STERN IAG

Board of Advisors Meeting

October 2nd 2018

Table of Contents

Letter from Portfolio Managers

Dear Board of Advisors,

We are very excited to start the new IAG year – we can't thank you enough for the supervision and input you will be providing us this semester. The 2018-2019 school year has commenced with a productive start to the Investment Analysis Group, and we look forward to leading the fund this year.

As a reminder, Steve and I have been part of the portfolio for the past two years serving in various capacities. We have spent a considerable portion of the summer and the school year implementing a series of infrastructural tasks we think will help our analysts learn and prosper. Some of these measures include: (1) an Investment Watchlist that helps us track companies that we are interested in but are not currently at an attractive price (2) the introduction of the Investment Memo deliverable that is less comprehensive that our prior Investment Checklist but allows for more focused investment analysis and discussion (3) a greater focus on the sector system that allows senior specialized members to allocate work off to junior analysts and inculcates a built-in mentorship that has always been critical to the IAG mission (4) A generalist program for underclassmen that allows them to try out different industries and work with different senior analysts. We are very excited about all the infrastructural changes we have made to the organization and will continue to communicate with Oversight of these changes. It is paramount to both Steve and I that we maintain a transparent relationship with Oversight, and look forward to updating you on our progress.

Over the period of the most recent two calendar quarters, the IAG fund has achieved a 16.54% return, eclipsing the S&P 500 benchmark return of 9.06%. Page 9 will help offer more color as to the current drivers of performance in the portfolio. Viewing the fund's returns through this lens is key as it offers a more meaningful illustration of performance, though should be taken with appropriate context.

Since our most recent meeting in May 2018, the US equities market has been generally been characterized by a few broad phenomena: (1) trade war with China (2) overheating risks (3) U.S. stimulus-fueled surprises. This greater uncertainty – along with rising interest rates – has contributed to tightening financial conditions and argues for building greater resilience into our portfolio. As a student-run fund without the information edge to always develop highly-contrarian, mispricing-focused theses that are accurate, it is imperative now more than ever that our team continues to search for opportunities in high-quality industry leaders at justifiable prices.

The excellent businesses we search for are often long-term compounders that reflect strong capital allocation and high returns on investment; we aim to identify true economic moats indicating durable, meaningful competitive advantages. Our team also aims to identify attractive entry points while avoiding superficially-cheap, poor-quality businesses at any price.

Today, we are pleased to present three businesses that exemplify our investment philosophy. On Page 30 is Blackberry (BB), a stable enterprise mobility management software business with a growth stake in autonomous vehicles. On Page 31 is Western Digital (WDC), an HDD and data storage manufacturer with favorable industry headwinds. On Page 33 is Davita (DVA), a kidney dialysis provider with high FCF and is incredibly shareholder friendly.

We look forward to the remainder of the semester. We are happy to be a source of information to the Board, and encourage you all to reach out with feedback or clarifications – thank you again for your time.

Best,

Nived Gopakumar & Steve Zhang

Portfolio Managers

Letter from the Chairman

Dear Board of Advisors,

As a part of our updates, we wanted to share with you various initiatives that we've undertaken internally. We hope to provide more clarity into what our club is working on operationally and engaging with the Stern community.

Partnerships: We recently brought in both Goldman Sachs Equity Research and Point 72 Asset Management for teach-ins. Goldman brought in two Stern alumni to speak about their experiences with equity research and go through an overview of the field. Point 72 went through two investment ideas with our students. More than 100 students were in attendance at each event. Additionally, we are currently hosting Credit Suisse's Credit Investments Case Comp. Davis Meiering, previous portfolio manager, reached out to IAG to host the competition.

Professional: Our senior class recently completed their summer internships. Senior firms include: J.P Morgan, Citigroup, UBS, Evercore, Guggenheim and Deloitte. Our junior class is also in the process of recruiting, with current firms accepted including: J.P. Morgan, Morgan Stanley, Goldman Sachs, Lazard and Rothschild

Portfolio Team Recruiting: After a competitive process with over 120 applications, we are proud to introduce you to the 10 new analysts that we onboarded to our Portfolio Team. This represents our most competitive application pool in years.

Pre-Screen: Sector heads extensively go through the answers to the application, students' resume, and attendance at IAG events. Each Sector head subsequently rates the application on a scale of 1 - 5 (Best). Applications that receive over a 3.5 on these various metrics are given a first round.

First Round: Students are interviewed by Senior Analysts, Sector Heads and Portfolio Managers extensively, focused on case-study styled questions as well as fit-based questions

Final Round: Students are given a week to complete a case study. This year, we decided to give students the opportunity to study the fixed-line telecom industry. Student's were asked to pitch a long on either Century Link, Charter, Comcast or a company of their choice.

Second Round Mentor: As we prize mentorship within IAG, students who receive a second round are paired up with an IAG mentor to help guide them on the case study. Mentors typically comprise of junior and senior analyst; this year, we would proud to have Sruthi, Mateo, Steve and Anna help out in the process.

IAG Connect: For student's not involved in the Portfolio Team, we continue to offer additional opportunities to get involved. Access to membership tiers is contingent on club attendance. Wednesday Workshops are +1 and Friday Pitches are +2.

Bronze: Premium access to IAG materials, including books and modeling trainings

Silver: Paired with an IAG upperclassmen mentor

Gold: Guaranteed first round interview

Letter from the Chairman Cont.

Communication: We have recently shifted our team over to Slack. As we view communication essential to the organization, we realized moving to a Slack channel would allow the organization to better handle inter-club communication. Additionally, the IAG Drive has been revamped with customized procedures to ensure all data from pitches is present. This way, we hope to eradicate the problem in which pitches can't be found once seniors graduate.

Social Media Engagement: We have recently hired a new Creative Director, Rajiv Thandla, to help our marketing efforts. Rajiv has done a stellar job creating marketing materials; our application post received over 2,850 views and the average Friday night pitch post receives ~400 views

Thank you once again for your continued guidance and support throughout the year.

Best,

Keshav Sota

Chairman

II. Portfolio Team Overview

Fall 2018 Team Roster

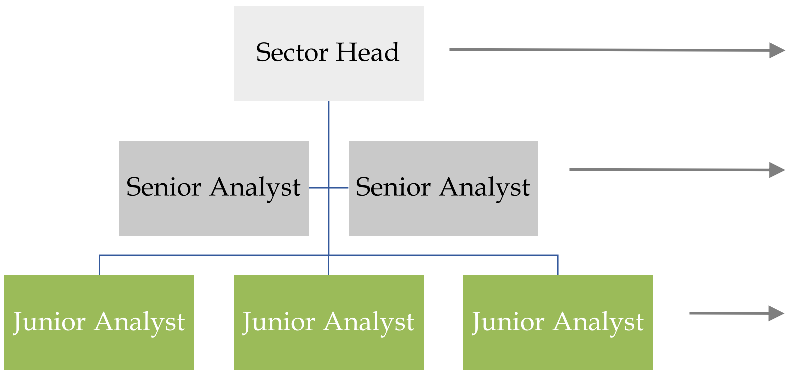
Portfolio Manager
Nived Gopakumar
Steve Zhang

Sector Heads
Rohan Deorah
Keshav Sota
Steve Woo

Senior Analysts
Samuel Lum
Sruthi Boddu
Steve Woo
Sushil Bhandaru
Mark Sun

Junior Analysts
Mateo Panjol-Tuflija
Liam Coohill
Michael Giese
Anna Usvitsky
Richard Li
Richard Zhang
Niti Parekh
Michael Davidoff
Cole Roseborough
Tyler Small
Oliver Jiang
Larry Wang
Brooke Fuller

Team Structure and Roles



Lead strategy for sector and manage analysts to bring weekly materials.

'Own' pitches by leading idea generation and facilitating pitch process.

Support Senior Analysts in modeling and material preparation.

Pitch Process

1. **Idea Generation:** Work within sectors to develop ideas (outside of weekly Portfolio Team meetings)

2. **Investment Checklist:** Comprehensive list that is used to grasp with potential investment ideas

3. **Investment Memo:** Standardized memo that details key company criteria, investment thesis and possible financial and operational risks

4. **One-Pager and Valuation:** Final deliverables required for presentation to Board of Advisors

III. Performance Analysis

Holdings Summary *(as of September 28th 2018)*

Company	Ticker	Analyst	Purchase Date	Market Cap (M)	Share Price at Purchase	Share Count Invested	Share Price 8/28/18	Share Price 09/28/18	Value (at 5/03/18)	Value (at 09/28/18)	% Portfolio	1 Month Moving Returns	Current Return	Morningstar Industry
Axon Enterprises	AAXN	Steve Zhang	10/19/2017	$3,634.00	$24.38	76	$67.30	$68.43	$3,161.60	$5,200.68	11.80%	1.68%	180.68%	Industrials
Bristol-Myers Squibb Co	BMY	Suresh Kannappan	12/6/2016	$101,371.50	$56.21	27	$60.17	$62.08	$1,376.73	$1,676.16	3.80%	3.17%	10.45%	Healthcare
Celestica	CLS	Kaan Tuncel	4/9/2018	$2,117.70	$10.06	180	$12.32	$10.83	$2,117.70	$1,949.40	4.42%	-12.09%	7.65%	Technology
Chipotle Mexican Grill	CMG	Dryden Brown	10/12/2016	$8,661.40	$430.11	3	$494.09	$454.52	$1,259.49	$1,363.56	3.09%	-8.01%	5.68%	Consumer Disc.
CVS Health Corp	CVS	Robert Yin	12/6/2016	$61,983.70	$77.28	20	$74.92	$78.72	$1,287.00	$1,574.40	3.57%	5.07%	1.86%	Consumer Stap.
Dave and Busters	PLAY	Keshav Sota	10/19/2017	$1,631.40	$48.90	38	$56.68	$66.22	$1,551.92	$2,516.36	5.71%	16.83%	35.41%	Consumer Cyclical
Dish Network	DISH	Robert Yin	12/10/2015	$17,364.20	$61.52	25	$36.33	$35.76	$810.75	$894.00	2.03%	-1.57%	-41.87%	Telecom
Disney	DIS	Kaan Tuncel & Steve Woo	11/13/2017	$148,352.60	$102.08	19	$112.58	$116.94	$1,865.33	$2,221.86	5.04%	3.87%	14.56%	Consumer Cyclical
Ferrari	RACE	SiHeng Yeo	1/7/2016	$22,183.50	$52.84	12	$130.04	$136.91	$1,523.88	$1,642.92	3.73%	5.28%	159.10%	Industrials
Gannett Co	GCI	Robert Yin	10/11/2016	$1,121.80	$11.96	127	$10.40	$10.01	$1,216.66	$1,271.27	2.88%	-3.75%	-16.29%	Telecom
Gilead	GILD	Samuel Lum	11/13/2017	$95,363.60	$73.77	25	$74.80	$77.21	$1,617.13	$1,930.25	4.38%	3.22%	4.66%	Healthcare
GNC Holdings	GNC	Gregory Gabovich	7/31/2017	$293.70	$9.69	189	$3.10	$4.14	$658.67	$782.46	1.78%	33.55%	-57.27%	Consumer Stap.
Green Brick Partners	GRBK	Gregory Gabovich	12/11/2017	$518.60	$11.39	162	$10.15	$10.10	$1,668.60	$1,636.20	3.71%	-0.49%	-11.34%	Real Estate
Hanesbrands	HBI	Steve Woo	12/11/2017	$6,551.20	$20.82	91	$17.51	$18.43	$1,520.61	$1,677.13	3.81%	5.25%	-11.49%	Consumer Cyclical
IAC Interactive Corp	IAC	Sushil Bhandarun	3/2/2018	$12,479.00	$151.30	12	$199.78	$216.72	$1,588.20	$2,600.64	5.90%	8.48%	43.24%	Technology
Incyte Corp	INCY	Robert Yin	4/9/2018	$14,126.00	$65.36	22	$73.85	$69.08	$1,344.97	$1,519.76	3.45%	-6.46%	5.69%	Healthcare
Formula One	FWONK	Kaan Tuncel	5/3/2018	$8,330.00	$29.60	63	$37.25	$37.19	$1,888.11	$2,342.97	5.32%	-0.16%	25.64%	Consumer Disc.
Perrigo Co	PRGO	Dryden Brown	6/20/2016	$11,417.90	$105.55	14	$74.58	$70.80	$1,059.94	$991.20	2.25%	-5.07%	-32.92%	Healthcare
Purple Innovation	PRPL	Robert Yin	4/9/2018	$317.43	$8.09	175	$5.44	$5.80	$1,662.50	$1,015.00	2.30%	6.62%	-28.31%	Technology
Rizzoli	RSZMF	SiHeng Yeo	5/11/2016	$11.44	$0.66	8	$1.03	$0.99	$11.44	$7.92	0.02%	-3.88%	50.00%	Technology
Stanley Black and Decker	SWK	Spencer Hanus	5/3/2018	$21,114.00	$139.53	14	$144.43	$146.44	$1,946.28	$2,050.16	4.65%	1.39%	4.95%	Consumer Defensive
Supervalu	SVU	Samuel Lum	12/11/2017	$555.80	$18.83	101	$32.24	$32.22	$1,699.83	$3,254.22	7.38%	-0.06%	71.13%	Consumer Defensive
Western Union	WU	Robert Yin	5/6/2016	$8,413.00	$19.14	19	$18.62	$19.06	$1,538.40	$1,571.72	3.57%	2.36%	-0.40%	Financials
SPDR S&P 500 ETF Trust	SPY								$2,083.88	$2,322.48	5.27%			
Cash									$62.93	$62.93	0.14%			
Total									$36,522.55	$44,075.65	100.00%			

Best and Worst Performers

Best Performing Movers (Last 1 Month)

Company	Ticker	Share Price 08/28/18	Share Price 09/28/1	Period Return
GNC	GNC	$4.14	$3.10	33.55%
Dave and Busters	PLAY	$56.68	$66.22	16.83%
IAC Interactive Corp	IAC	$199.78	$216.72	8.48%

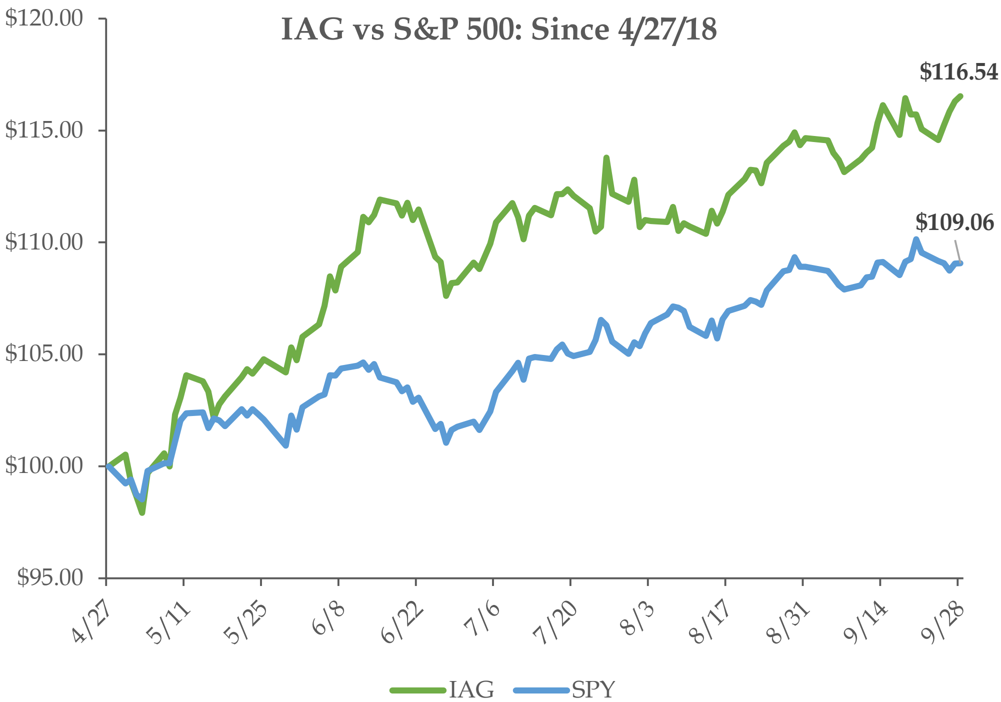
Shares of GNC jumped as much as 31.5% in trading Thursday after a large investment got the go-ahead to move forward. The committee on Foreign Investment in the US approved Harbin Pharmaceutical Group Holding's $300 million investment in GNC, which will make it the company's biggest investor. The companies are also forming a JV in China to manufacture, market and sell products there. Dave & Busters shares sored 7.9% after PLAY beat on both revenue and earnings, and raised both ends of 2019 revenue guidance. The IAC thesis continues to play out, with the company beating Street estimates on both revenue and earnings. With a growing TAM and *Coffee Meets Bagel* the only viable substitute to IAC's market leading brands, we continue to think that this is the industry leading company to hold.

Worst Performing Movers (Last 1 Month)

Company	Ticker	Share Price 08/28/18	Share Price 09/28/1	Period Return
Celestica	CLS	$62.00	$52.27	-12.09%
Chipotle Mexican Grill	CMG	$37.41	$34.74	-8.01%
Incyte Corp	INCY	$9.98	$9.70	-6.46%

Celestica shares fell 4% after news came out that Dell moved production in-house to Ireland, effectively cutting ties with Celestica. CMG reported slower traffic this quarter, and while we still continue to believe in the durability of the business model, these numbers signify the need for Chipotle to reinvest FCF into the store and its product offerings. Incyte announced on September 10th that their Chief Financial Officer David Gryska will retire at the end of the 2018, toppling the shares 4.2% in response. Many analysts believe that Incyte has the potential to be acquired given its solid commercial and broad pipeline assets, with revenues projected to hit $3 billion in the coming years.

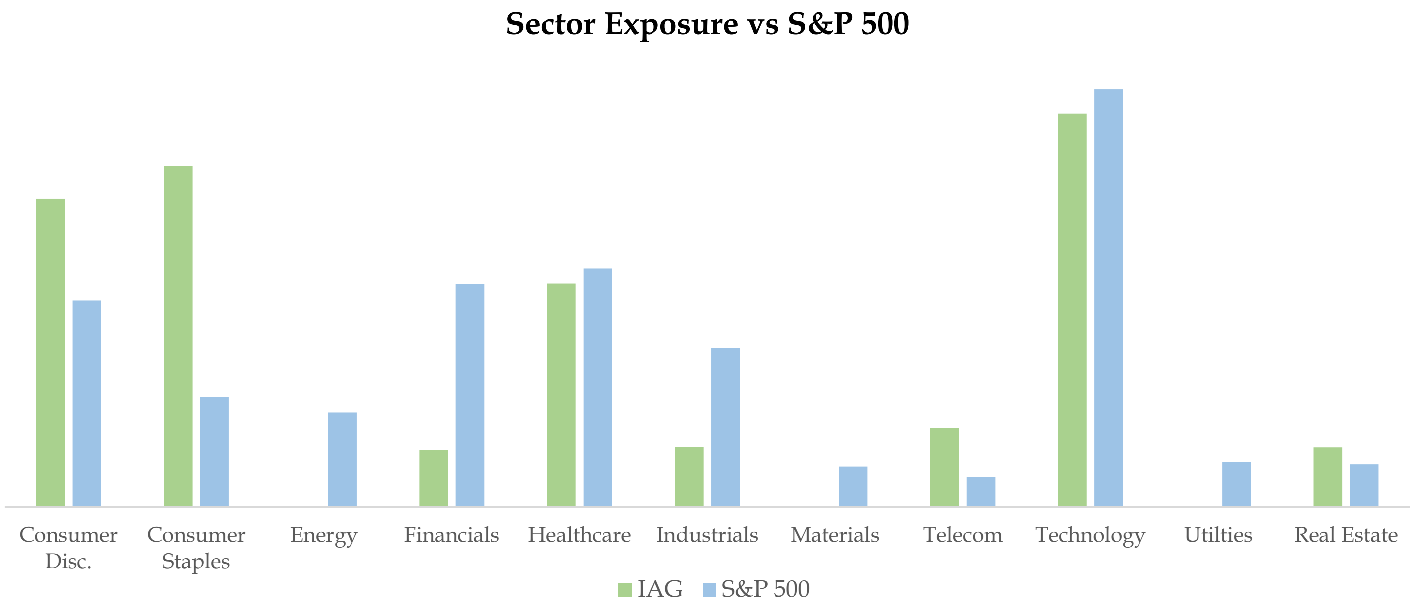
Portfolio Performance vs Benchmark

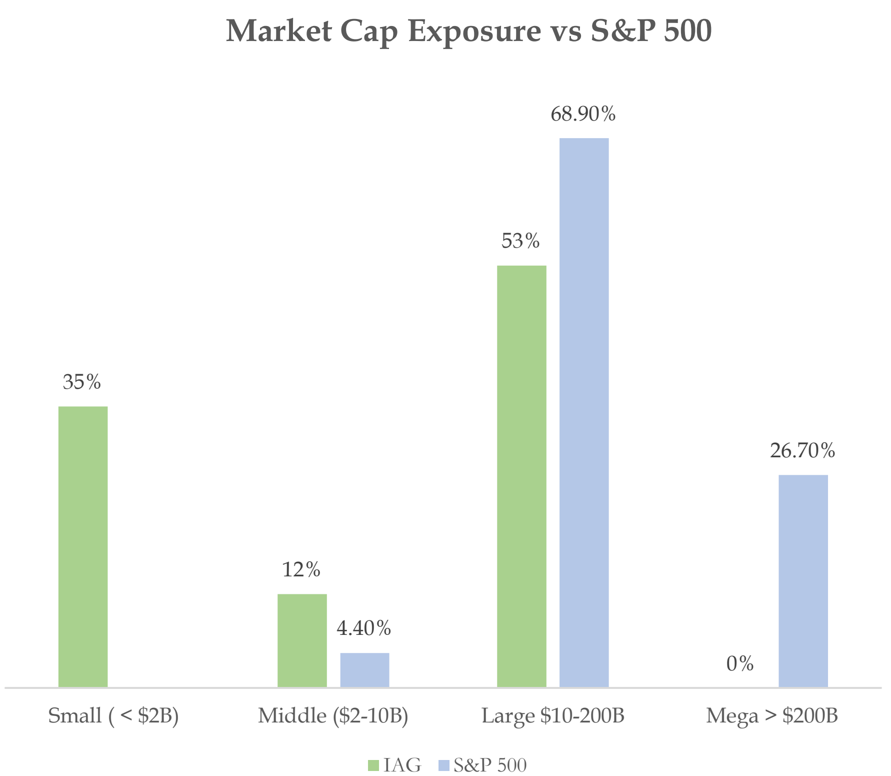


In the most recent month, IAG has returned on par with the S&P 500 benchmark. The majority of the portfolio's returns can be attributed to the performances of Chipotle and Supervalu. We believe the fundamentals of both businesses continue to improve and recommend holding both positions.

Over the course of the fiscal year, IAG has not beaten the S&P benchmark. We think IAG's ability to track – or exceed – the S&P has been compromised this year. As a deep value fund, we do not expect on most bull-run years to exceed the pace of the market's returns. We also believe however that our recent returns are an indicator that some of our recent positions have not undergone the intellectual rigor necessary to support their positions in the portfolio. We will evaluate these positions in the immediate future and strengthen our process to evaluate undervalued equities

Portfolio Exposure vs Benchmark





IAG continues to target the S&P 500 benchmark specified in the fund mandate. As of October 2018, IAG is particularly overexposed to Consumer Disc.& Consumer Staples and underexposed to Financials and Industrials. While we aim to correct IAG's overexposure, we also think our industry overexposure is cyclical and representative of where we believe there is most value in the market.

IAG is still underexposed to large- and mega-cap positions, an issue which has previously stemmed from the difficulty of identifying attractive opportunities to enter heavily covered stocks. We continue to hold positions Disney ($157 B) and Gilead ($95 B) and will continue to seek opportunities where they present themselves.

IV. Key Holdings Update

Portfolio Updates Since May 2018 Meeting

Company	Ticker	Update
Axon Enterprise	AAXN	Update and Sell Note in Packet.
Bristol-Myers Squibb	BMY	Update and Sell Note in Packet.
Celestica	CLS	Celestica's stock price had risen to a high of $12.48 as a result of two earnings calls beats. However, recently the stock traded as low as $10.71 due to Dell terminating their contract and moving production for its subsidiary in Ireland in house. Besides these updates, none of the thesis points for Celestica have been played out. The liquidation of their headquarters is expected to close this year, while the normalization of their inventory might take time as they continue to experience materials constraints from their suppliers.
Chipotle Mexican Grill	CMG	It appears that CMG has finally turned the corner with its new management and has hopped on the digital food delivery trend. The market has come to appreciate CMG's value and growth potential, and we believe its 60x EPS valuation is justifiably fair. However, Chipotle has asymmetric downside risk if it experiences another breach in its food safety.
CVS Health	CVS	A integrated PBM-retail pharmacy model should help CVS gain more market share over time. Current M&A and organic growth strategies make CVS well-positioned to benefit from changing-market environment. On the other hand, stock price has recovered from its fall due to concern over Amazon's potential healthcare entry. While its EV/EBITDA multiple currently trades below industry average, on top of steadily increasing ROIC for 8 the year straight, DCF valuation should be performed to confirm target price.
Dave and Busters	PLAY	Update and Sell Note in Packet.
Dish Network	DISH	Dish TV Subscribers continues to hemorrhage due to cord-cutting. However, it's Sling TV Subscribers gained 41,000 subscribers in Q2 2018, and is the company's response to cord-cutting. The Company's current churn ratio is, according to the Q2 2018 conference call, at historical lows. The company plans on unveiling its spectrum assets in 2020, and believe that they are well positioned to dominate the 5G and IoT (internet of things) market. The investment of nearly $21B in Spectrum assets has yet to play out in terms of returning value to shareholders. The company does not expect to sell Spectrum assets anytime soon; it's a key component to its 5-10 year plan.
Disney	DIS	Disney's acquisition of 21st Century Fox will allow it to grow its intellectual property portfolio. Disney's DTC segment will be unveiled in 2019. Disney's failed attempt to acquire Sky was a blow to its attempt to expand in the overseas market, but selling its stake will help to deleverage Disney. Subscription in ESPN+ grew at a steady pace, recently hitting over 1M subscribers.
Ferrari	RACE	Update and Sell Note in Packet.
Gannett Co	GCI	Update and Sell Note in Packet.

Portfolio Updates Since May 2018 Meeting Cont.

Company	Ticker	Update
Gilead	GILD	Since taking the position last November, Gilead is up approximately 5% despite unfavorable outcomes in some of our thesis points. YOY revenue is down ~20%, but the approval of the asset Yescarta in the United States will allow Gilead to gain market share even while the U.K thesis has not yet played out. The pullback in the insured population is offset as Gilead continues to develop effacious assets that will increase Gilead's TAM
GNC Holdings	GNC	Update and Sell Note in Packet.
Green Brick Partners	GRBK	Green Brick has severely under-performed since our original pitch in early-December of 2017. The movement can be attributed to the non-dilutive secondary offering of 7.14 million shares at $9.50 per share ($67.83 million) initiated by Third Point L.P in mid-June. After pricing in Third Point's discounted sale, shares are currently trading at about $10 and we believe the secondary offering lacks any material risk to our original thesis as the underlying fundamentals are unchanged and it's very possible Third Point sold to meet liquidity/redemption needs. Even with concerns regarding how advanced the real estate cycle is, Green Brick shares offer exposure to healthy markets in Atlanta and Dallas at a 10~11x FCF which we still believe to be cheap.
Hanesbrands	HBI	Update and Sell Note in Packet.
IAC Interactive Corp	IAC	While the stock has increased in value, the original thesis has played out well and still holds fundamentally true: the bulk of IAC's $16 billion dollar valuation can be attributed to a $13 billion stake in MTCH, and a $1.4 billion stake in ANGI – The video and rapidly growing publishing segments are valued at 1.5B – roughly 4X sales of these divisions over the past 6 months alone. Perhaps more importantly, there is still rapid growth in the Match Group which has completely cornered the online dating market, as well as ANGI, as home starts continue to increase. The company is experiencing strong growth and remains well-diversified.
Incyte Corp	INCY	Update and Sell Note in Packet.
Formula One	FWONK	Formula1 is diversifying its broadcasting platforms to increase viewership through partnerships with Netflix, Twitter, and Amazon. Formula1 has maintained its promise to focus on growing its sponsorship segment signing several minor deals, obtaining Honda and Mercedes as title sponsors, and introducing live in-play betting at the Grand Prix. Despite poor earnings in Q2 2018, Formula1's new sponsorships and broadcasting investments and partnerships will generate revenue and incremental EBITDA as they are implemented through the next season.
Perrigo Co	PRGO	Update and Sell Note in Packet.
Purple Innovation	PRPL	Update and Sell Note in Packet.
Stanley Black and Decker	SWK	Stanley Black and Decker has remained flat since we originally pitched the position in April due to fears of rising input costs as well as Sears exposure. However, we believe such macro-headwinds are minor concerns when compared to the moat of the business. As shown through its most recent partial acquisition of MTD lawn products, management's capital allocation expertise continues to strengthen the company's product line. In addition, we believe rising input costs can partially be passed onto the consumer as SWK products are among the industry's most recognized brands and highly price inelastic and as such, we hold great conviction with our position on the company.

Portfolio Updates Since May 2018 Meeting Cont.

Company	Ticker	Update
Supervalu	SVU	Update and Sell Note in Packet.
Western Union	WU	Western Union has remained flat over the past two years since the position was initiated. We believe the company has remained resilient in the face of alternative payment methods. Growth from its online users was recorded as 22% YoY in the 2Q18 earnings release while the consumer payments segment increased ~20% YoY in the same report. The growth in the payments segment is masked by the declining revenues in the business solutions segment, which management is considering a sale on. Given how shareholder-friendly the company is, we see the sale of the troubling segment as a possibility in the near-term and we feel comfortable waiting, especially with the 4% dividend yield.

IV. Sell Notes

Sell Note: Axon Enterprise

Dear Board of Advisors,

We would like to sell our position in Axon Enterprise, representing a 181% upside on a $24.38 cost basis. Since the stock was pitched in October of last year, our thesis points have mostly played out. Axon's free trial model in the Software and Sensors Segment has been executed well and has allowed them to capture 38 of 50 major metro area police departments in the US before their acquisition of major competitor VIEVU, as well as over 300,000 seats booked on evidence.com. Furthermore, Axon has successfully switched their Weapons Segment to a subscription model, encouraging police departments to decrease the period in between re-stocks as well as increasing the frequency and magnitude of recurring revenues.

At this point, Axon's prospects for growth are much less clear than they were a year ago. Management believes growth can be driven through a combination of more Evidence.com seats, development of add-on systems for cross-selling opportunities, and international expansion. We believe that:

Much of the low-hanging fruit (officers in major metros) for Evidence.com has already been picked, and expanding usage to smaller departments will require significantly more time and expense on Axon's part. Also, unlike the Taser and Camera markets, Evidence.com does face well-funded competitors.

- Add-on services require large amounts of R&D expense, with no guarantee of widespread adoption. Axon's management has been historically poor at cost controls as well, consistently overshooting expense guidance.
- Axon's international prospects are also tough, as it is difficult to effectively replicate their US sales strategy of having ex-police officers sell to their old precincts overseas.
- Additionally, conversion of the weapons segment into a subscription model has also lead to adoption of very aggressive accounting policies, and possibly an overstatement of segment sales.

With all of this in mind, we see limited upside for Axon going forward. We have greatly exceeded our original $37.06 price target and would like to capture our gains while we have the opportunity.

Sincerely,

Steve Zhang

Sell Note: Bristol Myers Squibb

Dear Board of Advisors,

We would like to sell our position on **Bristol-Myers Squibb** representing a **10.5%** upside. We believe that all of our thesis points have played out.

Current Earnings Recap:

After Q2 earnings, BMY now trades at a premium to the market reflecting investor confidence in BMY as a company.

Thesis Point 1: Combinational Therapy Approval Helps Recover Yervoy's Revenue Growth

In July 2018, Opdivo & Yervoy became the first immuno-oncology combination therapy approved by FDA, indicating the success of Phase 2 CheckMate -142 study so far. The approval serves as a potential catalyst for the sales growth of Opdivo and Yervoy. Although the effects are yet to be seen, Yervoy's sales, which experienced a 6% decline in 2016, is expected to continue rebound. The two products currently form 30% of BMS's total revenue. Market has reacted positively to the news, with BMY's share pricing increasing 12%.

Thesis Point 2: Successful Trial Result Creates Future Monetization Opportunities

On Sept 13th, 2018, BMS announced its experimental drug helped reduce the severity of the most common form of psoriasis in a mid-stage trial. After 12 weeks of testing, 67-75% of patient given 3-milligram dose twice daily, or a higher dose, showed a 75 percent reduction in dry, red skin- 3 times more than traditional chemotherapy in survival rate This promising result, as well as current enrollment of patients with lupus or Crohn's disease for a late-stage trial in BMS-986165, gives a chance for BMS to enter into a 900k ($10-12B) market.

Conclusion:

BMY's main product Opdivo is no longer a monopoly in the advanced-stage lung cancer drug market, as it was recently surpassed by its rival Merck's Keytruda in market share. Although the Eliquis segment is experiencing strong sale growth, it is being partially offset by accelerated revenue decline in established brands. Increasing reliance on Opidvo and decreasing portfolio diversification serve as major risk factors for BMY going forward. Market's positive sentiment and lack of tangible catalysts indicate that the stock fairly valued. Based on these points and the price appreciation after Q2 Earnings, I think it is the perfect time to sell BMY. It currently trades at 14.4x multiple, higher than industry average.

Best,

Larry Wang

Sell Note: Dave and Busters

Dear Board of Advisors,

We would like to sell our position on Dave and Buster's, representing a 48.6% upside. We believe that all of our thesis points have played out.

Thesis Point 1: Best in Class Restaurant Operator

Management has announced the implementation of a cash dividend and increase in share-repurchase. The board will now offer a $.15 cash dividend along with a $100 million share repurchase. Multiples are now trading at a slight discount to casual dining at 9.0x EV/EBITDA (industry standard to 10.0x). A significant portion of this rerate is due to the fact that the entertainment business has been appreciated. Dave and Buster's has become an industry leader in entertainment, introducing the first virtual reality game (Jurassic Park). For premium rides, management is testing price increases of ~20%.

Thesis Point 2: Expansion Plan Remains Sound

Management has announced that their expansion plan currently remains sound, with an expected 15 stores to be added at the end of 2018 and an additional 15 at the end of 2019. In Quarter 2 earnings, management had opened five new stores and were on track to hit the benchmark of 15 stores by the end of 2018, representing 13% to 14% unit growth. One new addition is planned in the Middle East market through a franchise agreement.

Thesis Point 3: SSS Outperformance

Dave and Buster's has continued to drive meaningful improvement in comp store sales during the quarter and new strong performance remains strong.

Based on these points playing out, I think it is the perfect time to sell Dave and Buster's. It currently trades above our price target of $60.48 (30.51%).

Best,

Keshav Sota

Sell Note: Ferrari

Dear Board of Advisors,

We would like to sell our position on Ferrari (RACE), representing a 111.26% upside. Currently, the stock trades at $139, representing a significant premium to the target price.

Previous CEO Sergio Marchionne set a $2B EBITDA target for 2022 which was priced in by the market due to strong confidence in his leadership. Following his sudden retirement and subsequent death in July the stock dropped. A further 10% drop occurred after New CEO Camilleri called Marchionne's goal "aspirational" in the Q2 2018 earnings call. It has since been revised to a more conservative but not significantly lower $2.1B-$2.3B. The price has largely recovered as new CEO Camilleri unveiled his plan to meet the new target.

After the Capital Markets Day on September 18th, RACE now trades at a premium to the market reflecting investor confidence in Ferrari as a company. Ferrari will have to meet its promise to introduce a record of 15 new models including an SUV during the period and move 60% of its cars to hybrid engines to allow for increased production. Ferrari's ambitious plan has been priced in, while much risk remains regarding New CEO Camilleri's ability to carry out his promises.

We believe that at the current price Ferrari has realized its value and there are better alternative opportunities for the allocation of our portfolio.

Sincerely,

Anna Usvitsky

Sell Note: Gannett

Dear Board of Advisors,

We would like to sell our position in GCI representing a ~15% downside. The original thesis has not played out, and the financial health of the company has deteriorated. It is in the portfolio's best interest for our capital to be redeployed elsewhere.

Current Earnings Recap:

In the most recent quarter, net earnings were up slightly YoY, however revenue and total circulation are still steadily declining. The market was generally unreactive to a slight earnings surprise.

Thesis Point 1: Merger with Tronc or other value-added M&A

The Tronc merger was abandoned, and the company has not pursued any other major acquisitions. The only successful acquisition since 2016 was a relatively minor purchase of online advertising platform Wordstream, which does not appear to confer any major competitive advantages or growth potential. This acquisition slightly reduces advertising expenses, but this is counteracted by rapidly declining newspaper circulation.

Thesis Point 2: Newspaper circulation is flattening

This has proved to be untrue, as a bottom has not yet been found for the industry. The Company's largest revenue producing publication, USA Today, has experienced a 17% YoY decrease in net circulation, which in turn reduces their ability to command any premium for advertising.

Conclusion:

Due to a lack of substantial M&A, organic growth potential, or clear turnaround strategy the stock has traded relatively flat with a slight decline over time. I see no clear path to improve earnings meaningfully as the print industry continues its downward trend. Additionally, the fairly apolitical stance of its largest publications has not exposed Gannett to any "Trump Bump" which other news organizations have generally benefitted from. Lastly, the company is relinquishing nearly all of its earnings in the form of dividends, which implies that they see no better opportunities to deploy capital and does not bode well for future growth prospects. At this time, the opportunity cost of holding this position outweighs the potential upside, and therefore I must recommend we sell out of our position.

Best,
Tyler Small

Sell Note: GNC

Dear Board of Advisors,

We would like to sell our position on GNC Holdings, representing a 57% downside.

Current Earnings Recap:

GNC reports 2018 Q2 EPS of $0.20, reflecting a 52.4% year-over-year plunge. Revenues declined 4.9% YoY to $617M, due to GNC's sale of Lucky Vitamin in September 2017.

Thesis Point 1: Harbin Pharmaceutical announces planned investment into GNC in February 2018

GNC shares jumped 31.5% after the US Committee on Foreign Investment approved Harbin Pharmaceutical Group Holding's $300 million investment in GNC, which will make it the company's biggest investor. The companies are also forming a joint venture in China to manufacture, market, and sell products there. Harbin will own about 40% of GNC stock once converted.

Conclusion:

GNC is down 57% from when it was first purchased. The recent stock jump due to the Harbin Pharma investment announcement represents an opportunity to minimize losses and exit this position.

Best,

Richard Li

Sell Note: HanesBrand

Dear Board of Advisors,

We would like to sell our position in HanesBrand, representing a -11% downside on a $20.82 cost basis.

Hanesbrand, Inc. (NYSE: HBI) was originally pitched in Winter '17 due to three main factors: its collaboration with Target to sell Champion clothing and gear, market overreaction to Q3 Earnings and its ability to manage margins with in-house manufacturing. The company has proven itself capable only on the third point by keeping operating margins level since last December.

However, Hanesbrand is overly reliant on third party distributors in its supply chain. In July, Target chose not to renew an exclusive partnership for a line of Champion athletic wear that will now expire in January 2020. The C9 line is a large portion of Activewear revenue (LTM: 22% sales), and the stock lost close to 20% of its market cap on the day of the announcement. Although we were blindsided, this should not have come as surprise; Target had already launched a few in-house brands before the pitch was made. Its latest private labels include Wild Fable apparel for women and Original Use for younger men. Other retailers like Macy's and Walmart have made similar private-label launches.

While HBI's top-line reflects progress made towards stabilizing its intimate-wear business and growing Champion, a quick review of HBI's balance sheet will review that the company has inventory outstanding days of 180+. Management has severe difficulties converting accounts receivables into cash. We believe this reflects poor working capital and supply chain management, which is a stark contrast of what management thinks of their company.

Sell-side analysts from Barclays noticed that management expectations were 'less prudent' than they should be. Management expects an organic 2.5% (excluding Champion C9 line) growth for the next five years, which seems unlikely at this point. On an EV/EBITDA basis, the stock trades at 10x, which is only 16% under peer group average. We believe that there are stronger margins of safety elsewhere within the consumer defensive sector.

Best,
Oliver Jiang

Sell Note: Incyte

Dear Board of Advisors,

We would like to sell our position on Incyte, representing a -0.38% downside on an initial purchase price of $69.08 a share. Following our investment in March 2018, Incyte failed to meet several key indicators regarding pipeline assets. More specifically, Incyte's Epacadostat treatment failed in both melanoma and non small-cell lung carcinoma targets, the two most critical aspects of the thesis. Epacadostat offered the chance to be used as a combination therapy with the hugely successful Keytruda, Merck's "miracle" immunotherapy drug that will pull in an estimated $5.7B in sales this year. The failure of Epacadostat demonstrates that Incyte has lost the opportunity to capatlize upon Keytruda's success as a combination therapy.

Projections for Incyte's Jakafi asset predict stable revenues of approximately $3.0B in FY 2027. This guidance is too far removed from the current thesis timelines, and does not justify the level of the position's risk exposure to the rest of Incyte's pipeline. While we are optimistic about some results within Incyte's cholangiocarcinoma study, the majority of Incyte's pipeline is approximately five years from reaching Phase III. Given that our thesis did not play out and Incyte does not have assets remaining that are fundamentally mispriced, we believe that there are better opportunities for capital allocation.

Best,

Cole Roseborough

Sell Note: Perrigo

Dear Board of Advisors,

We would like to sell our position on Perrigo (PRPL), representing a -32% downside from our purchase price. We believe that the core thesis will not play out with this business and have decided to cap our losses.

The thesis focused on two guiding points: (1) people lost confidence in acquisitive pharmaceutical companies after Valeant (2) a re-rate based on the fact that Perrigo should trade at a consumer staples multiple.

We believe there are several risks to the business that pose significant trouble. We think that there will be weakness in organic revenue growth in the Consumer Health segments but due to smaller than expected OTC market growth and greater than expected price erosion. We also believe that a delay in FDA approval of generic drug applications could result in a decline in revenue and/or margins of the Rx segment. With PRGO planning to separate its Rx business by 2H2019, we are unsure about how or if PRGO can maintain its industry leading dominance in the generic brand market. Lastly, we have seen margin compression in the core products segments in the last two years, stemming from increasing competition from other generic brands.

We think it is important to admit whenever we get a thesis wrong, and to exit that position immediately. We see this with Perrigo.

Sincerely,

Nived Gopakumar

Sell Note: Purple Innovation

Dear Board of Advisors,

The buy order for Purple Innovation was $6.13 based on the following thesis points: significant rollout of offline retail distribution at Mattress Firm and other partners, natural market growth from increased online penetration, and new product launches and innovation. These thesis points, coupled with an absolute and relatively cheap valuation, made Purple Innovation a lucrative opportunity.

However, various developments have occurred since April that make our position in Purple a significant risk. These developments have also reflected on Purple's stock which now trades at $5.80, representing a 29% loss.

Offline Retail Distribution: Purple's potential to enter the offline market has reduced significantly as a result of Mattress Firm considering a potential bankruptcy filing. In November of 2017 Purple signed a distribution deal with Mattress firm which allowed Purple to sell their products in 13 Washington D.C. locations. Later in the year, the deal extended to include 30 locations in Chicago and further locations in San Francisco. Should Mattress Firm proceed with the filing, Purple would have to look into new opportunities to expand into the offline market. Parachute and Casper, Purple's main competitors, have already set up retail stores in New York city, completely circumventing the need for third party retailers.

Management Risk: On March 15th 2018 Purple announced that Sam Bernards had stepped down as Chief Executive Officer in order to pursue other opportunities. The company continued to operate with an interim CEO, Co-Founder Terry Pearce, until a replacement was found. It took 6 months for the replacement to be found. Purple has announced that from October 1st 2018 onward the company would be headed by Joseph Megibow. The changes in management reflected on the company's performance as Purple reported a $3.6 million net loss in the first quarter of 2018, compared to a net loss of $2 million in the first quarter of 2017. The performance of the new CEO is yet to be evaluated and provides additional risk, especially in an emerging business such as Purple.

With the emergence of these risk factors we can no longer be certain of the validity of our thesis points. Therefore, we believe we should exit our position in Purple Innovation.

Sincerely,

Mateo Panjol-Tuflija

Sell Note: SuperValu

Dear Board of Advisors,

We would like to sell our position on SVU, representing a 71% upside. We believe that all of our thesis points have played out.

Current Earnings Recap:

After the announcement of a takeover by United Natural Foods in Q1, SVU now trades close to the takeover price of $32.50.

Thesis Point 1: Transformation into pure play wholesale distribution

Management took many steps to transform themselves into a wholesale distributor. First, they grew their Core Wholesale Business by acquiring other wholesalers such as Unified and AG Florida as well as adding new Wholesale customers, such as The Fresh Market. They also made investments in new distribution warehouses and began to divest their retail assets, beginning with the sale of most of their Farm Fresh retail stores and pharmacies.

Thesis Point 2: Success of the new CEO, Mark Gross

SuperValu's new CEO at the time we initiated this position came to the company with years of experience with accretive M&As and the food and grocery industry. Therefore, when the share price dropped to around $15.00 by the end of FY 2018, we expected that the company could go one of three ways: management sells the company, and we would realize the value immediately; management continues to transform SuperValu into a pure play wholesale distributor and does well; or management continues to transform SuperValu into a pure play wholesale distributor but performs poorly. However, we found this last situation unlikely due to the new CEO's experience with grocery M&A.

Ultimately, just after Q1 2019, United Natural Foods Inc. agreed to acquire SuperValu in a $2.9 billion deal, including debt. United Natural Foods distributes healthy food options to natural-product stores and conventional supermarkets. They have agreed to pay $32.50 per SuperValu share and are completing SuperValu's transformation into a pure play distributor.

Conclusion:

Our initial thesis has played out fully and the stock price has been hovering around $32.50 since the acquisition by United Natural Foods was announced in late July. We do not see any further appreciation in the stock price, and we do not think it is worth taking on the possible risk of the transaction not going through in the future. Therefore, I recommend selling this position.

Best,

Sruthi Boddu

V. New Position Proposals

BlackBerry (NYSE: BB)

Strong security business fundamentally misunderstood by the market

Keshav Sota
President
krs478@stern.nyu.edu

Nived Gopakumar
Portfolio Manger
Ng1582@stern.nyu.edu

Steve Zhang
Portfolio Manager
sz1654@stern.nyu.edu

Anna Usvitsky
Junior Analyst
avu215@stern.nyu.edu

Price Target: $13.32 (21.1% upside)

October 1st, 2018

Business Description:

Blackberry is a one of the world's leading security enterprise software and services company focused on the Internet of Technologies, moving away from its traditional image as a hardware company. Blackberry's business currently comprises of three key operating segments: Enterprise Software & Service (41.6% of revenues), Blackberry Technological Solutions (17.5%), Licensing (21.0%) and others (19.9%)

Investment Thesis:

- **Microsoft Risk is Overblown:** Microsoft recently announced that they would move to also providing enterprise software catered towards security. However, Blackberry and Microsoft compete in two very different spaces; customer's that want high quality software will never choose Microsoft. Blackberry is the only security vendor recognized by Gartner in all eight categories of their *Market Guide for Information* and scores the highest scores in all six cases of Gartner's *Critical Capabilities for High Security Mobile.* Larger enterprises will always come to Blackberry
- **Licensing Model is Better than Perpetual Model:** Blackberry also recently shifted to a licensing model rather than a perpetual model. For the most part, we view this shift as a positive; by moving to a SaaS model, the company realize higher recurring revenue. The company can provide higher customer value, achieve economies of scale, and subsequently provide investors with more clarity on key metrics. We studied a case study on Adobe; when Adobe did a similar shift in 2012, the stock price immediately fell, but over the long-run, the company was able to unlock further shareholder value
- **Blackberry Technological Solutions is a 'High Bet' category:** BTS represents a very key product for the firm; enterprise software in all aspects. RADAR and QNX are a part of the product suite that currently are key to Blackberry's growth. The market is currently unsure how to value these products; in our valuation we backed out just revenue/units for these two segments and found the total market we thought Blackberry would be able to penetrate
- Market Overreaction to ASC 606 Accounting: Blackberry was unable to properly adapt to ASC 606 Accounting Standards. The reason behind the inability was that auditors were unsure whether the data center exactly constitutes a service. Management was unable to communicate with investors in time thes impact of the accounting change

Catalyst:

- **M&A:** Blackberry has a very strong balance, with around $2.3bn in cash. Management has an extensive history of pursuing bolt-on acquisitions to augment Blackberry's capabilities
- **Earnings:** We expect the ASC606 Accounting Standards to be fully integrated by the next management call/investor event
- **LBO:** Blackberry has been the target of PE firms for quite a few years. Shift to higher margins and higher recurring revenue should make Blackberry an even more appealing takeout target, with no significant debt on its balance sheet

Key Ratios and Statistics ($MM):

Share Price (Date)	10/1/18
Market Cap	$7,862
Net Cash	$2,300

Figure 1 - Stock Chart

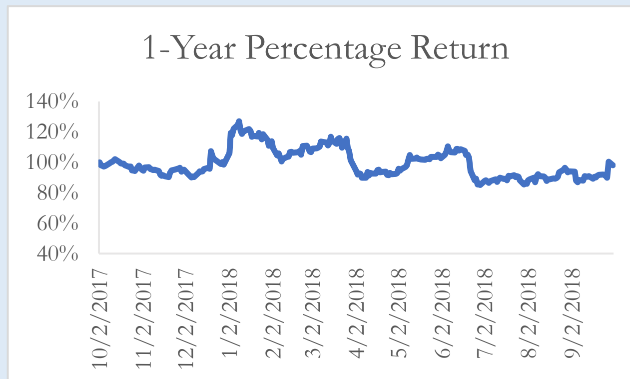


Figure 2 – Valuation (Sum of the Parts)

Multiple Method - Incremental Value for Next Gen	
2020 Revenue	122
Discounted Revenue	104
Incremental EV	834.60

Multiple Method - Core Business	
2020 Revenue	840
Discounted Revenue	664
Core Business EV	4,645.61

Sum of the Parts Valuation	5,480.21
(+) Cash	2,259.00
(+) Deferred Revenue	195.00
(-) Debt	782
Equity Value	7,152.21
Implied Share Price	**13.32**
Implied ROI	21.1%

Western Digital Corporation (NASDAQ: WDC)

A rebound in NAND demand to exceed expectations

Mateo Panjol-Tuflija
Junior Analyst
mpt319@stern.nyu.edu

Price Target: $147.5 (60.3% Upside) — October 1st, 2018

Business Description:

Western Digital Corporation is a leading developer, manufacturer, and provider of data storage devices and solutions that address the evolving needs of the information technology industry and the infrastructure that enables the proliferation of data in virtually every other industry. Its broad portfolio of technology and products address the following key markets: Data Center Devices and Solutions; Client Devices; and Client Solutions. Western Digital is a veteran of the industry perfectly positioned to extract value from the increasing demand for high capacity storage

Investment Thesis:

NAND Demand Elasticity to Offset Pricing Decline:

The NAND industry is currently experiencing a cyclical decline due to over-supply. NAND Flash prices are predicted to decline as much as 35% by the end of 2018. This fact, coupled with the fact that almost 47% of Western Digital's revenues come from NAND, caused Western Digital's stock to plummet 29.7% *YoY*. However, NAND is widely believed to have the most elastic demand profile of any semiconductor. As prices continue to fall at an estimated long-term rate of 15-20%, demand will see an upswing, reaching anywhere from 40% to 50% *YoY* growth. With bit growth demand growing at this pace and costs shrinking at 20%, one must assume very large, sustained pricing declines to claim that revenues will materially decrease.

HDD Revenues Will Stabilize Earnings Per Share:

If we were to value Western Digital as a pure play HDD business it would be fair to apply a 10-11x P/E ratio based on comparable companies. At the current share price the market tells us it expects a decline to below $8 per share due to weakness in the flash business. This is highly unlikely considering the strengths of Western Digital's HDD segment. The HDD market is basically a duopoly split between Seagate (STX) and Western digital, with both claiming around 40% market share. The HDD market had seen a secular decline, however, recently the decline has been offset by Data Centre demand. HDD storage is nearly 5 times cheaper than NAND storage, therefore, hard drives will remain the most cost-effective option for capacity storage. Overall storage maintained on HDDs will grow 30% per year on the back of the 40% growth in cloud storage. The cumulative effect of the secular decline due to PC demand and the increase due to Data Centre demand will see exabytes shipped fall around 5% annually. With HDD average selling prices remaining constant and margins increasing from low-thirties to mid-thirties, Western Digital should see a steady revenue stream from this segment to stabilize their earnings per share.

AND Memory Has Incredible Potential

There will undoubtedly be numerous applications that generate and use data that we cannot yet envision in today's data-centric world. Certainly though, some of the big drivers in the next five years will be continued growth of cloud applications such as social media, autonomous driving, machine learning, and virtual reality. By 2020, an estimated 53 zettabytes data will be created. HDDs have little to no use in this environment, considering their power draw, speed, and size. Therefore, most of the data created will be stored on SSDs, creating an unparalleled opportunity for growth.

Key Ratios and Statistics:

Share Price (07/15/18)	$58.54
Market Cap	$17.06B
52-Week Low	$57.63
52-Week High	$106.96
Dividend Yield	3.42%
EV/EBITDA	3.95x

Figure 1 - Exabytes Shipped

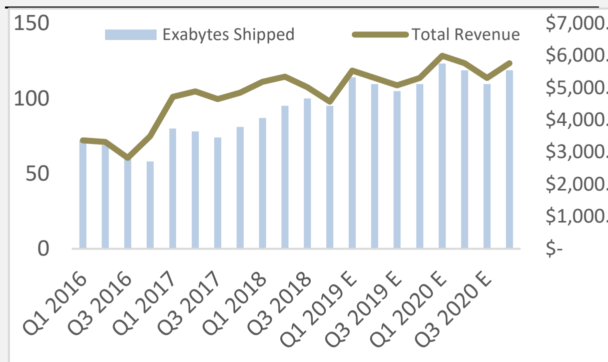
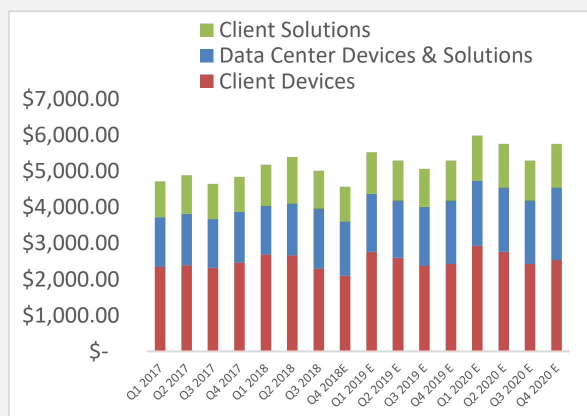


Figure 2 - Revenue Sources



Risk-Reward

- **Base Case ($144.41 146.69% Upside):** The NAND pricing cycle continues at a rate of 20% annually. As a result, bit demand grows at a rate between 40-45%. On the other hand, HDD continues to see a secular decline in demand of 5-10% annually. This secular trend is offset by the increase in ASP due to a transition to high value drives. Furthermore, Western Digital retains their previous market shares in both the NAND and HDD industries. However, due to NAND uncertainty the market assigns a more conservative EV/EBITDA multiple of 10x.
- **Bull Case ($173.70 196.7% Upside):** The industry retains the same demand and pricing trends. However, due to higher certainty in the trends od pricing and demand growth the market assigns a premium to Western Digital, leading to an EV/EBITDA multiple of 12x
- **Bear Case ($55.98 4.4% Downside):** The NAND cycle continues with no deacceleration, seeing prices drop by 35% annually. Furthermore, Western Digital does not manage to increase their gross margins in the NAND segment, significantly reducing their profitability. The ASP of the HDD market ceases to grow as the secular decline in the PC market offsets the growth in data centers, while the demand for HDDs tumbles. As a result of the NAND decline the market assigns a pure play 8x EV/EBITDA to Western Digital.

Revenue Build								
	FY 2016	**FY 2017**	**FY 2018**	**FY 2019**	**FY 2020**	**FY 2021**	**FY 2022**	**FY 2023**
Total Revenue	$ 12,994.00	$ 19,093.00	$ 20,647.00	$ 20,160	$ 21,304	$ 22,703	$ 23,835	$ 25,396
YoY % Change	*-10.8%*	*46.9%*	*8.1%*	*-2.4%*	*5.7%*	*6.6%*	*5.0%*	*6.5%*
Revenue By End Market								
Client Devices	$ 6,237.12	$ 9,546.50	$ 10,117.03	$ 9,676.83	$ 9,967.82	$ 9,989.25	$ 10,249.11	$ 10,920.22
% of revenues	*48%*	*50%*	*49%*	*48%*	47%	44%	43%	43%
Data Center Devices & Solutions	$ 4,937.72	$ 5,536.97	$ 5,987.63	$ 6,243.05	$ 6,862.56	$ 7,945.99	$ 8,819.00	$ 10,158.34
% of revenues	*38%*	*29%*	*29%*	31%	32%	35%	37%	40%
Client Solutions	$ 1,819.16	$ 4,009.53	$ 4,542.34	$ 4,233.61	$ 4,473.90	$ 4,767.59	$ 4,767.03	$ 4,317.30
% of revenues	*14%*	*21%*	*22%*	21%	21%	21%	20.0%	17.00%

Operating Build								
(mm)	FY 2016	FY 2017	FY2018	FY 2019E	FY 2020E	FY 2021E	FY 2022E	FY 2023E
NAND Revenue	$ -	$ -	$ 8,050.00	$ 9,016.00	$ 10,188.08	$ 11,614.41	$ 13,356.57	$ 15,493.62
YoY % Change	*0%*	*0%*	*0.0%*	*12.0%*	*13.0%*	*14.0%*	*15.0%*	*16.0%*
NAND Gross Margin	***0%***	***0%***	*45.0%*	*45.0%*	*45.8%*	*46.5%*	*47.3%*	*48.0%*
NAND Gross Profit	$ -	$ -	$ 3,622.50	$ 4,057.20	$ 4,661.05	$ 5,400.70	$ 6,310.98	$ 7,436.94
YoY % Change	0%	0%	0%	*12.0%*	*14.9%*	*15.9%*	*16.9%*	*17.8%*
HDD Revenue	$ -	$ -	$ 11,172.00	$ 11,144.07	$ 11,116.21	$ 11,088.42	$ 10,478.56	$ 9,902.24
YoY % Change	*0%*	*0%*	*0%*	*-0.3%*	*-0.2%*	*-0.3%*	*-5.5%*	*-5.5%*
HDD Gross Margin	*0%*	*0%*	*30%*	*30%*	*31%*	*31%*	*32%*	*33%*
HDD Gross Profit	$ -	$ -	$ 3,351.60	$ 3,343.22	$ 3,404.34	$ 3,465.13	$ 3,340.04	$ 3,218.23
YoY % Change	*0.00%*	*0.00%*	*0.00%*	*-0.25%*	*1.83%*	*1.79%*	*-3.61%*	*-3.65%*
Total Gross Profit	$ 3,435.00	$ 6,072.00	$ 6,974.10	$ 7,400.42	$ 8,065.39	$ 8,865.83	$ 9,651.02	$ 10,655.17
Operating Expenses								
Research and Development	$ 1,627.00	$ 2,441.00	$ 2,400.00	$ 2,481.70	$ 2,622.55	$ 2,794.71	$ 2,934.10	$ 3,126.22
Selling, general and administrative	$ 997.00	$ 1,445.00	$ 1,473.00	$ 1,503.62	$ 1,588.96	$ 1,693.27	$ 1,777.72	$ 1,894.12
Other	$ 345.00	$ 232.00	$ 215.00	$ 330.05	$ 348.79	$ 371.68	$ 390.22	$ 415.77
EBIT	$ 466.00	$ 1,954.00	$ 2,886.10	$ 3,085.05	$ 3,505.09	$ 4,006.17	$ 4,548.98	$ 5,219.05
YoY Change		*319.3%*	*47.7%*	*6.9%*	*13.6%*	*14.3%*	*13.5%*	*14.7%*
EBIT Margin	*3.59%*	*10.23%*	*13.98%*	*15.30%*	*16.45%*	*17.65%*	*19.09%*	*20.55%*
Tax Rate	*2.60%*	*11.70%*	*28%*	*21%*	*21%*	*21%*	*21%*	*21%*
Taxes	$ 12.12	$ 228.62	$ 808.11	$ 647.86	$ 736.07	$ 841.30	$ 955.29	$ 1,096.00
EBIAT	$ 453.88	$ 1,725.38	$ 2,077.99	$ 2,437.19	$ 2,769.02	$ 3,164.87	$ 3,593.70	$ 4,123.05
% of revenues	*3.5%*	*9.0%*	*10.1%*	*12.1%*	*13.0%*	*13.9%*	*15.1%*	*16.2%*

Exit EBITDA Multiple Approach			
(mm)	2019E	2020E	2021E
EBIT	$ 3,085.05	$ 3,505.09	$ 4,006.17
+ Depreciation & Ammortization	$ 1,812.33	$ 1,915.19	$ 2,040.91
= EBITDA	$ 4,897.38	$ 5,420.28	$ 6,047.08
EV/EBITDA			10.00x
Enterprise Value			$ 60,470.83
Present Value of Enterprise			$ 49,353.56
+ Cash			$ 5,030.00
- Debt			$ 11,170.00
= Equity Value			$ 43,213.56
Shares Outstanding			299.24
Implied Price Per Share			$ 144.41

DaVita Inc. (DVA)

Great FCF generating business that has a dominating market position and is shareholder friendly

Nived Gopakumar
Portfolio Manager
Ng1582@stern.nyu.edu

Mark Sun
Junior Analyst
Zs1029@stern.nyu.edu

Price Target: $98.70 (26.8% upside)

October 1st 2018

Business Description:
Davita is a leading provider of kidney dialysis services for patients suffering from End Stage Renal Disease (ESRD). Kidney's Care Division provides dialysis and administrative services in the U.S. through a network of 2,510 outpatient dialysis centers, serving a total of approximately 197,800 patients.

Investment Thesis:
Virtual monopoly in Kidney Dialysis Market: The market volume dynamics for dialysis are incredibly stable with multiple tailwinds. The patient base in inelastic (mortality without treatments 3x / week) and has grown at a 3.8% due to an aging population burdened by risk factors such as hypertension and obesity. Within this growing TAM, there are two competitors in the space (DaVita and Fresenius) splitting ~80% of the US market. There is little new entry into this space due to lower cost of operate and serve for incumbents. DVA also operates in a positive market environment in which commercial reimbursement outlook has stabilized. For the past five years, major insurers have been attacking dialysis reimbursement by requiring pre-authorization and pressuring outright reimbursement per treatment. Over the past year, these pressures have waned, with the five major commercial insurers signing long-term agreements (all greater than 5 years).

Overblown Regulatory Headwinds Creates Opportune Buying Time: The California assembly and senate passed SB 1156 on 8/30, a union-backed bill that would cap commercial dialysis payments at lower Medicare rates and force charities to disclose donors of third-party payments. The stock price dropped 9% despite a likely EBITDA drop-off of no more than 3%. California's union push is feared to make the state largely uneconomical; management has guided $100-250M of impact on operating profit, but it will likely be on the lower end given how California is already an absolutely horrible reimbursement state today. Sell side believes that California's vote could catalyze other states to push similar legislature, but we believe this is unlikely given that a natural legislative rollout would make 50% of clinics unprofitable and cripple the entire industry.

Divestiture will spur focus while providing additional cash to a highly recurring FCF generation business. This will allow them to buy back shares and create immense EPS growth:

DaVita is divesting a non-core division by the end of 2018 that contributes no profitability. Pro-forma for the sale, it trades 6.6x EBITDA versus historically 5 year at 9.4x. The subsidiary also took capital for acquisitions and a good amount of management resources. The divestiture also DVA to refocus as it will be the only scale pure-play dialysis provider.

Management is using a vast majority of the proceeds along with existing yearly FCF to buy back shares. Management is using the majority of the proceeds plus recurring FCF to repurchase shares: in fact, they added an incremental $1B term loan to perform a levered buy back before the sale is completed. For the past two years, management has eliminated close to 15% of the share float, and still has $1.4bn left in their share repurchase program. While top line will continue grow at ~3/4%, immense shareholder value will be created as management continues to hoover up shares.

Key Ratios and Statistics:

Price Target	$98.70
Upside	26.8%
Share Price (9/28/18)	$71.63
Market Cap	$11.955 B
52-Week Low	$52.51
52-Week High	$28.80.71
Cash	$393.8 M
Debt	$9.9B
Avg Daily Volume (90 day)	1.56mm

FY	2016A	2017A	2018E	2019E
Revenue (M)	10,707	10,877	11,312	11,764
EBIT(M)	2,029	1,812	1,986	2,065
EPS	$4.36	$3.52	$4.32	$4.49

Figure 1 – Dialysis Patient Growth

2000-2015 Patient CAGR: 3.8% *(in thousands)*

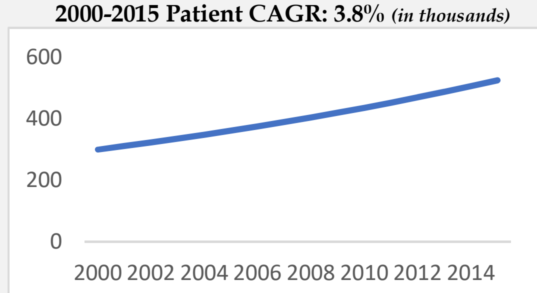
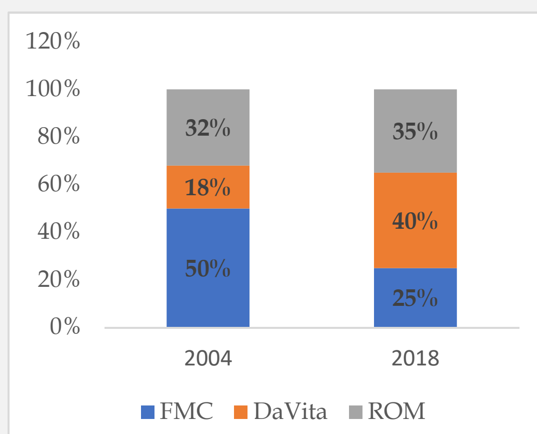


Figure 2 – Consolidated Industry Trend



Risk-Reward:

(1) **Base Case ($85.89, 16.4% Upside)**: The market continues to growth organically with ~1% revenue growth annually. G&A and other variable cost remain stable outlook with slightly higher than historical average. The interest rate environment remains stable with unexpected high rate hike. The regulatory headwind partially impacts performance in certain areas and AKF program remains workable.

(2) **Bull Case ($98.70, 26.8% Upside):** The market stays on a strong growth track with ~4% growth annually. The G&A cost and other variable cost remain stable. Interest rates environment remain relatively stable without unexpected rate hike. The regulatory headwind proves to be overblown and revenue consistently posing strong results.

(3) **Bear Case ($59.13, 21.14% Downside):** The market has been shrinking with 4% revenue decrease annually. G&A and other variable cost are at a higher end of historical average. The interest rate environment remains relatively stable with higher rate hike. The regulatory headwind impacts performance in multiple areas and the operation of AKF program has been limited.

Perpetuity approach	
Unlevered FCF in last forecast period (t)	1,362,726
FCF^{t+1}	1,396,794
Long term growth rate (g)	2.5%
Terminal value	26,989,834
Present value of terminal value	19,698,805
Present value of stage 1 cash flows	5,521,137
Enterprise value	**25,219,942**
Implied TV exit EBITDA multiple	*9.8x*
Net Debt	
Cash & equivalents ST & LT market. securities	551,750
Long term debt	9,336,231
Net debt	**8,784,481**
Trapped cash	0

Exit EBITDA multiple approach	
Terminal year EBITDA	2,742,230
Terminal value EBITDA multiple	12.0x
Terminal value	32,906,763
Present value of terminal value	24,017,336
Present value of stage 1 cash flows	5,521,137
Enterprise value	**29,538,473**
Implied TV perpetual growth rate	*3.4%*

Fair value per share	Perpetuity	EBITDA
Enterprise value	25,219,942	29,538,473
Less: Net debt	-8,784,481	-8,784,481
Less: Trapped cash	0	0
Equity value	**16,435,461**	**20,753,992**
Diluted shares	191,348.533	191,348.533
Equity value per share	**$85.89**	**$108.46**
Market premium / (discount) to fair value	(16.4%)	(33.8%)

Cost of capital assumptions	
Cost of debt	4.8%
Tax rate	23.0%
After tax cost of debt	3.7%
Risk free rate	3.0%
Beta	1.09
Market risk premium	7.0%
Cost of equity	10.6%

Capital weights	Amount	% of total
Market value of equity	11,889,000	57%
Net debt	8,827,997	43%
Cost of capital (WACC)		**7.7%**

$70 Per Share

Share Buyback Schedule	2015	2016	2017	2018	2019	2020	2021	2022
Share	211,868	201,641	188,626					
60%				362,043.85	244,182.71	247,056.14	246,238.24	259,805.49
70%				422,384.49	284,879.83	288,232.16	287,277.95	303,106.41
80%				482,725.13	325,576.95	329,408.18	328,317.65	346,407.32
60%				5,172.05	3,488.32	3,529.37	3,517.69	3,711.51
70%				6,034.06	4,069.71	4,117.60	4,103.97	4,330.09
80%				6,896.07	4,651.10	4,705.83	4,690.25	4,948.68
Share Oustanding								
60%				183,453.50	179,965.18	176,435.81	172,918.12	169,206.61
70%				182,591.49	178,521.78	174,404.18	170,300.21	165,970.12
80%				181,729.49	177,078.39	172,372.56	167,682.30	162,733.63
EPS								
60%				4.30	4.45	4.61	4.65	4.74
70%				4.32	4.49	4.66	4.72	4.84
80%				4.34	4.52	4.71	4.80	4.93