

## US Small Cap

### Radical Uncertainty to Certainty

- Markets haven't seen this toxic combination of macro cross currents since the 1970's. The wide level of indiscriminate selling after a much-needed valuation correction left us with greater opportunities to capture higher portfolio returns in our small cap strategy. The first half of this year we had the foresight to place greater weight on valuation metrics that capture more impact from total debt-equity levels and greater cash flow certainty, given the higher cost of capital and widening credit spreads. Furthermore, a pre and post pandemic snapshot provided us with greater clarity for a contrast point in investment decision making, as past global and U.S. monetary growth has widespread consequences.
- Investors worried a combination of surging inflation and an aggressive Federal Reserve would fuel a period of stagflation. Now the market is focused on the depth and breadth of a recession. Further downside may come from the market pricing in a prolong recession after valuation multiples reset in the first half of this year. We would expect earnings growth for 2022 and 2023 to contract in the 2nd half of the year if valuation multiples hold constant at the current levels.
- We believe fresh eyes are valuable and contrasting brings more clarity with asset classes and investments. Humility, homework, and understanding are hidden strengths in the asset management industry that pay off. Jesus himself said "Not everyone can accept this teaching, but God has made some able to accept it." Matthew 19:11. The history, translations, and what the heck Jesus is actually talking about turned us on our heads with benefits for everyone.

### Performance Summary

The portfolio increased 7.30%, outperforming its benchmark, the Russell 2000® Index by 24.50%, for the quarter ended June 30, 2022. Stock selection in information technology and health care lifted relative performance, while selection in consumer discretionary and industrials detracted.

→ For detailed investment information, please contact a Five Dimensions Institutional team representative.

### What we learned

Despite high periods of negative volatility in the second quarter, we were encouraged to see investors pay more attention to profitability and relative valuation levels.

We thought rather than provide another quarterly market commentary and market outlook to the already massive stash, we provide differentiation by highlighting some of the most valuable lessons we learned during the quarter. Invariably, lessons and mistakes have always become a benefit to us, our future, and future returns. In addition, we think its valuable to provide insight that puts our framework into context for the benefit of others.

One of the top contributors to the small cap strategy this quarter was Axsome Therapeutics (AXMS). We added to that stock with two buy tranches on June 13 under \$23 a share. Axsome had fallen 51% since the start of the quarter. Five Dimension's investment process keys in on asymmetrical risk return gaps using our framework to find good investments. Furthermore, asymmetrical risk return gaps combined with stocks that are mispriced by the market at wide levels is one of our goals.

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We provide a 6-point summary of the information that triggered an investment change on Axsome Therapeutics on June 13 with key learnings for us:

1. We came across newer research that two excipient properties - hygroscopicity and microenvironmental acidity are responsible for inducing drug instability. Given the change in the expected base case payoff of the stock, we had to understand more about the oral and molecular structure of AXS-005. The drug has two compounds: bupropion and dextromethorphan, and we had to compile all the individual compounds at various dosage levels in various forms to note the pharmacokinetics and stability levels. Pharmacokinetics can be simplified if we broke it down, thus liberation, absorption, distribution, metabolism, and excretion. We were aware of the risk in metabolism variability. We questioned if that could be adequately characterized with the current population numbers and so we adjusted for that in historical position sizes, relative to the expected payoff of the stock. Those two excipient properties supported what our research showed when we contrasted the pharmacokinetics compiled from all the FDA NDA approval packages of the two compounds, various forms, and various dosage levels. We had strong reasons to believe that the CMC deficiency issues focused on stability and dissolution testing.
2. The FDA has newer guidance and real time updates in their CDER's manual of policies and procedures or MAPP's. It was clear from company transcripts the street was using some older polices in their assumptions of the timeline of events. We continued to connect the dots with the new information and updates over time. Consistent with the FDA's new policies on information requests and identified deficiencies, relative to issuing a complete response letter, street fears of a worst-case scenario were illogical to us. The street fears were at odds with what is described in newer FDA guidance and MAPP's. The decision by the FDA to override any complete response given the FDA's internal assessment (current FDA MAPP on information requests and deficiencies), breakthrough status, priority review, FDA guidance on drugs in the MDD space, and FDA guidance on psychedelics continued to lower the risk profile of the lower probability outcomes we assigned in our research.
3. The passage of time and updates we argued reduced the metabolism risk of this optimized dual therapy drug combination with the current population numbers in the studies. In this case, each compound targets the same enzyme, with each component having known large material effects on CYP2D6. You can google the compounds with the FDA's drug interaction table of strong and moderate inducers on various enzymes. This suggested to us that it while it may be too unpredictable to characterize, some unknowns and theories have proved otherwise. The additional clinical updates and ongoing safety studies would keep reducing this risk for us.
4. The recent purchase of Solriamfetol was not understood or priced in yet from the market due to current biases of the street with AXS-05. A valuation reset on the stock was derived from the sales modeling, total addressable market, competitive differentiation, change in commercial pre commercial pipeline, and the pipeline enhancements to come as we thought about AXS-12 narcolepsy and the company's strengths.
5. The reasons for the complete response on AXS-07 or migraine compound and the expected NDA refiling further cemented areas that had no substance with street speculation in our opinion.
6. We gained evidence to indicate the company was progressing faster than the street consensus timeline on another NDA filing. We think this pertains to AXS-14's (Pfizer-Axsome collaboration) and a third NDA filing would be another valuation reset for the stock.

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We contrasted the totality of this new information and analysis, to the same point in time five months ago, where the market value was identical when we adjusted for the market, to realize the risk return gap widen by a large margin we thought. Then when we hypothetically eliminated AXS-005 and related drugs in the pipeline, the downside of this scenario had no downside in our models or we thought it was 100% priced in. Please note the payoff and range of outcomes for any stock based on the current market value, information, and market regime shift changes daily. The information on Axsome Therapeutics serves as no recommendation on whether to buy, hold, or sell the stock but as insight into our framework, decision making process, and key learnings during the quarter.

### We had no clue what Intersex meant

During the quarter we reached out to a scientist for research help. In our due diligence of research, this person identified as intersex in some white papers we read. We were clueless what that term meant. We asked others and they had no insight. The term intersex is an umbrella gender term or newer adjective for people that have been around since the dawn of civilization. You might recognize Aphrodite's from the Greeks, Eunuchs from the Bible, Transgender, He/They/Non-binary people, etc. With the advancement of tools and technology, we have further fundamental DNA evidence that gender includes more than two groups. While five of the seven groups of people (Table) were once thought to be extremely rare, scientists are now estimating it's a lot more common than people realize given incorrect assignments and or someone's choice to suppress this information when it is learned later. Most cases a person's choice is influenced by external factors so this was very logical to us. We questioned than what is the definition of sexuality with DNA if we used hetero- homo groupings by non-XX and XY relationships? XY and non-XX relationships? Non-XX and non-XY relationships. Admittedly, our heads were spinning in cases outside our expertise, where most people might not understand the implications here. As if this wasn't enough, what about when some men loose their Y chromosome, any implications with changes in gender, sexuality, or both? We don't know.

We were intrigued by the mention of Eunuchs in the Bible. We measure our stock outcomes and assign error probabilities to those outcomes using a range of 1% to 99%. A 0% error probability is defined as truth. A method to measure and test truth is logical consistency, empirical adequacy, and experiential relevance (see Appendix). We did further research on Eunuchs. It appears God chose to have Isiah predict what he didn't live to see (Isaiah 56:3-7) with Phillip and the Ethiopian Eunuch (Acts 8:26-28) and (Acts 8:36-38) in our linear understanding and consistency of the whole Bible from Old to New Testaments. We think there are very strong reasons why we don't know what kind of Eunuch the Ethiopian was, in terms of being forced by a government, a slave, culturally suppressed, or biologically natural. Jesus showed how difficult it is for us and for investors to overcome our biases, influences, and learned behaviors when Matthew quoted Jesus saying "Not everyone can accept this statement," Jesus said. "Only those whom God helps. 12 Some are born as eunuchs, some have been made eunuchs by others, and some choose not to marry for the sake of the Kingdom of Heaven. Let anyone accept this who can." Mathew 19: 11-12

Genders			
XX	Female		
XY	Male		
XO	Turner Syndrome Female		
XX/XY	Chimera	2 sets of DNA	
XO/XX	Mosaic		
XO/XY	Mosaic		
XY/XY	Mosaic		

## Manager Outlook With Certainty

We figured out decades ago that what happens to the markets isn't as important as our responses to the market. We ask ourselves all the time, how certain are we with all of the outcomes we planned for and what's the cost if we are wrong. In 2019, our patience was beyond stretched with our investment in Synaptics (SYNA) to the extent we wanted a different business model and wanted the board to dismantle and or sell. The board didn't agree with our assessments which we respected and we closed the position. The stock then went from \$30 to \$275 in the subsequent 2 years. We were very wrong in our upside outcomes but we were very right in our downside outcomes as we only realized a 10% loss on that position.

Often times it's easier for us to use metaphors in explaining our framework and stocks. If you have an immediate fatal health event today or you are in a fatal accident, do you have 100% certainty what happens to you? How certain are you with your faith and beliefs (e.g., 75%, 95% right, etc.)? Let's say you think you are 100% right, and you are wrong. What's the cost to you of being wrong, and cost to others, etc.? It seems less meaningful at this time for us to provide an outlook on what to expect or how we positioned. I would encourage you here or soon, to recheck your beliefs or find more answers, with fresh eyes, contrast, and humility. I know with absolute certainty where Melissa is because she made one decision, at one point in her life, and she understood it. Her life and her decisions since that decision didn't void that decision, and her outcome according to God in the Living Bible.

Melissa Hanly: My Sister-in-Law August 14, 1987- June 22, 2022 (34 years old)



Our friends and family include non-clients and clients. They come from a diverse set of backgrounds, faiths, religions, beliefs, practices, sexuality, and perhaps now gender after this quarter in what we learned. We treat people the same. Thank you for the trust you place in us. Thank you for the understanding why we were unable to do a final window dressing the last week of the quarter with the prudence in a quick rebalance to minimize tracking error given the cash build up.

## Appendix

The answers are always in front of us or at least accessible if you have the eyes to see and ears to hear. For example, how long does someone need to quarantine if they test positive for COVID? (Leviticus 13:4). We think Galileo and Copernicus just read Isaiah 40:22 in the Bible, as it says the Earth is a sphere. A consensus belief that pervaded for thousands of years didn't make it right. What about Hipparchus and others that endeavored to catalogue an accurate count of the stars in the solar system. They should have just read the Bible (Jeremiah 33:22). Jeremiah says the stars are infinite in his book. How did he know that? Does science carry more weight in a decision? The first president of the United States died from bloodletting, a process of draining sick blood out of the body and the science of that day. That's counter intuitive to what we do today with blood transfusions and the need for healthy blood (Leviticus 17:11). In 1861, there was a very famous book that came out, it was called Fifty-one Incontrovertible Proofs that the Bible is Scientifically Inaccurate. Today not a single scientist would agree with one fact from the fifty-one incontrovertible facts. The Bible has 40 authors, written about someone else, over a period of 1,500 years, with hundreds of hundreds of predictions that have come true, so far, and the forecasting error rate of the Bible is still 0% as of today.

The holdings identified in this table, do not represent all of the securities purchased, held or sold during the period. Relative contribution reflects how the portfolio's holdings impacted return relative to the benchmark. Cash and securities not held in the portfolio are not shown.

Top Contributors			Quarterly Return of the Russell 2000 Index: -17.20%			Top Detractors		
MYOV	Myovant Sciences Ltd.	64.12%	ELYM	Eliem Therapeutics, Inc.	-69.06%			
AXNX	Axonics, Inc.	29.48%	CARS	Cars.com, Inc.	-41.97%			
GOGO	Gogo Inc.	26.73%	CROX	Crocs, Inc.	-40.86%			
PCT	PureCycle Technologies Inc	16.00%	TREX	Trex Company, Inc.	-35.15%			
KBR	KBR, Inc.	13.86%	ICHR	Ichor Holdings, Ltd.	-33.30%			
STKL	SunOpta Inc.	13.64%	ZD	Ziff Davis, Inc.	-29.52%			
AXSM	Axsome Therapeutics, Inc.	13.19%	FTAI	Fortress Transportation and Infrastructure Investors LLC Class A	-29.16%			
APLS	Apellis Pharmaceuticals, Inc.	11.31%	ACAD	ACADIA Pharmaceuticals Inc.	-26.69%			
MGRC	McGrath RentCorp	10.09%	SIG	Signet Jewelers Limited	-25.37%			
PLUS	ePlus inc.	9.35%	COLM	Columbia Sportswear Company	-8.37%			

## Performance

As of 6/30/2022	Annualized Return									
	2nd Quarter 2022	1st Quarter 2022	Year To Date	1 Year	3 Year	5 Year	7 Year	9 Year	10 Year	Since Inception (12/31/2010)
<b>Small Cap Composite (gross of fees)</b>	<b>7.30</b>	<b>-1.40</b>	<b>5.80</b>	<b>11.16</b>	<b>36.24</b>	<b>22.24</b>	<b>17.34</b>	<b>18.03</b>	<b>19.12</b>	<b>17.60</b>
Russell 2000 Index	-17.20	-7.53	-23.43	-25.20	4.21	5.17	5.91	7.81	9.35	8.45
Difference	24.50	6.13	29.23	36.36	32.03	17.08	11.43	10.21	9.76	9.15

## Portfolio Manager

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For more information, please visit [fivedimensionsinvest.com](http://fivedimensionsinvest.com)

Past performance is no guarantee of future results.

Discussion is based on performance gross of fees.

Information relating to portfolio holdings is based on the representative account in the composite and may vary for other accounts in the strategy due to asset size, client guidelines and other factors. The representative account is believed to most closely reflect the current portfolio management style.

Portfolio holdings are as of the date indicated, and are subject to change. This material should not be construed as recommendation to buy or sell any security.

For equity portfolios, relative contribution compares the performance of a security in the portfolio to the benchmark's total return, factoring in the difference in weight of that security in the benchmark. Returns are calculated using daily returns and previous day ending weights rolled up by ticker, gross of advisory fees, may exclude certain derivatives and will differ from actual performance.

**Investing involves risk, including the possible loss of principal and fluctuation of value.**

US Small Cap Composite, benchmarked to the Russell 2000® Index

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