat we find incredible is the highest grossing movie of all time, I think, is still Avatar in the neighborhood of \$3 billion. Grand Theft Auto is the bestselling game franchise of all time. Over the last three or four years, it has grossed close to \$4 billion. The world of gaming is extraordinary.

That led us to do all sorts of work on gaming companies in the past. Whether it's gaming-software companies or console makers like Sony. It led us to do work on virtual reality.

Virtual reality and augmented reality are still pretty early, but I think their applications within gaming and within the consumer space will be very, very real.

For us to understand the space, we actually start with semiconductors and chips. What excites me about semiconductors is that they are the lifeblood of consumer electronics.

"Jeff Bezos has said something to the effect of, 'If we have a good quarter, it's because of the work we did three, four, and five years ago. It's not because we did a good job this quarter.'"

When chips reach certain levels of speed and success, then we know whether or not these opportunities are real. We're still early on in the research. We don't have a very strong opinion on those two areas, but we're excited about them. The way we're going to monitor them is by looking at the chip companies. There are a few names that we're doing work on, but nothing we're excited about right now.

G&D: Sony is a company you have spoken about publicly. Do you have any thoughts about their push into VR?

NN: You've seen the first few entrants in VR, including Sony

and Oculus. I wouldn't be surprised if we see something out of larger companies like Google or Amazon, so all of these companies will move into the space. What's extraordinary about technology is that the world has gotten a lot more competitive, but the world has gotten a lot more concentrated as well. There are only a handful of companies that have the balance sheet, R&D expertise, and the vertical integration to perform all of the necessary tasks very, very quickly. This is going to allow just four or five companies to compete for products in these core areas, and I think they can do it. Big Technology is really exciting right now because the companies are also incubators for talent and product ideas.

VR may be an exciting area, or it may not take off. The area will either pick up dramatically or it won't work. Many areas simply don't work. Google Glass didn't work. We'll see what happens to Snapchat videos. I think we'll see a lot of products over the next twelve to eighteen months. New offerings will emerge and it will either be a new killer app for the world of technology, or we'll forget about it.

For us, it's all about who we think has the greatest amount of scale, who is in the right end-markets, and can garner the most market share. Right now, we see the opportunities primarily in gaming for VR because we are still in the early stages. A lot of these companies haven't really come out with real products yet, so it's still very early. We need to see consumer demand. We

(Continued on page 33)

Neal Nathani

need to see users start to accelerate. We love to look at inflection points in users.

The other thing we'll monitor for all technology companies is inventory. These are businesses that often get customer cycles right, but there are many that get customer cycles wrong. We like to monitor not only demand from the end customers, but also how these businesses are able to manage customer demand and inventory. Over the next six to twelve months we'll spend a tremendous amount of time on both of those areas. Our battle will be figuring out whether there are more opportunities outside of gaming, and who we think can be exposed to it. Right now, our belief is that, of the areas we follow, gaming is the most likely to have the greatest impact.

G&D: For these large companies, how do you parse out details like product-specific inventory when so much is consolidated into the financials? Is this where the value-added research is so valuable?

NN: Absolutely. What we love to do is triangulate research, for lack of a better word, whether it's talking to customers, reading trade publications, attending conferences, or understanding the supply chain. Within technology, at least in consumer electronics, there's so much research you can do because you can track the semiconductor sales. There are retailers that are selling these actual products. There are all of these components

that are made all around the world. Consumer electronics is an area that lends itself to a lot of great value-added research.

On a drawing board, we map all the different areas we'd like to research and the information we need. Over a period of several months, we try to triangulate all of the data that helps us make the most sense of the puzzle. Sometimes, we get it right, and sometimes we get it wrong. For us, it's about triangulating as much data as possible that we can analyze quantitatively. We're math guys here. We love to take qualitative findings and boil them down quantitatively.

This business is hardest when you feel like you need to be emotional or irrational. This business becomes so enjoyable and so satisfying when you can take that away and just make clear, logical, rational decisions. Our entire process, our scoring matrix, how we lay out these chart boards is taking something qualitative and making it quantitative. That allows us to embrace volatility, rather than run away from it.

G&D: You also touched on embracing volatility. How long do you typically look to hold on to these investments?

NN: Our goal is to have a long generate a 50% return over a two-year period. We think about holding our investments for a similar time horizon. In shorts we expect similar results, but you're obviously battling things like borrowing costs and dividend yields. You've got to be cognizant of that because you're paying

money every day when you are short. If you're in a structural long, these are names where we can go for long periods of time if the thesis is still intact. We're constantly pushing ourselves with regard to target prices and thesis creep.

If something has reached our target, and the thesis hasn't changed, then we won't be there anymore. If it's reached our target and the thesis has gotten better, we've got to re-evaluate our target. Well, we may still hold it. We may actually buy more of it if the thesis has gotten better. We're always evaluating our probability-weighted upside-downside versus our thesis.

In the world of technology, things are innovating and changing so quickly that a business may have a 20% upside target in one year. But then, they've made an acquisition and moved into a new vertical, spent an incremental amount of money on R&D and, all the sudden, the thesis has gotten incrementally better. In that case, we'll re-evaluate our upside and we may think the company is even more compelling. Because we're so focused on areas like consumer technology, it plays to our strengths because I think we have a pretty good vantage point to see where the puck is going, as opposed to where it has gone.

G&D: Given the pace of disruption in technology, would you prefer to be closer to the consumer side, even though that might be changing very quickly? Or would you rather be closer to the chip side, where companies can play

(Continued on page 34)

Neal Nathani

it from different angles, and might not be as exposed to one specific product or cycle?

NN: The consumer — by definition — is very fickle. On the names that are very consumer-focused, you can probably make a lot of money, but also lose a lot of money. We found some of our best ideas when they were consumer-based. There are definitely consumer-facing areas where we felt like the idea could lead to a short. Particularly, if you have themes, you can make a lot of money on the short side.

On the long side, finding things that are a little bit off the radar has actually been a sweet spot. Some of these names are in technology, or semiconductors, or software. If you can find them within the food chain that people really don't understand, then you can have that real variant perception.

Also, because these areas are so innovative, and because some of these businesses have more diverse customer bases, you can avoid major problems because these companies offer a better margin of safety. We always like to think about the margin of safety. It obviously determines how much money you can make, but also how much money you can lose. If we get our margin of safety right, we can be aggressive and play offense all the time.

G&D: Do you have any advice for current students and others looking to work in investment management?

NN: First, I think it's very important to have a process in

place which you can adhere to during periods of volatility. Jeff Bezos has said something to the effect of, "If we have a good quarter, it's because of the work we did three, four, and five years ago. It's not because we did a good job this quarter." We like to really think about that when we think about our process. Our success comes from the work we do laying the seeds during periods of challenges and volatility. I think if you can adhere to a process and start to develop one as a student, it will help you over time, and allow you to embrace volatility.

The other thing is to always try to have a variant perception and think differently, not just about investments but about everything you pursue. I graduated at a time when Silicon Valley was the place to be. By the time I got there, and went through the experiences, the world was ending in Silicon Valley. I was passionate. I love C++ programming. I love talking about data networking. I was and am a computer geek at heart. I pursued technology because I was passionate about it. But I think there are many people who pursued it because they thought it was the hot thing out there.

One, go with what you're passionate about. Two, think about something where you're not just following the herd. Or if you do follow the herd, do it because you're passionate about it. That will help you not only when you choose your jobs, but actually how you invest day to day.

G&D: Thank you for your time.



Chris Weldon '12

Chris Weldon

(Continued from page 1)

worked as an analyst at Lazard Freres in the Technology, Media and Telecom mergers and acquisitions group. Mr. Weldon earned an MBA from Columbia Business School in 2012. While at Columbia, he completed the Value Investing Program administered by the Heilbrunn Center for Graham and Dodd Investing. He received a B.A. in Finance from The Stern School at New York University in 2005.

Graham & Doddsville (G&D): Can you tell us a little bit about your background and how you got your start?

Chris Weldon (CW): I went to undergraduate business school at NYU's Stern School. Upon graduating in 2005, I worked as an analyst at Lazard in the TMT group. In retrospect, 2005 was a fascinating time to study traditional media businesses as the internet was in the process of dramatically changing the competitive landscape.

After banking, I decided to pursue my first role in principal investing in private equity at Oak Hill Capital. I started in 2007 in what was one of the most bullish times in decades and within eighteen months we were in the thick of the great financial crisis. I was incredibly fortunate, as we had a very strong balance sheet and I got to see some of the most bullish and bearish times in a very short period.

Over the course of three years we acquired a number of companies with significant amounts of debt and as the

businesses slowed we had to recapitalize them. The experience was formative in developing an understanding of the business cycle and capital markets and it defines how I think about risk and uncertainty.

Before I came to Columbia, I decided I wanted to start down the public market investing path and worked as a consultant at Hound Partners. Hound was an amazing opportunity, as I got to work alongside some of the most thoughtful investors in the industry, a number of whom I consider mentors. They taught me to focus on process over outcomes and explained the importance of doing value added research and developing a variant perception. They also taught me about how they identify successful short investments.

I came to CBS knowing that I wanted to join the Value Investing Program. I spent the first year also working in an internship with an analyst at another large tiger cub. He was one of the most outside-of-the-box thinkers I had ever met and was formative in developing my screening process. He explained the power of mental models and how reframing investments as analogies can help give you a radically different view on how things will play out.

During the summer between first and second year I worked at Viking Global. Despite the fact that I was only there for a short while, I recognized that Viking's competitive advantage was different from some of the other tiger cubs. Viking was extremely good at identifying

sector headwinds and tailwinds and managing gross and net exposure and factor risks. Through that experience, I recognized that portfolio and risk management were critical pieces to a successful fund. They also taught me that sizing and timing investments was critical, because slugging ratio is way more important than batting average.

Midway through my second year, I got a call from a fellow value program colleague about a new start-up fund called Incline Global. He told me that the fund was being started by a former partner from Appaloosa and that they were looking for another analyst to come on as a partner. I figured that graduating business school was as good a time as any to take a risk and looking back today, I do not think that I could have made a better decision.

Incline was an early stage start-up. In the beginning, we all huddled around a conference room table with Bloomberg terminals working on investment ideas. Jeff Lignelli, the PM, had a lot of experience, but like all start-ups we had to figure things out as a team. We had to think about how we wanted to run our investment process. How we would go about building and training a team and what resources we needed. Going through the start-up process was amazing as it taught me about all of the pieces it takes to build a successful investing business beyond the research functions. How to think about human resources, fund raising, vendor relationships. Jeff also allowed me to co-manage our short exposure which was an

(Continued on page 36)

Chris Weldon '12

amazing learning experience. It allowed me to work on a large number of ideas in a short period of time and understand on a relative basis what makes for a successful investment.

Two years into my experience at Incline, I met with another CBS colleague who told me about another exciting start-up called Aravt Global. He told me that Yen Liow was building a team to focus on mental model oriented investing and he had an amazing group of capital partners. They were looking for a senior analyst to come and help them build out the frameworks. While I loved Incline and consider Jeff a friend and mentor, the opportunity was too exciting to pass up.

For the better part of the last three years, I have been at Aravt Global helping manage investments across a wide group of sectors. It was an unbelievably rewarding experience as I was fortunate to work with some of the best and brightest across all functional areas of the business. I also was able to spend a significant amount of time developing and deepening our investment frameworks.

Spending the past ten years working in both public and private equity at both start-ups and established firms has given me the tools and the confidence to launch Stamina Capital. Stamina aims to take the best practices from each of my experiences to create an operating system that defines processes for screening, investment research, sizing and timing, and portfolio/risk management.

At its core, the investment business is about decision making and we believe the operating system can improve return on time and drive to better decisions.

“That’s where the mental models come in. By studying history, we can find patterns that can help us understand what will happen in the future.”

G&D: If we think about the different elements of your process, how did you develop them and what were the influences?

CW: In my opinion, screening is where investment analysts differentiate themselves. There are tens of thousands of different securities. Where do you spend time? That's really the hardest part. It's saying, "What is my power zone?", and matching that up with the opportunity set the market is providing.

The Stamina Capital screening process was most influenced by Oak Hill, where we were thematically focused, and Aravt where we utilized investment frameworks. Through developing investment themes, we can identify long-term tailwinds and headwinds that will influence profit pools within an industry. One multi-decade theme that I first experienced in the TMT group at Lazard was how the rise of the internet was going to impact advertising. As

people have shifted their consumption of media to the internet, advertising dollars have followed and the unit economics of the entire industry have shifted.

The shift to digital advertising is the thematic construct, but how do you take that to the specific investment level? That's where the mental models come in. By studying history, we can find patterns that can help us understand what will happen in the future. The key, of course, is to look at many industries, time periods and geographies to understand the common characteristics of great investments. Our fund plans to focus exclusively on one long mental model, “the compounder.” The characteristics of the compounder are (i) a durable competitive advantage, (ii) a large total addressable market with significant share potential, and (iii) strong unit economics that drive high returns on incremental invested capital. In fact, the name Stamina Capital refers to the businesses we plan to invest in—these are businesses that we believe will outlast the competition.

One current example is Facebook as it fits the framework well. Facebook's competitive advantage stems from its network effects on both the supply (users) and demand (advertisers) sides. The total addressable market for advertising is >\$500 billion globally, of which Facebook has a low single digit share of revenue despite significantly more time spent. The returns on incremental invested capital are extremely high as the company enjoys significant

(Continued on page 37)

Chris Weldon '12

volumetric and price growth with little incremental investment.

Of course, identifying these characteristics is the easy part. The hard part is understanding what price implied expectations are and whether this would be an interesting investment.

This is where studying Google, Walmart, O'Reilly, Transdigm, Inditex, and many other successful compounders of the past plays a role. While the rest of the world frames the investment based on 2017 or 2018 P/E or free cash flow, we know that we need to expand the playing field and ask what the business will look like in 2020 or 2030. This is a critical goal of Stamina, to use time-arbitrage. While some would argue Facebook looks expensive on traditional, shorter-term valuation metrics, if I look further out, it looks incredibly cheap.

The key question the stock is asking is what is the mature total addressable market penetration and what is the free cash flow that Facebook will generate at that point in time. If we assume that advertising dollars follow time spent and Facebook garners a significant and growing amount of that time, Facebook could see its revenue double and earnings quadruple over the next five years.

You need to be extremely careful when using mental models, as you can easily use the wrong framework. That is why we also have to run the investment idea through the counter framework, which in

this case is "the fad" or "the story stock."

The investment process is the bread and butter of what analysts do. It's taking the insights from the framework and defining the key investment factors, the key areas of primary research, and the most significant risks. The investment process provides a checklist on how to execute this in a time-efficient manner. It's blocking and tackling.

"[The process] is actually meant to kill ideas rather than let them through the funnel."

There's a little bit of creativity in this process, but it's really meant to be very formalized and, as a function of that, scalable, because it can be taught in a very systematized way. The irony is that the investment process is the gauntlet and is actually meant to kill ideas rather than let them through the funnel. We need to keep the bar extremely high as we plan to be concentrated and for every new investment that comes into the portfolio we need to force curve something we love out. As I mentioned earlier, Hound had the greatest influence on this part of the process.

Then, you have sizing and timing. This is one that I think is a super-critical component that few people talk about publicly. To some extent, I consider this the special sauce of investment firms. How do

you think about whether a position is a 1% position, a 5% position, or a 10% position? That's a function of business quality and risk/reward. It's also understanding price implied expectations and the qualitative catalysts that can ultimately influence security pricing. As we talked about earlier, slugging ratio is everything, so knowing when to flex the position is critical to monetizing your ideas.

Just as important is recognizing, as quickly as possible, when you are wrong and exiting the position. We have developed a systematic way to drive the decision making which was influenced by working with great portfolio managers.

Our portfolio management process is very much influenced by my time at Viking Global. I remember the team recounting what they were doing in 2008, in the thick of the financial market turmoil. They explained what they were seeing during that time that impacted their decisions around gross and net. Through intuition and pattern recognition they recognized the environment had changed and that they were no longer getting compensated to take risk. They reduced exposure significantly and in turn, performed extremely well through the worst sell off in modern history.

While we recognize market timing is extremely challenging, we believe we can use the framework oriented process to improve decision making. Accordingly, we went back and studied the majority of the financial crises over the past

(Continued on page 38)

Chris Weldon '12



Paul Fanelli '17 and Maryam Badakhshi '17 take a break from talking with their peers at the Value Investing Program Welcome Reception

three decades and identified a number of quantitative and qualitative signals that we plan to use to improve portfolio and risk management.

G&D: You've mentioned time arbitrage, an ability to think further out. What gives you the ability to do that? Is it the selection of your limited partners? What's the process to ensure you can do it?

CW: That is a great question and one that we are, candidly, working through. Our goal is to operate like a private equity firm in the public equity markets. We recognize that we can only have assets with the same duration as our liabilities and plan to only take capital from partners that are aligned with this strategy. This likely means we are going to say no to a lot of different providers of capital. Despite the fact that this will likely make the fund raising process harder, it's something that we believe we need to do to give us the best chance to be successful long-term.

G&D: Switching to shorts for a moment, it's not a situation where you're getting paid to be short anymore. You're paying to be short pretty much everything, how do you think about that in terms of timing? How does that change your process and mentality when you're thinking about shorts?

CW: Short selling has become extremely challenging because of competition. The hedge fund industry is not dissimilar from any other industry, returns were extremely high, and lots of capital came to the industry; a lot of smart, young people have come to the

industry. As a function of that, ideas have become more crowded and returns are being competed away.

We define everything we do at Stamina by return on time and on that metric, short selling is inferior to long investing because you cannot compound capital. In many cases short selling also acts more like gross exposure, rather than reducing net, which can lead to suboptimal portfolio levels in times of volatility.

That being said, I think that short selling is a critical piece of a successful investment management business. Not only can you generate significant alpha but it also helps you be more skeptical in your long underwriting. It makes you very skeptical of everything. It makes you question management, question the analysts that are feeding you information from Wall Street, question your friends who are pitching you their book.

In my experience, short selling returns are highly cyclical. There are times when the market is giving you great opportunities to short but, more frequently, times when it is dangerous to be short. This is why we plan to be highly opportunistic in short selling and treat it like a "best ideas fund." By removing the need to be short, I believe we remove one of the inefficiencies in the traditional hedge fund model.

I also believe we have to treat short positions differently than longs. While we plan to be long-term oriented investors in the long book, we plan to

monetize the short side much more opportunistically.

The one framework we plan to use on the short side is "the cyclical peak." Over the past few years, we have developed a power zone identifying and monetizing them and believe that they lend themselves to our thematic/framework-oriented process.

G&D: Can you elaborate on shorting cyclical peaks?

CW: The cyclical peak typically starts with a period of strong demand that drives capacity utilization higher. As utilization tightens we typically see prices increase. Returns on capital for incumbents expand causing other industry participants to take notice. Once returns on capital expand wide enough, both incumbents and new entrants start to add capacity. But that capacity takes a period of time to add. The lag typically drives more capacity to be added than is needed. During this period, demand is likely growing, but in many cases, demand flattens out or ultimately falls. Meanwhile the supply starts to come to market in an accelerating fashion.

Once the supply comes, you see volume growth slow as market share becomes more competitive. Then you see prices correct. Frequently you see operating dis-leverage, and ultimately financial dis-leverage, if the projects were credit-financed.

The reason we like this framework is that there are many ways to monetize it. Generally during the peak

(Continued on page 39)

Chris Weldon '12

earning phase, incumbents' market capitalizations get completely out of whack and there are lots of different companies that have come to the market as new IPOs. You can opportunistically look for the ones that are the most skewed. For iron ore, for example, it was Cliffs Natural Resources, it was Rio, it was BHP, it was Vale. There were hundreds of billions of dollars of market cap that we were able to amortize the thesis over. In the case of oil, it was even bigger than that.

The key is really to find ideas that are so big and have so much market cap that you don't need to deal with the crowding issues as much. The critical thing is that this is about trading, and so, to some extent, it is all about what's priced in. If you stay too long, you're inevitably going to see some level of mean reversion. What was a cyclical peak can become a cyclical trough over different periods of time; you just need to be really careful. Price implied expectations are critical, and, ultimately, you need to be out before the rest of the world is out, because once things get really exciting, short interest goes to 20% or 30% and it causes short squeezes. Those short squeezes can take mark to market losses and turn them into permanent capital losses, if you lose conviction at the worst possible time.

G&D: You mentioned the pitfalls of losing conviction at the worst possible moment, how do you approach a position that has moved against you?

CW: Frankly, it's the hardest part about being an analyst or portfolio manager. When something goes against you, how do you react? My thought process has evolved over time. The way that I would have traditionally reacted was to re-underwrite. Go back and see if I missed anything, if the key investment factors changed, or if I missed a key factor.

“Some of the best ideas that I’ve been involved in went against me numerous times before they worked. With short-selling, it’s all about sizing and timing.”

The issue with that is, in the case of short selling specifically, you could see a stock move against you 50% or 100% in a short time period. My thought process has evolved to cut first and do the analysis afterwards.

It's very much a function of respecting markets, and studying how some of the great traders deal with risk. They know that even the best analyst hit rates are 55% or 60%, and so they respect the fact that when something goes against you, you might be wrong and so you should cut fast.

G&D: Do you use stop-losses, technical triggers, or similar mechanisms?

CW: I set a general range for what I am willing to lose and then size the position

accordingly. You have to respect the market and understand that you're going to be wrong frequently. The key, once you have cut, is to re-underwrite the position with a fresh set of eyes. On the short side, it's doubly hard, but that's not to say that you can't come back to it. Some of the best ideas that I've been involved in went against me numerous times before they worked.

With short selling, it's all about sizing and timing. If you can find a good idea and track it over six months or a year, and then look for when price implied expectations are completely out of whack, you can make a significant return. The key is to identify when the moment of truth is coming, and flex up to capture the alpha burst, that's really where all the value is added on the short side.

G&D: You've stressed making sure that you enter or exit investments at the right time, especially on the short side. Is it similar, then, on long investments?

CW: In our case specifically, I'd say it's less important. The core of our portfolio is going to be high quality businesses that have become cheap for an idiosyncratic reason. With high quality businesses time is your friend, as the floor continues to rise through most parts of the economic cycle. That being said, we constantly need to ask when we want to have a 3% position on versus a 10% position? To that end it is critical to understand what's priced into the stock relative to what expectations are. If you see a significant disconnect over the next 18 to 36 months

(Continued on page 40)

Chris Weldon '12

you likely want to be big. In many cases, it's not actually valuation-dependent per se, it's more about the world is expecting "X" and I think "Y" and here's my informed reason why: I've spoken with ex-employees to understand competitive dynamics, I've talked to competitors, I've talked to suppliers, and I've talked to customers, in order to conclude there's something mispriced. That's really where you can create a lot of incremental value.

G&D: We've discussed your power zone when shorting; how does it compare to longs? What do you look for in long-term investments?

CW: The focus of Stamina on the long side is the compounder framework. These come in a few different flavors. The two that we plan to focus on are the mature compounders, these are the Visa's, the MasterCard's, the Google's, and the Facebook's, but there are many other businesses that are more off the beaten path like the Interactive Brokers's or Henry Schein's. Frankly, everybody knows they're really good businesses, everybody knows that over a five- or ten-year period, free cash flow per share is going to grow strongly. The key is using market volatility to our advantage. We plan to buy when there is some form of controversy that allows us to pick them up cheaply.

Those are what I would define as lower variant perception. You're not going to have a dramatically differentiated view on what's going to happen in the business, but that doesn't

mean that they're not really good compounders. I think, that to some extent, a lot of the world thinks that these are boring, but boring is beautiful.

The other piece of the book, which is more differentiated, is what we call "quality transitions." Quality transitions can be earlier stage compounders that are in the process of proving out their moats. Alternatively, they could be more mature compounders that are in industries that are out of favor.

"...when things tip and the signpost ultimately avails itself, forget about valuation for a period of time and say, 'This has just changed, it has shifted the probability tree dramatically.'"

In the case of the earlier stage compounders we try to figure out what the business will look like once they get through their investment phase. We use analogies to understand how things may play out. Some current examples: Can Workday be the next Oracle? Can TripAdvisor be the next Priceline? These require a heck of a lot more work to understand where fair value is and how things are going to evolve over time. These investments have the potential for much higher internal rates of return but, of course, come

with wider bands of volatility.

Another quality transition example from earlier this year was in energy infrastructure. While in general we believe the majority of businesses in the industry are lower quality/commoditized, we identified a number of midstream businesses with strong competitive advantages and large addressable markets where they could grow. They have incumbency in places that you literally could never rebuild the infrastructure that they have. As a function of that, they actually do fit into the category of long-term compounders. But they're in an industry that has gone out of favor due to the high volatility in oil and gas prices.

Timing is critical with these investments as you do not want to catch a falling knife. That being said we love when risk is being sold off indiscriminately and we can take a longer-term view and say, "Gosh, this is significantly below fair value." It's going to have higher volatility, because, frankly, there's more controversy. The real key with this one, specifically, is terminal value, " $r - g$." You need to have a great deal of comfort that you can get a business that is still growing, because, as you know in the discounted cash flow model, so much of the value ultimately resides in the terminal value.

G&D: How do you gauge management quality, especially for incumbents going through an investment phase where there's execution risk?

CW: So to back up, when I speak about the investment

(Continued on page 41)

Chris Weldon '12

phase, what I mean is a company that is forgoing some level of profitability today to grow its moat, either for defensive or offensive reasons over the long-term. It's never easy to assess management in the moment, but I think it's a combination of two things that can give you comfort.

The first is the track record of the management team. Have they made the right decisions over a long enough period of time? Have they dealt with enough of these similar decisions to make the right call? We do case studies on every idea. We look back over ten, twenty years, and say, "What are the decision points that are similar to this, and how have they evolved and changed?" The second piece, which is equally as critical, is speaking with industry participants, and asking, "Does this make sense?" The best people to speak to are competitors as they are typically biased to be skeptical.

A lot of it is actually talking to real people in the industry and asking them if it makes sense. If it went wrong, what is the pre-mortem? What should you be tracking to understand if it did go wrong? Then you line up the signposts and track them over time to see if things are playing out as you expect.

Sizing and timing are very important during the investment phase. The case studies show that this phase is volatile as the public markets are very skeptical of short-term pain for what is hopefully longer-term gain. What we have found is that you may want to size down while the company proves out its case

and plan to size back up as you see the signposts line up.

G&D: This goes back to your sizing and timing argument. Having prepared and having done the work, if and when those opportunities present themselves, you size up?

CW: That's exactly right. In fact, the critical piece is that when things tip and the signpost ultimately avails itself, forget about valuation for a period of time and say, "This has just changed, it has shifted the probability tree dramatically."

The downside cases have now moved up significantly and the upside cases have also moved up dramatically. That's one of the hardest things to do from an analytical perspective, because this is a whole new world. The world may never believe it could happen, but in fact, it happens quite frequently. If you look at the Amazon's of the world, the Netflix's of the world, the Google's, Facebook's, nobody thought that these were going to be 10, 15, 20, 30, 50 times the size that they were five or ten years ago.

G&D: How do you think about exiting investments? Is it looking at relative implied expectations as you're doing work on new names and new themes? Is it valuation driven?

CW: There are a few different reasons to exit a position. We talked about one earlier, where it's more formulaic. Something goes against you, and you ultimately decide you want to re-underwrite from an unbiased position.

The second one is if a key investment factor changes. That is super critical. In the case of Facebook, one of the key investment factors is pricing. We believe that they have the ability to increase prices to industry level CPMs over time. If you saw that they have tapped out pricing, it's going to be extremely challenging for them to continue to compound free cash flow per share at the levels we have underwritten. We would be forced to do significant primary research to understand whether this was temporal or more permanent. If it was more permanent, what is the fair value under the revised set of assumptions.

G&D: What advice do you have for students?

CW: I think the key to being successful coming out of business school is to frame your career appropriately and be dynamic. This is a challenging time for active investment management and you should be realistic that the first opportunity you get might not be perfect. If you frame your career as a continuum of learning, then this is just one step in a long-term process of continuous improvement. If you continue to learn and grow as an investor you will ultimately find a great opportunity to deploy your skills.

For me, there have been two primary ways to learn and I suggest using both of them to your advantage. The first is finding a great mentor. When selecting a firm, prioritize people first. If you find the right people, your learning will accelerate. The next is to learn

(Continued on page 42)

Chris Weldon '12

by doing. I suggest keeping a journal and doing a personal review every six months. Journal about every investment you look at, about your process, about decision making, about every book you read. Whenever you hear someone speak that inspires you note it in the journal. This will become your greatest resource and will help you define your power zones.

The second key to your success is in defining a style that is authentic to you. This is what I mean when I say "power zone." Some people gravitate towards value while some people gravitate towards growth. Some people love to short sell and others use frameworks/mental models. There are many ways to skin the cat.

Try to think about yourself, and what makes you tick, because this whole business is about finding your circle of competence, and then matching that up with the opportunity set the market gives you. That'll allow you to be more concentrated and, most importantly, it will give you greater conviction when things go against you.

G&D: Thank you very much for joining us.

CW: Thank you guys very much. I appreciate it.



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