



FIN 5220-7990: SMIF Fund

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Dec. 5, 2017



Overview

- Company Review
- Management Team
- Sector Trends
- Macro Conditions
- Balance Sheet
- Financial Analysis
- Valuation
- Thesis



Applied Optoelectronics (AAOI)

- Company Description
 - leading provider of fiber optic products, expanded Datacenters, and unique Semiconductor manufacturing techniques. Serving primarily 40g, 100g, and main supplier of 400g business data connection.
 - Supplies Microsoft and Facebook with faster data connections and database optimization.
- Intrinsic Value
 - IV = \$2.94
 - Organic growth.



Bandwidth Demand - Key Driver



- Business Score: 9



Management Team

- Executive Team
 - CEO, Dr. Chin-Hsiang (Thompson) Lin.
 - CFO & CSO, Dr. Stephan J. Murry.
- Notable Board Members (7 Total)
 - Chairman Dr. Lin, William Yeh, Richard Black & Allan Moore.
- **Director, Allan Moore bought \$1m in shares on Nov. 14, 2017.**
- Institutional ownership: 97.67%
- Insider ownership: 5.77%
- Executive Compensation
 - Long-term equity compensation.
- Management Score: 8



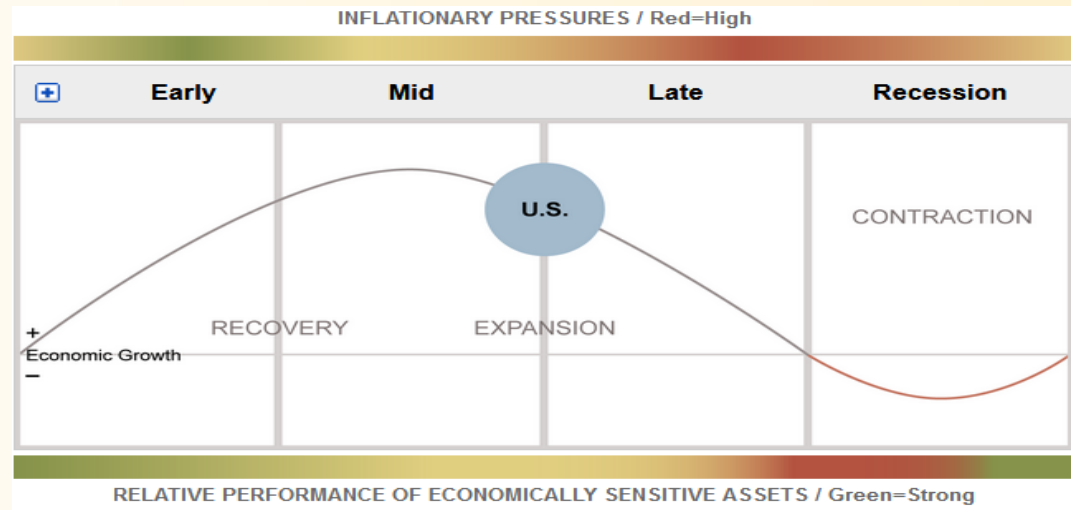
Sector Trends

- Semiconductor equipment
- Headwinds
 - China's impact on the supply chain decreases prices.
- Tailwinds
 - Companies shifting to faster data connections and expanded datacenters.
 - U.S. Semiconductors - 22 consecutive months of production growth.



Macro Conditions

- GDP Growth
 - 2016: 3.1%
 - 2017: 2.3%
 - 2018: 2.5%



- Increase in GDP effects consumer spending and cycle positively.
- Growth projections boost Technology outlook.
- New tax reform laws may increase earnings by 15%.



Balance Sheet

\$ IN MILLIONS	9/30/15	9/30/16	9/30/17
CASH ⁽¹⁾	\$49	\$60	\$72
WORKING CAPITAL ⁽²⁾	\$95	\$92	\$153
TOTAL ASSETS	\$257	\$327	\$439
TOTAL DEBT ⁽³⁾	\$49	\$92	\$41
<p>(1) Cash: Cash, cash equivalents, short-term investments, and restricted cash.</p> <p>(2) Working Capital: Total current assets less total current liabilities.</p> <p>(3) Total Debt: Short-term loans, notes and bank acceptances payable and total long-term debt.</p>			

- Balance Sheet Score: 9



Financial Analysis

Applied Optoelectronics (AAOI)			
Current Price:	\$ 41.90	Market Cap:	812m
52 week high:	\$ 103.41	Enterprise Value:	782m
52 week low:	\$ 21.88	Current Ratio:	2.63
Target Price:	\$ 120.00		
EPS:	4.19	<u>Catalysts:</u>	
Altman Z-score:	8.68	Leader in Advanced Optics.	
ROIC:	12.96%	Fast Growth Markets.	
Beta:	1.75	Marquee Customers.	
Profit Margin:	22.90%	Proprietary Manufacturing.	
Report Date: Dec 31st			

- Top 2 customers (Microsoft 37%, Facebook 24%) account for 61% of Revenue.



Current Financial Highlights

 3Q17 Results NON-GAAP	 IN MILLIONS EXCEPT %	Q3 2017	COMMENT Y/Y%
	REVENUE	\$ 88.9	Up 27%
	DATACENTER	\$ 65.8	Up 24%
	CATV	\$ 18.9	Up 47%
	GROSS MARGIN	44.4%	Up 1130 basis points
	OPERATING INCOME	\$ 20.6	Up 156%
	NET INCOME	\$ 22.0	Up 217%

- Financials Score: 9



Revenue Growth

ANNUAL REVENUE BY SEGMENT

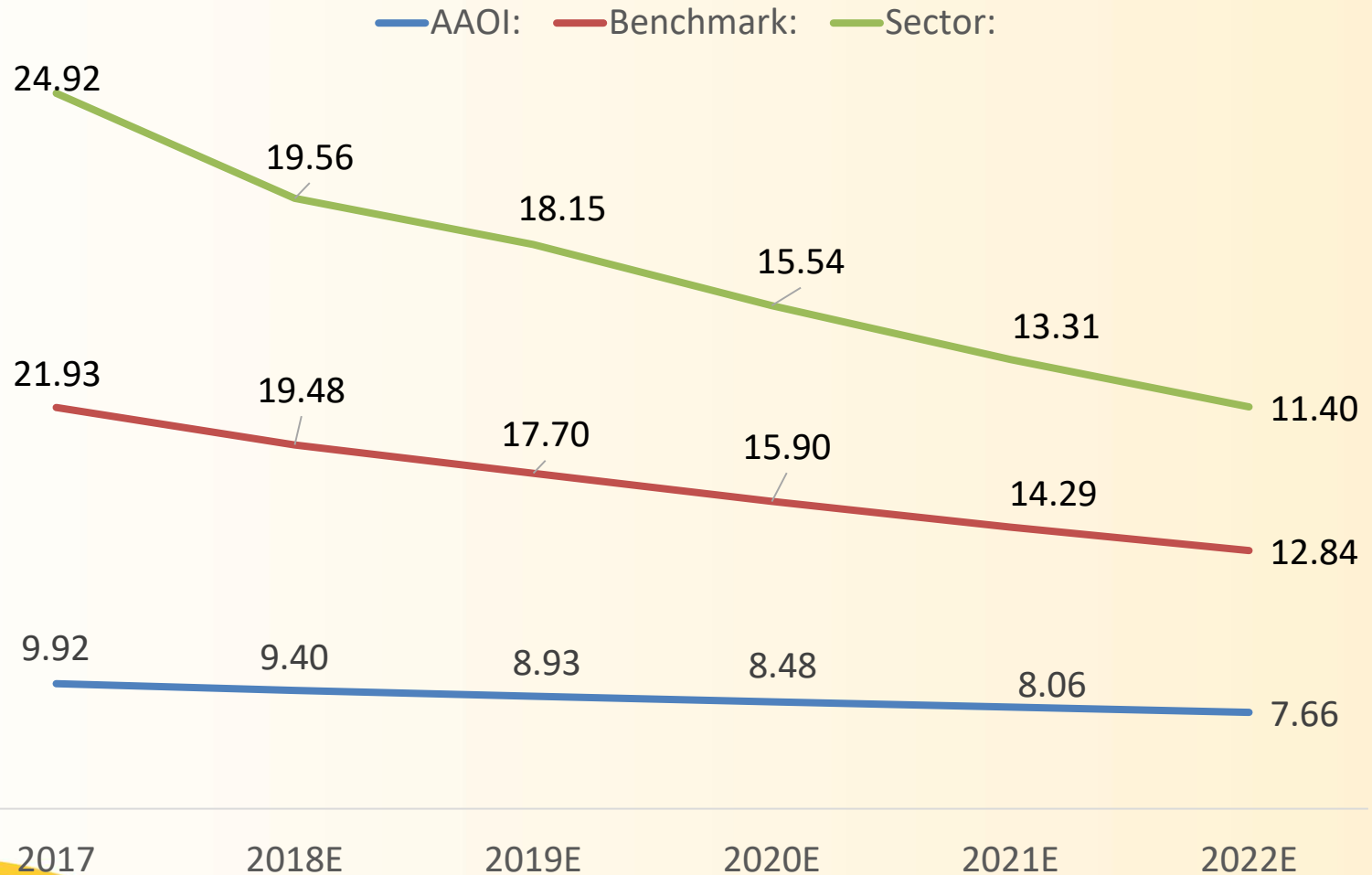


Valuation Metrics

Applied Optoelectronics			
P/E Ratio (TTM):	9.92x	P/B:	2.68
P/E Ratio (NTM):	9.50x	P/B (NTM):	1.99
EV/EBITDA (TTM):	7.2		
EV/EBITDA (NTM):	4.42		
<u>S&P 500</u>		<u>Sector:</u>	
P/E Ratio:	21.93x	P/E:	24.92x
P/E Ratio (NTM):	17.70x	P/E Ratio (NTM):	18.15x
EV/EBITDA:	13.13	EV/EBITDA:	15.15
EV/EBITDA (NTM):	17.17	EV/EBITDA (NTM):	11.18
P/B:	3.2	P/B:	5.77
P/B (NTM):	2.9	P/B (NTM):	4.43
Margin of Safety: 40%			



AAOI PE vs Benchmark vs Sector



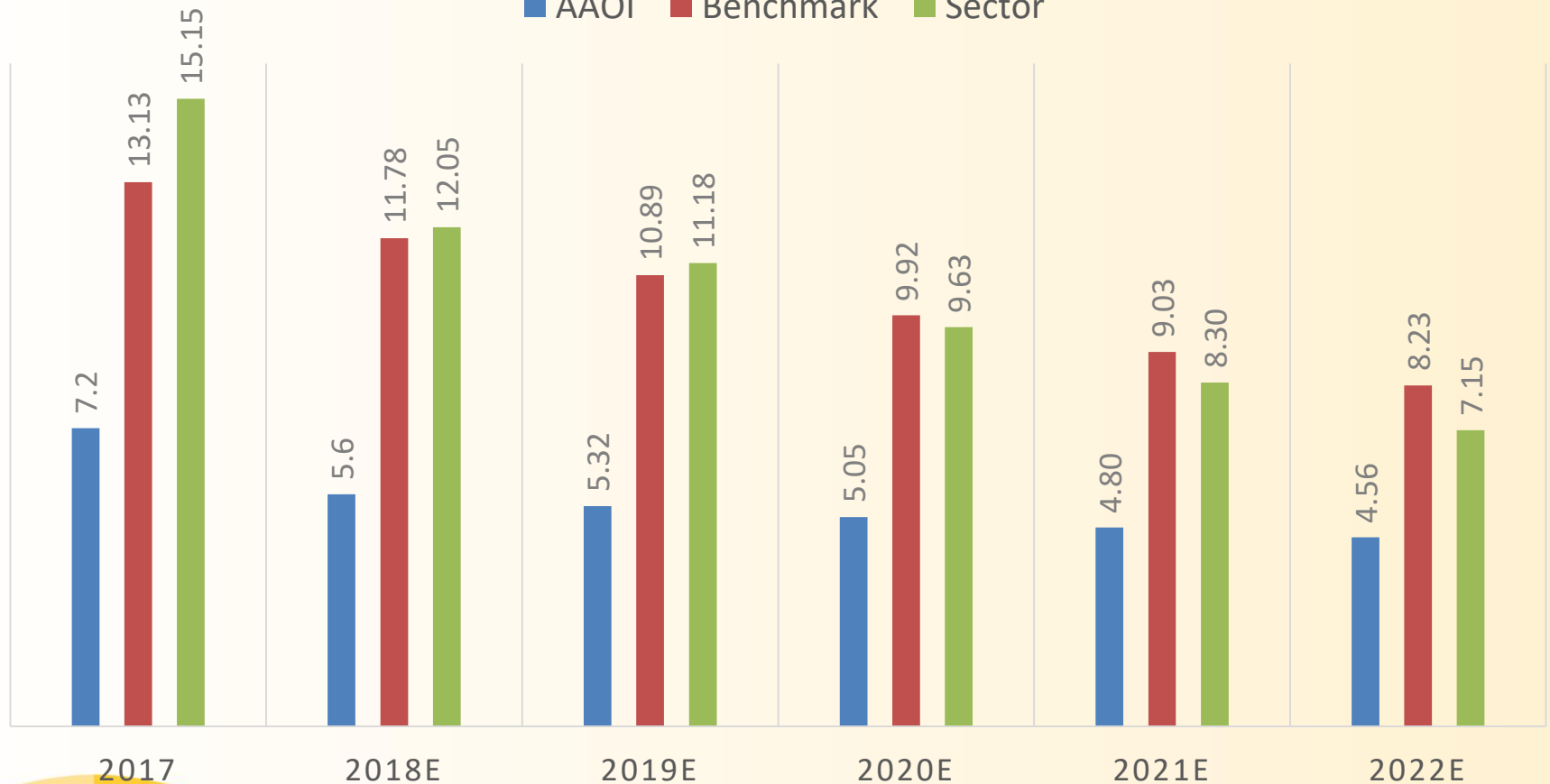
Source: Bloomberg

SMIF Fund 13

AAOI vs Benchmark vs Sector

EV/EBITDA

■ AAOI ■ Benchmark ■ Sector



Valuation

- Consistent growth in production volume will continue for AAOI and U.S. Semiconductors.
- More companies are shifting from 40g to 100g networks and expanded Datacenter capabilities.
- Fast growth and AAOI products have driven earnings and value for key customers.
- Low price to high value and 19% upside is a steal at a cheap price.

Perpetuity Growth Method	
DCF Estimated Value per Share (USD)	49.83
DCF Estimated Upside	19%



Customer Growth

Facebook



Microsoft



Relative Valuation

Company	Mkt. Cap	P/E	EV/EBITDA
APPLIED OPTOELECTRONICS	809	9.92x	7.2
AMBARELLA INC	1,904	37.21x	24.98
II-VI INC	3,151	30.01x	16.91
VISHAY INTERTECHNOLOGY INC	3,298	32.01x	9.98
CIRRUS LOGIC INC	3,539	13.87x	8.34

- Valuation Score: 9



Thesis

- Microsoft and Facebook growth associated with utilizing next gen AAOI products.
- Rapidly growing Datacenter market fuel record high revenues.
- China's initial impact on the supply chain is consistently short lived.



Risks to Thesis

- Over reliance on Microsoft and Facebook may have significant consequences.
- Cyclical nature of sales in the Semiconductor sector.
- Uncertainty: Market, financial performance, and new tax reform.



Stock Screener

Stock Screener		AAOI
Market Cap:	> \$250m	\$809m
Traded on the U.S. Stock Exchange		✓
P/E Ratio:	< 11.0x	9.92x
EV/EBITDA:	< 10.0	7.2
Altman Z-score:	> 4	8.68
Current Ratio:	> 1.0	2.86
Interest Coverage:	> 5	13.2
ROIC:	>= 10%	12.96%
Profit Margin:	> 20%	22.60%



Summary

- Innovative business.
- Trading at great value.
- Financials and valuations demonstrates tremendous potential at a low price.
- Overall score:

Category	Score	Grade
Company:	9	A
Management:	8	B
Balance Sheet:	9	A
Financials:	9	A
Valuation:	9	A
Overall:	8.8	A-



Any Questions or Comments?



Thank You

