



THE DCM ADVISOR: SPRING 2015

DARDEN CAPITAL MANAGEMENT

Darden Graduate School of Business

The University of Virginia – Charlottesville, VA

Darden Capital Management is a student-run organization whose purpose is preparing its membership for careers in investment management and research as well as other functions within the financial markets.

In 1990, The Darden Foundation recognized that the best preparation for careers in these industries is hands-on investment management experience. Accordingly, the Trustees earmarked \$250,000 from the Foundation's overall endowment for active management by Darden students. Today, Darden Capital Management's assets under management have grown to over \$10,000,000 held in five funds, making it one of the largest programs of its kind. The Cavalier, Darden, Jefferson, Monticello and Rotunda funds are managed independently and provide the opportunity for Darden students to develop skills in investment analysis and portfolio management.

Darden alumni and other investment professionals are encouraged to consider first year students for internships and second year students for full-time positions within the space. For more information, please contact [Jack Oakes D'89](#), Director of Darden's Career Development Center, at 434-924-7686.

DCM Membership: Class of 2015

Leadership

Tee Valentine, CIO
Christine Brown, COO
Samuel Hutchings, CFA, DOR

Jefferson Fund

Scott Meadows, CFA, Senior PM
Doug Bobrow
Josefa Palma
Randy Sinclair

Cavalier Fund

Ross Rosenstein, Senior PM
Ted Casey
Joakim Nilsen
Michael Tham

Monticello Fund

Alex Fraser, CFA, Senior PM
Stoya Maglova
Jake Womble
Jake Yeager

Darden Fund

David Waldman, Senior PM
Alex Cameron
Brian Dunne
Aaron Mack

Rotunda Fund

Kavi Sud, Senior PM
Rob Langdon
Charlie Legg
Derek Rey

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DCM and Mayo Center for Asset Management Update

Samuel D. Hutchings, CFA, Director of Research

There have been many exciting developments for DCM and Darden's commitment to the asset management industry this academic school year. In June of 2014, the University of Virginia Board of Visitors voted to name the Center for Asset Management, The Richard A. Mayo Center for Asset Management to honor Darden alumnus Richard A. Mayo (CLAS '64, MBA '68). The naming honors Dick Mayo's contributions and lifelong service to Darden. I have had the pleasure of getting to know Dick personally by participating in his and Dean Bruner's Business & Economy Reading Seminar. I cannot think of a more deserving alum to receive such recognition. Dick has served as a mentor to many of us and we are truly grateful for all of his contributions to Darden.

With the naming of the Mayo Center for Asset Management, the school has also welcomed George Craddock back to Darden as the Center's first director. As Director of MCAM, George will assume the primary leadership and managerial responsibility for the administration and oversight of all the Center's activities. Activities include conferences (e.g., the University of Virginia Investment Conference and Shanghai Investing Summit), sponsored research, Darden Capital Management support, seminars, and roundtables. The Director is responsible for coordination and communication with Mayo Center stakeholder groups, including the MCAM Advisory Group and Friends of CAM. The Director will also be a highly visible spokesperson for the Center with national media and corporate audiences.

In the past few months, George has worked alongside DCM to launch the inaugural Mayo Center Investing Classics Reading Seminar, a second year elective. Working with other parts of the Darden enterprise, he has also helped facilitate DCM meetings with Bob Craine, an independent oil and gas producer, Jonathan Mariner, CIO of Major League Baseball as part of his Leadership Speakers Series visit and Ted Weschler, an investment manager with Berkshire Hathaway.

DCM is truly grateful for the Mayo Center for Asset Management and we look forward to leveraging it to learn more about and gain more exposure to the capital markets industry. We are also lucky to have a strong supportive alumni network. This year a group of us visited Sands Capital courtesy of Frank Sands and Frank Sands Jr. to learn more about the investment management industry. We also have had many guest lecturers including Larry Kochard, CEO of UVIMCO and John McFarlane, Founder of Zaff LLC, among others.

Lastly, Darden Capital Management would like to recognize, congratulate and welcome our new members from the Class of 2016. The transition from the class of 2015 is underway, and we wish the new class another year of success.

Incoming DCM Membership: Class of 2016

Leadership

Jake Dubois, CEO
Claire Lewis, CIO
Marci Stewart, COO
James Franco, DOR

Cavalier Fund

Frank Coughlin, SPM
Charlotte Dagher
Phil Deneault
Liqun Pan

Darden Fund

Ermal Jahollari, SPM
Scott Degen
Justin Potter
Nick Rossi

Jefferson Fund

Jesse Fink, SPM
Jonathan Jones
Nan Liu
Caitlyn McClay

Monticello Fund

Adam Silver, SPM
Bhaskar Mahajan
Sarah Sherman
Ignacio Colis Vidal

Rotunda Fund

Greg Suellentrop, SPM
Chelsea Cramp
Charlton deSaussure
Felipe Nesi

What Should Investors Be Asking?

Tee Valentine, Chief Investment Officer

Short term predictions regarding macro data are about as useful as meteorologists are here in Charlottesville. Instead of taking a stab at the answers, we thought it might be useful to highlight the questions. Darden Capital Management was fortunate to have lunch recently with Quad C founder and current Berkshire Hathaway Portfolio Manager, Ted Weschler, who told us that the average holding period for a stock listed on the NYSE is 6 months. At DCM we are long term investors, so what are the key questions that will drive markets in the next 3-5 years? The great thinker, strategist and investor, Kiril Sokolov recently highlighted a four drivers of the global economy today:

- Reckless monetary policy
- Technology destroying not creating jobs
- Deflationary pressures caused by excess capacity and capital
- The global burden of unproductive debt coupled with the worst demographics in 500 years

No one knows what the impacts of these factors will be, but asking the right questions will help us understand their potential impacts better.

Are we feeling richer? On April 7th, the Wall Street Journal reported that McDonald's would be adding premium sirloin burgers to its US menu for a limited time. Sales receipts for the more expensive burger will dictate how long it hangs onto the menu, but its reintroduction says something about how McDonald's is viewing its customer base. "The sirloin burgers—one with bacon, another with mushrooms, and a third with classic lettuce-and-tomato toppings—are served on a wooden surface similar to a cutting board," WSJ's Annie Gasparro said. McDonald's pulled premium burgers in 2013 because the \$4-5 Angus burger was too expensive to compete with the Dollar Menu. Will the Big Mac index take on a new meaning? We don't know, but we are watching. Another blue chip company with a very different socioeconomic profile, American Express, has missed its revenue targets 4 years running, and has publicly refused to discuss the specifics of its growth initiatives.

Are interest rates bottoming? Last June, PIMCO Chief Economist, Paul McCulley wrote a piece entitled "Just Give Me a Framework," in which he argues that well-anchored inflation expectations are the new reality. "There is no shame in recognizing new realities," McCulley paraphrases, "only in refusing to do so." McCulley Argues that Volcker's war on inflation was won decisively by the turn of the century, and that inflation expectation have been "well anchored" since that time. "Yes, they bounced around cyclically, but have trended in a sideways pattern, in the neighborhood of the Fed's long term inflation target of 2%," urges McCulley. If inflation is "secularly" lower and interest rates reflect inflation expectations than the answer is maybe not. If stock markets are valued on discounted cash flows, and the risk free rate is the lynch pin of the Capital Asset Pricing Model, then we have low rates to thank for soaring equity prices. Deflation, or simply a lack of inflation, could support lower rates for much longer than folks are anticipating, and we dance on! McCulley dubs our current period "The New Neutral," but so much free flowing capital may inch us closer to bubble territory and increases the burden of unproductive debt.

Prem Watsa, chairman and chief executive of Fairfax Financial Holdings, aka "Canadian Warren Buffett," recent noted tech valuations in his annual letter to shareholders:

	Market Cap. <i>(\$ billions)</i>	P/E Ratio	Price to Sales
Social Media			
Twitter	31	(loss)	21x
Netflix	29	111x	5x
Facebook	223	73x	17x
LinkedIn	33	89x	15x
Yelp	3	358x	9x
Yandex	9	19x	6x
Tencent Holdings	164	46x	14x
Other Tech/Web			
Groupon	6	(loss)	2x
Service Now	12	(loss)	17x
Salesforce.com	40	(loss)	8x
Netsuite	8	(loss)	14x

The continuing speculation reflected in the stock prices of public high tech companies has moved to private high tech companies, as shown in the table below:

	Latest Valuation <i>(\$ billions)</i>	Total Equity Funding <i>(\$ billions)</i>	Valuation/Funding
Xiaomi	46.0	1.4	32.9
Uber	41.2	2.8	14.7
Palantir	15.0	1.0	15.0
SpaceX	12.0	1.1	10.9
Airbnb	10.0	0.8	12.5
Dropbox	10.0	0.6	16.5
Snapchat	10.0	0.6	16.3
Theranos	9.0	0.4	22.5
Square	6.0	0.5	12.1
Stripe	3.5	0.2	18.4

“The Wall Street Journal says that worldwide there are 73 companies that are valued at more than \$1 billion by venture capital investors, versus half that number prior to the dot.com crash. The third column of the table above shows the ratio of the latest valuation of each company to its total cumulative equity funding raised from inception. So Uber has a valuation of \$41.2 billion as compared to the cumulative equity capital raised of \$2.8 billion – i.e., the valuation is a hefty 14.7 times all of the money that was raised by the company. We’re confident that most of this will end as other speculations have – very badly!” - Prem Watsa March 6, 2015

If we marry McCulley’s “New Neutral” with Prem Watsa’s outlook for inflation, rates would rise moderately in the absence of hyperinflation or, perhaps, decline in the face of deflation. A notable investor at a New York City conference recently quoted Walter Kronkite in saying, “If you’re not confused, you don’t know what’s going on.”

The table below, excerpted from Fairfax’s shareholder letter, explains the context in which Watsa has purchased derivative securities which profit from a deflationary environment.

We have worried about deflation in the past few years in our Annual Reports – it is now upon us! In spite of QE1, QE2 and QE3 and some twists, we saw deflation in the U.S. in the second half of 2014, as shown in the table below:

								% change June – Dec. 2014
U.S. CPI Index	June	July	August	September	October	November	December	
	238.3	238.3	237.9	238.0	237.4	236.2	234.8	-1.5%

We have had deflation at an annualized rate of 3% in the second half of 2014 in the U.S.! And it is not going away. In fact, in January 2015, the U.S. reported its first year-over-year decline in the CPI index since 2009 of 0.1%. In Europe, we had deflation of 0.5% in the second half of 2014, as shown in the table below:

								% change June – Dec. 2014
European CPI Index	June	July	August	September	October	November	December	
	117.6	116.8	116.9	117.4	117.4	117.1	117.0	-0.5%

As of January 2015, 17 out of 19 countries in the Euro area were experiencing deflation on a year-over-year basis.

At a recent investment conference in New York City, panelists including Howard Marks and Stan Druckmiller offered a sentiment that inflation would be moderate and rate moves would be well managed by the Fed.

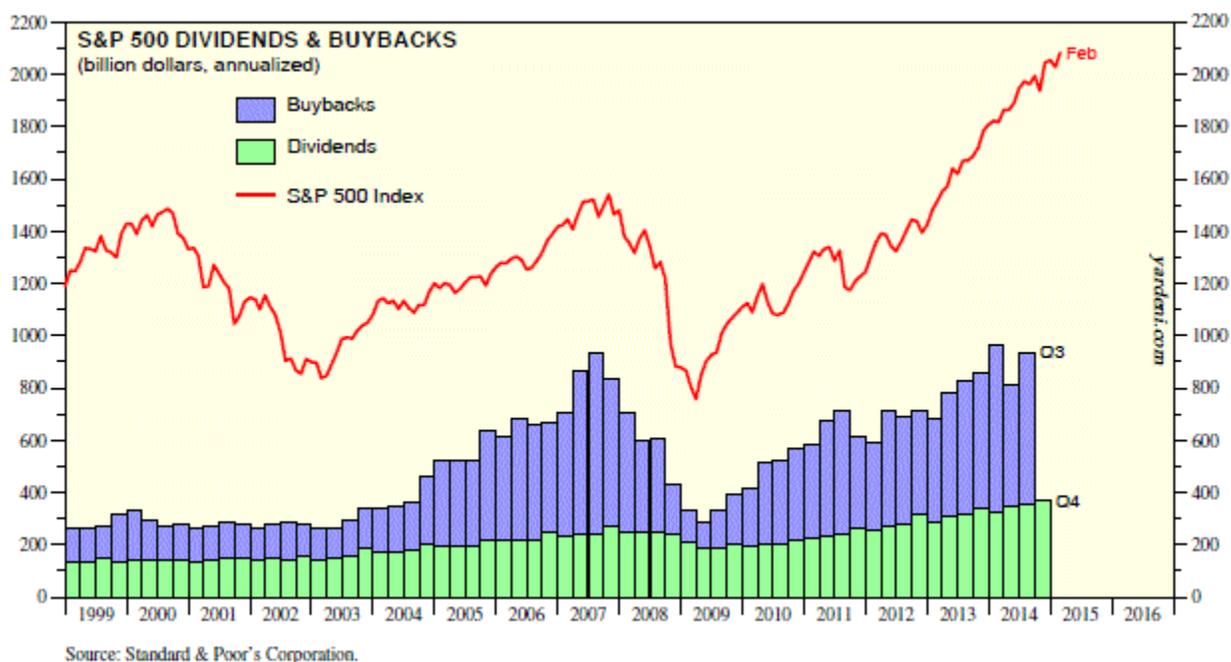
What will happen to Greece? All of the banks in Greece that owned Greek government debt blew up in 2012 when the government delivered a 50% haircut on their own bonds. Market Caps were leveled, an extinction event occurred, a pro-business government was elected. Greece’s banking system has shrunk from 20 banks to 4 (all roughly the same size), and Eurobank (after investments from WL Ross, Fidelity, Fairfax and MacKenzie Cundill Value Fund recently passed an ECB stress test. The Greek government has a debt problem, but its citizens do not. As a percentage of GDP, according to the World Bank, Greece’s domestic credit to the private sector is 122% compared to 192% in the United States. Jobs growth, consumer spending and tax collection may go a long way. While the rest of the nation sleeps, it may be a good time to check out Santorini.

Will corporate debt outstanding continue to increase, and what are the implications?

According to a 2014 McKinsey study, there are troubling signs.

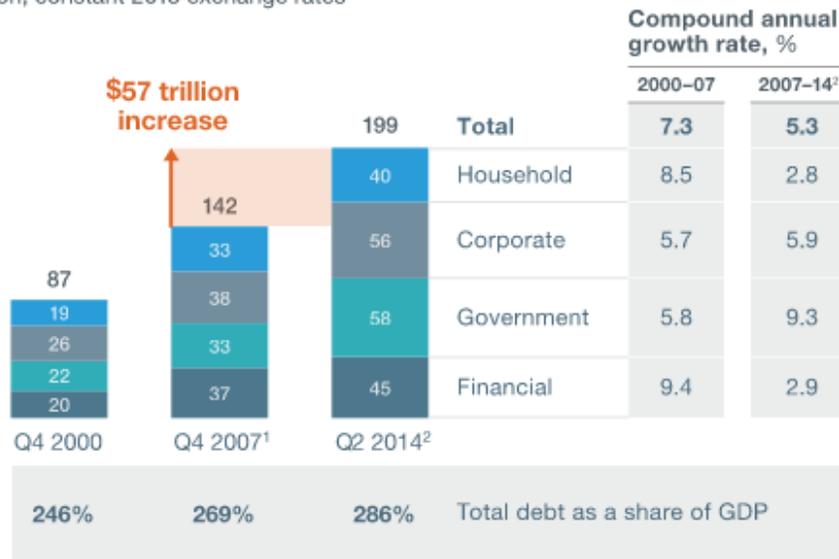
In China, Debt to GDP has quadrupled since 2007. 50% of all loans are linked to real estate, and shadow banking loans are growing at 36% per year. Global debt has increased \$57 trillion dollars since 2007, from 269% of GDP to 286% of GDP. According to the study, “seven years after the global financial crisis, no major economies and only five developing countries have reduced the ratio of debt to GDP.” The same study points out that, globally, corporate bonds in circulation have increased by \$4.3T since 2007 which is nearly 3 times the growth in corporates from 2000-2007.

Between 1997 and 2009, 438 companies in the S&P 500 bought back \$2.4T worth of stock (the total market capitalization of the S&P 500 peaked pre-recession at 13.8T). Since 2009, S&P 500 firms have spent more than \$2T on stock repurchases and have remained at historically high levels quarter after quarter (recently surpassing 2007 levels.)



S&P companies are buying back their stock at increasingly high valuations (the Shiller PE ratio stands at 27x against a median value of 15.9x), locking in poor returns on capital for shareholders in order to juice earnings per share while diverting capital away from investments in growth capital expenditure that could increase revenue growth and employment. Mal-investment will be encouraged by prolonged lower rates, yet the Fed debate continues.

Global stock of debt outstanding,
\$ trillion, constant 2013 exchange rates

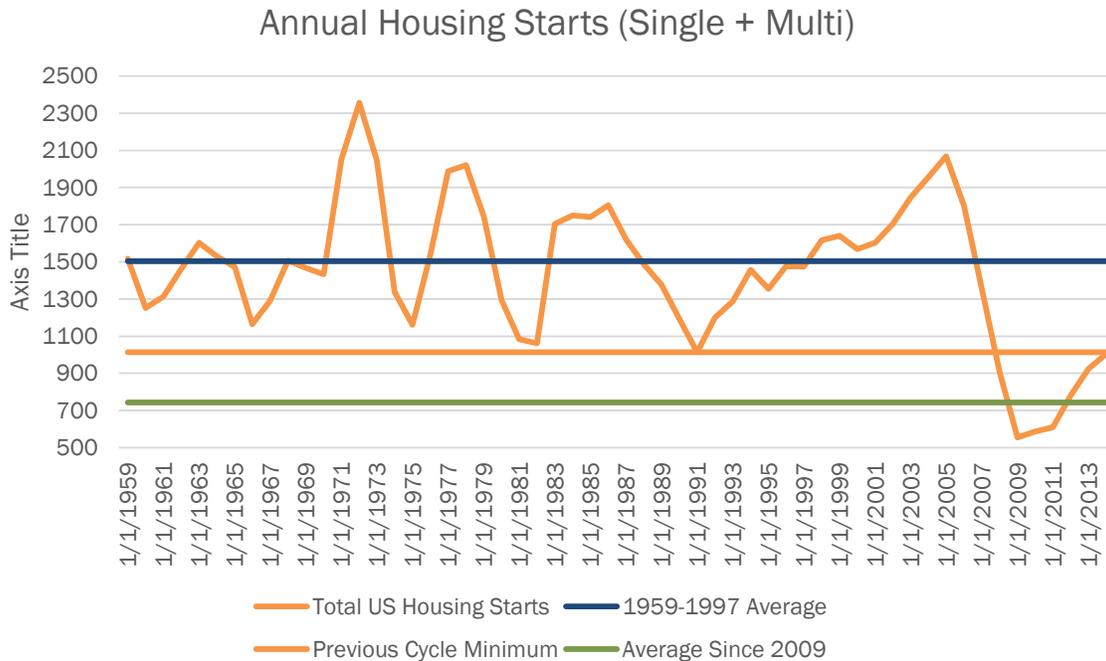


¹Figures do not sum to total, because of rounding.

²Q2 2014 data for advanced economies and China; Q4 2013 data for other developing countries.

Source: Bank for International Settlements; Haver Analytics; International Monetary Fund *World Economic Outlook*; national sources; McKinsey Global Institute analysis

What's going to happen with US housing? In 2013, the percentage of 30 year olds owning homes and the percentage of 30 year olds living with their parents intersected. According to the US Census Bureau, 30.3% of 30 year olds were living at home at the end of 2013. That same figure was 22.9% in 1980 and 23.2% in 2000. This is not good. Trade up and first time buyers have yet to take over from investors, which is why home price increases have been in the low single digits since 2012 according to Trulia. As the chart below shows, we have hit an important threshold in total housing starts. According to an April 9th Wall Street Journal Article, completed foreclosures are declining. Between October of 2007 and October of 2008, there were 910,000 consumers whose credit reports showed that they had foreclosure proceedings. By October of 2014, 30% of those had no evidence of the event on their credit reports. By the end of 2014, single and multi-family housing starts surpassed the previous cycle minimum (in 1991) of 1.01M starts for the first time since the recovery began (see chart below).



DCM Fund Updates – 2014/2015 Academic Year

Cavalier Fund

Ross Rosenstein, Senior Portfolio Manager

The Cavalier Fund is Darden Capital Management’s long/short fund and we invest across market caps with the S&P 500 as our benchmark. The team has been generally pleased with the fund’s fiscal year performance for our class (April 1, 2014 to March 31, 2015). To date, our portfolio has returned 7.1%, relative to 12.7% for the S&P 500 and 4.4% for the Barclay long/short index. While we have made some mistakes and certainly learned some lessons, we feel that on balance we have collectively made good decisions. Additionally, we have had significant participation from every member on the team, as well as from First Year Darden students and from several of Darden’s Executive MBAs. Good decision making requires lots of opportunities to make investments and we’ve had no shortage of those. In total we’ve reviewed 23 pitches, of which we’ve invested in roughly 70%. A sample of recent purchases is highlighted below:

TrueCar (TRUE) (Short): TRUE was founded in 2005 and is an online lead generation business aimed at making the car-buying experience more transparent. The company is attempting to revolutionize the auto-buying industry just as Zillow and Yelp did for real estate and local, respectively. We initiated a short position in 1Q 2015 on the thesis that this model will not be well received by dealers, both in its own network and outside of its network. TRUE went public in early 2014, and there is already a lawsuit against it filed by a handful of dealers. We also believe that large OEMs have plans to restructure

their pricing models to render third party lead generators obsolete, and we do not believe the model will work on used cars.

Charter Communications (CHTR) (Long): CHTR links individuals and businesses with the latest innovations in connectivity, including High Definition and On-Demand entertainment, high-speed internet and advanced phone services. Serving more than 6 million customers in 29 states, Charter is one of the largest cable entertainment and broadband communications companies in the nation. We purchased Charter earlier last year around \$118 with the thesis that its shares were depressed after a failed bid to acquire Time Warner Cable (TWC), but it would acquire certain divestitures from the Comcast/TWC merger and drive further consolidation in the industry. Charter and Comcast recently reached an agreement on divestitures and Charter is expected to acquire the sixth largest cable operator in the U.S., Bright House Networks. As the position has grown into one of our largest positions, we anticipate trimming it down in order to take advantage of other opportunities but holding a majority for the long term as we still see upside in the name.

Shake Shack (SHAK) (Short): SHAK is a “fast casual” burger chain that caters to a more selective palette than traditional burger chains. SHAK began as a hot dog stand in Madison Square Park in New York City, by Union Square Hospitality Group CEO Danny Meyer. SHAK went public this past January and has risen over 90% above the IPO price. They have plans to grow via the addition of 10 domestic stores per year for the foreseeable future. Trading at a P/E ratio of over 250x LTM earnings, we believe that the stock is overvalued and should trade at a lower valuation in line with traditional fast food peers. Given that growth in same-store sales have declined to 1.1% per existing store and the new store growth is expected to come solely from outside the core New York City market.

Cabot Oil & Gas (COG) (Long): Companies in the energy sector have experienced massive stock price depreciation primarily due to the decline in oil prices. We believe there is an opportunity to identify companies with good margins, a healthy balance sheet and a strong management team, which experienced “more than justifiable” stock price depreciations. COG’s assets consist of ~97% natural gas in the Marcellus Shale area and ~3% oil in the Eagle Ford Shale. The Cavalier Fund initiated a position in COG based on three factors. First, the stock price had been pushed down as a result of oil prices – making for an attractive entry point to this pure-play natural gas company. Second, the company’s asset base, location and infrastructure is well positioned for the expected increase in natural gas consumption and demand over the next five years. Third, low leverage and a lower cost per Mcf than peers showed that the experienced management team had positioned COG to survive any long or short term commodity price fluctuations. Our conclusion was that COG has strong long-term potential despite any short-term volatility.

Generac Holdings (GNRC) (Short): GNRC designs and manufactures portable and standby backup power generators for the residential, commercial and industrial markets. It is a good short candidate given market saturation in its most profitable

residential category where it commands 70% market share. The market misperceives normalized demand, projecting residential revenue and total company gross margins to increase in 2015. Channel checks prove otherwise as peak demand in 2013 is not sustainable given pull forward demand from superstorm Sandy. At >10x EBITDA, the stock is pricing in much optimism.

Darden Fund

David Waldman, Senior Portfolio Manager

The Darden Fund invests in small caps companies with the Russell 2000 as our benchmark. Small caps have experienced a year of significant volatility in 2014 – 2015. In the year before took over as managers of the fund the Russell 2000 index returning 38.6% in 2013 and the S&P 600 Index returning 41.3% in 2013. As managers of the Darden Fund we recognized that there was an increased chance of significant asset price volatility after a multi-year bull market, and were prepared for the challenge of guiding the fund through turbulent times. Since April 2014 the Russell 2000 index has experienced significant swings in monthly price movements, with annualized volatility dropping below double digits for only one month. Volatility in the Russell 2000 peaked in the fall of 2014 when from August to October it remained over 26% on an annualized basis, and for the year averaged 19%. This is compared to 2013 when the average volatility for the year was 13.4%. In contrast by focusing closely the risk vs. reward tradeoff for each name in our portfolio and sizing positions accordingly the Darden fund experienced an average volatility of 14.6%, 4.4% less than that of our index.

The managers of the Darden Fund were also prepared for the challenge of identifying unrecognized value in the aftermath the multi-year bull market. Leveraging our diverse mix of experiences – ranging from emerging market private equity, to distressed debt, to growth equity to investment banking – the team spent the year seeking good stocks with multi-year investment timelines. In particular, the team sought companies that were undergoing Operational Improvements, experiencing Turnarounds, undergoing Technology or Transformations and due to our focus on small caps the occasional Market Inefficiency. As of March 31, the Darden Fund has returned 3.37%, relative to 5.69% for the Russell 2000. Some representative examples of types of investments made by the Darden Fund team over our tenure are listed below:

Operational Improvements: One way that the Darden Fund team sought to identify undervalued companies was to identify organizations that were in the process of making strategic operational improvements that would take years to fully develop. Revlon (REV) is a portfolio holding that fell into this category. A global leader in the beauty and personal care products industry Revlon is in the first innings of their new strategic plan. Under the leadership of CEO Lorenzo Delpani, Revlon focusing operations on fewer

brands, increasing the marketing spending a smaller portfolio and investing in new ERP system. These changes will take years to play out, but will deliver operational improvements and strengthen the position of Revlon's core brands.

Technology & Transformation: Another benefit of our diverse background was the ability to leverage our knowledge to identify companies that are benefiting from technological improvement or transformation. Our position in Advanced Drainage Systems (ADS), represents our belief that technological improvements are fundamentally changing the once stolid industry of water management. Advanced Drainage Systems is a designer, manufacturer and marketer of high performance thermoplastic corrugated pipe and related water management products, primarily in North and South America and Europe, and delivers customers a product that is superior in both cost and quality to traditional concrete water management products. This is a story that will develop over years but based upon our research we believe ADS is well positioned to lead this technology shift and the transformation of the products used by the water management industry.

Turnarounds: Finally, we are believers that there is often unrecognized value in situations that require a turnaround, often where others have lost faith, and that is what we believe we found in DeVry Education Group (DV). DeVry is one of the market leaders in the for-profit education sector, which has been under pressure for a number of years. Our research led us to identify unrecognized strength in the DeVry Group, and the confidence the long-term value of their portfolio of educational services. The DeVry Education Group operates three segments: Business, Technology and Management, Medical and Healthcare, and International and Professional Education. What we identified through our research was that there is strong growth in revenue and demand for DeVry Medical & Healthcare education, a valuable brand in the Becker CPA Review Services, and a developing international business in Brazil. It also became clear that DeVry management has devoted serious resources to turning around their core DeVry University. Management has given leadership of DeVry University to an experienced team of internal managers who have turned around lagging operations in the past, sought to right-size campuses and deliver meaningful cost savings of \$100M, while aligning the curriculum with other growing segments of the business including health care.

Jefferson Fund

Scott Meadows, CFA, Senior Portfolio Manager

The Jefferson Fund is Darden Capital Management's Value / GARP (Growth at a Reasonable Price) fund and is the second largest of the five DCM funds with just under

\$2.4 million in assets under management. For the 2014-2015 fiscal year, the portfolio returned 7.33% which exceeded the benchmark Russell 1000 Value Index by 54 basis points. Furthermore, the Jefferson Fund team strongly believes that the portfolio is very well positioned for outperformance over the next 3-5 years and is excited for the next generation of DCM management and for the knowledge and expertise that they will bring with them in taking the portfolio forward.

While the focus of DCM remains centered on stock selection and valuation techniques, this year's Jefferson Fund team set out to leverage an additional layer of analysis that incorporated top-down portfolio management into the traditional bottom-up equity research structure. In addition to using the standard research methodologies that seek to identify mispriced individual securities in the market, the team overlaid additional portfolio theory concepts to help address questions such as how a new position would affect the sector allocation or the risk profile of the overall portfolio. In doing so, the team spent a significant amount of time familiarizing themselves with modern portfolio management theory and building in concepts such as volatility, Sharpe ratios, tracking error, active share, and correlations into their existing research framework. The question that each portfolio manager sought to address with their stock pitches was extended from "is this a good investment?" to "is this a good investment for our portfolio?"

In evaluating the risk profile of the portfolio at the start of the fiscal year, the team recognized that sector level exposures varied significantly from the benchmark. For the 10 sectors defined by The Global Industry Classification Standard (GICS), the average variance in weighting of the portfolio relative to the benchmark was over 80%. In other words, for any given sector, the Jefferson Fund had on average an 80% higher or 80% lower level of exposure to that sector than the Russell 1000 Value Index. Throughout the course of the year, the team's rebalancing efforts have aligned the portfolio to where the average variance between sector allocations in the portfolio vs. the benchmark is less than 5%. Our strategy was based on the idea that portfolio performance on a forward looking basis would be attributed to management's ability to identify companies that had the potential to outperform their competitors within their sectors, rather than be materially impacted by sector allocation.

In addition to right-sizing the sector exposures within the portfolio, the team spent the last year working to better align the portfolio with its style mandate as a Value / GARP fund. A year ago, the portfolio consisted of smaller companies with lower yields and higher valuations than the broader Russell 1000 Value Index. The weighted average portfolio market capitalization and free cash flow yield were 7.1 and 5.2 standard deviations below the benchmark mean respectively, whereas the weighted average

price to sales ratio was 2.2 standard deviations above the benchmark mean. At the end of the 2014-2015 fiscal year, the mean portfolio company size, free cash flow yield, and price to sales ratio were each within 1.7 standard deviations of the benchmark mean which indicates a strong alignment with the mandated value style. Currently, the aggregate portfolio price to forward estimated earnings, price to book, and price to sales multiples are 22x, 4x, and 3x respectively; each of which are within one turn (1x) of the benchmark.

There are two style portfolio characteristics however in which the team has sought to differentiate the portfolio from the benchmark: dividend yield and earnings growth. The GARP element of the Jefferson Fund's mandate has driven the portfolio managers to focus on companies that are retaining more of their earnings to reinvest in future growth opportunities, all while ensuring that the price paid for investing in that growth is reasonable and fair. Furthermore, in evaluating potential investment opportunities, the team closely examines the credibility and track record of the company's leadership. Recognizing that excellent management is essential to future success, we have strived to allocate capital to companies that are led by the best. We assert that investing in companies that have the combination of exceptional management teams that believe strongly in the future growth prospects of their businesses, and demonstrate that belief by maintaining low dividend payout ratios and high levels of reinvestment, provides for the best portfolio performance opportunities.

Monticello Fund

Alex Fraser, CFA, Senior Portfolio Manager

The Monticello Fund performed well in the year ended 3/31/2015, returning 10.5% 6.04% for the MSCI ACWI. Ironically, as we worked hard over the last year to seek out investment opportunities outside the US, the fund's tilt toward US-domiciled companies boosted performance in a year marked by dollar appreciation. Aside from the currency tailwind, drivers of performance were largely stock specific, as strong business performance drove the market to close the gap between market value and our estimate of intrinsic value for several holdings. Additionally, over the last year the fund benefited from two buyouts in the portfolio as well as a rumored buyout that never materialized but offered us a chance to exit a position at our estimate of intrinsic value. The following is a selection of recently purchased holdings along with a brief commentary on each.

Dick's Sporting Goods (DKS): We bought and then sold DKS in the course of three months. We initiated a position in November at around \$45 per share with the belief that the market was over-reacting to declining sales of golf equipment and not giving the company credit for its growth opportunities (notably the *Field and Stream concept stores*) and its flexibility to adapt to changing consumer preference. We liquidated the

position in January when rumors of a private equity bid drove the price up to \$55 per share, which we believed to be roughly fair value.

Jinko Solar (JKS): JKS is a Chinese manufacturer of solar panels and the cost-leader in the industry. At 8x trailing earnings we believe the company is deeply undervalued (though not as deeply as it was when we initiated our position), and with China's increasing demand for energy and increasing environmental regulation, we expect demand to grow exponentially. Though concerns about margin compression and the commoditization of the industry are valid, we believe the valuation opportunity more than compensates us for this risk. The stock has appreciated 40% since our purchase, and while we have trimmed to take some gains off the table, we maintain a 4% position.

Diageo (DEO): DEO is the largest distiller in the world by revenue and profit, with a portfolio of iconic global brands. It is a high margin, high ROIC business with a wide competitive moat based on brand loyalty and prowess in marketing and distribution. We initiated a position in Diageo to replace Coca-Cola, which we sold based on the belief that it is overvalued, particularly given a weak demand outlook for its core products. While Diageo is not optically cheap at 22x trailing earnings, we believe the company has a huge runway for both volume and pricing growth as it continues to expand its presence in emerging markets.

Industrias Bachoco (IBA): IBA is the largest poultry producer in Mexico. The company benefits from good long-term secular growth trends and strong brand positioning demonstrated in premium pricing. The company is family controlled, and we have confidence in the long-term orientation of the controlling family. The company is very conservatively capitalized with 20% of the market cap in net cash. Cash balance has grown over the last few years, and we expect a return of capital via special dividend in the next couple of years. Additionally, we expect that the company will take advantage of any market weakness to expand into other Latin American countries via M&A, and they will not need to borrow to do so. We believe IBA is undervalued by 25-30%.

Gran Tierra Energy (GTE): GTE is a small Canadian-domiciled oil E&P company that operates in Columbia, Brazil, and Peru. In the aftermath of the oil-price collapse, we were attracted to GTE's strong balance sheet (over \$330 million in net cash), which should give the company the ability to ride out an extended period of depressed oil prices. The company is going through a management change and strategic re-orientation, but we believe we are compensated by the valuation.

UEPS Net 1 Technologies (UEPS): UEPS is a South African provider of payment solutions and transaction processing services across multiple industries. The company operates primarily in emerging economies. UEPS is growing rapidly, but its stock price is depressed by uncertainty regarding a large government contract and litigation risk.

The stock is very cheap versus comps and historical multiples and we believe UEPS offers an attractive risk/reward scenario.

Rotunda Fund

Kavi Sud, Senior Portfolio Manager

The past year brought about great challenges in financial markets – oil prices, small cap underperformance, and valuations trending above fair value – all of which impacted our fund’s mandate, which allows us to invest across market size and style category but focus on companies meeting Environmental, Social, and Governance (ESG) criteria. For the 2014-2015 fiscal year, the Rotunda Fund returned 9.22% vs. 9.89% for the MSCI KLD 400. For the Rotunda Fund, in our 5th full year of existence, we surpassed the \$1 million mark under management while ending the year with ~\$1.1M. The portfolio management team came into the year with two distinct goals that we believed would help us drive alpha generation for the long-term. We wanted to improve the rigor of our research process, which involves deep fundamental analysis and ESG analysis. In order to improve our fundamental analysis we further incorporated the use of multiple financial software providers, sell-side research, and our own primary research through conversations with competitors, investor relations personnel, and industry experts. Then, we came together to challenge each other’s assumptions with the intent of better understanding the workings of each business. On the ESG front, the team tackled this rapidly evolving space through significant outreach efforts and trials of third-party research providers. Rotunda Portfolio Manager, Rob Langdon, details these efforts in a separate article in this issue of the DCM Advisor. Overall, we believe that our efforts in improving our investment rigor helped contribute to strong performance and position the portfolio for continued outperformance. A couple of our best-performing investments are highlighted below.

Gilead Sciences (GILD): Gilead Sciences is actively involved in trying to eradicate infectious disease around the world. Their leading HIV/Aids and viral hepatitis treatments are licensed and distributed through partners in the developing world to provide patients with low-cost life-saving drugs. More than 125 countries are included in Gilead’s access efforts, and over 7 million HIV patients in developing countries were treated with Gilead medicines last year. Gilead was the first to join the Medicines Patent Pool in 2009, and according to MSCI, Gilead leads all of its biotech peers in the “access to healthcare” ratings category. Throughout the year, we discussed and debated Gilead’s valuation and our patient, buy-and-hold approach has worked very well, as the stock returned 39% during our fiscal year.

CST Brands (CST): CST Brands owns and operates ~1800 gas station and convenience stores located in the southwest US and Canada. CST spun off from Valero in April 2013, allowing the new management team to focus on a unique growth strategy and implement a cultural shift in the company. First, CST used cash-flow generating stores to invest in larger store setups which allowed the opportunity for a greater percentage of sales to come from higher margin merchandise items. Second, the new

management team made a strong push to decentralize store management responsibilities to individual store managers and customer-facing employees. These two strategic shifts in the business provide CST, an already well-managed operation, a competitive advantage against new entrants. Further, the workforce development programs put in place to improve store merchandising and management gave CST strong ratings from an ESG perspective. Since initiating a position in March 2014, CST has returned 43%.

Darden Capital Management has provided our team with a unique opportunity to learn first-hand about financial markets, and most importantly experience the analytic and psychological decisions that investment managers are tasked with making every day. The experience has better prepared us for careers in the investment management industry. As the Rotunda Fund continues to grow along with the ESG space, we look forward to continuing to support Darden Capital Management as alumni in future years.

25th Anniversary SRI Conference Update

Robert Langdon, Rotunda Fund Portfolio Manager

In November, I attended the 2014 SRI (Sustainable, Responsible, Impact) Conference in Colorado Springs, Colorado on behalf of DCM. This was the 25th anniversary SRI Conference held at the beautiful Broadmoor Hotel. The Rotunda Fund was excited to send a representative to the conference because we believed it would help us realize two of our goals for the year: deepen professional relationships in the ESG-focused (environmental, social, governance) investment space and explore ways to deepen the analytical rigor of our ESG thesis analysis for each company we pitch for the fund.

We spent much of the fall semester connecting with people in the industry but the SRI Conference provided a unique opportunity to meet in person with practitioners who were actively implementing the developing field of socially responsible and impact investing. At the conference, I connected with investors at Barclays who create indices composed of firms that create competitive advantage through having women in leadership roles and companies that best serve customers and employees with physical or intellectual disabilities. I connected with a portfolio manager at Impax Asset Management, a London-based fund that is known for its investments in companies that are innovating to help countries and municipalities deal with increased water scarcity. I connected with investment management firms such as Parnassus Investments, Boston Common Asset Management, and Calvert Investments that integrate ESG analysis across their investment platform. I also connected with the CEO of the Institute for Sustainable Investing at Morgan Stanley and held a follow-up conversation with a vice president in Morgan Stanley's Global Sustainable Finance group.

Another key goal of our portfolio manager team this year was to add robustness to our analysis of the sustainability case for each investment. We leveraged Sustainalytics ESG ratings that are available through Bloomberg, but we sought in-depth company research that would help us understand these ratings and better discern which companies were best-in-class within their industry across ESG metrics. Through conversations with representatives from MSCI ESGI at the conference, I negotiated a free trial of the industry leading ESG research from MSCI. Our team has utilized this research to better understand the ESG profile of our current holdings and to help us think through each of our stock pitches.

What is Sustainable Investing and Why Should We Do It?

Robert Langdon, Rotunda Fund Portfolio Manager

What is sustainable investing?

The sustainable investment movement continues to grow as it moves into the mainstream of institutional asset management. Harvard Management Company recently hired a vice president of sustainable investment to focus on assessing material environmental, social, and governance (ESG) factors across its portfolio. CalPERS is increasingly integrating sustainability into its investment mandate and recruited Darden students in the fall for this position. Wellington, a firm that consistently recruits at Darden, has a dedicated ESG research team bringing these issues into their research across the firm. Hirtle Callaghan, an outsourced CIO firm, recently hired a former Rotunda Fund portfolio manager as an investment specialist focusing on building their ESG presence. All of these examples point to the growing prevalence of sustainable investing and we believe the Rotunda Fund uniquely allows Darden to be a leader in this quickly developing area of asset management.

How does sustainable investing drive better risk-adjusted returns?

There has been a lingering concern for years that sustainability investing necessarily leads to lower returns. However, we believe that the data indicate sustainable investing can lead to superior-risk adjusted returns. Sustainable investing delivers better returns largely by selecting best-in-class companies that are afforded a lower cost of capital by the market for their superior risk-management. These companies are managing material nonfinancial environmental, social, and governance risks on the horizon that have the potential to have meaningful financial implications. Due to this superior management, these companies are provided with a lower cost of capital, which is a principal driver of better returns for shareholders.

A key distinction for sustainable-mandated investors was recently highlighted in a working paper from three Harvard Business School professors. This key distinction that was previously ignored by the academic literature on sustainable investing is the

“materiality” of a company’s sustainability initiatives. The professors make the argument that investors focusing on investing in companies that make “material” corporate sustainability investments are able to deliver outperformance because these management decisions to invest in material corporate sustainability issues are “value-enhancing” for shareholders (“Corporate Sustainability: First Evidence on Materiality” by Mozaffar Khan, George Serafeim, Aaroon Yoon; HBS Working Paper 15-073). Conversely, investors that invest in companies that invest in immaterial corporate sustainability initiatives are less likely to outperform. The team of researchers leveraged guidance from the Sustainability Accounting Standards Board (SASB) and MSCI KLD to define what sustainability factors are material for different sectors.

Why is the sustainability investing mandate especially relevant for Darden?

The endowment’s long-term focus on superior risk-adjusted returns is also the core of ESG-focused investing. ESG investors find opportunities in best-in-class companies that mitigate exposure to value-destroying risk by better managing the nonfinancial risks. A separate benefit is that there is reduced exposure for the University to potential outrage generated when stakeholders find out that the endowment is invested in companies that have material practices to their business that do not align with the University’s mission, values, or principles.

How do we define Rotunda’s sustainability investing mandate?

We view the Rotunda mandate as two-fold: invest in best-in-class ESG companies and invest in companies with sustainability built into the core of their business models. We don’t view our mandate in terms of avoiding certain industries or “sin stocks.” Instead, we look for best-in-class companies across sectors that will help us deliver outperformance over the medium- to long-term.

What are example of companies that we’ve invested in?

An example of an ESG leader that we added to the portfolio is Google (NASDAQ: GOOGL). We first did a bottoms-up financial analysis that implied its valuation was attractive and then layered onto that an ESG analysis that demonstrated that it is a best-in-class company in the technology space. Google’s environmental leadership includes its lowering of its ratio of emissions per dollar of sales from 2011 through 2013, its company-wide carbon neutrality since 2007, and its improving Carbon Disclosure Program Score. The company’s social leadership is demonstrated by its best-in-class employee satisfaction initiatives as evidenced by its #1 ranking in the Forbes list of best companies to work at for the fifth time. Google’s governance leadership includes having 67% more female representation on the company’s board than the S&P 500 average. Studies have shown that companies reducing their environmental impact, offering highly sought-after employee experiences, and managing their businesses with a diverse set of perspectives are more likely to succeed over the longer time frame that is relevant to an endowment.

Importantly, we believe that the ESG criteria must be central to the business’ success, not just a philanthropic interest of the C suite that can dissolve with new management.

For example, we pitched Tiffany & Co. (NYSE: TIF) in March because of its attractive valuation and the fact that being a responsible business is key to its long-term financial success. The CEO's reasoning in making this case is two-fold: Tiffany's social license to operate in a heavily extractive industry (mining) is dependent upon being a responsible actor and its customers constantly demand responsible practices such as its strict support for and adherence to the Kimberly Process to ensure that diamonds aren't "conflict" minerals. Our ESG analysis was further supported by the AAA ranking given to TIF by MSCI ESG Research (the highest ranking achievable).

An example of a sustainable growth company that we added to the portfolio is Sprouts Farmers Market (NASDAQ: SFM). Our bottoms-up financial analysis suggested that Sprouts had an impressive growth trajectory and an attractive valuation. The stock had for months faced technical headwinds as Apollo slowly sold its shares into the market following an IPO several years ago. However, in October 2014, this technical headwind was fading and we believed in the attractiveness of SFM's sustainable growth story. Our ESG analysis indicated that Sprouts' democratization of organic foods and natural produce allowed our fund to uniquely participate in the broader societal trends toward healthier and more natural foods.

How have we implemented our sustainable investing mandate?

- Connected with Berkley Haas' MBA-led fund with a similar mandate to share best practices of ESG analysis. We also helped mentor a UNC first year MBA who is building a student-run fund with a sustainable and responsible investing mandate at Kenan-Flagler.
- Added intellectual rigor to our ESG analysis, including company rankings from Sustainalytics and MSCI ESG Research in our stock pitches. We also leveraged our Bloomberg terminal to include relevant nonfinancial data such as water consumption per \$1,000 of EBITDA or trends of environmental emissions per sales dollar.
- Piloted proprietary, company-specific ESG research from MSCI throughout the year to add more data and analysis to our ESG assessments for each company pitched by the portfolio managers.
- Hosted a Bloomberg ESG analyst for a training session on how the Rotunda team could best leverage Darden's Bloomberg terminals for more robust ESG analysis.
- Connected and spoke with the head of outreach at the Sustainability Accounting Standards Board (SASB) to further explore developments in sustainable accounting including the notion of which ESG factors are "material" for different sectors.
- Spoke with several investment managers in the ESG space, including investors at Brown Brothers, Barclays, Parnassus, Hirtle Callaghan, and ClearBridge.

We're excited about the incoming Rotunda Fund portfolio management team and we look forward to seeing them continue to build on Darden's leadership position in the quickly evolving space of sustainable investment.

The Rotunda Fund, and Darden Capital Management more generally, has been one of the most positively impactful experiences I've had at Darden. There is no better training for an investment management career than managing a meaningful amount of real money and the Rotunda Fund afforded this unique opportunity of managing over \$1 million. I was also given the unique opportunity to learn about the sustainable investing space in an experiential way that few other MBA programs would have facilitated. And for that, I'm deeply grateful to the Darden Board of Trustees for supporting Darden Capital Management and the Rotunda Fund.

Women in Investing Conference Wrap-Up

Marci Stewart, Incoming Chief Operating Officer

The Women in Investing (WIN) Conference, organized by Johnson, Cornell University, was held in Boston on November 20-21, 2014. Since its inception in 2010 by Cornell grad Lakshmi Bhojraj ('95, MBA '01), the conference has gained momentum as the preeminent platform for full-time MBA women from top business schools who are interested in the investment management career path. The WIN Conference benefited from the sponsorship support of The Capital Group Companies, Fidelity Investments, MFS Investment Management, PIMCO, Causeway, Putnam Investments, State Street Global Advisors (SSgA), TIAA-CREF Asset Management and Wellington Management Company.

The format of the event allowed the participants to network and learn more about investment management careers. Charlotte Dagher, Caitlyn McClay and Marci Stewart were the three first-year students who represented Darden at the conference. We networked with, and learned from, more than 60 distinguished investment management professionals, demonstrated our stock-pitching skills in front of a panel of industry veterans, and interacted with 70 aspiring MBA women from top US and European business schools (Johnson at Cornell, HBS, Wharton, Chicago Booth, Columbia, NYU Stern, and London Business School, among others).

During the official welcoming dinner, we got a chance to engage with our MBA peers and learn about the various paths that led each of us to consider a career in investment management. The guest speaker, Melissa Reilly, Chief Investment Officer of Fidelity Investment's Equity Group, gave an insightful and passionate account of her successful career in investment management. She provided valuable tips on what it takes to recruit and be successful at investment management. Along with that, she gave us her personal take on how to navigate the world of investing, and how to build credibility and network as we move up the career ladder.

On the second day of the conference, the Darden team gave a stock pitch presentation of AeroVironment, Inc. (AVAV, NASDAQ) a United States drone manufacturer based in California. AVAV generates 82% of its revenue from drones and 18% from energy systems.

The investment thesis was a growth story, and our hypothesis was that as the drone market grows, AVAV will continue to be a leader in the industry. Using a DCF analysis, we recommended to go long on the equity with an 18-24 month investment horizon and a price target of \$39, which was a 34% upside from the then current price. At the time of the presentation, AVAV had a market cap of \$681.5 million, a P/E ratio of 38.9X and a Price/Book ratio of 1.99X.

The presentation covered our thesis that AeroVironment is positioned with premium potential to take advantage of large market capture as a pure play company in the unmanned aircraft segment. In addition, spending on military, commercial, and leisure applications of drone technology is expected to be \$98 billion over the next decade. AVAV has significant first to market advantage with established manufacturing operations and key relationships in the industry including recent FAA regulation movements which will help to limit future liability to AVAV. AVAV has tempered its own growth in accordance with current demand resulting in a very strong balance sheet prepared to take advantage of solid market timing. Finally, AVAV is well positioned as a future M&A target leading to high payouts for early investors.

After the stock pitch, the Darden team had to defend their hypothesis by answering questions regarding capital expenditures and competitive landscape assumptions from top portfolio managers. We closed the day with a number of networking sessions and panel discussions by industry experts on a variety of interesting topics. Those included investment idea generation, company coverage, asset classes and allocation and global markets. The Darden team got extremely positive feedback on our polished presentation, valuation and investment idea on AVAV.

The Devil You Know: Dick's Sporting Goods (DKS)

Jake Womble, Monticello Portfolio Manager

Darden Capital Management (DCM) is often billed as the best experiential learning experience at Darden. Given my non-traditional background in the military I could hardly argue with the fact that succeeding as a Portfolio Manager in the Monticello Fund would require a good deal of learning on my behalf. As DCM's global investment vehicle, the Monticello Fund has exposed me to markets and industries that I have no first-hand knowledge of. For a rookie, investing provides enough complexity that one should be happy to eliminate any additional dimensions of uncertainty, such as global markets and complex businesses when looking for the right place to invest. For this reason I chose to make my initial pitch in an industry that I could easily understand – American athletic retail.

At its core, the Monticello Fund has focused on investing in undervalued, financially strong, and well-managed companies in a global sector context. Even to the untrained

eye, Dicks Sporting Goods (DKS) was a perfect match in all three of these categories. With over \$6B in sales, zero debt, and the original management team in place, DKS was screaming as a potential buy opportunity given its unfavorable multiple based valuation. As recently as October of 2014, DKS was trading at 6.8x forward EV/EBITDA in an industry that was averaging 8.8x.

Why the valuation delta? To put it simply, macro headwinds in the golf and hunting industry had caused the discount. While management was making efforts to burn through overstocked inventory and reallocate floor space to more profitable business lines, the market was taking a short term view of the stock and punishing it for foregoing short term margins/earnings. The only question I really needed to answer, was whether or not the slowed growth and compressed margins were a short or long term problem.

The wonderful thing about retail is that you don't need to rely very heavily upon research and opinions provided by questionably motivated sell-side analysts to get to the heart of the matter. If you want to see what a company is doing to grow revenue and improve margins, the process is as simple as walking through the door. I was able to assess whether or not management's rudder steers in strategy were being implemented as promised by comparing and contrasting a variety of stores in the Charlottesville, Richmond, and Washington metro area over a given time period.

I then asked myself as a typical athletic retail customer - would I rather buy from DKS or a competitor? DKS has a shopping experience that is vastly differentiated from its major competitors through a "store within a store" concept and feels more like Target than Wal-Mart. Seeing these dynamics at play I knew that both other customers and I would continue to give our business to Dicks Sporting Goods in the future.

Following some basic due diligence of the idea (running a sensitized DCF, researching management, and exploring past analyst calls and SEC documents) I had no reason to believe that there was any real downside to the stock. Yet given current valuations, there was at least 2 turns of EV/EBITDA left on the table.

I recommended our fund purchase DKS at around \$44 per share with a price target of \$55 (a conservative 8.3x EV/EBITDA). With only a single year of business school under my belt I was satisfied with simply understanding the income statement and I was conscientious about not overthinking the valuation.

Shortly after the fund took a position in DKS, the market validated my opinions as the company quickly became rumored as a likely Private Equity buyout target. The stock shot up to around \$55 per share over a couple of weeks.

While there was certainly some good fortune involved with the timing of my pitch, I learned a valuable lesson through this process. Eliminating uncertainty should be the first objective in idea generation. Complimenting that lesson, DCM's outstanding group of leadership and portfolio managers have provided me with an experience that has molded multiple areas of personal uncertainty into areas of understanding; a process that has broadened the scope of my realistic investment universe.

Recap: Darden @ Virginia Investing Challenge

Charlotte Dagher, Incoming Cavalier Fund Portfolio Manager

This past November 13th, Darden Capital Management held the third annual Darden @ Virginia Investing Challenge (DVIC).

The stock pitch competition was held in conjunction with the seventh annual University of Virginia Investing Conference (UVIC). The competition brought together participants from fifteen top MBA programs and judges from a number of esteemed investment management companies. This year's challenge was sponsored by Brown Advisory, Factset, Eaton Vance, The London Company, and Wedge Capital Management. Two DVIC updates to highlight from DCM COO, Christine Brown, "This year we drastically increased the amount of investment management sponsors supporting the event. We also added office hours with hiring investment management firms during the course of the event."

This year's theme focused on investment opportunities related to the economic recovery.

Participants were encouraged to focus on companies within the Energy, Healthcare or Technology sectors, who by capitalizing on the economic recovery would revolutionize their industry.

The competition was blind, meaning the judges were not aware which schools the participants hailed from, and split into two rounds. Three groups of five schools competed against each other in the first round. The winner of each group moved onto the second final round, which was held in Abbott Center Auditorium and judged by Tad Smith (JP Morgan Private Bank), Doug Rogers (Eaton Vance), Jason Polun (T. Rowe Price), and Don Wilkinson III (Wilkinson O'Grady).

Columbia Business School won this year's competition, receiving a cash prize of \$3,000 presented by Dick Mayo. The winners, Aaron Purcell, Brendan Dawson, and Sisy Wang, pitched a short recommendation for Solar City, a residential solar energy provider. Judges and spectators were captivated by their articulate and passionate presentation.

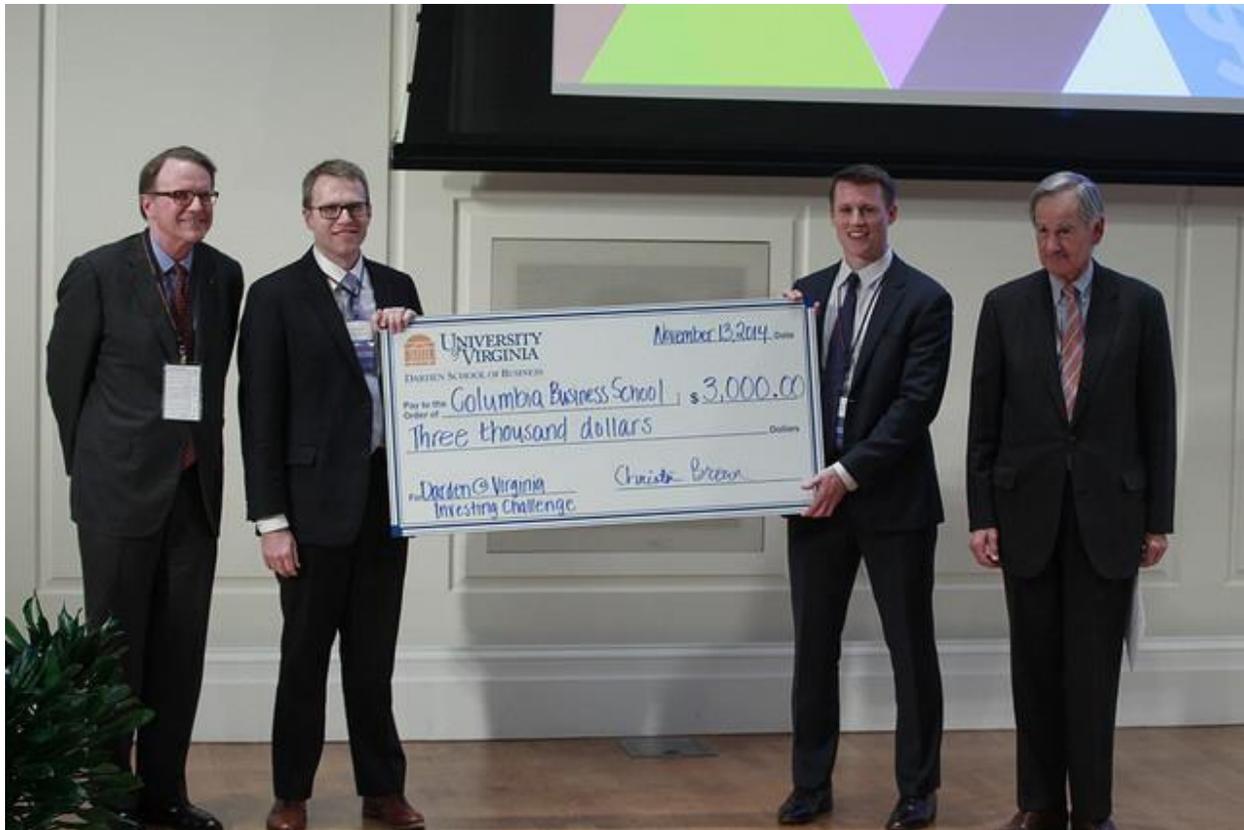
Second and third place finishes went to the University of California, Los Angeles (Anderson) and University of North Carolina (Kenan-Flagler), respectively. Both schools pitched long recommendations on 3D printing companies, something we saw from a number of participants. UCLA pitched a long recommendation for Stratasys and UNC for Autodesk.

All participating schools and their pitches are seen below:

Carnegie Mellon University (Tepper) – Long: OmniVision (OVTI)
Columbia Business School – Short: Solar City (SCTY)
Cornell University (Johnson) - Long: Sierra Wireless, Inc (SWIR)
Duke University (Fuqua) - Short: athenahealth, Inc. (ATHN)
Georgetown University (McDonough) - Long: SolarCity (SCTY)
MIT (Sloan) - Long: Nuance Communications, Inc (NUAN)
New York University (Stern) - Long: DexCom, Inc. (DXCM)
Northwestern University (Kellogg) - Long: Verizon (VZ)
University of California, Los Angeles (Anderson) - Long: Stratasys (SSYS)
University of Chicago (Booth) - Long: Now Inc. (DNOW)
University of North Carolina (Kenan-Flagler) - Long: Autodesk (ADSK)
University of Pennsylvania (Wharton) - Short: TrueCar (TRUE)
University of Virginia (Darden) - Long: Plantronics, Inc. (PLT)
Vanderbilt University (Owen) - Long: InnophosHoldings (IPHS)
Yale School of Management - Long: Ubiquiti Networks (UBNT)

“This competition is a great way for MBA students to show off their investment management prowess and has helped raised the level of awareness of Darden’s commitment to the asset management field,” said Brown.

The University of Virginia Investing Conference (UVIC) began right after the Darden @ Virginia Investing Conference (DVIC) on the afternoon of November 13th and continued throughout the following day. UVIC brought together leading minds in the Energy, Healthcare, and Technology sectors, enticing riveting discussions around investment forecasts for the coming months. Also present were leading macro-economic and investment management professionals. Keynote speakers included: Kyle Bass, Nancy Lazar, Ned Hooper, Peter Diamandis, and Kathy Warden.



Columbia Business School accepting their winning check of \$3,000 from Dean Bruner and Dick Mayo.

Short VNET: A Technical, Reward-to-Risk Perspective

Jake Yeager, Monticello Fund Portfolio Manager

The Chinese data hosting firm 21Vianet Group, Inc. (Ticker: VNET) presents an attractive short opportunity based on technical factors and risk and reward characteristics. In the following article, I first briefly introduce the company. I then analyze its technical factors and compare the reward and risk characteristics of the technical setup. Finally, I estimate the setup's reliability and calculate its expectancy. The high expected return suggests a very favorable scenario for the short seller.

VNET provides carrier-neutral Internet data center services to Internet companies, government entities, blue-chip enterprises, and small- to mid-sized enterprises in China. It operates 12 self-built and 69 partnered data centers located in 43 cities in China with approximately 14,000 cabinets. The company was founded in 1999 and is headquartered in Beijing.¹ VNET currently trades on Nasdaq as an American Depository Receipt. As of late March 2015, its market capitalization was \$1.4 billion and it traded \$11 million and 652,000 shares per day on average.²

VNET demonstrates very favorable technical characteristics for the potential short seller. First, it exhibits significant negative momentum, as its 52-week returns register in the bottom decile of a broad investable universe.^{3,4} In addition, VNET is

trading well below its 200-day simple moving average (See note #1 in Figure 1.), which strongly suggests that VNET's long-term trend is down. Per the old adage "the trend is your friend," many successful traders and portfolio managers use the 200-day moving average to gauge a stock's long-term trend, so that they can then lean in its direction. For example, legendary hedge fund manager and University of Virginia alumnus Paul Tudor Jones said in a recent interview:

You always want to be with whatever the predominant trend is...My metric for everything I look at is the 200-day moving average of closing prices...get out of anything that falls below the 200-day moving average.⁵

That is, or look to short it!

VNET's low level of volatility is also promising. Its volatility has decreased to its lowest levels over the past year and, consequently, its current volatility is much less than its long-term average volatility (See notes #2 and #3 in Figure 1.). Both factors suggest that VNET investors are not afflicted by excessive fear or greed, which would make prices swing wildly and increase risk at the time of entry. In addition, since volatility often moves in cycles, VNET may be ready for a volatile downward move.

Finally, VNET has formed a clear chart pattern that favors trend continuation. After plummeting more than 50% from all-time highs in September 2014, VNET settled into a six-month symmetrical triangle pattern. In *Technical Analysis of Stock Trends*, which is considered the "bible" of classical charting, Edwards and Magee comment that a stock is far more likely to break out of a symmetrical triangle pattern in the direction of its long-term trend.⁶ For VNET, that would be downward.

VNET also demonstrates favorable reward and risk characteristics. A breakdown through the bottom trend line of the symmetrical triangle pattern offers a well-defined, low-risk entry point (See note #4 in Figure 1.). When entering, one should be mindful of the prior swing low at \$15.79, as this low may offer support for the bulls. To control risk after entering the trade, place a protective stop above the high of the day on which VNET broke out of the triangle. My experience suggests that this is a reliable stop-loss level and that it will usually be less than 8% from the entry price.

To assess the potential reward of the VNET setup, I borrow from Peter Brandt's *Diary of a Professional Commodity Trader*. Brandt states that the potential reward of a chart pattern is equal to the distance traveled within the pattern itself.⁷ In VNET's case, the percentage change from the symmetrical triangle's extreme high to its extreme low is 38%, so the potential reward is 38% (See Figure 2.). To derive a price target from the potential reward, simply project downward 38% from the hypothetical \$15.79 entry point. This gives a minimum price target of \$9.78. This target roughly coincides with price support levels formed in 2012 and 2013, which lends credence to taking profits at this level.

One must also directly compare the potential reward and risk of a setup. Regarding VNET, given the potential reward of 38% and the maximum 8% risk, one obtains a Reward-to-Risk Ratio (RRR) of 4.75, which is very high.⁸ Choosing setups with high RRRs is important because, to quote Paul Tudor Jones again, one "can actually be a complete imbecile...and [is] still not going to lose."⁹ This is because, with a high RRR, one does not have to win as often in order to break even. For example, given

VNET's high RRR, one would only need to win 17% of the time in order to break even.¹⁰ In fact, there is a nonlinear relationship between breakeven win rate and RRR, so that as RRR increases, breakeven win rate decreases rapidly, particularly at low RRRs (See Figure 3.). This underscores the importance of favoring high RRRs when assessing potential investments.

Although a high RRR provides cushion via a low breakeven win rate, one must still assess the probability of winning. To accomplish this, I evaluate VNET via a systematic, albeit subjective, process (See Figure 4.). First, if a technical factor is present in a setup, I include its numerical score in my calculations. The magnitude of a factor's score is based on my experience of how much a factor impacts a setup's reliability. In addition, there are both favorable and unfavorable factors: favorable factors increase a setup's reliability and unfavorable factors detract from it. Once I identify the factors that a setup exhibits, then I separately sum scores for favorable and unfavorable factor types. I then subtract the total unfavorable score from the total favorable score in order to obtain a Net Score. Based on my experience, a setup's Net Score roughly coincides with the likelihood of success. For example, I estimate that a speculator has about a 40% chance of profiting on the VNET setup if it triggers an entry.¹¹

A 40% probability of success may seem unimpressive, but, upon computing the VNET setup's expectancy, one finds that it yields an ample 10.4% expected return.¹² That is, if one invested 10% of total capital in every trade like this, then one could expect to make on average 1% on total capital each time.¹³ If one makes 30 trades per year—and these types of trades are plentiful, I can attest to that—then one can expect to make about 30% per year. Please note that this does not include compounding effects. Not too shabby.

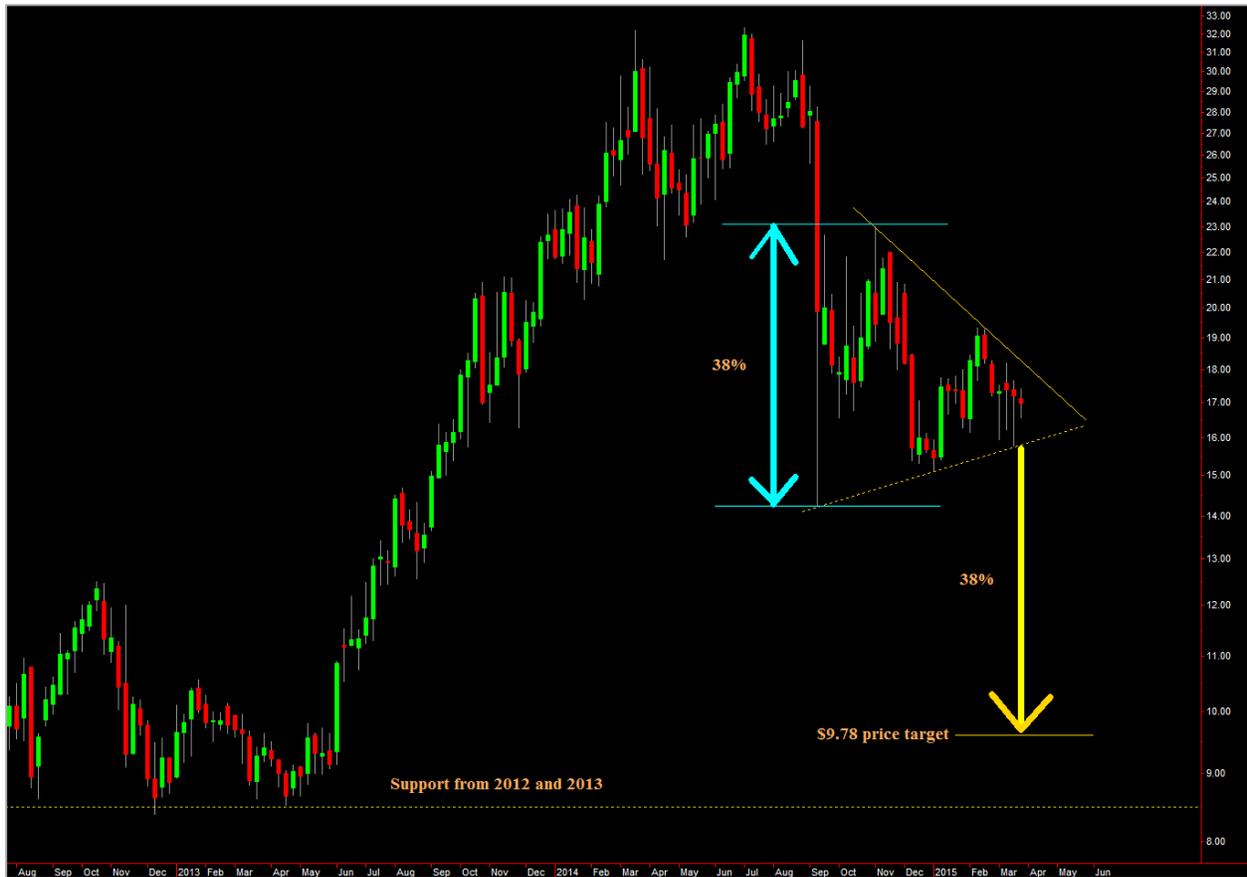
In conclusion, VNET's technical attributes and reward and risk characteristics present a favorable scenario for the short seller. Its strong negative momentum, long-term downtrend, decreased volatility, and symmetrical triangle pattern point to a continuation downward. Moreover, the triangle pattern provides a precise, low-risk entry point and suggests that the potential reward of the trade far exceeds its risk. In fact, the RRR of the VNET setup ensures that one could lose four out of five times and still make money. However, please do not take that as an invitation to be imbecilic!

Figure 1 – Trend, Volatility, and Pattern Analysis (Daily price chart)



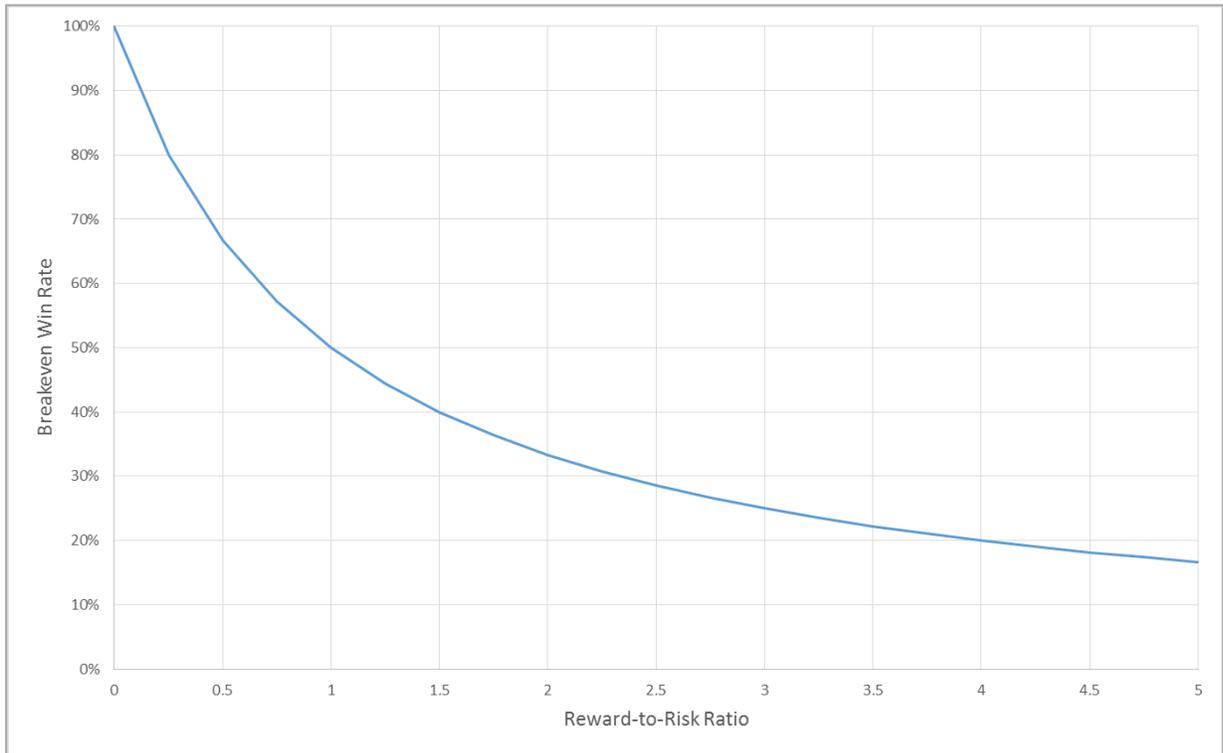
Source: Author's analysis

Figure 2 – Price Target Projection (Weekly price chart)



Source: Author's computations

Figure 3 - Breakeven Win Rate as a Function of Reward-to-Risk Ratio



Source: Author's computations

Figure 4 - Multifactor Probability Analysis

x Pros	Score	x Cons	Score
Horizontal setup		Net spike on volume against long-term trend	
Breakout near long-term trend line		Breakout near far long-term trend line	
Breakout before long-term channel midpoint		Breakout beyond long-term channel midpoint	
x Decreased volatility during pattern	2	Increased volatility at breakout	
Stable volatility at breakout		x Diagonal setup	1
x ≤ average volatility at breakout	1	> average volatility at breakout	
Pullback to 50-day		-	
-		-	
-		-	
Total	3	Total	1
Net Score	2		
Probability of a winner	40%		

Source: Author's estimates

Endnotes

¹ Company reports

² Finviz.com

³ Finviz.com, author's computations

⁴ A discussion of momentum's efficacy as an investment strategy lies beyond this article's scope. For more information, please see *Expected Returns: An Investor's Guide to Harvesting Market Returns* by Antti Ilmanen.

⁵ Adrian Trout, *Trade the Tape*, <http://tradethetape.com.au/tag/paul-tudor-jones/>, accessed March 30, 2015.

⁶ Edwards and Magee, *Technical Analysis of Stock Trends*, Eighth Edition, pgs. 106-108.

⁷ Brandt, *Diary of a Professional Commodity Trader*, pg. 47.

⁸ Reward-to-Risk Ratio = (potential reward / | risk |) or (38% / |-8%|) = 4.75.

⁹ Adrian Trout, *Trade the Tape*, <http://tradethetape.com.au/tag/paul-tudor-jones/>, accessed March 30, 2015.

¹⁰ Breakeven win rate = (1 / (1 + RRR)). Given a RRR of 4.75, then the breakeven win rate equals (1 / (1 + 4.75)) or 17%.

¹¹ See the following article for additional explanation of multifactor probability analysis:

<http://jakeyeager.com/2014/11/19/quantifying-the-quality-of-a-setup/>.

¹² Expectancy = (P(winning) * potential reward) + (P(losing) * risk) or (40%)(38%) + (60%)(-8%) = 10.4%.

¹³ Expected return on total capital = Trade's expectancy * Percentage capital at risk or (10.4%)(10%) = 1%.