

Graham & Doddsville

SPRING 2021

An investment newsletter from the students of Columbia Business School

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Welcome to Graham & Doddsville



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

We are pleased to bring you the 42nd 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). In this issue, we were lucky to be joined by three entrepreneurial investors who all started their own funds.

We first interviewed **Brian Bares**, founder of Bares Capital Management. We discussed Mr. Bares's early interest in investing, experience with launching and running his own fund, understanding of institutional allocation, and his first-principles based approach to fundamental analysis. Mr. Bares lays out his process, which focuses heavily on business and management quality. Brian is also the author of "The Small-Cap Advantage", published in 2011.

Next, we interviewed **Sean Stannard-Stockton**, CIO and co-founder of Ensemble Capital Management. Mr. Stannard-Stockton walks through Ensemble's Venn diagram for investing, which focuses on the overlap between management, competitive moats, and "forecastability". Sean also shares case studies of successful (Mastercard) and unsuccessful investments (Time Warner), with interesting learnings in both cases.

Lastly, we interviewed **Dan Rasmussen**, founder of Verdad Advisers. We discussed Mr. Ras-

mussen's early investing influences, approach to small-cap value investing, and contrarian thoughts on the value of fundamental forecasting. Our conversation about "Superforecasting", narrative shifts, and current market trends is a fun and timely read.

We continue to bring you stock pitches from current CBS students. In this issue, we feature the winners of the 14th Annual Pershing Square Challenge. 1st place winners Paul Chandler ('21), Jack Devine ('21), and David Kilgariff ('21) share their buy thesis on Dolby (NYSE: DLB), presenting a compelling case based on DLB's underappreciated transformation. 2nd place winners Bill Henry ('22), Tom Moore ('22), and Dickson Pau ('22) present their buy thesis on Angi (NASDAQ: ANGI) and walk through ANGI's improving economics as it transitions towards pre-priced transactions.

Lastly, you can find more interviews on the *Value Investing with Legends* podcast, hosted by Professor Tano Santos. Professor Santos has recently conducted interviews with guests including Anne-Sophie d'Andlau, Florian Schuhbauer and Klaus Roehrig, Elizabeth Lilly, and Anna Nikolaevsky ('98).

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

G&Dsville Editors



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

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Brian Bares, Bares Capital Management



**Brian Bares,
Bares Capital
Management**

Brian Bares founded Bares Capital Management in 2000. BCM manages \$5.6 billion across two concentrated, qualitatively oriented strategies: Mid/Large-Cap and Small-Cap. Brian is the author of The Small-Cap Advantage, published in 2011 by John Wiley & Sons. He is also an external advisor for the M.B.A. Investment Fund at The University of Texas at Austin. He graduated from the University of Nebraska with a B.S. in Mathematics (1995) and has earned the CFA designation.

Editor's Note: This interview took place on March 30th, 2021.

Graham & Doddsville G&D: Brian, thanks for being here with us. I was hoping we could start with you walking us through your background and what started you down the investing path?

Brian Bares (BB):

Sure, well, I grew up in Nebraska. My father was an eye surgeon, and I enjoyed watching him kind of expand the scope of his own business, engage in some entrepreneurial ventures and that dinner table talk sparked my interest in business, and he was very interested in stocks and would select his own portfolio positions from the 52-week low list in the weekend newspaper. And I started reading

some newsletters and annual reports in high school and happened upon a publication called Outstanding Investor Digest, which chronicled a lot of what Buffett was doing and some of Buffett's contemporaries.

And then, of course, I read the Berkshire Annual Letters and was pretty much hooked at that point. I went to University of Nebraska, studied math and actuarial science, moved to Austin shortly after college and worked for an investment manager, who had some institutional clients and a high net worth practice. The firm was small and it was growing very quickly, and I got the privilege of having a lot of responsibility fairly early. And that gave me a great inside perspective on the various aspects of the firm. So I learned a lot both from an investment standpoint, and in dealing with the operations, trading, compliance, etc. And that gave me a lot of confidence when I made the leap at 27 years old to launch my own firm.

G&D:

In terms of your early influences and mentors, either personally or folks that you looked up to from afar, who were the major influences on you? And with Buffett being from Nebraska and kind of the local investing hero, how much of a role did that play in your development?

BB:

Yeah. Warren Buffett is clearly on the list, but he wasn't quite the superstar when I was growing up that he is today. He was actually fairly low profile, even in the city of Omaha in the 80s and the early 90s, and then he exploded into superstardom in the mid 90s. I clearly looked up to him, and reading the Berkshire Letters was a huge catalyst for me and my interest in investing generally. But thankfully, I think I got my hero worship out of my system at a fairly early age.

My earliest mentor was my father, who is the ultimate contrarian and very self confident and is completely comfortable operating alone when he feels like his reasoning and rationale are solid for making a particular decision, especially in business. And so I think I inherited a fair amount of that. And that has been a key in my success I think.

The founder of the firm I previously worked for is a guy named Mark Coffelt, who was also an early mentor. He taught me a fairly powerful lesson about hiring smart young people and empowering them to make decisions. And the autonomy and the agency that I felt as a young contributor on his team was a very powerful motivator for me, and it made me want to work harder and smarter for him. And

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that is a lesson that I've taken and applied at our firm.

I've never met David Swenson, who is the Yale CIO. But his book *Pioneering Portfolio Management* when it was published in 2000, was a huge catalyst for me starting the firm and growing the firm, and it was very critical in our early success, because it was essentially a guide book for where institutional allocation was headed, and where we could potentially fit into what is now known as the endowment model.

Ironically, some of my greatest mentors after starting my firm were actually institutional allocators. They helped me navigate some critical decision points along our path to success. So people like Ellen Shuman, who ran the Carnegie Corporation of New York for years and Anders Hall, who was at Duke, and now is the CIO at Vanderbilt University. They are two people that are probably unaware that they're mentors to me, but they have been extremely influential in my professional life.

G&D:

That's great. You mentioned Swenson's book and launching the firm at a young age – was that the signal that kind of told you, hey, I'm ready to do this and strike out on my own here?

BB:

Absolutely. It was critical. So my experience at the time was with a firm that was highly diversified in its portfolio implementation and almost purely quantitative, which are exactly the opposite of what we do today. And so, as I was working for this company, I noticed that institutional allocators were using a series of intermediaries, primarily investment consultants to choose 10 to 12 public equity managers each holding 100 stocks. And to me, it just didn't make any sense at all, because everybody's paying active fees and getting passive results. And at the time we would add a 50th, or a 60th name to the portfolio, and it was almost inconsequential in the grand scheme of things for the end client.

“I noticed that institutional allocators were using a series of intermediaries, primarily investment consultants to choose 10 to 12 public equity managers each holding 100 stocks. And to me, it just didn't make any sense at all, because everybody's paying active fees and getting passive results.”

And so I just gravitated from first principles towards this idea of concentrated portfolios. But given the state of the industry, I didn't know whether somebody who was 27, with very little experience, who didn't work on Wall Street and hadn't lived in New York could actually compete successfully for institutional allocations. And it was that book that gave me my “A-ha” moment where I said to myself, that the institutional allocator community will gradually adopt this endowment model, which internalized investment due diligence at the expense of relying on a lot of these third parties, institutional investment consultants and the like.

I thought that internalization of the due diligence process would allow for unconventional, younger, less tenured managers, like what I was contemplating at the time to successfully compete for large institutional allocations. And if there was any kind of a stroke of structural genius in founding the firm, it was a recognition that the endowment model would be widely adopted, and there would be a kind of categorical shift towards concentrated long-only public equity managers like Bares Capital.

And so we've rode the wave of adoption of concentrated managers as almost a new asset class like infrastructure, private equity, or venture. And so the 60-

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40 stocks bonds model gave way to the endowment model, which included a number of additional pie slices in the institutional asset allocation pie chart, and the public equity piece shrunk, but the constitution of managers within that piece reshuffled in favor of concentrated managers at the expense of the diversified 100 stock 1% managers from the mainline Wall Street firms. And so we were the beneficiary of that gradual shift over the last few decades.

G&D:

It sounds like you had a very clear vision for the value proposition that you would have to these allocators. What were those early fundraising conversations like because of your age, and just given that you hadn't been a portfolio manager at a firm before? What did you point them to, to convince them that you were worth taking a shot on?

BB:

Well, that's the trick, right? I am pretty fortunate in having had some institutional validation, some success and growth in assets under management. And so, I have a lot of emerging managers asking me this exact question. Because there are a lot of people out there that are pretty good compounders, good analysts, but they have a difficult time with the fundraising, and

getting that first client and so that zero to one conversation is a very difficult one.

I think there's a couple things that are important, the first is that the personality characteristics of the actual manager are important. The first thing I learned is that I can't outsource the fundraising to somebody else if I'm a new manager. I have to go and give the impassioned pitch for the money myself, because I'm the one that believes in this process the most, and they're going to want to meet me and do the due diligence on me and make sure that they're comfortable with me as a manager to make that initial allocation.

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The second thing is I wanted to make sure that I could articulate a repeatable investment edge, and we can talk about the investment process itself in a moment, but I think we had a pretty good story around that. And then third, in a time and resource scarce early iteration of Bares Capital Management, I needed to focus on the smallest part of the US equity market, which is micro cap, and essentially sell the scarcity of a concentrated portfolio, implemented in micro cap.

And that was very appealing to the endowment managers. The capacity limitation meant that I was signaling that I wasn't an asset raiser, that I was going to close and I kept that promise of closing and occasionally giving money back to investors as we were successful. So just sort of fighting my own economic incentives to raise portfolio diversity beyond what was optimal for future compounding was something that allocators did and still do seek out in boutique managers.

I think another important point is that I was also doing this at a time that was pre-Madoff, and so there was a little less, frankly, operational due diligence than there is today. It was also coincident with the proliferation of hedge fund allocations. And so there was a lot of money going to brand

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new startup hedge funds. And that those same people, in many cases were due diligencing the public equity managers. I think that the early Bares Capital story sort of felt a little bit analogous to some of these startup hedge funds. At the time there was a little bit more of an appetite to take a bet on newer managers.

G&D:

Definitely. Maybe shifting gears a bit to your process and your own competitive advantage, it seems it's really in the boots on the ground research, meeting hundreds of companies a year and doing the hard stuff that's tough to replicate. Could you talk a bit about your investing approach and how it's developed over time?

BB:

Sure, so I'd say the first thing is that because of my own relatively unique history, we didn't inherit any investment DNA from anyone else. Everything was sort of built from first principles, and so when I thought about the problem of investment management, which is how do you get share price outperformance over the long term, you have to say, "Well, what is the share price a reflection of", and it's simply a reflection of internal compounding of business value per share, absent distributions and dividends and multiple

expansions and contractions.

“you have to say, ‘Well, what is the share price or reflection of’, and it's simply a reflection of internal compounding of business value per share, absent distributions and dividends and multiple expansions and contractions.”

So there is a long term convergence between share prices and business compounding. And everything that you know about a business is in its past. But the DCF exercise shows us that everything that determines the value of a business in the future. So valuing will always be a predictive endeavor. And so we want to focus on those predictive factors that should drive exceptional compounding over time. And those happen to be qualitative. They happen to be moats, or competitive advantage and the word “moat” is getting a little too overused in our business.

But competitive advantage is the first category, and the next is management, both capital allocation and strategic execution and operational implementation. And

then, of course, growth, and it's hopefully under- or unappreciated sources of growth that drive that qualitative excellence. So we think that to make these qualitative determinations, you need to get out from behind your computer, and you need to get in rental cars and in airplanes. And obviously we did this for two decades before COVID hit, and then we've been kind of resting on our ability to replicate this work over Zoom, but we're already getting back out into the field and starting to reboot this process that I think we have become known for. We're trying to create a competitive advantage for Bares Capital by doing qualitative work that other people are either not resourced to do or unwilling to do.

A lot of people would maybe argue that visiting companies is a surefire way to introduce human bias. But in my experience, that's just kind of an excuse not to do the work. It's really hard to build a team and get the resources to get them on the road and to get them enough reps to the point where an analyst can truly distill exceptional from average. But the way to execute effectively is to just get them as many reps as possible. And by the way, we just don't see a lot of our competitors out on the road doing this type of work – they're trading ideas with their friends, they'd rather be sitting

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behind their screens. And so I think it's really is a differentiator for us. And we firmly fall into the camp of believing in the value of qualitative research and that if you're aware of these natural biases that everybody talks about, you can compensate for them through awareness. But ultimately, we're putting into practice the art of evaluation of these qualitative buckets, and we just get better – we think we get better and better at it over time.

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I think this work is arguably amplified in small companies, where there's fewer market participants engaging in this type of work. And so while we study the Amazons and the Googles and the Apples of the world, we're largely focused on this sort of small and mid-cap area and the qualitative research isn't just going and seeing these companies, but it's actually training on their software or going to their industry trade

shows or visiting customers and competitors, anything that we would need to do to shore up our qualitative understanding of these three buckets, the competitive position and the growth prospects and the people running these businesses.

It's important to note that we're not trying to do this so that we can better predict the next quarter's earnings, it's really about the long-term understanding of the potential for per share business compounding.

G&D:

When you look at as many companies as you do, and take in as many qualitative data points as you do, are there common frameworks that you tend to put these insights into and keep those updated to benchmark against different ideas? Because it just seems like you're pulling in a ton of information. I'm curious how you sift for insights in that process.

BB:

All good investment analysis in my view is pattern recognition. And so that's why the reps are so important, because you see emergent patterns for success, and the more you do it, the better you get at it. We obviously prefer certain types of patterns that intrigue us and allow us to have some confidence that we're not spinning our wheels on a company.

Some interesting patterns that have come out of our work are what we call encore performances, which are essentially successful managers moving from one company to another, and typically following those successes has been a fairly good recipe for success for us.

Another very simple pattern that's kind of counterintuitive is when one of our analysts comes back from the field and starts a sentence with, "Brian, you'd never believe what is happening at the company I just visited..." It's almost like market inefficiency coming alive. It's something that you can't get from a Yahoo profile or a Bloomberg snapshot. The comment might be indicative of a new level of energy infused into a company as a result of some new people taking the helm or a new effort that they have internally, which could create large tangential growth opportunities.

And oftentimes, when we happen upon this pattern, it's not an intentional search. It might be because our analysts are in a city visiting with every public company over the course of two weeks. And they're looking at something we may have looked at a couple years ago, and a new pattern has emerged at a stagnant idea that's in our qualitative database. And so when we find patterns that might indicate future success, like encore

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performances, or razor-razorblade models, or build once sell many times dynamics of software information services companies, these are indications that it's worth spending some time to dig a little bit more deeply to see if there's something there.

G&D:

Going back to your initial focus on micro and small caps, and now investing mid and large-caps, are there aspects of that evaluation process between management, growth and competitive positioning that you weight differently when you're looking across company sizes?

BB:

Yeah, there are gives and takes for being in micro versus small versus mid cap. The fact that a company has gotten to, for example, mid and large-cap is usually an indication that there's something special about the competitive dynamics or the growth prospects or the management of the business. And so, I think that it is actually, believe it or not, a more fruitful search for these qualitative characteristics in larger companies, fruitful meaning more numerous, whereas in micro-cap, that's where companies go to die. There are a lot of landmines in the space. And so you have to be a little bit more selective. Obviously, the effort there, it takes a little less time to get up to

speed on a micro-cap company, and sometimes the access is a little bit easier to get the information that you're looking for. But the flip side of that is that sometimes you find a great little company, but the public float limits you to maybe a smaller position size than you would otherwise have in small cap or in mid cap. I would say that an unheralded benefit of being in larger companies is that you tend to have other market participants more focused on the near term.

A friend of mine worked at one of the large asset management companies and said that when he finally got a shot to run a portfolio, he had 18 months to prove himself. And when I think about that being the typical time horizon of a PM of a large asset management company, that to me says that there is truly a time arbitrage advantage for people that have a five, seven, or 10-year outlook.

G&D:

That makes a ton of sense. I'm curious when valuation kind of comes into the process – how do you think about making sure you're buying at the right price?

BB:

Yeah, with such a concentrated portfolio, we don't want to make a mistake on the quality of the business. And so we don't do valuation work up front using factor proxies. So we're not

screening for factors like low EV to EBITDA or for low price in relation to book value or earnings. We think that's probably a recipe for getting into value traps, and the market is just getting more efficient over time. And so a low price in relation to, say, book value is probably indicative of a business that's under-earning on its capital base and in permanent economic decline.

“...we're not screening for factors like...low price in relation to book value or earnings...that's probably a recipe for getting into value traps, and the market is just getting more efficient over time. [A low multiple] is probably indicative of a business that's under-earning on its capital base and in permanent economic decline.”

Rather than a contrarian indicator of value, like the industry associates with the price-to-book factor from the Fama-French three-factor model or the net-nets of Ben Graham, for us, a low value factor multiple is just an evolving marketplace where the

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market is relatively efficient, and it is assigning these low multiples to businesses that are probably economic melting ice cubes. And so we want to be in the highest quality names run by the best people with the best prospects for growth. We do all of our qualification upfront based solely on those qualitative factors, and so the bulk of our process is being out in the field doing the hard work of prequalifying businesses without knowledge of current stock prices.

The result of our qualitative work is a focused list of about 30 businesses that we would want to own regardless of price. And then we do appraisal work on this list. So the appraisal work happens at the end of our process rather than upfront. And it's a little counterintuitive, because I think most people if they were starting an investment strategy from scratch would look at the thousands of public companies available to them, and they would probably use some factor screening or filtering to try and whittle down what looks like an unmanageable universe to something more manageable.

But I think that that's where a lot of people get into trouble, because they're using primarily value-based screens to try and find businesses, but you're leaving out all the great businesses when you do that. And so for us, we do absolutely no computer

screening or filtering – it's completely absent from our process. We think about what businesses we want to own, and once we've identified them, then we value them. And our portfolio is a conviction weighted expression of our best total return prospects from our preapproved focus list.

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G&D:

How do you think about portfolio weighting? Is it more about conviction and clarity with respect to growth prospects or the other qualitative factors and being very confident that the thesis will eventually express itself in the way that you expect? Or is it more about upside potential vs. downside risk?

BB:

Well, we think about all of those things, and the confidence interval tightens for us when a business's revenue and expense structure are more predictable. Which basically means that your reliance on your intrinsic value estimate should be correlated with your confidence in your predictions about the various line items starting with revenue going through the expenses and resulting in free cash flow.

For a business with very predictable free cash flow, we have a little higher confidence about the intrinsic value estimate, versus a business that's growing like a weed that has lots of embedded call options and tangential growth opportunities. An unpredictable growth dynamic isn't to us a signal that we should stay away. It's just that we should be less reliant on the point estimate of intrinsic value that we have come up with. And so we're different than other managers in that we don't just blindly rank order our portfolio on price to intrinsic value, sell the most expensive, and buy the cheap.

We say the price to intrinsic value ratio is one of many factors that we consider when making portfolio management decisions. We have to think about the confidence in the management, the growth opportunities, the competitive

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advantage, the dynamic nature of the industry in which all these businesses operate. And then despite our concentration, we want to think about portfolio diversification as well. You're about 80% diversified after eight stocks, but nobody in their right mind would have eight regional bank stocks in a concentrated portfolio. We want to know what the economic drivers of value are in our portfolio and make sure that we're not taking any unintended macro bets with a concentrated set of positions.

G&D:

You mentioned growth as one of the pillars of your process. And I'm curious, especially when you're doing this deep qualitative work, how you go about valuing growth that is foreseeable, like a company that just entered a new market versus kind of the option value of a gifted management team and allocating capital to future opportunities, and then how you layer that into the forecast that drives your valuation.

BB:

It's more art than science, and we try not to be too accommodating to the management or give them too much credit for what is possible there, we try to be fairly conservative in that area, just so that we don't make colossal mistakes in swinging the

bat. I would say, though that this is where variant perception really shines. This is one area where there truly is an analytical variant perception that can be expressed in your portfolio. If you think about it, in its simplest terms – if a business makes a material acquisition, it can sort of rewrite the appraisal with the stroke of a pen.

That's unpredictable, both in size and timing, and so nobody on the buy side or the sell side would risk their careers incorporating something like that into a DCF or appraisal. However, there are things about an M&A strategy that can be analyzed from a qualitative standpoint, and you can get you comfortable with a conclusion. I may not know when and how these acquisitions may materialize but I know that the range of outcomes is not normally distributed, but it's heavily skewed to the upside with the right management. And if we can find a team of people that we get comfortable with, that maybe has a track record of success in this area, we might underwrite something like that, and we may not have the ability to give precise credit in a DCF. But we can allow for it as an embedded call option that's definitely worth paying for in some way.

I think Warren Buffett is probably the very best example of this. I mean, if you would have done a DCF on Berkshire

Hathaway as a textile mill back in the day you would have missed the boat on what that business was all about. You wouldn't have contemplated the acquisition of National Indemnity and all the subsequent businesses, but you could say the management bucket was clearly pretty strong! The slider is probably a 10 out of 10 and the moat should improve over time as he does his thing. And the growth prospects don't look great for a textile mill but that's missing the point, again, there's a lot of different ways that this business is going to grow through acquisition.

The question is how much of a disconnect between price to intrinsic value do we need to underwrite this opportunity? And that's where, in my opinion, portfolio management and security analysis will always be one part art and one part science.

*“The question is how much of a disconnect between price to intrinsic value do we need to underwrite this opportunity?
...Portfolio management and security analysis will always be one part art and one part science.”*

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G&D:

We've talked about a history of strong capital allocation being an important factor for management. Are there other pieces that you're looking at, like a proven ability to expand into new markets or other aspects of their previous operating performance?

BB:

Yeah, I think the traditional value investor crowd that I once identified myself with would have this mental picture of a great capital allocator being a Henry Singleton or Warren Buffett, where they are sitting in an office making decisions about buybacks versus dividends and things like that. And capital allocation is obviously an important part of analyzing management, as is understanding management's incentives, analyzing the proxy statement, and all these sorts of things. All of that is sort of table stakes work for us, but we think that competitiveness, strategic execution, understanding and having a vision for the company, how they relate to employees, are they planning to do M&A, and what's their skill set in that area are also very important.

There's a lot of personal characteristics that describe great managers, and I like this analogy of a talent stack or the skill stack that people need to have in order to be successful. And some are 10 out of

10 in sales, and some are 10 out of 10 in capital allocation. Like in golf, there are a lot of ways to get it down the middle of fairway, and everybody's swing looks a little bit different. Ultimately, the questions are whether this person or group of people can be trusted with our capital, and do they have a good set of incentives, and do we have proof that they've been successful in the past, and do we have a high degree of confidence that they can execute going forward.

“Ultimately, the questions are whether this person or group of people can be trusted with our capital, and do they have a good set of incentives, and do we have proof that they've been successful in the past, and do we have a high degree of confidence that they can execute going forward.”

Highly innovative companies are an area where we differ a little bit from the traditional Buffett crowd. Warren famously said that he applauds the effort but prefers to skip the ride when it comes to research and development. But for us if a business is proven to

be innovative and may be a potential disruptor in their field, that's something that is an embedded call option that increasingly has proven itself to be very valuable especially in the current environment.

G&D:

When you're on the road and meeting with companies, are there any key questions or things that you're looking for that you've found helpful in getting a better sense for management?

BB:

The first icebreaker, especially with a founder or owner operator, which is yet another pattern that we look for and gravitate towards, is just to have them tell us their story. And it usually gets them opening up, because people like to talk about themselves. And so they start chatting about the history of the company, and how they grew it and the challenges that they met early on, and how they overcame those challenges. And then you start to get a pattern for how the person thinks, and then you tend to ask, what are you working on now? Where's the business going? And what are you worried most about?

What we have tried to do is to put ourselves in their shoes and say, "If I were running this business, what are the critical questions that I would have," and then

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we try to focus on those things. And oftentimes something comes out of those conversations that we don't contemplate – each of these conversations is a learning opportunity.

And so sometimes we pull something out of these businesses that we at that point hadn't contemplated, and we go back to the office, incorporate that into our decision making and make sure that we've shored up the thesis. Because if we didn't contemplate it going in, it could be a potential red flag, especially if it indicates a deterioration in the competitive aspects of the business.

There's a lot of different things that might come out of the conversation, but we don't have one sort of silver bullet question. We ask about competitors and buybacks and dividends, and all of it is interesting, but it's really more of a mosaic, and we're just trying to fill in the pieces. Let's just say we don't have a secret sauce question that we ask, and if you sat in a meeting with us we wouldn't have some earth-shattering questions that you wouldn't have contemplated, our advantage comes more from the comprehensive nature of our search, and the qualitative contrast among companies.

What we do is we make sure we don't waste management's time. We want to make sure that we're not asking about tax rates or basics about

the business. We want to come in armed with a really deep understanding of the business and the competitive set, and ask good strategic questions. People appreciate that. And they also like that we're long-only. So they tend to be okay with talking to us. They're not worried about us being short the name or asking questions for nefarious purposes, they can do checks on us and see that we have a long-term group of clients, and that we're usually friendly in voting proxies.

“What we do is we make sure we don't waste management's time. We want to make sure that we're not asking about tax rates or basics about the business. We want to come in armed with a really deep understanding of the business and the competitive set, and ask good strategic questions.”

G&D:

Going back to portfolio construction and specifically the sell decision – you mentioned that the price to intrinsic value calculation is just one

piece of the puzzle. And so it's maybe more qualitative factors in the thesis that change that could drive a decision there. Are there examples of the thesis changing from what you underwrote previously that you tend to be on the lookout for that could signal a sell decision for you?

BB:

Yeah, there's a number of factors involved here. So let's just start basically with our sell discipline. We'll sell if something's wildly overvalued, and wildly overvalued is obviously a non-technical term, but if something is caught up in a bubble of non-fundamental buying we'll consider selling for price reasons alone. About 10 years ago we owned one of the names in the 3D printing space, and all of a sudden 3D printing was on the front page of the Economist and the Wall Street Journal and it got caught up in some speculative buying. Not at the GameStop levels [laughs], but it was caught up in a bubble of non-fundamental enthusiasm.

And so we sold our entire position, and then of course its market value promptly doubled again – Murphy's Law. We will rarely make those sell decisions based on valuation alone. More typically it's selling an overvalued position and buying a more undervalued one based upon a combination of price to

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intrinsic value and our qualitative assessment. And then occasionally the third reason that we would sell is that the pieces of the thesis deteriorate for some reason. And the deterioration is usually coming from a re-underwriting of our confidence in those three qualitative buckets.

If we have high degree of confidence in management, for instance, and they do something that we don't agree with, for example, a large needle-moving acquisition where they don't have experience in that area, that will usually be a signal for us to move on. If one of those managers that we have a high degree of confidence in retires, or moves on, that's usually a sign for us to move on and redeploy capital into another high confidence idea. If we're caught off guard by some competitive threat that we didn't contemplate in our thesis, we'll move on.

And so there's a number of things that could poke holes in the qualitative thesis that we have on these companies, but there's no automatic triggers, we don't do stop losses or anything like that. If we are confident in our work, and we like the name, and the stock price backs up because it gets caught up in a moment of pessimism, we're happy to back up the truck and really get pretty large in our position size. We typically start with 8-10% position sizing in

the portfolio. And then we'll go up to 15%, or even higher, if we're highly confident. It's a conviction-weighted portfolio, and the weighting for each name is fairly sizable compared to most managers.

G&D:

Got it – thanks for that. Just going to shift towards the current market environment. When you were starting out, it seems like there was a smaller set of investors that were explicitly looking for the type of compounders that you tend to focus on. How does the opportunity set you see today compare to other times in your career?

BB:

Well, let me just start by saying it's always been hard. I think Munger famously said that it's supposed to be hard. And it's hard today, and everyday is like waking up and drinking through a firehose of information, and we can't possibly digest everything, we can't possibly have our fingers perfectly on the pulse of everything, and we are concentrated in part because we can at least focus our time and energy on a handful of companies and try and get competitively advantaged research, and have a high degree of confidence and a differentiated view on a handful of companies.

But over 20 years, we've seen the ebbs and flows of investor appetite for

certain types of names and factors and things like that. But our core philosophy hasn't changed. One good thing about having built this from scratch on first principles is that we don't look at anybody else's 13F. I don't care if famous successful investors are buying or selling our names. We've been in the crosshairs of very famous short sellers in the past, and we win some we lose some but we're around a 65% percent batting average, and in a concentrated portfolio that's pretty good and usually leads you to outperformance over the long term.

“One good thing about having built this from scratch on first principles is that we don't look at anybody else's 13F. I don't care if famous successful investors are buying or selling our names.”

And so we try not to pay too much attention to the noise or the crowd. There definitely has been an increased recognition of the types of names that we research and the types of characteristics we look for, the high-quality compounder names, but I also see the typical sort of crowding and clustering behavior in other managers that is

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indicative of them avoiding original work. They seem to be comforting themselves with the social proof of their peers. And so we work hard to have a portfolio that's reflective of our original work free of outside influence.

To us that's a point of pride. When we're thinking for ourselves, we're typically offering our investors a relatively differentiated portfolio.

I think that the more perplexing thing for me is that the overall market is kind of two-tiered today, where you either pay a really high optical multiple for a clear disrupter and a business that has a very good chance of being much larger, or you pay a more normalized market multiple for businesses that are on the receiving end of disruption, and maybe economic melting ice cubes. And so that's just part of every investor's dilemma, which is how much will you pay for disruption. Going back to our earlier discussion, this is where we earn our fees, trying to evaluate those predictive qualitative elements in an attempt to put together a portfolio that can outperform. Fortunately for us, the tools required to navigate the current environment are core to our investment process and have been for 20 years. There are a lot of managers that are screening on factor models that appear to be lost in the woods when it comes to the current environment.

G&D:

To that point – as you think about moats and the speed at which things are changing, and the bifurcation that you just talked about, do you get the sense that moats are becoming less durable as we move on? Or is that just kind of what we're seeing in the headlines, and that's what's top of mind because of sky high valuations and maybe the underlying durability hasn't changed too much?

BB:

Well, I don't have the name of the paper off the top of my head, but there was a research report published a couple of years ago on the "topple rate," which is the rate at which companies are leaving the S&P 500. It's increasing decade by decade, so I would say that there is evidence that perhaps the duration of certain moats is decreasing. I love Professor Greenwald at Columbia's quote from his book *Competition Demystified*, "In the end everything's a toaster." There's a commoditization heat death of the universe coming for you if you operate any business. And so we don't give permanent perpetuity for exceptional economics at any company in our DCF models for that reason. So, yes, I think that there probably is a technological obsolescence risk that's increasing for all companies.

"There's a commoditization heat death of the universe coming for you if you operate any business. And so we don't give permanent perpetuity for exceptional economics at any company in our DCF models for that reason...I think that there probably is a technological obsolescence risk that's increasing for all companies."

G&D:

Do you factor in kind of what's going on in the general market or what's going on in the macro environment at all into portfolio decisions like how much cash to hold? Just curious how you think about cash and being fully invested when there is speculation going on in some areas of the market.

BB:

Yeah, so we don't hold cash tactically; we try to stay fully invested. The nice thing about the way that we have structured our business is that we are an institutional sub advisor. And so we don't have 100% of anybody's

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money, and so we don't have to be smart about short term market direction, being long or short, or worrying about investing in other parts of the capital structure, whether to have a little bit more small-cap India versus private equity in China. Those are decisions that are made above our pay grade by institutional allocators.

And so we stay fully invested in the best handful of companies that we can find in our market cap category. Now, it is true that we tend to look for businesses with high returns on invested capital, and we prefer that they can get that return without excessive use of leverage. And so those companies tend to be cash generative, and they themselves typically hold a fairly sizable excess cash balance, and so on a "look through" basis, we actually are experiencing a higher cash drag than the fully invested portfolios of our clients would otherwise indicate.

G&D:

You mentioned the LP base with institutional portfolios being a factor and letting you run the type of portfolio you'd want to run. For someone considering starting a fund, are their inherent limitations in terms of the way you want to structure the portfolio based off of whose money you're ultimately managing?

BB:

Yes, I mean, all of this is a discussion about basic "product market fit." You want to be selling your services to people who specifically want that service. And so, we have a lot of conversations with people who ask us to do things that are putting us outside the "straight up the middle of fairway" services that we offer, and we tend not to have productive conversations with those people. We know exactly who we are. And there are huge swaths of the institutional allocator community that are just not the right fit for us, and we know that and that's okay.

"we have a lot of conversations with people who ask us to do things that are putting us outside the "straight up the middle of fairway" services that we offer, and we tend not to have productive conversations with those people. We know exactly who we are. And there are huge swaths of the institutional allocator community that are just not the right fit for us...and that's okay."

That's probably the hardest thing for somebody starting up is knowing how to segment or categorize themselves. You hear, "I just want to invest, I don't want to deal with clients, I just want a \$100 million to invest how I want to." Unless you have a rich uncle or you find that one allocator that will let you do that, that isn't very reflective of the realities of the marketplace.

Some institutional allocators care about market cap, some care about geographic focus like US versus rest of the world, some care about filling this bucket or that bucket in their institutional allocation. As a manager I have to understand who I'm pitching to, and what they want, and how to service them effectively.

And so that is absolutely something that I think a lot of emerging managers get wrong. Maybe they're using cash tactically, and they're trying to appeal to people that don't want them to do that, or maybe they're investing globally, when they're failing to realize that many institutions separate US from rest of the world, or maybe they're investing across the capital structure. And perhaps that's not something that people want when they're looking for purely public equity exposure. Naturally there is some element of, unfortunate as it may be, filling a particular bucket or checking a particular box

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for a potential allocator.

G&D:

Awesome. If you have advice for people moving into the field, or making an impact early in their career, anything you can share there would be great.

BB:

I think the one piece of advice would be to live frugally. And it sounds kind of counterintuitive coming from somebody who has been a fund manager for 20 years, but early in my career, I lived this advice. I went to a state college on full scholarship and saved money during college, so that I could "cast about" a little bit for my first job and make sure it was the right fit, rather than having life "stick a gun at my head" and force me to work at someplace that I didn't necessarily like, because I needed the paycheck, and my life depended upon it. And so when I started my firm at 27, I had saved what seemed like a lot of money then to give myself a couple of years to turn my firm into a success.

And living frugally also meant that I didn't have to keep doing something else that I didn't like in order to advance my career and my long-term interest. It just gives you flexibility and confidence to chase down these opportunities where they appear or to go find them yourself. So I guess my advice would be live frugally and then find the people that are doing exactly

what you want to do, seek them out and drop everything and try and join them.

"...my advice would be live frugally and then find the people that are doing exactly what you want to do, seek them out and drop everything and try and join them."

That's kind of what I did with my first job in investment management. I talked my way into a job with this guy and said, "I'll work for free." And he said, "What's the catch?" And I said, "Well, pretty soon I'm going to be indispensable to you, and then you're going to have to pay me." [laughs] And he gave me the smirk and said, "Okay, come on board." And so I just happened to find the right opportunity and the right person and personality to where I was able to be successful. But I do think looking back that I had this key advantage. I was living frugally and had time abundance. I wasn't saddled with student debt, and I wasn't married, I didn't have kids at that time. If I had those things, it would have been a lot harder to do all this, especially if I had some time inflexibility personally that would have prevented the all-

consuming effort required to launch the firm.

G&D:

Definitely, that's great advice. I wanted to bring up your book, *The Small Cap Advantage*, and I heard on another interview that it was originally called *The Little Book of Little Stocks*, I think. I like that title a lot.

BB:

I think that title is still available if anybody wants to write it.

G&D:

If you were to write an update in 2021, is there anything that you'd be thinking about adding or things you'd want to dive into deeper that you've found interesting in the intervening years here?

BB:

I had a pretty cavalier paragraph in the book where I just sort of said, "I don't think that price to book as a value factor has underlying fundamental validity as a predictor of future outperformance." It's probably just a reflection of contrarian psychology, and that's after 80 years of the Fama and French Three Factor Model working perfectly, so it felt pretty bold to make that statement in the book.

So it was kind of a cavalier statement back then and as it turns out since the book's

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publication, price-to-book has just stopped working. And I think, as I said earlier, it's probably a reflection of an increasing amount of market efficiency, where a low price to book is probably more indicative of a business under earning on its capital base and so people are ditching that as a value factor in preference for businesses that have better prospects. I think that was kind of an interesting kind of tidbit from the book.

“...price-to-book has just stopped working. And I think, as I said earlier, it's probably a reflection of an increasing amount of market efficiency, where a low price to book is probably more indicative of a business under earning on its capital base and so people are ditching that as a value factor in preference for businesses that have better prospects.”

I think that I had a lot to say on firm structure and how to kind of build a firm that may have some elements of differentiation that would appeal to institutional

allocators. And so I think that those things are probably the most interesting takeaways from the book. The main thrust of the book, small-caps outperform large-caps, isn't some earth-shattering revelation to anybody.

If I did another book, I probably wouldn't do it on the same subject matter. If I did something else, it would probably be on the qualitative elements of the investment process. When I read investment literature now, I think that's probably where there might be an opportunity to add something unique. Portfolio management, security analysis and the qualitative elements of those two endeavors could be an interesting foundation for another book.

G&D:

When I think about the value investing books that I was introduced to early, it was very much in the vein of the Intelligent Investor and net-nets, and then you kind of find your own style from there. And so part of Columbia, which has been really interesting has been the emphasis that we've gotten on books like Quality Investing, or Common Stocks and Uncommon Profits. Are there books that are in that wing of the value investing house that you would recommend to folks?

BB:

The Rappaport book,

Creating Shareholder Value, I thought was a pretty good encapsulation of the how a business generates per share value over the long term, and why you should look for certain things. That's one that we give our analysts. The Swensen book Pioneering Portfolio Management is a little bit outside of the value investing canon, but it is, I think critical for understanding institutional allocators. And it's hard for emerging managers to understand what institutions are like, because they've never worked in that environment.

In any business I would want to understand what my customers want and how they behave. Business is not just how to manufacture a great product, it's identifying and effectively servicing customer demand, and that's a key part I think of our business that just gets left out of the conversation. And I think one of the reasons that I have been successful is that I think I understand what our clients want. And when I talk to some emerging managers, and they describe to me what they're doing, oftentimes in my head, I'm thinking to myself, “you've obviously never had a meaningful conversation with an institutional allocator.”

Many emerging managers think they can simply sit in their office and pick stocks all day. They think that is the job and that seems fun to

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them, and they're introverts and they don't want to do anything else. But success in our business is just so much more than that. I mean, when you look at the very best investment managers, you notice parts of their talent stack that are present in addition to being great security analysts and great portfolio managers. You'll notice that they're great managers of people, that they're entrepreneurial, that they have a customer focused mentality, that they can articulate what they're doing very well.

And that's not just important for selling yourself and your services. Oftentimes, institutional allocators will look at you and say, "Can I trust this person to come in front of my board, or in front of my clients or in front of my team, because my selection of them is a reflection upon me." And so that dynamic is missed as well. There's just a lot of nuances of our business that are underdiscussed, especially if you just stick with the typical Barnes and Noble investment section reading list. So for aspiring managers, I wouldn't limit reading to investment philosophy and process. I would extend my reading list to include books like Swensen's, where you can start to understand what your prospective customers think and how they make decisions.

So this was a long-winded way of saying

that I like the book, and I think it's now 20 years old, which is another entire conversation about how topical it truly is anymore, but it was critical for me in my early years. And it was definitely a non-standard book that I didn't hear many other investment managers talking about when I read it.

G&D:

It sounds like the way you think about the investment management business has a lot of parallels with the way you look at a business you might invest in as a company with a competitive advantage, and the different skill sets you need for the management team.

BB:

Absolutely. And to that point, what's the moat around Bares Capital Management? And how do we expand that moat? Part of the answer is the qualitative research process – not many people are doing it like us, and if you were a typical startup manager, say two people and a Bloomberg terminal, trying to build an investment management company, you probably don't have the fee income to get a fully resourced team of people out on the road and collecting all of this qualitative information. And by the way, if you are successful, you'll probably follow your economic incentives into a more diverse portfolio. Then you have the incentive to get into the

fee retention business rather than the compounding client capital business, because once you're successful, it's lucrative, and everybody wants to keep the assets around.

And we've kept our portfolio concentrated – it's kind of a marker in the ground that says we're in this for client compounding, we aren't an asset raising firm, we don't have any marketing or sales people on staff, it's just me and our President a handful of other people on the research team that go and talk to prospects and clients.

“we've kept our portfolio concentrated – it's kind of a marker in the ground that says we're in this for client compounding, we aren't an asset raising firm, we don't have any marketing or sales people on staff, it's just me and our President a handful of other people on the research team that go and talk to prospects and clients.”

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G&D:

It seems like there's so much information out there, and especially when you're a generalist, you could spend your day doing countless things. So I'm just curious about how you tactically structure your days, and what you've found to be most efficient, maybe for a day where you're not on the road, how do you actually spend your time?

BB:

Well, that has evolved significantly over 20 years of building the business, I mean, day one, I was picking health plans and negotiating office leases. And now, thankfully, I built a team that includes an operations staff who are responsible for the account statement balancing and trading and operations and compliance and dealing with regulators and that sort of thing. And then we have the investment team, who are responsible for selecting securities and managing portfolios. And so I've kind of carved out for myself the pieces of the process that I like, which are managing the research process, and talking to clients and prospects.

And so I split my time between those two functional areas. Managing the research process is making sure that we have the right people in the right positions, that the productivity of that staff is high. And then there

are a lot of new ideas competing for the existing approved list of focus list names that we have approved, and we have to make sure that the intensity of the research on those focus list names remains high.

I'd say that we all emphasize process over outcome. And it is a process. I think that naming the firm Bares Capital Management is probably the biggest mistake of my career. It should be called something else, because it really is a team effort. And it's not all me, I'm not the next Warren Buffett – I'm not sitting there just picking stocks all day long. It's a team of people that have functional responsibility for basically every area of the firm, and I've become more a manager of the business than I ever was 20 years ago.

“I'd say that we all emphasize process over outcome. And it is a process. I think that naming the firm Bares Capital Management is probably the biggest mistake of my career. It should be called something else, because it really is a team effort. And it's not all me...”

But it's difficult to be

successful in professional investing. And despite our resources, our team is still operating with time scarcity. And so we try to fish in ponds where there are a lot of fish. We try to focus our research time and efforts where it's likely that we will have the most fruitful search. And so, back to the earlier comments about the pattern recognition, we spend time in software, precision instruments, information services, and other categories where just about every constituent out-earns their cost of capital over extended periods. We don't spend a lot of time in steel companies and airlines and industries where businesses are capital intensive price takers, not price makers. They don't get a lot of love around the office and a lot of time and attention. I mean, we still look at them, but we're not spending an enormous amount of time on them.

G&D:

In terms of outside the office, what do you like to do? What ends up taking up most of your time?

BB:

Well, I actually like to have a nice separation between work and home. Family takes up the preponderance of my non-work life. I have three boys and they're into sports and other hobbies, and I try to take advantage of the

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short time I have with them before they leave the nest. And I really just enjoy being with friends, and that enjoyment has been amplified through quarantine I think. The mandated isolation has reinforced my appreciation for getting together with friends for dinners, hiking, sitting around a fire pit, laughing, having good conversations. I'm happy that it is starting to become safe to resume these activities after vaccinations.

And I'm also actually very lucky to have a lot of friends that aren't in investment management. They don't really care at all what I do and actually love that. It's also a huge benefit being in Austin, which especially 20 years ago, was kind of a backwater for investment management. I'm not constantly running into people in the business and talking about work, and I don't find myself engaged in that constant comparison with other people in our business, and I think that's a pretty psychologically healthy thing for me, honestly.

G&D:

Maybe just bouncing off that, do you think being outside of New York and the West Coast, helps someone avoid an element of groupthink in an investor mindset? Do you potentially recognize things in companies where if you were constantly in a huge city like New York that you

might miss because you'd assume that this was the way the rest of the world works?

BB:

So the answer is yes. And I think it is really more about the social proof of being in Midtown Manhattan, or San Francisco, where your supposed independence of thinking starts to get suddenly replaced when your good friends who you know and like start buying certain names, and you feel like you should be in them too. And so, one of the great lines of feedback we got from one of our early investors was, "the thing I love about your team is that no one else owns the names you own." This comment was probably 10 or 12 years ago, but they said, "everyone I talk to owns Visa and MasterCard," and it was the same five or six names that were in all of these hedge fund portfolios at the same time. The John Malone complex, the credit card networks, and other crowded names.

And we just had this differentiated portfolio. I don't know if it's me and my personality, or if it's Austin, the way we built the firm on first principles, or if it's all of the above. But it has produced some differentiation in what we do and how we do it. And so I like that, I love Austin, and I would much rather live here than in San Francisco or New York. And I got here in '96 when it was

really cool, and now it's totally discovered. Unfortunately now everybody's moving here.

G&D:

This was awesome – thanks for the time, Brian.

Dolby Laboratories, Inc. (NYSE: DLB) - Long 2021 Pershing Square Challenge (1st Place)



Paul Chandler '21

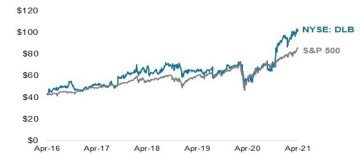
Paul is a 2nd year MBA at CBS. Last summer, he interned at Goldman Sachs in the Natural Resources Investment Banking group. He also interned in Private Equity at Eden Capital, Halmos Capital, and Dorilton Capital. Prior to CBS, he worked at PA Consulting Group in the Energy & Utilities Practice. Paul graduated with a B.A. in Economics from Yale.

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Jack Devine
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David Kilgariff
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Price (4/12/21)	\$102.14	Market Cap	\$10,378
52-wk High	\$103.88	Enterprise Value	\$9,303
52-wk Low	\$52.13	3-yr Adj. Beta	0.95
Avg Daily Vol. (3 mo. Daily, mm)	0.5	WACC	5.65%
Nominal Shares Outstanding	101.6	Dividend Yield	0.90%
Float (%)	63.90%	TEV / FY '22 Total Revenue	6.8 x
Short Interest	1.80%	TEV / FY '22 Cons. Adj. EBITDA	16.7 x



Recommendation:

LONG DLB for ~22% IRR with a 5-year price target of \$205 based on a DCF with a terminal multiple of 17.3x FY1 EBITDA and WACC of 5.65%.

Business Description:

Dolby develops audio and visual IP and licenses it to the media industry. The market for their tech includes content creators, streaming services/content distributors, and manufacturers of consumer devices, which is where Dolby monetizes their IP via royalties. These end markets include:

- **Broadcast:** (41% of 2020 rev.) includes televisions and set-top boxes (STBs)
- **Mobile:** (21% of 2020 rev) includes smartphones and tablets
- **Consumer Electronics:** (14% of 2020 rev.) includes DMAs, DVDs, soundbars, etc.
- **Personal Computers:** (12% of 2020 rev.) includes Windows and Mac OS and PC hardware
- **Other:** (12% of 2020 rev.) includes gaming consoles, auto, Dolby Cinema, and Dolby Voice

Dolby's premium products create value across the entire media ecosystem:



Jack Devine '21

Jack is a 2nd year MBA at CBS. Last summer, he interned at Goldman Sachs in the Natural Resources Investment Banking group. Prior to CBS, he was a supply chain supervisor and engineer at ExxonMobil. Jack graduated with a B.S. in Operations Research and Engineering from Cornell.

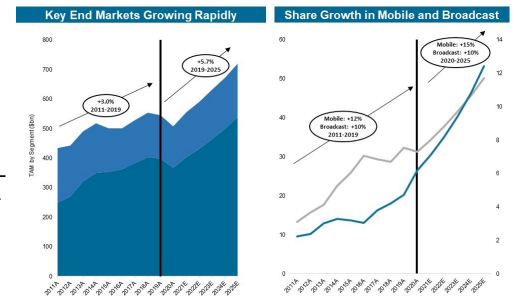
Investment Thesis:

I. Significant business transformation:

- Dolby has proven itself over 50+ years of tech cycles and has built a premium reputation in AV
- Dolby has historically been a "standards" licensing business, relying on audio encoding tech, where they were virtually a requirement for playback in consumer electronics, like DVD players
- Standards allowed Dolby to realize mandated, recurring revenue for each device shipped
- Since about 2013, management has strategically shifted to develop next generation, consumer-facing audio and visual products that work on top of their standards-based products
- Premium products include Dolby Vision (a High Dynamic Range visualization engine), Dolby Atmos (3D spatial sound technology), Dolby Voice, Dolby Cinema, and Dolby.io (media APIs)
- The market has not fully captured this fundamental shift in strategy: where device makers seek out Dolby's products to drive incremental sales of their SKUs

II. Upcoming adoption cycle enables above consensus revenue growth:

- Increasing internet speeds and faster processing power enable higher quality AV experiences in the home, bolstering demand for Dolby products
- Existing customers will expand usage of Dolby technology across their entire product line-ups, moving beyond premium SKUs, and new customers will adopt Dolby technology due to its superior performance and powerful network effects
- We estimate that Dolby has *already* been growing its market share by ~10% CAGR since 2013, but this growth has largely been masked by a declining legacy DVD business (see next page)
- We expect revenue growth of ~15% 5-year CAGR, driven by a weighted avg. ~5-6% CAGR TAM expansion and steady ~10% CAGR share growth
- **Broadcast:** Atmos and Vision are underpenetrated in the growing 4K TV market, existing in 9 of the top 10 smart TV makers, but mostly in premium SKUs
- **Mobile:** Apple's accelerating adoption across multiple product lines is a major win. iPhone 12 is the first smartphone to enable video capture in Vision and will encourage more OEMs to adopt



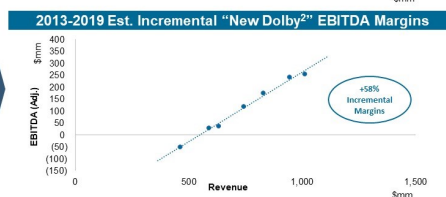
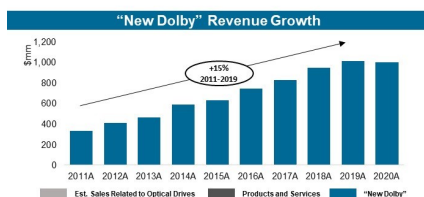
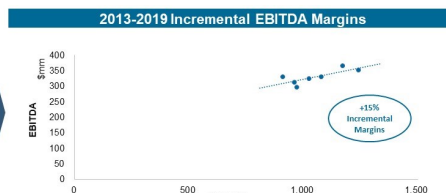
David Kilgariff '21

David is a 2nd year MBA student at CBS. Last summer, he interned at BofA Securities in the Technology, Media & Telecom Investment Banking group. Prior to CBS, David was a Manager within Accenture's TMT Strategy Consulting practice. David graduated with a B.S. in Mechanical Engineering from Johns Hopkins.

Dolby Laboratories, Inc. (NYSE: DLB) - Long

III. Significant hidden operating leverage in the business:

- Dolby operates a majority 95% gross margin licensing business, yet operating margins have eroded significantly over the last 10 years
- We believe margin erosion was largely attributable to its finally bot-tomed-out, legacy DVD business, where it held a powerful standards-based audio encoding monopoly
- Normalizing out DVD rev. using management estimates and historical shipment data, we find an underlying "New Dolby" business that grew revenue at ~15% CAGR with ~60% incremental EBITDA margins



- We believe that Sales & Marketing and Research & Development have significant fixed cost scale, and have grown efficiently as management shifted to launch the new Atmos and Vision offerings and build a global, scaled salesforce

IV. Business model has sustainable competitive advantages:

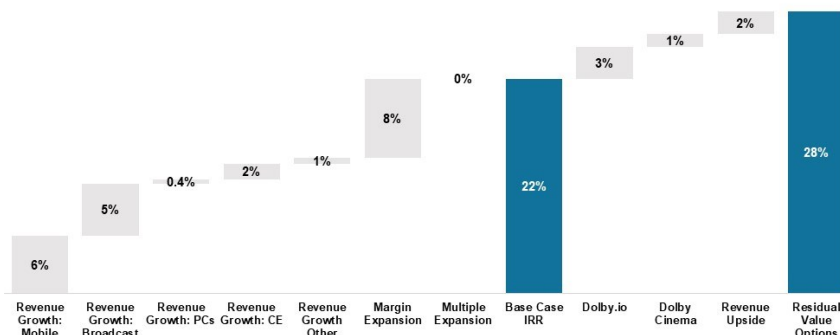
- Across multiple media formats, Dolby has built double-sided networks from content creators to device manufacturers. These network effects create significant barriers to entry while also creating value across the entire ecosystem
- Near-term accelerants of networks include premium streaming services, 5G handset upgrades, and internet upgrades
- Dolby's expanded product portfolio and bundled technology offerings create higher switching costs for OEM customers
- Significant IP protection is supplemented by "Intel Inside" style ingredient marketing on streaming services and end devices

Valuation:

- DCF with 5.65% WACC, 17.3x FY1 EBITDA terminal multiple
- No growth from multiple expansion
- Forward revenue continues to compound in line with "New Dolby" last 5-7 years (~14-15% CAGR), with observed ~60% incremental EBITDA margins
- Additional upside if use cases within gaming, music, and auto grow corresponding end markets faster than we anticipate
- R&D (15% of incremental revenue), S&M (18% incremental) scale in line with previous "New Dolby" growth – no additional operational de-leveraging
- Earnings power analysis provides comfortable downside protection (P/Adj. BV = 1.2x, P/Adj. EPV = 0.8x)
- Base case assigns no value to Dolby.io API business– which management believes could double the company's TAM and possibly lead to multiple expansion
- Base case assigns no growth to Dolby Cinema or other Products & Services— both of which could be significant

5-Year IRR for Base Case

Base to Upside Case Bridge (5-yr IRR)



Income Statement	2021E	2022E	2023E	2024E	2025E	2026E
Total revenue	1,351,612	1,516,690	1,710,673	1,937,224	2,200,674	2,506,101
Consensus	1,263,000	1,362,000	1,423,000			
Operating income	353,928	438,718	540,082	659,838	800,201	963,810
EBITDA	447,300	539,951	650,353	780,505	932,822	1,110,179
EBITDA Margin	33.1%	35.6%	38.0%	40.3%	42.4%	44.3%
Adj. EBITDA (with SBC add-back)	543,627	656,230	790,408	948,588	1,133,707	1,349,258
Consensus (includes SBC add-back)	492,000	562,500	627,500			
Consensus implied EBITDA % (no SBC add)	37.3%	32.8%	34.3%			
Net income attributable to Dolby	337,813	407,389	490,355	588,187	702,693	836,040
EPS:						
Diluted Unadjusted	\$3.29	\$3.97	\$4.77	\$5.73	\$6.84	\$8.14
Diluted Adj. (SBC Add Back)	\$4.03	\$4.86	\$5.85	\$7.02	\$8.39	\$9.98
Consensus GAAP EPS	\$2.64	\$3.02	\$3.57			
Consensus Adj. EPS*	\$3.46	\$3.93	\$4.50			

Risks and mitigants:

- Bundled customer relationships:** Pricing with large OEM customers is nuanced and includes bundles across products and end markets, making it challenging to forecast unit economics short term. Dolby's complicated relationships point to their stickiness with customers and the competitive moat they've developed
- Competing with customers:** Major OEMs (Samsung, Sony) develop AV technologies that could partially compete with Dolby. Double-sided networks reinforce the need for a neutral party to succeed and Apple buy-in indicates positioning
- IP Risk:** Dolby may be unable to enforce patents or face roll-offs. We observe the average patent expiration to be 2029. Dolby branding and trademarks also partially offsets some of this risk, and global patent enforcement arm has successfully operated across multiple cycles
- Controlled Company:** Dolby family controls 85% of voting rights. This can be viewed as a long-term strength, as Dolby can resist the urge to short sightedly raise prices too aggressively on technology cycles and maintain partnerships

Angi, Inc. (NASDAQ: ANGI) - Long 2021 Pershing Square Challenge (2nd Place)



Bill Henry '22

Bill is a first-year MBA student at CBS. Bill most recently worked on Citi's High Yield Credit Research team focused on Healthcare. He started his career at SunTrust Robinson Humphrey in credit origination before moving to their credit research team. His B.S. in engineering degree is from the University of Virginia with a M.S. in Commerce and from George Washington University.

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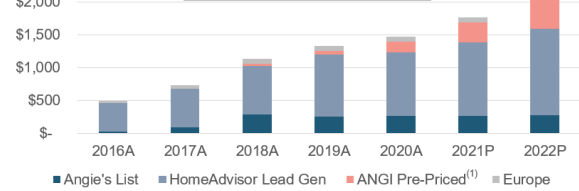
Tom Moore
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Dickson Pau
CPau22@gsb.columbia.edu

Financial Overview

Share Price	\$17.03	Market Cap (\$m)	8,513	\$2,000
52 Wk L/H	\$4.10/19.17	Debt (\$m)	832	\$1,500
FY20 Revenue (\$m)	1,467	Cash (\$m)	863	\$1,000
FY20 EBITDA (\$m)	176	EV (\$m)	8,482	\$500
Cash/shr (\$)	1.72	SI % Float	14.8%	\$-
Dil Shr Outstanding	500.1	NTM EV/Sales	5.2x	
# of Customers	15m	NTM EV/EBITDA	46.3x	
# of Suppliers	250k	NTM P/E	NM	

Revenue Segments (\$m)



Recommendation:

Long ANGI with a \$45.26 price target over 5 years, representing 166% upside and an IRR of 21.6%

Thesis Summary:

Angi Inc. (ANGI) is a dominant home services marketplace that is **shifting from a lead generation to a pre-priced transaction model with better economics**, and is best positioned to capitalize on an enormous, growing TAM with favorable tailwinds from millennial home ownership.

Business Description:

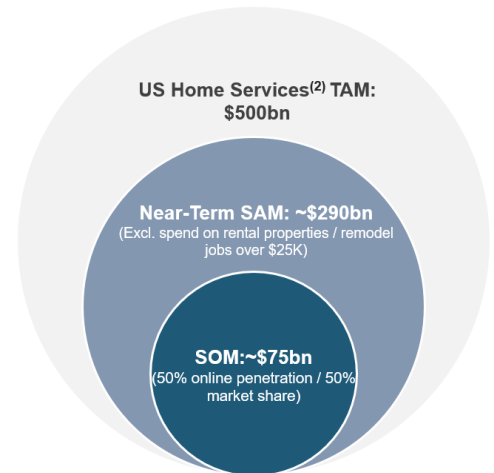
ANGI is the world's home services marketplace comprised of three business segments:

- **Advertising & Europe:** (~23% of rev) Home services professionals (pros) pay to advertise on Angie's List, HomeAdvisor, and smaller sites.
- **Lead Generation:** (~66% of rev) Customers input project details onto HomeAdvisor, and pros pay for leads (contact information) matched based on project type.
- **Pre-Priced:** (~11% of rev) Customers input project details and are provided with an "Uber-style" one-click price. ANGI matches the job with the pro and guarantees execution.

Investment Thesis:

I. Huge, Mostly Offline TAM with Tailwinds:

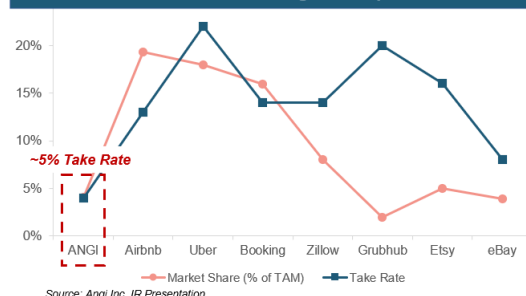
- Highly fragmented market valued at \$500 billion and currently **>80% offline**
- Millennials over the median home buying age (34 years) projected to nearly double by 2026
- As the largest online player, ANGI has a **significant supply advantage** over competitors in a market requiring a solution for millennials, who are now the largest segment of home buyers.
- Near-term Serviceable Obtainable Market of pre-priced services estimated at \$290 billion for **low and medium consideration jobs**.
- Growing TAM aided by **aging US housing stock requiring more maintenance**, and home services is less cyclical than traditional housing construction spend.
- We estimate that **18% of ANGI's GMV will be converted to the advantaged pre-priced model** by 2030, vs 1% today.



II. Pre-Priced is a Step Function Change:

- ANGI's 2020 **take rate** on pre-priced jobs estimated at **32%, vs <5%** for lead generation.
- ANGI can take more from pre-priced jobs because the model **drastically reduces friction for both customers and service pros**.
- Booking through pre-priced saves a customer over an hour of time relative to offline process, removing friction from being quoted a price over the phone and renegotiating in person.
- **73% of service pros surveyed said they would take a pre-priced job offered by ANGI**, with 21% unsure.
- Pre-priced jobs are attractive to pros: surveyed **pros reported being willing to take a 10% discount** from average prices in exchange for a guaranteed job.
- Pre-priced, guaranteed jobs prevent holes in pros'

ANGI's current Take Rate Lags Marketplace Peers

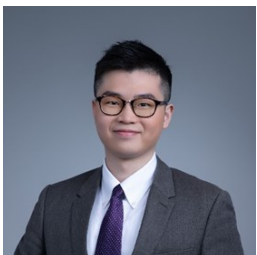


HomeAdvisor (lead gen) lacks ecosystem control; despite its size (\$20bn transactions enabled by the platform), it fails to take commensurate share of value



Tom Moore '22

Tom is a first-year MBA student at CBS. He started his career with PwC in its management consulting group focused on strategic planning and forecasting projects. Tom is an AVP for the Columbia Graham and Doddsville investment newsletter and is interning with Tensile Capital Management on its public equities team this summer. He graduated from UT Austin with degrees in Finance and Plan II Honors.



Dickson Pau '22

Dickson is a first-year MBA student at CBS. Prior to business school, he worked at Ascender Capital as a generalist covering Asian small and mid caps. Dickson graduated with First Honors from The Chinese University of Hong Kong with a Bachelor of Business Administration. He is interning with T. Rowe Price this summer.

schedules. **27% of service pro time is spent on non-revenue generating work** (marketing, negotiation, back-office), and on 19% of jobs, customers cancel last minute.

- Supply increase due to mental shift – **moving from a pro cost center to a revenue center**
- Pre-priced expands ANGI's moat over big tech. Lead generation business competes with Google and Facebook, but tech giants are uninterested managing thousands of suppliers and fielding calls to negotiate disputes.
- Pre-priced drives users to the ANGI mobile app (50% 2020 user growth), where transaction frequency jumps 50% and memberships are more likely. We project ANGI LTV / CAC to **improve from 3.0 to 7.1x by 2026**.

III. ANGI is the Dominant Player with the Best Management:

- Scaling pricing accuracy in the pre-priced model requires solving hundreds of thousands of micro-markets (400 metros x 500+ services), conferring a significant, **self-reinforcing data advantage to the largest player**.
- ANGI generates revenue that equals that of its next four primary competitors combined, and generates FCF in excess of NI **allowing for aggressive investments compared to unprofitable private competitors**.
- 84% owned by IAC, who wrote the playbook on scaling online marketplace businesses.
- Historically, IAC identifies an attractive market, consolidates via acquisitions, tinkers with product market fit through extensive A/B testing, and spins off at maturity (see MTCH)
- Handy (pre-priced cleaning services marketplace) co-founder Oisín Hanrahan recently elevated to ANGI CEO, demonstrating **ANGI / IAC commitment to pre-priced model** as its growth engine moving forward.
- "This is a testament to what we see as the future of the business." - Team interview with IAC CEO Joey Levin

Why the Opportunity Exists:

- Sell-side gross margin estimates imply minimal growth percentage of jobs transacted in pre-priced by 2022 (4.2% estimated in 2020, 5.4% 2022 sell-side, 7.4% 2022 base case)
- Bears believe the ANGI model is Google arbitrage, and will be unable to solve supply tightness
- Investors shorting ANGI to create synthetic Vimeo position ahead of Q2 '21 spin from IAC

Valuation:

• Base Case:

- Assume 24% of low priced jobs converted to pre-priced by 2026
- Margins to increase due to higher take rate and improvements in marketing and selling efficiency
- Three valuation methods: FWD EV/EBITDA, FWD P/E, and DCF.
 - WACC for DCF at 7.8%
 - Average 2025 target price at \$39.57

• Bull Case:

- Stronger margins as subscription model increases purchase and job frequency further

• Bear Case:

- Assume take rate pre-priced jobs decline more rapidly to drive adoption
- No improvements in purchase or job frequency

• Probability-weighted Price:

- Assume probability distribution skews to the right. Base case at 50%, Bull case at 30%, and Bear case at 20%.
 - Blended target price: \$45.26

	2020	FY26 Base	FY26 Bear	FY26 Bull	Implied 8% IRR
<i>Figures in \$m except per share</i>					
1. ANGI GMV (\$mn)	20,153	39,907	38,537	45,904	40,080
2. % GMV transacted in Pre-Priced	0.8%	7.1%	6.2%	8.1%	5.0%
3. Marketplace take rate	5.0%	6.3%	6.1%	6.6%	6.0%
4. Service Requests per Customer	1.8x	1.9x	1.7x	2.1x	1.9x
5. Jobs per Service Provider	41.7x	45.7x	41.7x	48.6x	44.4x
EBITDA Margin	6.3%	16.8%	7.7%	21.3%	16.5%
EBITDA Margin (net basis ⁽¹⁾)	6.8%	28.7%	12.6%	38.0%	24.9%
EBITDA (\$mn)	92	836	348	1,300	693
Forward EV/EBITDA		20x	10x	27x	15x
Earnings per Share (\$)	(0.01)	0.98	0.26	1.66	0.77
Forward P/E		35x	15x	40x	20x
DCF value per share (\$)		49.59	20.67	95.77	34.48
Average 2025 Target Price (\$)		39.57	11.03	77.57	24.45
Cumulative Gain/Loss %		132.4%	-35.2%	355.5%	43.6%
IRR (5-year)		19.6%	-8.8%	37.9%	8.0%

Primary Research & Interview Insights:

• On the difficulty of pricing home services and how aggregating data helps:

- "Drywall, brick, wood... all [variables] make a difference. The more jobs you perform the more data you have. And we have performed the most jobs." - Joey Levin, CEO of IAC
- "The dataset of pricing [home service jobs] nationally doesn't currently exist... We have the opportunity to become the reference point for home services pricing." - Brandon Ridenour, Former CEO of ANGI

• Service Providers See the Appeal of Pre-Priced:

- "It would be great to not have to haggle and just focus on the work." "Filling in empty time slots is a big benefit." "A steady stream of work that I don't have to hunt for would be huge." - Assorted Service Providers

• Technology can make a meaningful difference in the ability to pre-price jobs accurately

- "If you can give me the materials, the size of the access point, and the size of the issue, I can generally price the job from my computer." - Owner/Operator of Commercial Plumbing Company
- "Maybe a little more than half of my jobs are clean cut [he can accurately estimate the time / price in advance], but if you have a customer do a thorough job with photos that would help a ton. Knowing that stuff makes a huge difference with pricing." - Independent Plumber

• The Lead Generation model leaves much to be desired, especially for independent operators

- "Putting in money up front for leads that might not turn into actual business is expensive and time consuming." - Independent Handyman, Wicked Pissah Handyman

Sean Stannard-Stockton, Ensemble Capital



Sean Stannard-Stockton, Ensemble Capital

Sean Stannard-Stockton is the president and chief investment officer of Ensemble Capital Management, which he co-founded in 2004, and portfolio manager of the Ensemble Fund (ENSBX).

Ensemble Capital manages \$1.4 billion in separately managed accounts, on behalf of private clients and institutions. Ensemble's equity investment strategy focuses on owning a concentrated portfolio of competitively advantaged companies.

Editor's Note: This interview took place on March 26th, 2021.

Graham & Doddsville (G&D): To start, can you walk us through your background and how you got interested in investing in the first place?

Sean Stannard-Stockton (SSS): I was that kid who was 13 years old, found a book on stock-picking, gave it a read, knew nothing about it at all, but instantly fell in love. As I was going through high school, I discovered economics and loved it and went off to college knowing I wanted to pick stocks for a living. I went through college with that in mind and spent a lot of time reading about investing. After college, I worked at Scudder Investments in Boston for a handful

of years and then moved to what was then called Curtis Brown & Company, which was the predecessor to Ensemble Capital. Our founder Curt, who's now retired, had formed a sole proprietorship and was running about \$65 million in friends and family money for 15 clients, and I joined him.

It was just the two of us. We formed Ensemble Capital as a partnership in 2004 and then we built the business up over time. As far as my evolution as an investor is concerned, like a lot of young investors, I started with traditional deep value as many do. Munger talks about the "value inoculation" and the idea that investing should be about gaining access to a stream of cash flows, and that you pay less than that cash flow is worth in order to outperform, just intuitively made sense to me right away.

Back then, like a lot of younger investors, I didn't have the skillset to think about deep competitive advantage analysis and was instead drawn to the quantitative work of people like David Dreman and Jim O'Shaughnessy, whose book "What Works on Wall Street" was a great early read. I started trying to understand, "Well, what does the evidence say is the best way to do this process?" A lot of that evidence points to discounted valuation methods, although

O'Shaughnessy's book also pointed to momentum as being an important factor and that growth really does drive value. Those concepts stuck with me early on.

"Over time, I've really developed a process that's about trying to understand the future of a business. As much as we hate making forecasts, it's inevitable that the only value of a stock is its future cashflow. If you think you can't forecast that, then just go buy a different stock."

Curt was more of a classic growth investor, but always with a valuation sensitivity to his analysis. As we started working together, I started really developing my own philosophy of what is it that makes a great business and recognizing that historical results of a company or value on its balance sheet are relevant indicators to future value, but they are not the same thing as future value. Over time, I've really developed a process that's about trying to understand the future of a business. As much as we hate making forecasts, it's inevitable

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Sean Stannard-Stockton, Ensemble Capital

that the only value of a stock is its future cashflow. If you think you can't forecast that, then just go buy a different stock.

G&D: Was there a particular investment or set of investments when you got to Curtis Brown & Co that really showed you the power of investing in these competitively advantaged businesses?

SSS: I think most of my early lessons were mistakes I made on my own that taught me what not to do. My very first stock pick ever when I was just out of college was an investment in Tommy Hilfiger made simply because it was trading at eight times earnings. I figured I had found a cheap stock and thought, "Well, then I'm a genius and obviously it's going to go up a lot because it's so cheap." And it was a total disaster of an investment, thank goodness!

I always think if you ever go to Vegas, you have to pray that you lose big the first time, because if you win on your first trip to Vegas, you think you're brilliant and you keep going back until they take all your money. So having your first stock pick work out is a terrible disadvantage because it makes you think that you know what you're doing and having your first stock pick blow up on you is really important because it teaches you that you have no idea what you're

doing, which is always the case with your first stock pick.

At Curtis Brown & Co, I was also participating in building a business. The only operational experience I have is in operating Ensemble Capital, but Ensemble Capital is not just a team of analysts who sit around with spreadsheets. It's an organization that serves 220 private clients, it meets with people, interacts with markets, and has an HR function. Building that business definitely taught me that there is very nuanced strategic analysis that is the heart of running a business. The heart of any investment that you make is trying to understand those strategic issues and what it means to run these businesses. The statistical data that you can get out of Bloomberg tells you next to nothing about those things.

“At the end of the day, we think that the practice of investing is fundamentally a qualitative process. It is fundamentally about trying to understand the future.”

G&D: What were some of the key learnings as the business evolved from when you joined in 2004 to what we know it

has today? And what do you think it is about the way that your firm is structured and the way the analysts work together that creates a competitive advantage for you as a business, for you as a firm?

SSS: I think that the biggest thing that's evolved at Ensemble over the last nearly 20 years is more and more focus on building a systematic discipline to how we do things. At the end of the day, we think that the practice of investing is fundamentally a qualitative process. It is fundamentally about trying to understand the future. You can draw on lots of quantitative data to help inform your outlook, but at the end of the day, you have to make a judgment call. And that judgment can draw on quantitative inputs, but it is absolutely based on qualitative insights as well. And yet, the problem with qualitative analysis is you can have a lot of bias and a lot of noise that creeps into that process, especially as you build a team of people.

So each individual analyst has various biases that they may or may not be aware of and there's a degree of noise in their decision-making or in the inputs that they assume. The evidence is overwhelming that if you give an analyst the same company and have them do the work at different times of day, like after

(Continued on page 28)

Sean Stannard-Stockton, Ensemble Capital

lunch, rather than right after their coffee in the morning, you can get very different answers. That's noise.

As we've built from a couple individuals into an organization of nearly 20 people, I've really been focused on doing everything we can to create a systematic process that honors the qualitative nature of what we do, but also seeks to reduce bias and noise in our individual and joint decision-making. This is why on the one hand, we have a very qualitative process around analyzing the competitive context in which businesses operate. And yet the other hand, we basically use an algorithm to manage position sizing in the portfolio (although that algorithm is drawing on qualitative inputs that we transform into quantitative data that we feed to the algorithm.)

G&D: How do you split up responsibilities between you and the other two analysts on your team?

SSS: I play the role of analyst, not just CIO. I think of myself as like a player-manager, in that, yes, I am the CIO, but I'm also one of the analysts. Arif Karim, Todd Wenning and I each are the lead analyst on about a third of the portfolio, and then it's incumbent on the lead analyst to share and defend their analysis with the rest of the team. We collectively sign off on valuation models, so there's a lead

who's developing that, but each analyst is going to review it as well. We might ask questions about it or challenge it. At the end of the day, if we're trading on a stock at a certain valuation, the entire team has accepted it and given the okay.

There might be some difference of opinions, but nobody's saying, "No, we shouldn't but this, our valuation is wrong." On the more qualitative side, we have a process for force ranking each company in our portfolio, seven different critical questions that we think inform our ability to assess the business over the long-term. The lead and the secondary analysts all make those ratings, so everyone has to know enough about the business to understand questions like, "What is the likelihood that this business's products and services remain relevant over a 10 year or longer time period?" But that does not mean you need to know all the intricacies of the accounting of every business that you're not the lead on. So it is very much a joint process.

G&D: You have a great Venn diagram on Twitter which outlines your investment philosophy at Ensemble ([see following page](#)). Could you walk us through how you came up with this?

SSS: It came about through just doing this

qualitative work and thinking about what the key considerations are in any business. Every business is unique, but there are certain types of questions we find ourselves asking repeatedly.

Todd Wenning on our team had developed a Venn diagram of this sort to describe his own personal investment philosophy prior to joining us. I was an admirer of the simplicity and conciseness of how he had illustrated his thinking and he developed this version of the diagram a few years ago to describe our approach.

I think of our process as always evolving. I know that some people say, "We want everyone to have a process and stick to it forever." But if you stick to a process in a period of disruption, like the one that we are in right now, and you don't ever evolve, you're just going to fall behind. So if you are not constantly evolving your process, then you're basically just slowly dying. Because reality is changing, your fixed process is going to get out of sync, unless you're constantly revising it.

Our process as we implement it today was really formalized about a decade ago, but it continuously evolves. The different factors that we look at in this Venn diagram are not rocket science. We essentially think about the horse and the jockey, or the

(Continued on page 29)

Sean Stannard-Stockton, Ensemble Capital

VALUE CREATION

Does management understand and execute on creating economic value?

CAPITAL ALLOCATION

Does management thoughtfully weigh dividends, buybacks, M&A, and debt repayment?

INTEGRITY

CULTURE

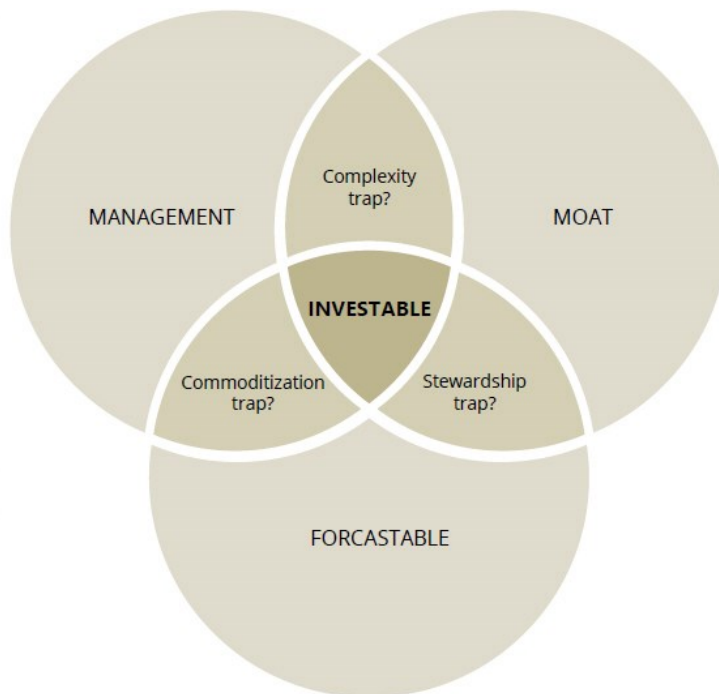
STAKEHOLDER ANALYSIS

ROIC & GROWTH FOCUS

VISIONARY/OPTIMIZER

UNDERSTANDABLE

Do the business dynamics of the company match our investment team's expertise?



DURABILITY

How likely will the moat be intact in 10 years?

RELEVANCE

How likely will customers value the product/service in 10 years?

IDIOSYNCRATIC BUSINESS

PRICING POWER

REINVESTMENT MOAT VS LEGACY MOAT

EMERGING MOAT

FORCASTABILITY

Does the business lend itself to accurate forecasting of long-term outcomes?

business and the management team. Moat and relevance are the horse, the company. Management is the jockey.

The third pillar is what we call forecastability. What we mean by that is both our circle of competence, but also the intrinsic forecastability of a business. There are some businesses that are just intrinsically more forecastable where there's just little debate about what growth rates are going to be, and then there are other businesses in which you have huge skews. We've owned Netflix for five years. There have been a lot of investors who thought that the business was a zero and not financially viable. You don't see the same arguments taking place with Pepsi, for example. Some businesses are more or less intrinsically

forecastable.

G&D: Great. Delving into moat first – you highlight the difference between the durability of a business and the relevance of it in the mind of the customer. What do you mean by that?

SSS: When you think about the durability of the competitive advantage or the moat, there's how wide the moat is right now and then the durability of the moat over time. All businesses are constantly being attacked a little bit, so there is an element of entropy in which moats are slowly decaying at all times. To a large degree, as much as you'd say, "Well, I want my business to be building their moats bigger and bigger," a lot of the work is actually just trying to maintain the moat and fend off the entropy of

business competition.

Management's behavior makes a big difference here as well. Over time we've put more and more value on culture and recognize that there are businesses in which it's structurally possible for competition to come along, but it's not going to happen for societal or cultural reasons. We've talked about First Republic a lot, and their levels of customer service. In theory, you'd say, "Well, the big banks can just replicate a high customer service environment for high net worth clients." And the answer is, "Yeah, but they're not going to." Banking is an industry that has a terrible long-term track record of customer service. You would really need to take a generation to refocus the big banks to compete with First Republic. There's

(Continued on page 30)

Sean Stannard-Stockton, Ensemble Capital

nothing structural, but there's real cultural reasons why it doesn't happen.

The concept of relevance relates to the idea that a moat is great, but what if your customers don't care about what it is you do? Then it doesn't matter that nobody can compete with you. Off the top of my head, think of an example like traditional sugared Coca-Cola soda. It's not like other companies came along and breached Coke's moat. It's that Americans and people around the world started caring less and less about carbonated sugar water. That's a decline in relevance.

One of the things that we've tried to emphasize in our writing is the difference between recognizability and relevance. Everybody in the world recognizes the Coke brand just as much as they did 20 years ago. But the relevance of the core sugared Coca-Cola drink is far lower today than it was in the past. It's very difficult to forecast relevance over a 10-year time period, but that's part of what we're paid to do. One way to think about it is we're trying to avoid the value traps, or businesses that are decaying.

G&D: In the past you've talked about looking for companies that are growing in excess of GDP. Does that mean you look for a healthy balance of volume and pricing growth as opposed to a business

that might not be growing much volume, but is increasing pricing? And maybe you can tie in your thoughts on the concept of mortgaging the moat into that as well.

“Over time we've put more and more value on culture and recognize that there are businesses in which it's structurally possible for competition to come along, but it's not going to happen for societal or cultural reasons. We've talked about First Republic a lot, and their levels of customer service. In theory, you'd say, “Well, the big banks can just replicate a high customer service environment for high net worth clients.” And the answer is, “Yeah, but they're not going to.””

SSS: In theory, you don't need to be growing to have value. Let's say you have a business with a 12% distributable free cash flow yield and guaranteed flat free cash

flow forever. Well, that's a great investment - 12% annualized returns. But in reality, there's just no guarantee. And businesses that grow at very low rates are losing wallet share of GDP, so they are intrinsically losing relevance relative to other economic activities. We believe that those businesses face the risk of hitting a stall speed. You see this phenomenon a lot in nature, where basically you're either you're growing or you're dying. We think of businesses the same way.

We don't want to invest in dying businesses, even if it's going to be a long time before they die. So, the nominal GDP growth rate hurdle we require is really just a way to avoid stall speed risk. As to price versus unit growth, in theory, you'd say, "Well, it's all revenue. So who cares?" or that price alone is best as there are not associated cost of goods sold. But it's unusual to be able to raise prices forever. At some point, you hit a terminal level in which you are constrained by the level of inflation.

Everybody loves pricing power. Warren Buffett has said that the most important indicator of whether a business has a competitive advantage is whether they have pricing power. And we think that's right, for sure. However, one set of businesses that exhibit pricing power are

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those that have trapped their customers. It's not that they have pricing power because their customers like what they do so much – it's that their customers are trapped. Every time they raise pricing, their customers accept it, but they hate the company just a little bit more. And when you do that, you keep pushing up the price and you push up the opportunity for a disruptor to come in underneath you. We think of it as each year, that company is actually creating an off-balance sheet liability and is exposing itself to competition. They are

“We really differentiate between pricing power that comes from trapped customers versus pricing power that comes from delighting customers so much that they're happy to pay more. When Netflix raises its price by a dollar, people don't immediately churn off – instead they say, "Oh my gosh, I can't believe I get all of this content for 12 bucks a month. I'm not worried about it being \$13.”

mortgaging their moat.

One of the businesses that clarified this idea for us was Live Nation, whose Ticketmaster business has a lock on concert ticket sales. We initially looked at it and thought to ourselves, "What an incredible business!" I should note – I haven't followed it for a number of years, so it's possible that things have changed. But after we dug deeper, we realized, "Everybody hates them."

Everyone who attends the concert is mad they paid such excessive amounts in fees. The artists also hate Ticketmaster. Live Nation is supposed to be about connecting people and benefitting the artists who are putting on the concert. If both sides of that equation don't like the company, well, that means that they are going to become more and more incentivized to try something else.

You might say, "Yeah, but they can't." But over time humanity solves problems, even insurmountable, intractable ones. So we just don't want to be investing in businesses in which customers and others in the ecosystem are incentivized to try and exit the relationship with the company. Even we think it can't happen. We just say, "You know what? It will at some point."

We really differentiate between pricing power

that comes from trapped customers versus pricing power that comes from delighting customers so much that they're happy to pay more. When Netflix raises its price by a dollar, people don't immediately churn off – instead they say, "Oh my gosh, I can't believe I get all of this content for 12 bucks a month. I'm not worried about it being \$13." Same thing with Apple – they have the price of phones up to \$1,000 and people still can't wait to buy one. It's totally different than old school cable companies taking cable bills up so high that people were just enraged. That's what we're trying to avoid.

G&D: Yeah. If you're actually improving your product or upgrading your product to your customer, that's creating value and you can charge a higher price for that. Whereas if you're just providing the same exact product year after year and not making any changes, but the customer has no choice, over time you're becoming more fragile.

SSS: That's right. Fragile is a good way to think about it. When you mortgage your moat, you are becoming more fragile. And that's the off-balance sheet liability. It's hard to quantify, it's hard to see, but it's there. It's very real.

G&D: You've also written about an inverse concept, which is latent pricing power and you've

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used Netflix as an example of a company that could raise price more, but chooses not to. How do you make sure that a company actually has latent pricing power and is creating a value surplus for customers versus just the inability to take price due to competition or other factors?

SSS: Yeah, that's a great question. The idea of latent pricing power as very much a function of the economy becoming more of an intangible economy. If you're in a tangible business, selling tangible things, you can't afford to set price too low because it costs you something just to make the product and get it to somebody, right? So you're constrained by how low you can set pricing. But when you're selling an intangible item, the incremental costs of each new sale may be very, very low.

For instance, with the Netflix example, when they add a new subscriber, there are some minuscule costs to the server levels they need, and support levels they need – maintenance spend. It's not that there is no cost, but it's very, very low because they don't have to go out and buy content for that individual subscriber and give it to them. The content has already been purchased. When you have that dynamic, you have the ability to set pricing at much lower levels than might be considered normal or

full levels. I think it has become more and more important for investors to understand this dynamic and understand that current pricing may not reflect long-term pricing.

I've said in the past that, one of the insights for me on this was when Facebook bought Instagram for a billion dollars. And I very foolishly thought that it was like the dumbest acquisition ever because they paid a billion dollars for a business that had no revenue and only 17 employees. But what I didn't appreciate and was naïve on at the time was the idea that Instagram could charge for the service they were providing if they wanted to.

They have all these users and they're just choosing not to add any ad load to the product yet, but it doesn't mean that they can't, right? Therefore you have this kind of step change in revenue over time as the business is monetized more fully, which has been our thesis on Netflix. But to your point, you can't tell it for sure. We use the rule of being generally correct rather than precisely wrong when figuring out what normalized pricing power is.

G&D: Switching gears to the management pillar, how have your views on management evaluation have evolved over time? And what have you found to be most helpful in evaluating a company that actually has a great

culture and a great ecosystem around it?

SSS: Earlier in my career I was more focused on just the shareholder's perspective on management decisions – for example, the need to be good capital allocators, they need to be strategic masterminds in terms of building the business and all that sort of stuff. Over time my thought process has evolved to recognize that's all super important but the shareholders' participation in value creation is the last step in the process. You have to create value first and foremost for your customer. And then once you do that, then there may be value that can accrue to shareholders. Even if you're creating value for your customers, you need to have other players in your business, all your other stakeholders, your employees most importantly, but also vendors and other people that you might engage with to do your business. They also need to have a value creative relationship with you.

Over time we put more and more emphasis on those elements and got more disciplined. We recently shared on Twitter an article from around 2003 showing Wall Street analysts criticizing Costco for paying their employees too much and giving them too many benefits. The idea was that such

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behavior was bad for shareholders. But of course, Costco has just trounced Walmart from a stock performance standpoint, even though Walmart is probably the best in the business at constraining the value that accrues to their employees. We owned Costco back then and took the other side of that trade.

“We recently shared on Twitter an article from around 2003 showing Wall Street analysts criticizing Costco for paying their employees too much and giving them too many benefits. The idea was that such behavior was bad for shareholders. But of course, Costco has just trounced Walmart from a stock performance standpoint, even though Walmart is probably the best in the business at constraining the value that accrues to their employees. We owned Costco back then and took the other side of that trade.”

Today we have a much more formal process. We've recently published how we think about stakeholder value creation. For us, all of this is completely aligned with shareholder value. So many people act like things like ESG analysis is somehow in parallel or unrelated or even contradictory to shareholder value creation. From our perspective, that's just wrong. There are certainly things companies may do that are purely charitable, but stakeholder value is not about charity. Stakeholder value is about creating win-win relationships with all of the players in your ecosystem. That's how shareholders make the most money – once those relationships are all going in a positive way, then the shareholder then has the opportunity to claim their share of that value creation.

G&D: Relating to the Costco example, is lot of times these sorts of decisions are very unpopular because they may result in earnings miss by investing through the income statement, right? Do you actively look for CEOs who are willing to really invest for the long-term and forgo short-term earnings?

SSS: 100%, I think that when you're doing idea generation in our space, a lot of it is pattern recognition. We're trying to identify some signals that a company, that we

don't yet know very much about, may fit into the process we're talking about. There's a widespread understanding that owner-operated businesses tend to be good businesses, and I think the reason for that is that owner-operators intrinsically understand stakeholder value generation. Because this is their own business and they're the operator, so they know in the real world you want your employees delighted with their relationship with you. You don't want to keep their pay as low as possible so that they are just barely on the brink of leaving at any given moment. Owner-operators understand that.

Family-owned businesses in particular understand multi-generational stakeholder value and can make decisions that may not seem optimal, but only because they're playing on a different time frame. Anytime we hear CEOs talking authentically about the importance of employees and taking actions that reward them, not out of a sense of generosity or charity, but out of a sense that these people are doing great work, we pay attention. If somebody at Ensemble gets a big bonus they often say, "Well, thank you." And my feeling is like, "Thank me? You earned this. You created all this value and that's why your bonus is so big."

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COVID was a test of management teams to see how they really think about stakeholder value. There was a company in our portfolio that we wrote about that in April 2020 came out and said to their entire staff, "Volumes are down 50% in the last two to three weeks, but we're going to have no layoffs for the next quarter until we get a better sense of what's going on." A quarter is not a very long time, but in April of 2020, a quarter was a very long time. But they told their employees, "There's just won't be any layoffs. And we can't tell you beyond that yet, but for the next three months, just know you're good."

Meanwhile, their main competitor reduced staffing by 20% on the same day and promised shareholders that they would strive to be profitable in all operating environments. You want to optimize for long-term profitability, not profitability every single moment in time.

Home Depot is another example of the mentality we look for. They spent \$2 billion in additional compensation for their employees who went to work while the rest of us were cowering in our homes. These are frontline employees operating an essential business who had to go to work in April when we were all horrified. That's exactly what you want to see. Recognition that investing in your people because they're creating value for the company

and the company is going to create value for them.

“For example, when we first invested in Landstar Systems, which is a third-party logistics company for trucking, it struck me a lot like Charles Schwab & Co and company's institutional business for RIAs and investors. These are totally different industries, but we recognized the concept of a network and pleasing different people in different parts of the network to create a flywheel.”

G&D: The final pillar of your framework is forecastability. Can you talk more about how you think about that across different sectors, from the more predictable ones to the more dynamic ones?

SSS: I mentioned there's two elements to that, the first being intrinsic forecastability. For example, a raw commodity seller is obviously very variable. But if a business has high cyclical but still has a steady longer-term cycle, that doesn't bother us at all. We'll

buy a cyclical as long as we know generally where we are in the cycle and understand it's going to move up and down. But there are some cyclicals that are just super erratic cycles and you don't know what the long-term trend is. That's the sort of business that we're going to avoid.

The second element of forecastability is really our own circle of competence. We're a generalist team and we think that there is a lot of value to being a generalist. For instance, you'll often hear us comparing stocks or companies in our portfolio to companies from other sectors. For example, when we first invested in Landstar Systems, which is a third-party logistics company for trucking, it struck me a lot like Charles Schwab & Co and company's institutional business for RIAs and investors. These are totally different industries, but we recognized the concept of a network and pleasing different people in different parts of the network to create a flywheel. I think that the generalist view is a really important one and one that we really embrace. We won't own the sorts of businesses that really require domain expertise at a deep, deep level to get comfortable.

G&D: You've also mentioned the concept of finding idiosyncratic businesses that look like one thing but are

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actually another. Could you walk us through what this means?

SSS: Ferrari is a great example of this. If you look at Ferrari you could say, "Well, clearly it's a car company." And it's true that they sell cars. Yet, the economics look nothing like other car companies, which tells you they are doing something different. In fact, it's basically a luxury company. They are selling multi-million dollar mechanical works of art. So it is much more like a luxury company and yet you can't neatly compare it to car companies or jewelry companies or handbag companies.

Businesses like that that will often be assigned to domain-focused analysts. So you end up with a bunch of car analysts analyzing Ferrari, and they just don't have the expertise and even worse, they apply what they know about car businesses to this business that is not a car company, which creates a systematic mis-valuation. But it also doesn't make sense for the luxury analysts either because it sells cars, and they just might not appreciate certain technical aspects of what Ferrari does.

So really, there are two elements of these idiosyncratic businesses that we're attracted to. One is that they are often misunderstood because the use of peer groups and peer multiples is so common that if you have a

business that doesn't have a peer group, you create price inefficiency in the market that we hope to take advantage of. The second element is that idiosyncratic businesses by their nature don't have a competitive peer set and therefore are competitively advantaged. Every business has some level of competition. But if you have a business that's doing the same thing as its competitors, then it has more competition than a business that is doing something very different from everyone else.

G&D: After you look at those three pillars how does valuation come into play? How do you ensure, especially over the past 10 years where multiples for these kinds of compounders have increased so much, that you're paying a fair price today and not overpaying?

SSS: It's just a point of fact that the value of a stock is the present value of the future, pro-rata share of cash flows from the company. Assessing that is difficult! But at the end of the day, whether you use a P/E ratio, a DCF model or some industry specific valuation metric, all you're doing is trying to approximate that same question - what's the present value of all this future cash flow? If you're doing something else, then you're playing a totally different game than we do and you're probably speculating.

“So really, there are two elements of these idiosyncratic businesses that we're attracted to. One is that they are often misunderstood because the use of peer groups and peer multiples is so common that if you have a business that doesn't have a peer group, you create price inefficiency in the market that we hope to take advantage of. The second element is that idiosyncratic businesses by their nature don't have a competitive peer set and therefore are competitively advantaged.”

Our process revolves around trying to estimate those future cash flows, find the present value and pay less than that. It's not simple, it's not easy, but that's what we're trying to do. Many of the companies in our portfolio trade at P/E ratios or other simplistic valuation measures that are higher than the

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overall market. If you took a quick look you might say, "Well, they aren't very focused on value. Look at the multiples on their stocks." But remember that we're exclusively trying to invest in businesses that are deeply competitively advantaged and that generate high levels of free cashflow.

When you have a high return on invested capital, you don't have to invest as much to grow at any given rate. Therefore, on average, our companies generate more free cash flow per dollar of earnings than the average company. And since we care about the cash flow, not the earnings, we'll pay a higher multiple on earnings for a business that has higher free cash flow per dollar of earnings. But none of that says that we can't mis-value a stock. Certainly in the environment that we're in today, we are focused on trying to avoid overvaluing companies.

G&D: How do you decide when to sell a company?

SSS: There are three reasons that we sell. One, our thesis falls apart. When we think about these different conviction buckets that we talked about earlier in the interview, there's a threshold requirement for each of those. If any company in the portfolio has even one of those questions fall below a threshold, we're out. For

example, if the moat is great, our understanding is great, but management is starting to really abuse the relationship with customers, we're out. In this scenario, our valuation process breaks down, so we just drop the stock.

"We want to be in our best ideas with the least risk and the most upside. Our turnover in the portfolio has averaged around 40% - 50% in recent years, which is higher than most other investors using our kind of approach, but most of it is what we call internal turnover. Rebalancing our position sizes within our portfolio."

The second scenario is a stock becomes overvalued. We have an approximation of fair value that we track for each company, and we don't sell a stock just because it's trading at fair value. We recognize that our fair value is just a central tendency of a cloud of possibilities. We're trying to predict the future here. So we can't say, "this stock is worth exactly \$100." If we have a \$100 fair value on a company, it probably means it's

worth something between \$80 and \$120. Hopefully it's concentrated around \$100 but there's some variability.

When most businesses get taken out or sell out through an acquisition, they sell at a premium, right? If you're running a really good company, you don't want to be offered fair value and say, "Okay, sure. I'll take cash." You want a premium bid in order to give up a valuable, high-quality asset. Similarly, we require a premium bid to give up our companies. There is a threshold at which we will just exit but it's above our assessment of fair value. If something is only 10% above our fair value, there's still a meaningful likelihood that it is actually undervalued. If it is 50% above our fair value, the likelihood that it's undervalued is much lower.

The final reason we sell is relative opportunity within the portfolio. We have a very disciplined, quantitative, systematic position sizing framework, and we are constantly evaluating all of our holdings versus each other. We want to be in our best ideas with the least risk and the most upside. Our turnover in the portfolio has averaged around 40% - 50% in recent years, which is higher than most other investors using our kind of approach, but most of

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it is what we call internal turnover. Rebalancing our position sizes within our portfolio. We're only exiting about 10% of our holdings fully to bring in another company. The rest of the turnover is internal to the portfolio.

G&D: Does the macro environment or the market environment, whether it's speculation or froth in certain areas, factor in at all to whether it's a decision to hold more cash or to invest in a certain type of business versus another?

SSS: The macro environment does, but not really the market environment. If stocks that we don't own are trading at crazy levels, it's not really relevant to us. Might the crash in those stocks cause our stock prices to decline? Maybe, but I don't know that we can forecast that with any level of certainty, so generally we're ignoring the market environment. That said, the market environment drives our trading behavior because if the market environment is optimistic, then we're probably going to own less of any given stock. But we're not going to change our portfolio because we think the market is due for a correction.

On the macro level, we would like to be kind of macro-agnostic at all times. We'd rather just spend time focused on individual businesses and just assume that the

economy is at a mid-cycle point, operating normally. There are times when that's how we operate. But certainly the last year has not been one of those times. I think that it would be deeply naive to have spent the last year being macro agnostic. For instance, in early March of 2020 we came to the realization that we needed to observe what was actually going on right in front of us from a macro perspective.

“At the time we bought MasterCard everybody knew it was a great business. Everybody knew it was going to grow for a long period of time and everyone understood the profit margins were great. But I don't think many people appreciated just how valuable the business was and what valuation it should trade at. Sometimes we go back and retroactively analyze what P/E ratio a business would have had to trade at to generate a market rate of return.”

It didn't require a forecast to recognize that Americans could be mandated to stay in their homes. And not recognizing that that would impact the economy and business conditions would be naive. The flip side of that is right now to look at \$2 trillion of increased cash in American household bank accounts versus a year ago. It would be deeply naive to say, "Well, that isn't really relevant." Of course it's relevant! Consumers are the customers spending the money. And a lot of them have a lot of cash all of a sudden.

So we don't spend time thinking about what is GDP or inflation or interest rates going to be over the next year or two, but we spend a lot of time trying to think about long-term macro-economic variables, like what might interest rates or inflation or real GDP growth be like over the next five to 10-year time period and where are we within that cycle? I think many investors mistakenly believe that they can avoid having macro-economic assumptions, but we think the only way to avoid it is to have implicit ones that you are not aware of.

If an investor says they don't care about macro but they are using a normalized P/E ratio of 16, well, why is that P/E ratio 16? If you disassemble it, you'll find that there's an interest

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rate and inflation and real GDP assumptions embedded in there. You just don't know what they are. And we'd rather be explicit in our assumptions.

G&D: Could you walk us through a case study of a successful investment that you've had in the past, and what you saw that others didn't at the time of the investment?

SSS: MasterCard is a good example. We've owned it for about a decade now. At the time we bought MasterCard everybody knew it was a great business. Everybody knew it was going to grow for a long period of time and everyone understood the profit margins were great. But I don't think many people appreciated just how valuable the business was and what valuation it should trade at. Sometimes we go back and retroactively analyze what P/E ratio a business would have had to trade at to generate a market rate of return. Costco is a good example. You'll find that historically Costco could generally have been bought at a P/E of 40 to generate a market return, but at the time saying it was worth 40x would have been crazy and seemed too high. And yet, in retrospect, we know that was actually the fair value.

I think that was very true about MasterCard when we first invested in it and we think continues to be true today. It's understood to be a high-quality business with an

amazing business model, but people haven't fully appreciated what happens to value when a business has this high of a return invested capital, as low a cost of capital through access to debt as they have, and this long a duration of growth opportunity.

The core insight we had in MasterCard was just a recognition that this was a much more valuable business. This was complemented by the fact that there was market concern about the technological disruption of the payment rails. Our view was that technology disruption was going occur on top of the platform that Visa and MasterCard built rather than disrupting their platforms. We didn't know this for sure, but we believed it to be the case. When Apple was preparing to launch Apple Pay, we were initially nervous. We were long Apple at the time too, but we were nervous for Mastercard. Apple had a lot of cash and a lot of smart people, and they had connections to customers' credit and debit cards and bank accounts via iTunes. We were thinking they could really launch their own payment rail system by leveraging the installed base of iPhones.

But what did Apple decide to do? They just built on top of the existing rails. So when you use your Apple watch to get on the New York subway, what are you doing? You're just

using a credit card. The innovation just enabled Visa and MasterCard's payment rails to be used for smaller and smaller micro-transactions, and it has been very beneficial to them. That doesn't mean that their rails will never be disrupted. But I think in retrospect, we can say that we were correct in our assessment that technology disruptors were not actually attacking the rails. They were building on top of the rails.

G&D: Any investments over the last five or so years that stand out as particularly painful mistakes and what did you get wrong when you made the investment?

SSS: So I think one mistake that led to an important learning was Time Warner. We invested in them prior to them being acquired by AT&T. This was around 2015, prior to us owning Netflix. Back then, there was the idea that Netflix was going to become HBO before HBO became Netflix, which played out, but that didn't mean HBO couldn't also be super successful. So five to six years ago, we thought HBO could become a global powerhouse. We thought Time Warner could bring it all around the world, use a super low price point, get tons of subscribers, and invest in content - basically the whole game plan that Netflix ended up executing.

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But what we didn't fully appreciate was that the Time Warner management team was so constrained by their devotion to the dividend, that they were unable to make the investments that they needed to make. We exited the stock and then not long after that, they sold to AT&T at a nice premium to where we had sold. But we viewed that sale as Time Warner essentially throwing in the towel. HBO Max is taking off now, but they could've launched that a long time ago, and we think they would be a much more successful media business if they had done that. We didn't appreciate the non-logical devotion to dividends. We get that people don't like dividends to be cut, but I would much rather a company cut its dividend to invest in an opportunity and defend its long term future.

That's a good trade-off because if you pay out the dividend, what am I going to do? Reinvest it in something else. If you have a better opportunity, go do that. They were institutionally constrained from doing that. When we talked earlier in the interview about some businesses are competitively protected for institutional reasons or cultural reasons, as opposed to anything really structural, the reverse can also be true. Sometimes doing the right thing is too hard for a company for institutional reasons. But

the good thing about that experience is that it made us realize Netflix was going to win because Time Warner and other legacy media companies were not willing to compete.

When we realized that was the case and that Netflix had already been raising price at about a 7% rate in a no-inflation environment, that really gave us the confidence to invest in Netflix. Interestingly, look at what has Disney done now – cut the dividend and invest in Disney Plus. They learned the lesson too, but five years is a long time to wait when a disruptor is eating your lunch.

G&D: You've written about the difference between optimizers, which are businesses that are more mature and are making decisions for a steady state, versus visionary CEOs that are looking at where the puck is going. Did this example make you have an even greater preference for investing in the visionary category? Or do you think this was just a one-off example of mismanagement in this particular case?

SSS: We don't have a strict preference for visionaries over optimizers. It's that we want the right style of team running the right business at the right time in its lifecycle. For legacy media companies optimizing their business model in a cable TV environment, there were

big competitive moats, and optimizing and milking what you had built for as much cash as possible was great. That was smart. It's only because a disruptor came along that a far-sighted media team should have recognized the real threat. It should have triggered the media teams to reorient away from optimization, towards being more visionary and thinking more about the long-term. That's what Disney is doing now brilliantly. They should've started a long time ago, but they're making the right transition. We felt Time Warner had been optimizing their business, but clearly should have switched into visionary mode, but they couldn't do it.

“Interestingly, look at what has Disney done now – cut the dividend and invest in Disney Plus. They learned the lesson too, but five years is a long time to wait when a disruptor is eating your lunch.”

It is the rare management team that can switch back and forth between vision and optimization. I do think that a lot of very successful visionary CEOs have been paired with an optimizer, but the optimizer often

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doesn't get the credit. Think about Steve Jobs and Tim Cook, or Walt and Roy Disney. There's lots of pairs out there in which the visionary is the big charismatic face of the business, but the management team understands optimization too. We think both are important and you just need to know the right mix at the right time.

G&D: How do you approach that from the individual business perspective, where a holding might have a unit that is an optimization phase and then other parts of the business that are more high growth? One example that comes to mind from your portfolio is Alphabet.

SSS: What makes business and investing so hard is that you need to balance everything exactly right all the time. We've been long Alphabet for about a decade now, and when Ruth Porat came in as CFO, we were of the opinion that it was good because the business needed to focus more on optimization. This was still a high growth, highly dynamic industry, so certainly you don't want an optimizer being the CEO and calling all the shots. But Alphabet was producing so much more cashflow than they had anything to do with that we thought it would be good to optimize along the way too.

The whole reason to be visionary and to identify some giant future profit

pools is to then go capture those profit pools. When you find one, you have to attack it and feed at the profit pool. We were a bit disappointed that after some initial signs of Ruth Porat being successful in that, it seemed to recede a bit, but it has now come more back to the forefront. Now Alphabet is spending about three quarters of earnings to buy back stock. We absolutely believe that they should have a very large strategic cash war chest on their balance sheet, in excess of any operating cash that they need. That's absolutely the right thing to do given their business and the competition. But they don't need as much as they have today. And even buying back the amount of stock they're doing now, they still are having cash build higher. To me, that's a whole bunch of the market cap sitting there in cash, earning cash rates of return.

If they don't have anything to do with it, they should give it to us because we've got stocks to go buy with it! We only partner with management teams that we trust. We are very likely to defer to their decision-making there, but we also rate companies at different levels on different metrics. So we would say that Alphabet has fantastic management on a whole lot of metrics, but on capital allocation questions, it has not been so great. Although they must be given credit for the fact

that they've done two or three of the best M&A deals in the history of technology space, so I also don't think you can call them bad capital allocators.

G&D: Could you walk us through a stock pitch of an existing idea that you're excited about?

SSS: Let's talk about Home Depot. We took a small position in Home Depot prior to COVID and we had a number of housing related investments prior to COVID. When we initially made the investment, we were of the view that the level of housing activity was at subnormal levels ever since the housing bust. The levels of existing home turnover and volume of new homes being built were both at low levels. This initial macro view made us think that even if the economy grows at just whatever an average growth rate is, that housing would grow faster because it was starting from a depressed base.

I would never in a million years have guessed that a pandemic would unleash housing activity. It's almost the opposite of what we would have thought, and yet that's exactly what happened. Everybody loves to buy a cheap stock with a catalyst, but we don't actually spend a lot of time thinking about catalysts because we think that the things that actually cause a

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stock to rerate higher tend to be pretty unpredictable. But in Home Depot's case, we upsized the position significantly and made it into one of our largest holding in the month or two after COVID hit, as housing activity started storming back and it became clear that the pandemic was actually a positive catalyst.

If we were all trapped in our homes for a long period of time, and we needed to start working there, we would use it differently. We're all using our appliances at levels that we haven't in the past. We've done a lot more home maintenance than normal because we're just using everything a whole lot more. And instead of going traveling, which a lot of homeowners would do over the summer, people decided to spend that money on their backyard instead. You couldn't find somebody to install a pool last summer because demand was so high.

As a side note, I think this is fascinating. There will be pandemic scares in the future for sure. Maybe next time there is a scare, we'll see fast food stocks or housing stocks rallying on concerns about a pandemic. We've all learned that like with most every crisis, there are always certain industries that thrive in a crisis.

So with Home Depot, we believe that the

economic conditions are such that there's a real tailwind to the housing industry. But the thing that makes Home Depot an idiosyncratic business, as we talked about earlier, is that 4% of their customers are pro contractors. And those customers generate 45% of the revenue of the business. Most people think of Home Depot as a do-it-yourself home improvement retailer for homeowners, like Lowe's, but only half of their businesses is that. The other half of their business is being a mission critical supplier in a B2B relationship with a fragmented end market. Those are conditions for fantastic competitive advantages.

When you talk to small contractors, at almost every job, there's something they don't have on hand that they need and they need to obtain from a nearby location. There are a ton of Home Depots in the country. Individual contractors will drive past a Lowe's to get to a Home Depot that's a few miles further away because it's just their preferred place for shopping. Any time you are a platform to another business, the business that is built on top of your business doesn't want to switch. They just want to make sure they're treated well so they can go do their own thing, and those are really great businesses.

This is the same dynamic I mentioned

earlier with Schwab's RIA business. Of course, some other retail broker could come out and steal some market share, but on the institutional side with RIAs, the value proposition improvement to try and move all your clients to a different custodian would have to be so large, it's almost unthinkable. Being a B2B service provider can be hyper-lucrative if you're really mission critical and if the cost is a low portion of your business customers' overall expense structure.

“The thing that makes Home Depot an idiosyncratic business, as we talked about earlier, is that 4% of their customers are pro contractors. And those customers generate 45% of the revenue of the business...Being a mission critical supplier in a B2B relationship with a fragmented end market are conditions for fantastic competitive advantages.”

G&D: What do Home Depot's contractor customers care most about between

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convenience, selection, and price?

SSS: I think price is the least important because home improvement contractors usually have parts and labor billing. If you need certain parts, whether one part is a little bit more or less expensive is not the needle-mover for the contractors themselves. They can basically pass along the cost to the homeowner. So it's about selection and it is also about the total ability to serve customers. Home Depot has their pro-desk, which is their online platform customized for contractors. If you go onto Amazon, both business customers and individual customers of Amazon get the exact same interface to buy stuff from, but businesses have different needs than individuals do. A contractor might need to download all of their transactions into QuickBooks. The Home Depot interface allows that. A consumer-facing e-commerce site doesn't have that sort of feature.

You could also go to Amazon and ship stuff to other addresses, but if you pick lots and lots of different addresses, pretty quickly it triggers fraud alerts. But contractors have jobs sites all over the place and they need stuff shipped to those job sites. Home Depot understands that. I think that it is that total service experience, selection, and being able to meet customer needs

that is most important, and price is least important.

Home Depot has pricing power, but not because the customer is trapped; rather, because it's not the key variable that the customer is optimizing for. Does that mean that Home Depot can charge a lot higher prices? Well, they have slightly higher gross margins than Lowe's but I think that the bigger thing is that they're able to move a lot more revenue for any given store, which generates much higher asset turnover and higher returns on invested capital. So Home Depot actually shouldn't optimize for margin – they should optimize for return on invested capital. Those are both important, which is why you can have low margin businesses like Costco that are fantastic businesses. And you have very high margin businesses that are not good investments because they are so capital intensive that it doesn't matter if the margins are high.

G&D: What do you think about Home Depot's growth runway? And what should they be doing with their capital between building stores, repurchasing shares, etc.?

SSS: One thing that's fascinating is that in the 10 years since the housing bust bottomed, Home Depot's revenue has almost doubled while their store count is

only up 2%. Part of that had to do with aggressive building of stores during the housing bubble and a recognition that they had overbuilt. So what they're seeing is higher and higher levels of revenue per store. I think that it's likely that they are getting close to having their stores running at really full capacity. We think that there is opportunity for them to go back to building more stores over time. Not some huge number of new stores, but to add slightly to growth through that lever. But most importantly, when we think about growth, we think about the simple fact that people live in houses. That's not going to change. Those houses depreciate. That's not going to change. And people want to live in nice places! The desire to maintain your home is encoded in our DNA. Coming back to the concept of forecastability – we have no concerns that say, 20 years from now, that people are just not going to care about what their home looks like. We think that a large part of the growth is just tied to GDP.

What would concern us is if Home Depot started hitting a stall speed; for example, if people started losing interest in home improvement relative to everything else. But we don't think that's the case – we think that in aggregate, home improvement will

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grow with people's spending power.

“So Home Depot actually shouldn’t optimize for margin – they should optimize for return on invested capital. Those are both important, which is why you can have low margin businesses like Costco that are fantastic businesses. And you have very high margin businesses that are not good investments because they are so capital intensive that it doesn’t matter if the margins are high.”

Because we believe that home improvement activity levels had been below normal for a long time, there is a tailwind from that as well. In the very short term, Home Depot is going up against 25% same-store sales comps from last summer, which was about five years of expected growth that played out in just a few months. So the comps are going to be very tough as they roll through 2021. But we think that it wasn't just a one-time event – we think that Americans had been disengaged with home improvement for a long period of time and that this pandemic

created an experience of becoming re-engaged. People have now regained the habit of home improvement.

In the years ahead, people will just be more likely to notice something in their house that they wish was different. And since they had done a bunch of home improvement last year, they'll say, "Oh yeah, well, I should just call up the contractor. I should just go to Home Depot myself and take care of this." Housing also has the additional benefit of the millennial cohort. The year with the most millennials being born was 1990, meaning that those people turned 30 years old during the pandemic. They're entering the prime home buyer period and we think that you're going to have a lot of millennials who are now earning at high enough levels to be in a position to buy homes and spend on home improvement.

G&D: What's your assessment of the management team there and the culture of the business?

SSS: I think the management team is great and the culture in particular is great. ESG has become very popular and is often focused on whether the company's products and services make the world a better place. If you think about so-called sin stocks like alcohol or gambling, there's the idea that the products and services

themselves are somehow negative for society. But that's not what stakeholder value is about. Stakeholder value is businesses whose products and services enrich the lives of their customers, yes, But more importantly, all elements of the stakeholder base.

Home Depot goes a layer further than the traditional thinking of putting customers or shareholders first. They put their employees, who they call "associates" first. The reason they do that is if they put the associates first, the associates will put the customers first and everything else takes care of itself. That's the line that they use. We think that Home Depot truly understands that the way to run their business and to generate as much profit for shareholders as possible, is to really focus on their employees and really treat them well. It doesn't mean just being generous and overpaying people, it means treating them really well, making them delighted to work there.

One thing that we saw during COVID was that this way of thinking extends to the relationship with suppliers. Many people don't think of suppliers as a critical stakeholder, but during COVID, Home Depot went out to one of their paint suppliers and said, "Hey, we can't get enough hand sanitizer.

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We're worried about our employees dying and we need you to help." And that paint company, who's a critical supplier to Home Depot, shut down one of their paint lines, reformatted it to make hand sanitizer and produced a ton of hand sanitizer for Home Depot. Why was that? It was not because Home Depot had the supplier trapped, it's because they are in a mutually beneficial value-creative relationship with that supplier. And the supplier understood that in a time of need, you stand by your partners.

Everybody understands that in real life. What's so weird is that investment analysts forget that stuff when they get into their spreadsheets. But in real life, there's people in your life who you have value-creative relationships with, and when they come to you at a time of need, you help them. You don't think, is this an optimal use of my time? You say, "No, this is what I do, because they'll be there for me in the future. I don't know when it's going to be. I'm not even going to measure whether I get returned the same value I put into it." When you have value-creative relationships, you invest in those relationships and some big portion of that value accrues back to you.

The book "Built to Last", written by Home Depot's founders, speaks to this issue right from their

founding years. You can see that when they talk about their associates "bleeding orange". Those are the sorts of businesses you want to invest in.

"I'm really glad to see that the businesses that we own, generally are paying well above industry averages, because it means that as wage costs get forced higher, there won't be the same degree of forcing mechanism on them. These companies will have to maintain their spread, but they'll have a lot more flexibility to do that strategically."

G&D: How do you think about valuation for Home Depot given where the stock is trading today?

SSS: For every position in our portfolio, we've established an assessment of the intrinsic value based on our expectation of future cash flows and we're evaluating the market price relative to that intrinsic value. But we don't spend much time thinking about current P/E ratios. Yes, revenue at Home Depot was elevated last year, but so were costs. I

mentioned they spent \$2 billion in extra associate compensation during COVID, and they've already said they're going to make \$1 billion of that permanent.

One thing that we're seeing across our portfolio is businesses like Starbucks, First Republic, and Home Depot are proactively raising wages, and doing so in some cases aggressively. We're really pleased to see that, because we think that wage inflation, which is a good thing for the economy, is coming. I'm really glad to see that the businesses that we own, generally are paying well above industry averages, because it means that as wage costs get forced higher, there won't be the same degree of forcing mechanism on them. These companies will have to maintain their spread, but they'll have a lot more flexibility to do that strategically, as opposed to having employees saying, "Hey, I need a raise," or regulations coming in and mandating that. So the \$1 billion of that COVID spend being made permanent is great, but in the short term it's still \$1 billion of potential earnings that's going to get coughed out of the business, even if at lower revenue levels.

G&D: Switching gears to our closing questions. How do you structure your days and what does a typical day look like for

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you?

SSS: The first half of my day, the calendar is kept as clear as possible. That half of my day is really devoted to pure equity research. I'm a lead analyst on a lot of these stocks, so I'm focused on researching those stocks, idea generation and all of that. Earlier in my career, I didn't think much about when during the day I did different types of work, but over time I came to appreciate that every person has different times of day when they're better or worse at different types of tasks. I know that when I'm first awake and I've had my coffee, I'm energized and I have the ability to dive into some of the deeper work.

But that's not true of everybody. On our team, for example, we often get emails from Arif at two in the morning because he does his best work from like 10PM – 2AM. And that's fine. It doesn't make a difference. I just try to do what works best for me.

In the second half of my day, I fit in my responsibilities as President and CIO of Ensemble Capital. I continue to do research which is my core responsibility. But I've just found that I can process a bunch of emails at 3PM, in the afternoon, when it's starting to get late, whereas understanding the economics of a company that I'm not all that familiar with is much better in the

morning.

Another important element is that our team is remote, in that Arif lives outside of San Diego, Todd lives outside Cincinnati and I'm in Silicon Valley. Our next hire will also almost certainly be somebody in a different geographic area. Our entire staff was already a remote-first team prior to COVID. We had about 20 - 30% time in the office, but we told people to work wherever they want to work to get the best work done. I've come to believe that equity research teams that work in-person, in a single city together, are at a deep disadvantage. Everyone worries the opposite. They say, "Well, if you're remote, you're going to lose the culture and the back and forth and all of that sort of stuff."

That's only true if you have a staff that is not digitally native. Our team is talking all day, every day. We have instant messaging, we have video chat, we have emails. It is a constant discussion here, even though we're all in different areas. Yet having people with different lived experiences, in different parts of the country, is really important. Todd's perspective living outside Cincinnati and in a non-urban area is quite different than my experience living in Silicon Valley. Neither is better than the other, but both are very critical and helpful inputs to the investment process.

G&D: What advice would you give to MBA students interested in pursuing investment management as a career?

SSS: The only reason you should do this because you're super passionate about it. You're going to be competing against people who just love this work so much. I know that's true of the people on our team. We don't need to work weekends here, but on our instant messaging board we're chatting all weekend long because there's always something interesting to talk about. On the weekend, I'm reading lots about investing. Not necessarily poring through research reports in service of some thesis, but just reading stuff I'm generally interested in.

I think that it's really critical that you are truly passionate about it. If you're not passionate about it, just go do something different because you're going to get schooled by people who are passionate in this business. This business is hard work, and even if you're very good at it, you'll have meaningfully long periods of underperformance. So you better be passionate, that's the only thing that's going to get you through those time periods.

Assuming that you are passionate, I think that in the earlier part of your career, you look at

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people who've been successful and learn about what they did. Read everything Buffett's written, all that sort of stuff. Learning from what other people have found works is a critical first step. From there, you need to begin to develop your own philosophy, because you can't copy your way to success.

You can observe success and use those learnings to inform your own style, but you must develop your own approach. The reason is that it's only your own approach that you will have enough conviction in.

“When something like March of 2020 occurs, you have to have the conviction to stick with your process. If you're just copying somebody else, you're going to start wondering, “Well, what would they do in this circumstance?” So you need to have your own process.”

When something like March of 2020 occurs, you have to have the conviction to stick with your process. If you're just copying somebody else, you're going to start wondering, “Well, what would they do in this circumstance?” So you need to have your

own process.

As you develop that, I think that the third part is really understanding that investing is about so much more than business and spreadsheets. You need to have your finger on the pulse of everything going on in the world, from cultural trends to politics. Being a curious person and cultivating your curiosity, and giving yourself permission to read widely on lots of different topics, is really, really important to that longer term success. In my own career, early on I read lots of books about picking stocks. Then I moved past that and started reading more detailed, specialized books on things like accounting. But now, a lot of the reading that I do is more around things that are not just about the art of stock-picking.

For example, I spent a lot of the last eight years reading about decision-making research, which is very applicable to what we do. As a portfolio manager, all you're doing is deciding to hold, to buy, or to sell. That's what you do all day, every day, every moment of time. You are constantly being made these different offers from the market, and you need to be making decisions. Even a decision to not react at all is still a decision! We've spent a lot of time drawing on the work of people like Phil Tetlock and Daniel Kahneman who have focused on decision-making to try to

extract key lessons.

Those lessons are the ones that I feel have really created differentiated processes for us. When we draw on learnings from other disciplines, to try and understand how those can be important in the investment management process, that helps us generate alpha. We know that many participants in the market are really only just focusing all their time on market information and aren't drawing on those other mental models. And we think that's a really important thing to cultivate.

G&D: Any particular books on that topic that you'd recommend?

SSS: Phil Tetlock's book “Superforecasting” is a must-read, as is “Thinking Fast and Slow” by Daniel Kahneman. The third that comes to mind is Nate Silver's “The Signal and The Noise.”

G&D: How do you spend your time outside of work?

SSS: Being an entrepreneur and building a business, as well as running an equity strategy means that there's not a lot of free time! I have my family at home; I've got two teenagers. I spend a lot of time with them. Like a lot of people who have children at home, I don't have some wide variety of other hobbies. Travel is by far my second most

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favorite thing to do; losing that for the last year has been a real negative. One of the things I love about travel that if you travel with an investor's lens, it gets so even more interesting. I was in Colombia a couple of years ago and I noticed that there was this one beer I'd never heard of that was everywhere. I started asking about it and people said, "that's what everyone here drinks". And they were telling me about how it doesn't advertise at all because everybody already drinks it. So why would you advertise? This wasn't a business that we were going to invest in, but it made the travel experience more interesting and it made me think about investing, and I think enhanced my investment knowledge.

Then I'm passionate about philanthropy. Early in my career, because Ensemble provides financial advisory service to our private clients, cultivating advice to philanthropic clients became a real focus of mine. Over a quarter of Ensemble's AUM is charitable assets, whether that is non-profit endowments, grant making entities or charitable trusts of individuals. And that's been an area that I've been very interested in, especially in the idea of high impact giving.

In my view, charitable giving is the provision of capital to organizations to create social impact, which is very similar to

investing. In social impact, the value is accruing to some third-party beneficiaries rather than to the shareholders, but that's fine. That's the point of it. The stakeholder value lens is still the right one, it is just that as an investor in the end you are judged by the return to shareholders while in philanthropy you are judged by the return to beneficiaries. So I've long been very involved with and interested in discussions on the effective philanthropy movement and how to better measure and maximize impact.

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

Dan Rasmussen, Verdad Advisers



Dan Rasmussen
Verdad Advisers

Dan Rasmussen is the founder and CIO of Verdad Advisers, a ~\$700m in AUM hedge fund. Prior to starting Verdad, Dan worked at Bain Capital and Bridgewater Associates. Dan earned an AB from Harvard College summa cum laude and Phi Beta Kappa and an MBA from the Stanford Graduate School of Business. He is the New York Times bestselling author of American Uprising: The Untold Story of America's Largest Slave Revolt. In 2017, he was named to the Forbes 30 under 30 list.

Editor's Note: This interview took place on April 16th, 2021.

Graham & Doddsville (G&D): Dan, first off, thanks much for taking the time to speak with us. I was hoping that we could start by walking through your background and what really started you down the investing path?

Dan Rasmussen (DR): I studied history and literature in college. I spent my prior summers working in journalism, and I was trying to figure out what to do with my career. My father is a lawyer and he said, "I get paid by the hour, but it would be pretty good to get paid based on the decision rather than the time spent." So I started looking for a career that would provide rewards based on making good

decisions. I was also interested in finding something intellectual. And I got lucky. I interviewed at a bunch of places and got a job at Bridgewater. I loved that experience. It really turned me on to investing and Bridgewater was a very academic and interesting place.

After college, I worked at Bain Capital for four years, which was also a wonderful place to work. Very different style of investing, very different set of intellectual questions. And I'd say, what I do now, my fund strategy is, even though I spent very little time at Bridgewater, almost equally influenced by Bridgewater and by Bain Capital in terms of what I'm doing in my approach.

G&D: Were there early mentors or investors that you looked up to? In other interviews you've mentioned taking an outsider's perspective, especially early, based on your undergraduate background. We'd be curious as to whether there were any mentors, either personal or from afar that you found inspirational.

DR: Absolutely. First, I really admire Ray Dalio. His big ideas around studying history and discerning fundamental linkages in economies, is a method of getting to the truth that has had a huge impact on me. Second, Andrew Balson, who was my boss at Bain Capital and now

runs Cove Hill, was enormously influential. He's a brilliant fundamental analyst and taught me everything I know about how to look at individual companies. He has the best understanding of anyone I've met of return on investment and how to identify true compounders (his investment in Domino's being the best example). And then in terms of academic literature, Philip Tetlock, Daniel Kahneman, Nassim Taleb as well, these people aren't even investors, but they teach you how to think. Those are my big influences.

G&D: How did your experience at Bain, with its focus on fundamental analysis, shape your investment philosophy?

DR: Bain is very oriented around deep due diligence and competitive advantage. They're focused on buying high quality businesses, which they define in the traditional Michael Porter way. When I was there, I did a whole series of analysis under Andrew Balson studying Bain's history and the history of private equity. One of the things that I found was that the price paid seemed to overwhelm all the other diligence items. Competitive advantage was often a transient thing. If a company seemed competitively advantaged in 2010, by 2015 it wasn't competitively advantaged anymore. In

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contrast, the price paid was predictive because it was one of the key variables determining how much money you made. You subtract how much you paid from what you sold it for and the less you paid for the same amount sold, obviously the more money you make.

The other thing that I found was that, especially as a junior person, you spent a huge amount of time at Bain developing growth forecasts. When I looked at our predictive power I found that if we just said 3% for every company that we'd ever bought, we would have been 20% more accurate than using our internal forecasts. My time at Bain led me in a couple different directions. One to reflect on was, what can we really know as fundamental analysts?

One of the parts that I don't think is valuable is growth projections. These are a huge trap. Forecasting growth sucks up a huge amount of energy and making complicated Excel models produces output with very little predictive power. In fact, these models often produce negative predictive power as they tend to be trend extrapolated. If the company has been doing well, the models are anchored in the last three years of data.

It also made me skeptical of competitive advantage analysis. I just couldn't find much empirical support for a lot of the traditional

thinking around market power and market structure. I was much more drawn to true value investing or deep value investing. Over time, and maybe I've evolved a bit from a pure focus on deep value investing, I've focused more on profitability and return on asset type metrics (the more Andrew Balson approach), which are very important.

Thinking about reinvestment opportunities and their rates of return is how fundamental analysis can get to a better answer. You are much more likely to actually be right, and these metrics really matter for valuation. You can see that in terms of how companies are valued, for instance in the relationship between return on assets and credit quality, or the rate of return on assets and multiples.

That's an important concept to understand, although at the end of the day value is still key.

G&D: As you were thinking about leaving Bain and going to business school, was there anything that signaled to you that, "Hey, I'm ready to launch my own fund. I've got a market that is attractive and I can do some of the type of work that I've been seeing in maybe a less competitive environment"? What was it that triggered that next step?

DR: I had all these different ideas. I didn't think growth rate forecasts were very good. I didn't want to buy expensive companies. And in my last year at Bain Capital, if I was assigned the growth rate forecast, I would stop and think, why am I doing this? This is silly. What a waste of my time. And that's not something anyone wants to hear from their 21- to 22-year-old analyst. That experience of expressing my views and then not really getting anywhere (in fact, making people angry) led me to think, am I a good employee? Am I going to succeed working for other people? Maybe I'm just a disagreeable, contrarian, dislikable person [laughs].

I even went and got a career coach, a deep, empathetic, and brilliant man named Lew Rumford. And I said, "Why do people get angry at me all the time? I'm just trying to express my views. I told a co-worker the competitive analysis project was a waste of my time and I showed him all the research I had done and why it was a waste of my time. And not only was he not persuaded, but he reported me to HR, like what's going on?" And so, Lew really helped me discern the right path for me.

At that point, like many young people, I was trying to figure out what I wanted to do, and I

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was very worried that working in a big company or working for other people would highlight my weaknesses more than my strengths. I was willing to go out and do something entrepreneurial because I perceived that as the place I'd be more likely to succeed.

Like many things in life, it was happenstance. If I had met someone at that time who thought exactly the way I thought and wanted me to come work for them, I would have done it. It would have been the path of least resistance. But at the time, the ideas I wanted to act on were very controversial and I fundamentally believe in acting on ideas. I believed in the research that I'd done and I wanted to see it play out in the real world. Starting my own fund was the only way to do this.

When I was considering what to do after college, I thought vaguely about being a history professor. One of my professors said, "Well, Dan, being a professor is the worst possible job. There's no pay, it's highly political, it takes forever to get tenure. You have to think about it like being a priest or a monk. If there's literally nothing else that you could ever see yourself doing but being a history professor, be a history professor. But if there's literally anything else you could see yourself doing, don't be a history professor." I'd almost have the same counsel

to entrepreneurs, at least young entrepreneurs. Do it because it's the only thing, or because you can't see anything else. Because it's hard, being an entrepreneur is hard.

“If you look at what drove private equity returns during the period in which they were astonishingly successful, it was buying micro-cap levered value.”

G&D: Transitioning to Verdad and your empirical research process, could you walk us through your approach at a high level? Also, could you talk through how you landed on the US and Japan as your primary focus areas? What made those markets attractive?

DR: At its core is that study I worked on at Bain, where we looked at what worked and didn't work in private equity. But first, let's ask what is private equity? How is it different than public equity other than being private? There are three main differences.

The 1st is size - private equity companies are small, about \$180 million in market cap versus tens of billions of dollars for your average large cap stock. The 2nd is leverage as PE deals are about 65% levered on a debt to enterprise value basis. The 3rd is valuations. Private

markets were about 40% cheaper than public markets on average from 1980 to about 2006. By 2006, both private and public multiples had converged. I'd argue that today private markets are more expensive than public markets.

If you look at what drove private equity returns during the period in which they were astonishingly successful, it was buying micro-cap levered value.

And these things worked in combination. If you were buying in a private market and selling into a higher multiple public market, or selling to a strategic buyer in the public markets, you're going to have multiple appreciation. And, holy smokes, when you're levered, multiple expansion works really, really well. You're capturing all that benefit. And the amount of leverage they were putting on these companies wasn't all that big at low prices. If you're paying seven times for a company and levering at 65%, you're putting four turns of debt on that business. Well, it turns out most companies can handle four turns of debt.

But what I saw happening in the wave of mega buyouts in '06, '07, '08, was that PE was paying 10, 11, 12 times EBITDA and putting six, seven turns of leverage of these businesses. Many of those deals had horrible, horrible

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consequences during the GFC in '08.

One of the lessons I took away from that is you don't want to put six times or more leverage on a business. It's just a really scary amount. But the way PE purchase price multiples were going at that time, 6x+ leverage was being featured in an increasingly large percentage of deals.

So what I set out to do was to say, "Hey, I want to go replicate private equity's early success. I want to go find companies that trade in public markets that have those same attributes. They're small, they're levered, they're very cheap. And I want to find a systematic way of identifying those companies, buying them, and managing portfolios of them."

When I first started out, if you did a screen for those criteria, most of the results were ex-US, and Japan was the biggest market. In terms of a count of companies that met these basic thresholds, Japan had the most, then Europe, then the United States. We focused internationally at the beginning because that's where the cheap companies were. We did some in the US, but we didn't really enter the US in a big way until March of 2020, which I can talk more about.

G&D: We wanted to dig a bit more on your screening and analysis process. Do you tend to

do any qualitative due diligence layering on top of the screening? Or does it tend to be more that you've done an extreme amount of research and back-testing, and you know that this market is where you want to be, and the qualitative analysis is maybe less of a value add. Where do you come down on that?

"What I set out to do was to say, "Hey, I want to go replicate private equity's early success... I want to go find companies that are small, levered, and very cheap. And I want to find a systematic way of identifying those companies, buying them, and managing portfolios of them."

DR: Quantitative analysis is great. I believe in base rates. Probabilities are conditional on characteristics. The key question is: what are the characteristics that condition those probabilities?

You can think of those characteristics as basically being factors, the drivers that show up clearly in regressions. In equities, there are a few. Size matters, valuation matters, leverage level matters,

return on capital metrics matter. You can pull those different levers in different directions, and, if you look at the long sweep of history, you get very different probability distributions for buying different types of securities.

Our first view is that we want to get that base rate right. Select from the set of stocks that are in the most attractive pool based on history. Now, once you're in that pool, you're trying to differentiate between the 150 things that are in that pool of securities. How do you choose? One way you can choose is by ranking. You can say, "Okay, well, have the screen tell me, which looks the highest return based on the past conditional probability distribution." You're looking for what's the most attractive to least attractive. And then you go start looking at the companies.

I've found that a human analyst's judgment is still very important for a variety of reasons. One is that reading historical financial statements involves a lot of nuance and idiosyncrasy. For instance, you have a company that does a divestiture, so obviously, the LTM financials aren't representative of the next 12 months or 80% of the company's revenue comes from Walmart and Walmart just fired them. These are quite simple and logical things that you'd want to understand about a business before

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investing in it. Either you have to be a brilliant AI programmer to figure out how to code your thing to do this or just have the human study it, and they're going to pick up on these things. I really think that humans are cheap robots [laughs].

There is value in being able to understand historical financial statements, read a cash flow statement, and understand what's going on with the business. If it helps you miss landmines like where a company is spending huge amounts of money on intangible assets, and you're like, "Well, what are these intangible assets?" And you dig a layer deeper, and you realize, "Oh my gosh, this thing is a total, total disaster." Or all their EBITDA is coming from lease revenue. It's these bizarre things that a human analyst finds.

When you're looking in the extreme of what a computer model likes, which tends to be cheap situations and deep value where people are pessimistic, you will find a disproportionate number of these weird things going on. So developing a trained eye for which of those weird things will modify your probability distribution in a bad way is useful.

I'd say it's less often that fundamental diligence moves us really in the direction of buying a stock. It's more likely that it filters things out. COVID is a great example for where and

when a human is going to help. A human is going to be able to distinguish between airlines and cruise ships and the like. Humans can very quickly judge what's going to happen in the next 12 months. And how that's going to affect different industries. But a computer looking at historical financials has no clue. You really want to use human judgment layered on top of a computer, especially if you're running a more concentrated portfolio. If you're running 500 securities, it doesn't really matter. If you're running 40-50 securities like we do, it does matter.

G&D: When you're thinking about portfolio construction and weighting, how do you go about it? Is it a function of relative risk, or equal weighted? Do you hold cash for opportunities?

DR: We run 100% invested all the time. We have a max position size of 4% (at cost). We like to start our positions off small and build them up over time because you find that with each quarterly earnings report, you learn a little bit more. We find that building a set of 1% positions, then sizing them up to 3 or 4% positions after a quarter or two of seeing their financial statements, is a really good way of running a book. We don't like to go up that much above 4% at cost, although obviously things run up and run

down.

The other things that we think about portfolio construction really are risk-related. We don't want too much in one industry or want it too much in one macro exposure. We want to have some diversification. If we've built a portfolio and we'd have not a single technology stock, we should probably go try to find at least one technology stock or renewable energy stock. We should at least find one.

“There is value in being able to understand historical financial statements, read a cash flow statement, understand what's going on with the business.”

On the other hand, if we have five auto parts companies, maybe we don't really need them all. Maybe those are all the same and we're excited about all of them but we should just choose the top three and cut the other two out.

Now I can get into March 2020 and talk about why we entered the US market in a significant way. One thing that my Bridgewater heritage taught me is that different strategies, different asset classes

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work well at different times, and the best predictor of when these strategies don't work are a lot of macro variables. Illiquid, small cap, and "value" are all a connected set of ideas. Value has a lot of overlap with small and illiquid.

"The reason value investing works over the long-term is that there are systematic expectation errors—people over-predict growth."

Small, illiquid value does well at points in the macro economic cycle. It does well from the bottom of a recession until the economy is doing well again. That is when value does absolutely the best, and it does well for a few reasons. One reason is that markets are driven by liquidity flows. People pull their money when they're scared, they dump money in when they're excited and illiquid small caps and value are at the tail end of that web. If investors are panicking and pulling their money, small cap and value are going to perform the worst. When money starts to flow back in, they're going to go up the most. At times of market panic, those illiquid securities sell off way too much, and then they come back way too much. That's the first dynamic.

The same dynamic

relates to value as a concept. In a normal market, value stocks are going to grow less than growth stocks over the next one-year period. You pay a much higher multiple for Amazon than the auto parts company. Then a year later, Amazon grew 20% and the auto parts company declined 1%. The reason value investing works over the long-term is that there are systematic expectation errors—people over-predict growth. Investors think that Amazon is going to grow at 22% and then it grows 20%, then the multiple comes down because investors are disappointed. On the other hand, people think, "Oh, that stock is awful. It's a melting ice cube. It's going to decline 5%, it declines 3% and the multiple goes up." And that's why value works over time.

But where value really works is coming out of a recession. Those small-cap value names, they were cheap pre-recession, they sell off more than the market in the recession. And then you're sitting there at the bottom of the recession and you say, "Okay, what's going to grow the most over the next year?" Well, it's all the crappiest, most cyclical dogs. Margins dropped 80%. And now as the economy recovers, margins are going to not just to get back to breakeven, you're going to grow more than 80%. All of a sudden, these deep value stocks actually

have growth rates that are more attractive than growth stocks. The one year in which the auto parts company is going to beat Amazon is March 2020 to March 2021.

You're getting a discount, an abnormal cyclical discount during a recession, and you're getting abnormally high growth rates — that's why the unique, special moment for value is in times of crisis.

What we said is, "We're going to run fully invested in our funds, but we're going to tell all of you, all of our investors, that the best time to do our strategy is when there's a recession and when high yield spreads blow out, when value stocks are abnormally cheap and have abnormally high growth prospects."

We published a piece called Crisis Investing, and we created a vehicle that was equal in size to our entire business at the time to do this — to buy deep value stocks in times of crisis. We had the idea in 2018-19, created the fund in January-February 2020, and launched on May 1st 2020. We played out that whole thesis with our business.

Again, we do think there should be a cyclically varying exposure to small-cap value. But in the past, we've done that by letting our investors add money at the right time and creating vehicles for them to do that rather

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than holding cash within our funds.

G&D: One other question we had, going back to the things you screen for, is what role does predictability of a business play? Does that matter at all? Or are you indifferent between if it's a mining company or something that's more predictable, given the leverage? Curious to hear your thoughts.

DR: I'd say that I'm not sure. There are necessarily degrees of predictability. There are high volatility and low volatility type industries, but everything is equally unpredictable. And I try to live by that philosophy. For commodity industries, I've been doing a lot of work more recently on how the commodity price environment affects those types of stocks. Obviously, it affects them a lot. You want to be cognizant, to the extent that you can, of whether it's a good time or a bad time to be exposed to that commodity because the stock that mines or produces the commodity usually has a large exposure to it. There are some levels of predictability in commodity prices that maybe you can use to make those types of decisions.

G&D: One of the more interesting aspects of the Crisis Investing piece that you guys put together was the timing associated with a bounce back after a crisis. And, this year likely was a lot

faster than what we'd probably see in the past. I was curious, would you ascribe that purely to the Fed's action or if these things tend to snap back more quickly over time because markets have become larger and more liquid or more efficient?

DR: First, yes, that is the case. This has been a good example of Ben Bernanke's idea of a financial accelerator. Why do small shocks turn into crises? The answer is because a small shock happens and then the financial system reacts — banks stop lending, investors stop investing, people that are going to build a new factory say, "Let's wait. Should we really build it in April of 2020? It probably isn't a good time to build that new factory. Let's put a pause in those plans." The impact of financing being shut off has a set of real-world consequences, usually even more dire than whatever shock hit the economy.

It's the financial accelerator that reacts to the real-world event that really drives a market crisis. What the Fed did in March was smart. They said, "We've got to stop the financial accelerator and we've got to step in fast." That was one of the lessons from '08. They needed to move fast, and they needed to stop the financial accelerator from accelerating. They went to exactly where they should have gone, which was the credit

markets, and said, "We're going to provide support for the credit markets." And that's going to keep the flow of funds going and keeping the funds flowing is going to prevent that second leg down. And it was brilliant and they did it fast. It was unbelievably well executed and I'm not usually a fan of government or regulatory actions. They often do more harm than good, but this was brilliant.

That's really what led to the very fast snapback. After that, you started to see parts of the economy opening again, and people adapting to the new normal quite fast, and people and businesses are resilient. It turned out a lot of companies that were left for dead in March have outperformed. One of my favorite examples is MasterCraft Boats. In every previous recession, you looked at this company and said, "Of course nobody is going to buy a boat in the middle of a recession." It's a leisure luxury item.

And MasterCraft Boats started off just as it would in any other recession. And then when it turned out after their lockdowns, people needed something to do. So, they went out and bought a lot of boats. It was completely the opposite of what you would have expected in a normal recession. And there were all sorts of things like that, that the

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economy just reacted in a weird particular way to this financial crisis. It was different from other ones.

G&D: MasterCraft was up about six times from its trough when we looked the other day. That makes a ton of sense. Everyone we knew was trying to rent an RV over the summer as well! One of the things we're curious about is the impact on passive flows across companies of different sizes, whether it's small-cap, mid-cap, and passive ownership seems to expand as you go up the market cap spectrum. Is that something you think about with your levered small value strategy?

DR: There's been one strategy, or maybe one theme, that has worked over the last decade — buy large tech. One thing that was interesting is that the indices always owned more of large tech than active managers did. Even large cap growth managers owned less of the large tech companies than the indices did. When people think, "Oh, I'm going to sell my active managers. I'm going to go passive." They're not thinking international, developed, mid-cap value. They're not thinking of some esoteric Vanguard fund. They're thinking I want to own either the S&P 500 or the Vanguard total stock market index.

If you look at where Vanguard's assets are, or where many of the

other passive players' assets are, they're in large-cap, US index trackers that track the S&P or the total market. It's like 80% of their assets. What's quite interesting is that as money shifts from active to passive, it's also style shifted, because most active managers are a little bit more mid-cap, a little bit more value. And so, as people have shifted, they've shifted styles, and that's also been supportive of the rally in the large growth style. On top of this, you've had another random force, which is this deflationary force that brought down rates, which you could argue really increases the NPV of growth stocks. That's been another related phenomenon.

All those things have driven the S&P 500 and large-cap US equities and passive large-cap US equities to do really, really well over the last decade. For most active managers, the more boxes (like small-cap, or value, or international) you tick, the worse you've done relatively.

But those things also have a reasonable likelihood of reversing. Valuations are quite stretched for a lot of those companies. At some point, people will start noticing the valuation premium of big index constituents relative to stocks that are not constituents of those particular indices (either because they're international or because they're smaller.) It's going to be an

interesting dynamic and it's going to favor active managers, not because active managers are smarter, but just because their factor exposures are different.

G&D: Absolutely. We've seen a bit of a re-rating from historical value versus growth over the last 1-2 quarters. So we're curious, where do things stand from your perspective? Valuation spreads have narrowed, but there's still a pretty notable spread. What looks most attractive to you today from that perspective?

DR: The period from Q1:18 to Q1:20 was just the most painful period for small-cap value investors ever on record in the Fama and French data back to 1926. It was just the absolute worst. It was all driven by relative multiple expansion in large growth and multiple compression for value. That was a painful time to be a small cap value manager, honestly. What we started to see is the reversal of those things. Thank God.

You've started to see large growth multiples stabilize. They haven't started coming down but they've stabilized. And you've seen small value multiples pop back up. Where we are today is that large-cap growth and small-cap growth multiples are at 1999 / 1974 levels. Very, very, very elevated, and small cap-value multiples are normal.

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If you leave the US and go internationally, there are really three big pockets of value: (1) Eastern and emerging Europe, (2) the UK and (3) Japan.

Those are the markets that are by far the cheapest right now, and to me, the most interesting markets to be deploying capital into. The US was the most interesting market to deploy money into a year ago. The US recovery has been faster than any other market, but as the economic recovery picks up in some of those other areas (where multiples are even lower), the value stocks there aren't going to look all that different from US value stocks in terms of financial performance.

G&D: When you look at these markets and the relative attractiveness of the opportunity set, are you thinking about whether the pieces of fundamental performance that you mentioned are sustainable? Profitability, return on assets, return on capital, those types of factors. How do you consider relative quality indicators for a market like the US which is tech heavy versus another international market?

DR: The US is tech heavy generally, but the value industries are the same in the US as internationally. If you're talking Eastern Europe or the UK, value stocks are often industrial or manufacturing companies. You can find

the same spread of high quality and low quality in any of these markets. The real question is there any tech there? And there isn't, or very little and that's been what's driving the market. But within the context of value, that question doesn't matter as much. Japan happens to be very idiosyncratic relative to those other markets. The UK and Eastern Europe are part of the same North America, Europe, economic regime, same cyclical patterns, etc.

“Where we are today is that large-cap growth and small-cap growth multiples are at 1999 / 1974 levels. Very, very, very elevated, and small cap-value multiples are normal.”

Japan's a little different. It's obviously Asian export oriented. It's a hugely cyclical economy and a huge export oriented economy. It's got a somewhat different set of drivers. And Japan is also really interesting for value investors because there's no bankruptcy or virtually no bankruptcy. The Japanese government provides a lot of support through the banks to make sure companies don't go bankrupt. And if you look at small value performance, quite a large percentage of small value companies in the US and Europe do

this for cause. That doesn't happen in Japan. And as a result, the downside volatility in Japan is much lower than the US and Europe.

G&D: Dan, just to follow up on the point of the industries you see in this small value bucket. It might be small cap banks, industrial stocks, or consumer stocks. How do you deal with the issue of structurally lower growth rates, especially in places like Japan, which has had growth problems for a long time? Do you think, well, they're not really growing, so maybe they deserve a lower multiple as a rule, as opposed to the US, which is a better growth environment?

DR: We can interpret history in that way and that has been true. The US has grown faster and tech has grown faster still. These other markets have not had as strong growth. But I don't think that says anything about the future. There have been periods when emerging markets were growing a lot faster than the US, like the 2000s, and there have been periods where developed international grew quickly. These things are very temperamental and cyclical. Investors tend to be too trend extrapolated and say, "Well, the US grew more in the last 10 years, therefore it's going to grow more in the next 10 years." I just don't think that's an accurate way of looking at the world.

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There are lots of rationalizations that you hear all the time, such as European companies being much less well-run than US companies. But when you look at who runs most of European companies, it's like the exact same people. Okay, they went to INSEAD instead of Columbia, but it's the same people. They both worked at McKinsey, just different offices. I really doubt that different management styles are really driving the disparity.

“There's always a new set of narratives that define or shape our understanding of the world...These trends can persist, but at the end of the day, the future is unpredictable. The paradigms and narratives that define what is in favor and out of favor change.”

Or, Japan. GDP grows really slowly, but if you look at GDP per capita, Japan has actually been growing faster than Europe. There are a lot of these different dynamics in these different markets that are contrary to the narrative of the US having the fastest growth, the best managed companies, and that the US is going

to dominate the world. I'm not sure.

My friend Ted Lamade has an interesting thesis, which is that a lot of these tech stocks sell enterprise software, meaning they're selling software to all the old world companies. And for these software firms to grow as much as they've grown, they must be providing a value add that is in excess of what those old world companies are paying. There's an economic logic to that.

At some point, those software gains should start translating to productivity gains for value stocks. Otherwise, the sole story of what those software companies are doing and their growth trajectory couldn't possibly continue to thrive unless they're providing value to their customers. It would be logical to argue that perhaps the customers of the technology companies might be the winners of the next decade even though the innovation that was driven in 2010s was by the software companies themselves.

G&D: Going back to different industries. Oil, for instance, was great when emerging markets were growing very rapidly, but now, oil is no longer the best industry for global growth exposure. Similarly, if you think banks are challenged by low interest rates for a very long time, then banks become less attractive. Or if we think

about industrial stocks, if you don't have a lot of population growth, you won't need a lot of growth in physical capital. So, do you think there are good reasons that these industries may not be as interesting as a technology?

DR: Those are all narratives that can shift. There's always a new set of narratives that define or shape our understanding of the world. Today we might think negatively about oil and commodities, but commodities have had their worst decade ever in the past decade. Maybe the next decade will be better for commodities. Maybe 10 years from now we'll be talking about wild inflation in the US and how France is really the most interesting place to invest because of the stability of their government. These things are temperamental and they're oriented and anchored on recent history. Markets do trend because as these narratives gain in popularity, they're reinforced by people pulling capital in line with those narratives.

These trends can persist, but at the end of the day, the future is unpredictable. The paradigms and narratives that define what is in favor and out of favor change. The safest long-term strategy is to bet on the unpredictability and chaos of the future. To

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bet that something's going to happen next year that surprises us. And gee, those surprises are more likely to benefit things that are really depressed and cheap and more likely to hurt things that are really expensive and require the world continuing to go on as it has in order to win.

G&D: Thanks for that. Have you looked into or thought at all about the market's perception of disruption and whether the market tends to overvalue disruption, and excessively penalize the disrupted? I'm curious if that factors in at all to your strategy?

DR: This is the growth versus value debate. Disruption versus disrupted. Tech versus non-tech. The answer over the last 10-years has been very simple: bet on tech, bet on disruption, bet on the US, bet on growth.

Part of that has been based on a real-world reality, which is large earnings growth among those tech companies. There's real innovation in the cloud and real innovation in direct to consumer products. All of these things were real. Real innovation in software that led to real economic advancement.

You can't step away and say, "Okay, my auto parts stocks grew just as much as tech." Because they didn't. Tech grew more, and that was the right bet. But now, that narrative is priced into markets. You can look at

the valuation multiples for electric vehicle stocks or something and they're just nuts. Whereas industrial companies, consumer discretionary companies, and some of the boring things are priced at just normal multiples.

"Tech grew more, and that was the right bet.

But now, that narrative is priced into markets. You can look at the valuation multiples for electric vehicle stocks or something and they're just nuts...At some point the narrative that sustains these things will shift, and when it does, it will be very painful for these things that are priced to perfection."

Now, you can look forward and say, "There are two great risks in markets. There's bankruptcy risk and overvaluation risk." The risk of worrying about overvaluation risk is FOMO. You get left out when some part of the economy rips but you dodge the drawdowns when they eventually come. At some point the narrative that sustains these things will shift, and when it does, it will

be very painful for these things that are priced to perfection.

G&D: A lot of what we've talked about really comes down to forecasting and trend extrapolation versus mean reversion. At CBS, we spend a lot of time on fundamental security analysis and forecasting, and it's valuable for us to talk to somebody like you who's looking for value but taking an outside view. Where do you draw the line? Do you think it's possible to generate alpha consistently by having a variant view? Maybe you're not able to generate a five-year DCF with any real precision, but you're taking the probabilistic outcomes and maybe some of those probabilities skew in a certain way, and that's your source of alpha and you're directionally correct?

DR: I probably have two big points of disagreement with the curriculum at Columbia [laughs].

Disagreement one is on DCF modeling and forecasting. It's a waste of time, it's value destructive, and any historical analysis of growth rate projections and actions taken based on growth rate projections is going to show you that they're detrimental to performance. If you rank every stock in the US based on its expected growth rate, the highest expected growth rate stocks tend to do the

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worst. The more you're spending on these things, you're just actively buying into things that don't work.

Now, those things can work when it's momentum driven. During the last decade, no matter how off your DCF model was for Tesla, your decision to buy Tesla ended up working. But was that because your DCF model for Tesla was right? Probably not. It was because there was this huge tectonic shift towards tech and growth.

The other point that I disagree with is this idea that a variant perception can be built on a particular expertise. I don't disagree with the variant perception idea, but Philip Tetlock has shown in his work that expertise increases confidence without increasing accuracy. The world's leading expert in Soviet studies was no better than your average Joe off the street in predicting when the Soviet Union was going to end, but a lot more confident.

The best way to make forecasts is to use base rates, to use these types of forecasting methodologies that have been proven to work. You have to think in terms of base rates, think in terms of historical probabilities, and be what Tetlock called Super Forecasters. Those techniques work and they should be taught. That should be the curriculum at

business school – how to make good forecasts. Because there is a better way to make forecasts, there is a scientifically better way to make a forecast that does lead to better outcomes, but it's not the traditional trend extrapolation in the DCF approach. Nor is it developing a massive amount of expertise by talking to leading experts in the industry. Or the idea that I'm going to invest in an insulin pump company because I'm diabetic and therefore I have better information, which is silly.

At the end of the day, I do believe in human judgement, regardless if that human judgment is expressed through construction of an algorithm or that human judgment is expressed through fundamental analysis. I'm a believer that there's good judgment and bad judgment. And there are lots of ways to measure good judgment, and there are lots of people that exhibit good judgment and lots of people that exhibit bad judgment.

I am not making the case against active management or fundamental analysis. It can work when done well, with good judgment – look at the track record of people like Andrew Balson. These quantitative processes can work well when they're driven by good judgment and good logic and equally, they can be bad. But I like to start with what is

empirically valid. Base rates are an empirically valid way of making predictions. Using analyst forecasts of growth rates is an empirically bad way of making predictions. The more we can rely on things that have been empirically validated, the better our outcomes hopefully will be.

G&D: We were going to transition a little bit here, but you and Verdad as a whole put out a lot of research, and we're grateful for that personally. How do you think consistently writing has affected your investment process and the way that you think and see the world?

DR: Writing is tremendously useful. By putting your ideas down on paper you express yourself, you see what makes sense, you find the holes in your argument, you share with others who disagree with you or critique you. Writing helps you build confidence in your own voice, in your own style of investing. It also helps people understand what you're doing and what you're thinking, which is really important for business.

The market is wildly volatile and unpredictable. It has huge swings that are not justified by reason. A large part of the investment management business is to contextualize that volatility, explain that volatility, and find a course of action. That's

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consistent regardless of volatility. Most bad decisions are made in markets because of volatility. Most good managers are people that have found a way to grapple with chaos, unpredictability, and volatility. Writing and research is one way to do that. It allows you to put things in context, to zoom out and say, "Hey, gee, what happened yesterday? In the big scheme of things, isn't that uncommon? And here's what's happened the last few times something like what happened yesterday happened. What happens next?" That's really valuable.

G&D: You mentioned in a podcast with Patrick O'Shaughnessy that if you were going to write a book it might be titled "The Bonfire of the Bad Ideas." We've talked about forecasting, but I was curious if there were any other primary bad ideas that you see from investors today?

DR: We've talked about Porter's Five Forces a bit, which I think are rubbish. DCF models are rubbish. I believe that an expertise driven variant perception is rubbish. The diversification and volatility reduction benefits of private assets is another bad idea that's leading to a lot of very bad outcomes today. Those are some of my greatest hits.

G&D: On the narrative around the expertise driven variant view, time and time again, we get the question, "What do

you know that the street doesn't?" How do you respond to or think about this question?

DR: There's classic efficient market theory that says, "All information is priced in." The theory says that the price of the security reflects all available information at that time. The logical reaction to that is, "Oh, go find information that isn't priced in." That's the expertise driven variant perception. I don't really buy that. I don't buy that there's a lot of that information just lying around.

But more importantly, and where I differ from the efficient markets theory is that there are multiple interpretations of the same data. Shown the exact same fact pattern, people are going to come to very different conclusions. In America, there's a red team and a blue team: throw them the same set of facts and see whether Breitbart and The New York Times react the same way. They probably won't.

So, why would two investment analysts react the same way to the same set of information for a given company? They come with vastly different predictions about the future. Their perceptions are wildly variant, and we don't know who is right. That's the other really interesting thing. We have no way to know whether Bitcoin is going to go to \$500,000 or if it's going to go to zero

next year. We don't know. Someone could pitch \$500,000, the other person could pitch zero, and we would have no way of proving that either one of them was wrong, but next year we'll know that either or both of them were wrong and that somebody else was right.

"Most good managers are people that have found a way to grapple with chaos, unpredictability, and volatility. Writing and research is one way to do that."

Those people that had those varying perceptions are going to have to readapt and come up with a new set of forecasts to incorporate the new information. That's why markets are volatile.

What I like to do is then say, "Okay, well, what I want to do is play the man, not the puck." I don't want to play the data because I'm just going to come up with a variant perception that's just as variant as everyone else's. What I want to do is figure out how are the perceptions weighted? Is there a consensus? Maybe all the perceptions seem to be tilting this way, therefore the risk-reward is over here on the opposite side, because

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nobody's thinking that, but that's equally plausible because the world is unpredictable.

That's why I care a lot about valuation multiples, because valuation multiples are your way of understanding consensus. Something that is really richly valued has a huge optimism consensus. Something that's really, really cheap has a huge pessimism consensus. Obviously, you want to tailor that by industry and other fundamental characteristics to make sure you're actually selecting for pessimism as opposed to just selecting low return on capital businesses or something.

Broadly that's where I come down. The world is about meta-analysis, not analysis. It's not about what you think about a stock, it's about what you think relative to what other people think. It's not about the information, it's about the interpretation of the information. And even more it's about interpreting other people's interpretations of the information.

G&D: Awesome. You mentioned enjoying and respecting Tetlock, Taleb and Kahneman. Any other authors or books that you might recommend? It could be investment related, history, fiction, just anything that comes to mind.

DR: Let's see. For those who are quantitatively

minded, Jim O'Shaughnessy's book, "What Works on Wall Street" and Antti Ilmanen's book, "Expected Returns". I have those right up here and I look at them once a week. There's always some question I have, and the answer is usually in one of those two books. Those are really helpful for quants. Random books I read recently that I love. William Percy's "Lanterns on the Levee", which is a fantastic book. That's nothing to do with investing but it's really, really good.

G&D: Thanks Dan. I sometimes feel like we get trapped in just taking down the list of investing books and we occasionally need to get back to the love of reading just for the love of reading. And then, a couple of quick closing questions. Do you have any advice for students that are beginning in a career in investment management?

DR: The value of writing and sharing your writing. It can be long form, it can be short form, but the internet makes that much easier. If your thing is long form stock pitches, get on SumZero, get on Value Investor Insight, get on Seeking Alpha. Post your things, get feedback, build a name, build a reputation. There's just such value in exposing your ideas, testing your ideas, learning how to write. And whether you're doing that internally at your own company or not, your

ability to communicate your ideas is probably equally important to the quality of the ideas themselves.

G&D: Last question, what do you like to do outside of work? How do you end up spending your time these days?

DR: I have two sons and I spend a lot of time with them. And I read a lot, but those are probably my two pastimes.

G&D: That's great. What kind of activities do you end up doing with your sons these days?

DR: Well, they're two and zero. It's the basics. Changing diapers, getting them food, take them to school, going for walks.

G&D: Well, we in that context, appreciate your time even more! Thanks much Dan.

DR: A little sleep deprived [laughs] but it's my pleasure.



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