



Ballast – materials added to a vessel to improve stability and control; anything that provides mental, moral or political stability and steadiness.

In 2017, Ballast Asset Management returned 13.5% (12.7% net of fees) versus 10.3% for the Russell 2500 Value, and 16.8% for the Russell 2500.

		YTD 2015*	2016	Q1 2017	Q2 2017	Q3 2017	Q4 2017	2017
Ballast Portfolio ₁	Gross	-7.6%	23.7%	2.1%	2.1%	4.2%	4.5%	13.5%
	Net	-7.9%	22.9%	1.9%	1.9%	4.1%	4.3%	12.7%
Russell 2500 ₂		-6.9%	17.6%	3.8%	2.1%	4.8%	5.2%	16.8%
Russell 2500 Value ₃		-5.8%	25.2%	1.6%	0.3%	3.8%	4.2%	10.3%

* 2015 is a partial year starting on August 11, 2015

In our second annual letter, we decided to provide detail on our process and philosophy. Global macro conditions change, stock ideas come and go, but our principles persist.

In one of our favorite movies, *A River Runs Through It*, the character Reverend Maclean, who was also the father and teacher of two young boys, believed that “the art of writing, lay in thrift.” In one scene, he showed this by having his oldest son rewrite a story several times, each time requesting that he write it again, half as long. In our letter, while attempting to provide as much detail about our process and outlook as possible, we strive to hold true to this wisdom. Of course, the Reverend also made his son throw the paper away upon meeting a satisfactory level of brevity. We humbly anticipate a similar outcome is possible with our letter and ask only that you consider recycling the paper.

Ballast Investment Process and Philosophy

Our overarching strategy is to invest in fundamentally sound companies at reasonable valuations relative to immediate cash flow prospects, with tolerable worst-case risks and free upside optionality. These prospects typically relate to broadly misunderstood business fundamentals, negative sentiment caused by transitory issues and/or unappreciated business initiatives.

We approach investing with rigorous intellectual honesty, scientific open-mindedness and a commitment to continuous learning. We are students of the behavioral aspects of economics and investing, especially the aspects that cause otherwise smart people to make poor decisions. We use checklists and peer reviews to ensure thoroughness and consistency, to identify biases and avoid blind



adherence to “rules of thumb,” all to reduce unforced errors. Our top three guiding principles (articulate a concrete Investment Thesis, require asymmetric Reward-to-Risk Ratios, consistently execute our analytical Sell Discipline) are derived from academic studies, observations of great investors past and present, wisdom gleaned from our mentors, and the occasional skinned knuckle.

Investment Thesis

We only invest with a well-defined, testable thesis derived from observable fundamentals (e.g., demand changes, industry consolidation, product launches, price increases, regulatory events and so on) that relate back to value drivers (e.g., sales growth, margin expansion, return on investment, valuation multiples and so on). This necessarily involves forecasting and informed estimation, which we approach scientifically but not with the insistence of being exact, since we agree with John Maynard Keynes that it is “better to be roughly right than precisely wrong.” We also make a point to “state the obvious”; this keeps us focused on the most important value drivers and helps root out hidden assumptions. The thesis plays a major role in ongoing position maintenance, our sell discipline and postmortem processes. It helps prevent hindsight bias and thesis drift and enables us to ask objectively whether we made a good decision that happened to go bad or we simply made a bad decision. (If the latter, we always look to improve the process by asking, what would have led to a better decision?)

Reward-to-Risk Framework

We view risk in absolute terms and use a consistent framework across security selection, position sizing, portfolio construction and selling disciplines. At the security level, for instance, we calculate the value of a company for two possible scenarios – when we are right (Reward) and when we are wrong (Risk). Our assessment of reward is based on what we believe is reasonably likely to occur, while our downside calculation is derived from potential worst-case scenarios. Acknowledging the variability and uncertainty inherent to active management, we only invest when the reward from a successful investment is a multiple of the risk of an unsuccessful venture. This substantially moderates the practical and emotional pressure of needing to be right all the time, reducing aversion to admitting a mistake early. At the portfolio level, we size positions according to reward-to-risk, adjusted for our conviction and interaction with the rest of the portfolio. We monitor positions daily and conduct a comprehensive reward-to-risk review of the portfolio weekly. Existing positions are normally increased (decreased) due to an improved (declining) reward-to-risk ratios, or because new evidence increases (decreases) the likelihood of a favorable outcome.

Sell Discipline

Selling is the underappreciated twin of security selection. Ballast’s primary reasons for selling are: 1) the stock reached our target price and no longer offers a compelling reward-to-risk ratio, 2) new information invalidated our investment thesis, and 3) a more compelling reward-to-risk opportunity fills



a similar role in the portfolio. We do not use price levels to trigger automatic exits, but a 20% loss triggers a comprehensive thesis review.

Evidence from our annual postmortem (described further below) backs up our belief that our sell discipline is one of the most important things we do for our investors. If our original thesis is violated, we sell the stock, regardless of price – no second-guessing. Examining our busted thesis sells over the last two years, we noted only half of the stocks sold on a thesis violation subsequently underperformed the Russell 2500, but that underperformance was 3x worse than outperformance of the half that bounced back. While this finding may be intuitive, the magnitude of avoided losses was enlightening and strongly affirms our sell discipline. This policy adds to performance because, most often when an investment thesis is violated, the stock is down, sometimes significantly, which makes selling far more difficult because emotion gets in the way. To sell a stock at a loss is to admit a mistake, and we humans are wired to avoid admitting to ego-threatening mistakes. That is where our behavioral tools come into play. To get out of a hole, first quit digging.

As an example, let's look at Mattel. We sold this globally recognized toy company in February 2017. Mattel's brands include Barbie, American Girl, Monster High, Fisher-Price, Thomas and Friends, and Hot Wheels among others. Sales in several categories had declined for a few years for a variety of reasons, including stale brands, missed opportunities in licensing and increased competition from digital activities. As a result, the stock had fallen by more than half in late 2015. However, it offered an attractive 6% FCF yield with potential upside from reinvigorating a diverse brand portfolio with solid brand awareness that still generated over \$1.1 billion in Free Cash Flow over 2014 and 2015.

Our investment thesis was as follows:

- 1) Management undertook a concerted effort to strengthen the Barbie brand by making it more relevant in a more global, diverse marketplace, while also revitalizing the American Girl and Thomas and Friends brands.
- 2) The company had several licenses for movie trademarks and characters that should benefit from upcoming sequels (e.g., *Cars* and *Toy Story*).
- 3) Mattel maintained a solid balance sheet, had a long history of generating a Return on Investment (ROI) of greater than 20%, and substantial resources to invest in growth. Further, margins were well below historical levels, with current results thereby understating the company's true earnings power.
- 4) Emerging markets represented a huge growth opportunity.
- 5) Optionality – Legos (owned by Hasbro) had shown a huge resurgence in popularity, and we believed Mattel's MEGA BLOCKS could be pulled along as parents sought a less expensive alternative for similar entertainment.



Efforts to revitalize Barbie and other brands showed progress, but not enough to offset the expected loss of the Disney Princess license and declines elsewhere. On the fourth quarter earnings call covering the 2016 holiday season, Mattel disclosed that it had used significant promotional activity to stimulate sales, which pressured margins from already depressed levels. We also learned that too much retail inventory was left over from the holiday season, further pressuring short-term profitability.

Rather than ride out an inventory correction chasing apparent cheapness, we concluded that the brand reinvigoration wasn't sufficient to offset pressure from other toy makers and substitution of digital products (iPads, video games, etc.). We'd made a mistake and the thesis was broken, but our sell discipline eased the emotional pain of selling the stock 25% below its 2016 highs and we avoided the additional 40% collapse suffered through the end of 2017.

Postmortem Process

One of the aspects of our process that I enjoy most is our annual postmortem analysis, when we look back at our buy and sell decisions over the last couple years. We examine each trade individually, and the collective results, as we strive to learn from our past and get better. We have done this analysis every year in January for over a decade. Candidly, this is not a back-patting session. The vast majority of the focus is on the mistakes we made. Many of the tools and processes we use to safeguard ourselves from repeating the mistakes emerged from these sessions.

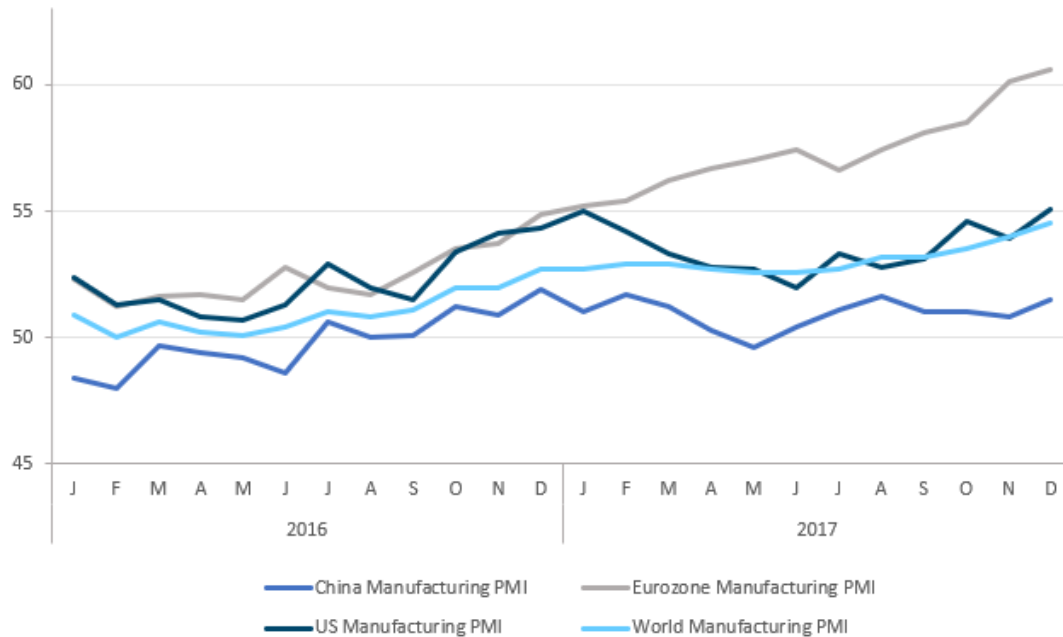
We also analyze the results of our aggregated decisions, which reinforced our conviction in the importance of a concrete investment thesis – and sticking to it! The 3x underperformance of broken-thesis sells mentioned above was part of this exercise. The Investment thesis is just as important to resizing positions. In cases where we increased the position size due to improved reward-to-risk (because the stock got cheaper) or increased confidence in our thesis, 60% outperformed the benchmark, with the outperformers returning 2x what the underperformers lost. The numbers are about the same for positions we reduced due to diminished reward-to-risk (because the stock increased) or because we had less confidence that our thesis was correct.

Macroeconomic Outlook

Although we invest bottom-up, we do still pay attention to the world around us. Metaphorically, when the barometer is rising, we sail far and wide. When it is dropping, and storm clouds gather on the horizon, we sail close to shore. Notably, volatility spiked and we experienced a correction in the equity markets while we were writing this letter. We still think it is important to discuss these views because they explain our current positioning, which we would summarize as the real economy outperforming the financial economy.



Global Purchasing Managers Index (PMIs)



Note: Data are seasonally adjusted
Source: Bloomberg, Caixin (China), Markit (Eurozone, US, and World)

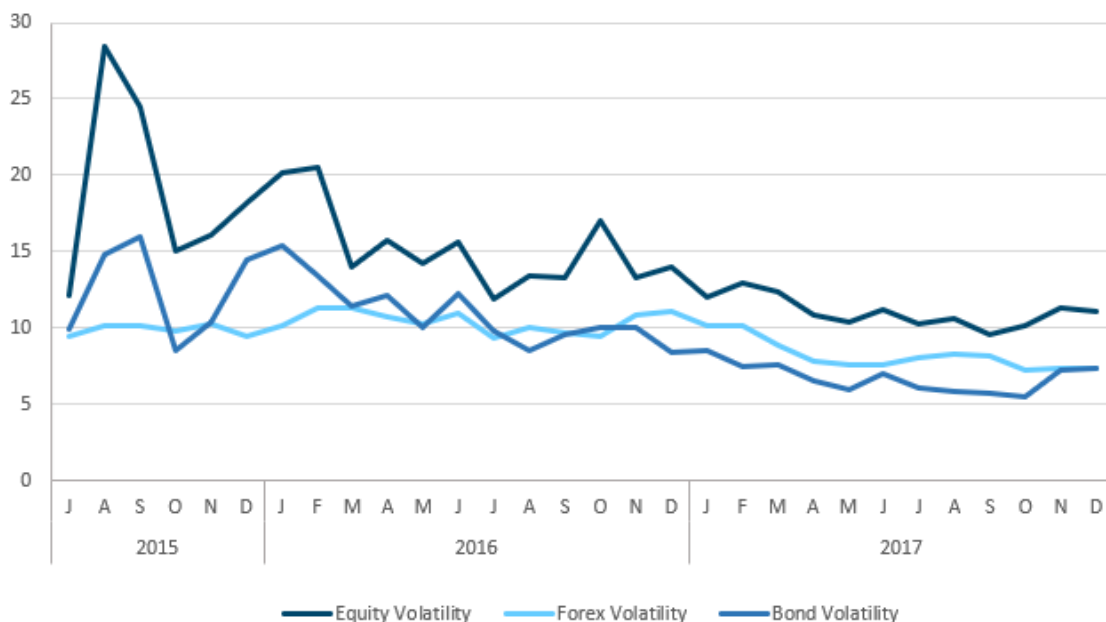
The global economy appears quite healthy: PMIs are strong, sovereign yields are low, industrial commodities showed life in 2017, stock markets are up over the last 12 months and, until recently, volatility was low and falling. In fact, in 2017 the global economy experienced synchronized growth for the first time since the global financial crisis. In January 2018, the IMF revised its global GDP estimates 0.2% higher to 3.9%, which compares to its 0.1% revision to its 3.7% estimate for 2017. The growth appears sustainable to us as well, with only a few potential headwinds. Tightening global capacity might stoke incipient inflation concerns or it could lead to a resurgence in the subdued capital investment cycle. China's debt levels remain a potential problem, but the world can handle its GDP slowing 100–150bp, assuming China does not once again confound broad expectations to the upside.

So why are we sailing a little closer to shore? There is not one specific issue we can point to, but we know from experience that the twinge in our knee often indicates a storm just over the horizon and that if the barometer starts to fall, it could fall much faster than usual. After the initial low-quality rally that led us out of the previous recession, growth and yield have been dear. Interest rates were at historic lows, and the economy struggled to reach potential growth. That led to stocks with high dividend yields (the bond proxies) and unique top-line growth profiles to outperform and become quite expensive. More recently, cyclical joined the party.



Today, rates are rising, economic growth is accelerating, and valuations are lofty. For these reasons, we believe fundamental characteristics such as returns on invested capital and free cash flow yield will become much more important in equity returns. Cyclical will likely begin to experience multiple compression. We believe the bond proxies will endure the mirror image of the post financial crisis rally, and Value will finally begin to outperform Growth. For those reasons, we have little exposure to REITs and Utilities. Our valuation sensitivity in Producer Durables and Materials stocks is even higher than normal. Mature Technology is our favorite sector due to the predictable and elevated levels of free cash flow. We think lower corporate taxes, low unemployment, higher wage growth and inexpensive valuations make Consumer Discretionary attractive. Finally, we like companies that will benefit from lower corporate tax rates, and that have the pricing power to keep the margin pickup for themselves, rather than cutting prices to take or protect market share (i.e., software companies versus grocery stores).

Market Volatility



Source: Bloomberg, CBOE SPX Volatility Index (Equity), CTRB Deutsche Bank Volatility Index (Forex), CBOE High Yield Corporate Bond ETF Volatility Index (Bonds)

Until the last couple weeks, equity volatility had sustained unusually low levels for several years, which spread to other asset classes. The problem is that “stability begets instability”⁴ – risky bets that paid off because markets were calm encourage even riskier bets that need markets to be even calmer. We saw this happen quite clearly with mortgage credit last cycle. Investors took more and more mortgage risk until the market collapsed under its own weight. There is no clear mortgage analogue today (except possibly China’s debt levels, low volatility funds or crypto currencies) and we do not expect a repeat of



the global financial crisis. However, the term structure, credit spreads, implied equity discount rates and volatility itself indicate a macroenvironment that is priced mostly for positive outcomes.

In this sort of environment, small real risks can be amplified by complex financial markets that are seemingly less prepared to absorb downside volatility. We cannot say when, if ever, there will be a cascade, but we do see idiosyncratic sources of potential volatility: US tax policy changes, global central banks increasing short-term rates and possibly faster inflation. We are not anticipating rapid inflation, but rising global capacity utilization, higher oil and industrial commodity prices, a softer dollar and low unemployment suggest the potential for unexpected inflation is higher now than at any earlier time in the current expansion.

So to answer our own question, we're sailing a little closer to shore because you never know who is skinny-dipping until the tide goes out.

Performance and Contribution to Returns

Top Contributing Positions			Bottom Contributing Positions		
	Name	Total Return		Name	Total Return
NTAP	NetApp Inc	60%	CATM	Cardtronics PLC	-66%
IAC	IAC/InterActiveCorp	89%	DF	Dean Foods Co	-45%
ON	ON Semiconductor Corp	64%	NGS	Natural Gas Services Group Inc	-19%
OSK	Oshkosh Corp	42%	ARRS	ARRIS International PLC	-15%
FMC	FMC Corp	69%	DKS	Dick's Sporting Goods Inc	-49%

Top Contributing Positions

NetApp (NTAP), a supplier of enterprise-class storage solutions, saw a 60% return for 2017 and has been one of our best-performing stocks for 2 years running. New solutions in Flash and software-enabled storage fueled NetApp's top-line growth, quelling fears of secular declines. This stock is a classic example of combining the power of multiple expansion with upward revisions to revenue and earnings growth expectations.

InterActiveCorp (IAC) advanced 89% after several positive developments highlighted the tremendous value embedded in this tech conglomerate. Most notably, HomeAdvisor merged with Angie's List to create the single largest home service platform and the online dating assets held under Match Group saw accelerating growth. This management team has an uncommon ability to derive value from its technology and media assets.



ON Semiconductor (ON) returned 64% for the year as rising global semiconductor demand, higher content of power solutions in new automobile designs, and synergies extracted from the acquisition of Fairchild Semiconductor in 2016 all coincided to produce favorable growth, profitability and multiple expansion.

Oshkosh Corp (OSK), also a top performer in 2016, returned 42% for the year. Oshkosh fired on all cylinders as access equipment contemplated higher global demand and US infrastructure spending, fire and emergency equipment orders and margins outperformed expectations, and Oshkosh Defense saw early benefits and follow-on orders of Joint Light Tactical Vehicle (JLTV) contract win.

FMC Corp (FMC) rallied 69% as an asset swap with DuPont prompted by regulatory bodies resulted in a highly accretive transaction for FMC's agricultural solutions business. Secondly, what was considered optionality at the time of our initiation came into fruition when FMC's lithium assets reaped significant pricing and multiple expansion driven by global demand for lithium batteries.

Bottom Contributing Positions

Cardtronics (CATM), the largest ATM owner and operator, was down 66% for the year and was our biggest detractor. Fortunately, the stock gained 62% in 2016 and we trimmed our position, but that did not make the drop any less painful. The company faced a procession of unfavorable events during the year and was further set back by a negative turn in transactions per ATM (similar to same-store sales in retail). In addition to transitioning out of 7-Eleven stores, which was known in advance and we believe to be well managed, the UK's interchange network put to vote a plan to reduce fees by 20% over the next 4 years, leading Cardtronics to rationalize the number of ATMs in the country. Further, the four major banks in Australia cut withdrawal fees, triggering an impairment of their subsidiary. In spite of a rough year, we maintain a position in Cardtronics as we believe our thesis regarding the stickiness of cash usage, the value of ATMs as branding assets for banks, and the cash generation of the company remain intact. Notably, the stock has recovered 35% in 2018 as of the writing of this letter.

Dean Foods (DF) had a challenging year with the stock down 45%. Similar to Cardtronics, Dean Foods performed well in the prior year (up 30%) and we trimmed our position. The company faced incremental pricing pressure as some customers vertically integrated their milk supply. Rising input costs and volume pressure on their fluid-milk business persist, but as the country's largest and lowest-cost producer of milk, we believe Dean will weather this storm. The company is making strides in leveraging their existing processing and distribution assets into new areas, while maintaining a cost and scale advantage to their competitors in fluid milk.

Natural Gas Services (NGS) was down 19%. After running over 50% following the 2016 election, the stock gave back some in 2017 on stagnant natural gas prices and the realization that improving demand for the company's gas compression equipment would be slower to return than feverish hopes had anticipated. We believe Natural Gas Services is one of the best-run oil and gas equipment providers in the industry, and that NGS will continue to see improved results as we recover from the violent downturn witnessed in 2015.



ARRIS International (ARRS), provider of network and customer on-premise equipment to service providers, was down 15%. Set-top box spending by telecom and satellite providers came in lighter than expected, intensifying fears of a secular decline in the industry. We believe these fears are overblown and that the company's efforts to consolidate the industry, synergies therein, and huge cash generation will ultimately push the stock higher.

Dick's Sporting Goods (DKS) lost 49% for the year. While the company successfully navigated the integration of several Sports Authority stores (Sports Authority went bankrupt), they were run over shortly thereafter when pricing in the industry came under pressure. Our thesis that the company would benefit from capacity rationalization (competitors closing stores) and would maintain stable pricing in sporting goods as they executed on consolidation and cost-saving initiatives was violated when management pivoted to chase market share. This move violated our original investment thesis, and we sold the stock. Fortunately, this stock was a small position for us.

Below are our top 10 holdings as of year-end 2017.

Top 10 Positions			
Name			
NTAP	NetApp Inc	CIT	CIT Group Inc
TDC	Teradata Corp	XOXO	XO Group Inc
ZION	Zions Bancorporation	ON	ON Semiconductor Corp
OSK	Oshkosh Corp	GDP	Goodrich Petroleum Corp
LNGG	Linn Energy Inc	DOX	Amdocs Ltd

Top 10 positions as of 12/31/2017 account for 31% of total portfolio

Conclusion

Thanks again for your interest in Ballast. If you have any questions about our firm, our People, or our Process, please feel free to reach out.



Best regards,

Ballast Asset Management

About the Firm

Ballast is a boutique investment firm that employs a fundamental, bottom-up approach to investing in Small and Mid-Cap stocks. We emphasize a team-based culture and stress chemistry and fit of each member. We have a proven, repeatable process with a specific focus on limiting downside volatility and exploiting asymmetric Reward/Risk profiles. Just as a ballast is used to give stability to a ship, we actively manage our client portfolios to operate safely and successfully, regardless of market conditions. Ballast operates as a wholly owned, independent subsidiary of Inverdale Capital Management.

Important Notes and Disclosures

The investment decisions we make for clients' accounts are subject to various market, economic, and other risks, and there is no guarantee that those investment decisions will always be profitable. Clients are reminded that investing in any security entails risk of loss, which they should be willing to bear. The past performance of the firm or its principal is no guarantee of future results.

Some information contained in this communication was obtained from third-party sources. While these sources are believed to be accurate, that information has not been independently verified.

1. The Ballast Portfolio represents the performance of a proprietary account managed in the firm's model strategy that was launched on August 11, 2015. Gross Performance represents the returns of the account after all expenses, but before deduction of management fees. An individual client's account would be subject to the deduction of management fees in accordance with the Ballast fee schedule. Net Performance represents returns net of all expenses and the highest management fee rate (1%) in the firm's fee schedule. The returns achieved by an individual client's account may vary from those reported for various reasons, including management fee rate, timing of cash flows, frequency of rebalancing of individual accounts, and an individual client's restrictions. Past performance does not guarantee future results.

2. The Russell 2500 Index is a market capitalization weighted index of the 2,500 smallest companies in the Russell 3000 universe of United States equities. Returns shown include the reinvestment of dividends and are based on data obtained from FTSE Russell.

3. The Russell 2500 Value Index measures the performance of those Russell 2500 companies with lower price-to-book ratios and lower forecasted growth values. Returns shown include the reinvestment of dividends and are based on data obtained from FTSE Russell.

4. According to the undeservedly more obscure economist Hyman Minsky's Financial Instability Hypothesis, which given the evidence of the GFC, should probably be upgraded to a theory.