

# First Solar, Inc.

**Recommendation** **SELL** ★ ★ ★ ★ ★

**Price**  
USD 62.16 (as of Jul 24, 2020 4:00 PM ET)

**12-Mo. Target Price**  
USD 48.00

**Report Currency**  
USD

**Investment Style**  
Mid-Cap Value

**Equity Analyst Angelo Zino, CFA**

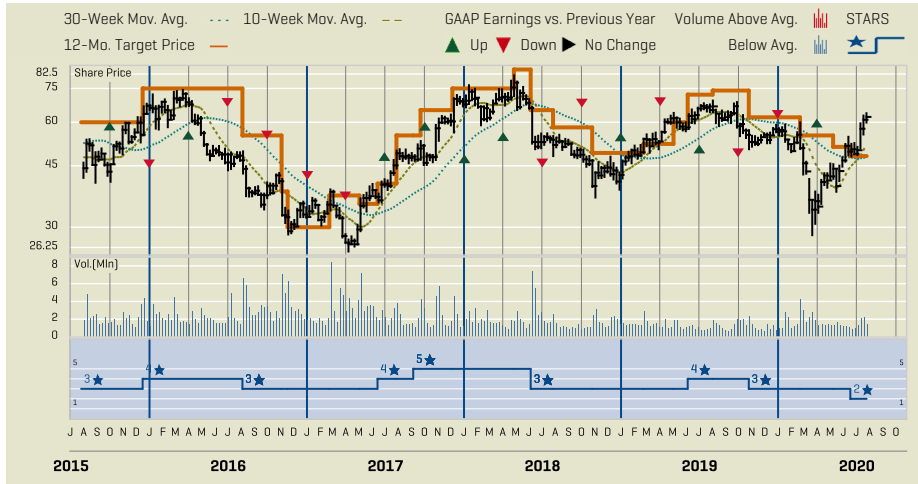
**GICS Sector** Information Technology  
**Sub-Industry** Semiconductors

**Summary** First Solar produces solar modules using a proprietary thin film semiconductor technology.

**Key Stock Statistics** (Source: CFRA, S&P Global Market Intelligence (SPGMI), Company Reports)

52-Wk Range	<b>USD 69.23 - 28.47</b>	Oper. EPS 2020E	<b>USD 2.62</b>	Market Capitalization(B)	<b>USD 6.583</b>	Beta	<b>1.26</b>
Trailing 12-Month EPS	<b>NM</b>	Oper. EPS 2021E	<b>USD 3.62</b>	Yield (%)	<b>NA</b>	3-Yr Proj. EPS CAGR[%]	<b>10</b>
Trailing 12-Month P/E	<b>NM</b>	P/E on Oper. EPS 2020E	<b>23.73</b>	Dividend Rate/Share	<b>NA</b>	SPGMI's Quality Ranking	<b>C</b>
\$10K Invested 5 Yrs Ago	<b>\$14,466</b>	Common Shares Outstg.(M)	<b>105.91</b>	Institutional Ownership [%]	<b>69</b>		

**Price Performance**



Source: CFRA, S&P Global Market Intelligence

Past performance is not an indication of future performance and should not be relied upon as such.

Analysis prepared by Equity Analyst Angelo Zino on Jun 18, 2020 07:40 AM, when the stock traded at USD 49.90.

**Highlights**

- We look for sales to rise 18% in 2021 after our view for a 16% decline in 2020 and 37% rise in 2019. While FSLR recently removed 2020 guidance due to the risk of project push-outs and logistics issues, we are encouraged by the lack of cancellations and note it has been able to largely run production being considered an essential business. FSLR has good near-term visibility, with a backlog of 12.3 GW that will fill demand through 2021 (additional 7.5 GW pipeline in mid-to-late stage). We are wary of FSLR being able to sustain at least a book-to-bill of 1x through 2021.
- We forecast an annual gross margin of 25% in 2020 and 27% for 2021, wider than the 20% margin in 2019. We see considerable cost reductions from the move to Series 6 (at least 30% relative to Series 4 panels) and note the accelerated decommissioning of its Series 4 panels. We have a positive stance on manufacturing cost reduction initiatives and conversion efficiency but remain cautious about recent industry pricing declines.
- Despite expected cash burn in 2020 (we see \$450 million), reflecting capacity expansion plans and \$350 million cash outflow to settle a class action lawsuit in January, we anticipate better times ahead in 2021.

**Investment Rationale/Risk**

- Our Sell reflects our view of downside potential to earnings estimates given a high likelihood that industry pricing declines to be more pronounced than we previously thought. We note that FSLR is effectively sold out through 2021, which provides good visibility in the intermediate term. However, we are growing more cautious about booking opportunities, further U.S. ITC step downs, and think lower industry prices could act as a headwind to margins. We believe that FSLR's transformation carries significant risk over time, as it shifts towards a greater percentage of sales being module only from its historically focused systems installation business. We see a less favorable tax equity financing environment amid Covid-19.
- Risks to our opinion and target price include narrower-than-projected margins, smaller cost-per-watt reductions than anticipated, and less favorable government incentives.
- Our 12-month target price of \$48 is based on a P/E of 13.3x our 2021 EPS forecast, above peers, to reflect FSLR's net cash position of \$1.1 billion. We see execution risk as FSLR transitions to a third-party module provider, while it reviews options to potentially sell the project development business.

**Analyst's Risk Assessment**

<b>LOW</b>	<b>MEDIUM</b>	<b>HIGH</b>
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Our risk assessment reflects our view of the highly competitive nature of First Solar's business, the relatively early stages of the business cycle for alternative energy sources, and a high degree of execution risk in the company's aggressive capacity expansion plans. Also, we have concerns that a substantial amount of the company's common stock is held by the estate of John T. Walton and affiliates, giving them considerable control over the business.

**Revenue/Earnings Data**

Revenue (Million USD)	1Q	2Q	3Q	4Q	Year
2020	532	--	--	--	--
2019	532	585	547	1,399	3,063
2018	567	309	676	691	2,244
2017	892	623	1,087	339	2,941
2016	876	1,016	681	331	2,905
2015	469	896	1,271	942	4,113

**Earnings Per Share (USD)**

	1Q	2Q	3Q	4Q	Year
2021	<b>E 0.83</b>	<b>E 0.86</b>	<b>E 0.86</b>	<b>E 1.07</b>	<b>E 3.62</b>
2020	0.85	<b>E 0.36</b>	<b>E 0.83</b>	<b>E 1.43</b>	<b>E 2.62</b>
2019	-0.64	-0.18	0.29	-0.56	-1.09
2018	0.78	-0.46	0.54	0.49	1.36
2017	0.09	0.50	1.95	-4.14	-1.59
2016	1.90	-0.11	1.45	-7.23	-4.05

Fiscal year ended Dec 31. Next earnings report expected: Early Aug. EPS Estimates based on CFRA's Operating Earnings; historical GAAP earnings are as reported in Company reports.

**Dividend Data**

No cash dividends have been paid in the last year.

**Business Summary** June 18, 2020

**CORPORATE OVERVIEW.** First Solar designs and manufactures solar modules using a proprietary thin film semiconductor technology. The company's solar modules employ a thin layer of cadmium telluride semiconductor material to convert sunlight into electricity. In less than three hours, FSLR is able to transform a two-foot-by-four-foot sheet of glass into a complete solar module, using about 1% of the semiconductor material needed to produce crystalline silicon solar modules. Its production process eliminates the multiple supply chain operators, and expensive and time-consuming batch processing steps that are used to make a crystalline silicon solar module. Over time, the company will derive a more substantial portion of its revenues from the U.S. market as well as emerging regions located outside of Europe, we think.

FSLR's customers develop, own and operate solar power plants or sell turnkey solar power plants to end users including owners of land, owners of agricultural buildings, owners of commercial warehouses, offices and industrial buildings, public agencies, municipal government authorities, utility companies, and financial investors that desire to own large-scale solar power plant projects.

**CORPORATE STRATEGY.** FSLR aims to reduce PV system costs in three primary areas: module manufacturing; Balance of System (BoS) costs (costs unrelated to the module, including inverters, mounting hardware, grid interconnection equipment, wiring and other devices and installation labor costs); and cost of capital. FSLR's first mover advantage has disappeared, we think, and we expect a more competitive solar environment to pressure financial results in the foreseeable future.

By continuing to improve conversion efficiency and production line throughput, lower material cost and drive volume scale to further decrease overhead costs, FSLR thinks it can further reduce manufacturing costs-per-watt and maintain a cost advantage over traditional crystalline silicon solar module manufacturers. Also, it looks to make substantial reductions in BoS costs, which represent over half of all costs associated with a typical utility-scale PV solar power system. Strengthening its financial position, including its balance sheet and credit profile, should enable FSLR to lower the cost of capital associated with investing in a solar power system.

**IMPACT OF MAJOR DEVELOPMENTS.** In June 2015, FSLR and SunPower completed an initial public offering of its joint yieldco vehicle, called 8point3 Energy Partners. Both companies contributed a portfolio of solar assets that was spun off into a separate entity.

**MARKET PROFILE.** CFRA sees global solar installations declining in 2020, which would mark the first instance in two decades. By our calculations, solar installation growth accelerated by 10% in 2019 to about 112 gigawatts, largely driven by significant growth in Europe. After several years of lackluster participation in Europe, we calculate that installations in this once-critical market more than doubled in 2019. We also think the U.S. will see utility driven orders slow in 2020 after the step down in the Investment Tax Credit (ITC). We think China installations were only 25 gigawatts for 2019, a more than 40% decline from 2018. We now see the new norm for annual installations in China to be around 25 gigawatts, sharply below our previous assumption of 33 to 38 gigawatts. Overall, the demand seen in China during 2018 and 2017 of between 45 to 50 gigawatts appears unsustainable, especially as the region looks to reduce its emphasis on incentives.

**FINANCIAL TRENDS.** Sales at First Solar increased 37% in 2019 after declines of 24% in 2018 and 0.3% in 2017. We expect revenue to decline in 2020 as the company successfully transitions to a greater mix of revenue to its module only business and more competitive Series 6 panels. In light of what we view as the world's significant need for alternative energy sources, and FSLR's great strides in offering a product whose costs are on par with those of retail electricity in key geographic markets, long-term growth prospects for solar remains positive, we think.

The solar manufacturing business is a highly capital intensive business. We currently forecast FSLR to spend about \$500 million in 2020 and a more modest \$350 million in 2021 compared to \$669 million in 2019, with the proceeds to be largely utilized to shift toward its Series 6 modules and capacity expansion. We believe FSLR is the only player in the industry to be in a net cash position, which we believe will provide a significant competitive advantage. Total long-term debt was a manageable \$400 million at the end of the March quarter, while cash and short-term equivalents were \$1.5 billion.

**Corporate Information**

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**Officers**

**Global Controller & Chief Accounting Officer**

B. M. Jeffers

**Chief Technology Officer**

R. Garabedian

**CEO & Director**

M. R. Widmar

**Chief Financial Officer**

A. R. Bradley

**Interim General Counsel & Secretary**

J. E. Dymbort

**Chief Operating Officer**

P. T. deJong

**Chairman of the Board**

M. J. Ahearn

**Board Members**

C. Kennedy

G. A. Hambro

M. E. Joseph

M. J. Ahearn

M. P. Sweeney

M. R. Widmar

P. H. Stebbins

R. D. Chapman

S. L. Allen

W. J. Post

**Domicile**

Delaware

**Founded**

1999

**Employees**

6,600

**Stockholders**

46

**Auditor**

PricewaterhouseCoopers LLP

# First Solar, Inc.

Quantitative Evaluations						
<b>Fair Value Rank</b>	2	1	2	3	4	5
		LOWEST				HIGHEST
		Based on CFRA's proprietary quantitative model, stocks are ranked from most overvalued [1] to most undervalued [5].				
<b>Fair Value Calculation</b>	<b>USD 57.27</b>	Analysis of the stock's current worth, based on CFRA's proprietary quantitative model suggests that FSLR is slightly overvalued by USD 4.89 or 7.9%.				
<b>Volatility</b>		LOW	AVERAGE	HIGH		
<b>Technical Evaluation</b>	<b>BULLISH</b>	Since May, 2020, the technical indicators for FSLR have been BULLISH.				
<b>Insider Activity</b>		UNFAVORABLE	NEUTRAL	FAVORABLE		

Expanded Ratio Analysis				
	2019	2018	2017	2016
Price/Sales	1.92	2.01	2.39	1.14
Price/EBITDA	14.49	26.37	21.32	6.85
Price/Pretax Income	-48.94	30.49	34.13	-8.40
P/E Ratio	-51.27	31.22	-42.47	-7.92
Avg. Diluted Shares Outsg. (M)	105	106	104	103

Figures based on fiscal year-end price

Key Growth Rates and Averages				
Past Growth Rate [%]		1 Year	3 Years	5 Years
Sales		36.50	1.79	-2.01
Net Income		NM	-34.88	-21.92
Ratio Analysis [Annual Avg.]				
Net Margin [%]		NM	NM	NM
% LT Debt to Capitalization		8.10	NA	NA
Return on Equity [%]		-2.23	NA	NA

## Company Financials Fiscal year ending Dec. 31

Per Share Data (USD)	2019	2018	2017	2016	2015	2014	2013	2012	2011	2010
Tangible Book Value	47.58	48.85	47.90	49.18	52.61	47.73	43.22	40.58	41.38	35.20
Free Cash Flow	-4.70	-10.18	7.92	-0.22	-4.87	4.78	6.12	4.41	-8.89	1.37
Earnings	-1.09	1.36	-1.59	-4.05	5.83	3.90	3.67	-1.11	-0.46	7.68
Earnings (Normalized)	1.20	0.54	1.46	2.29	3.84	2.63	3.06	3.06	2.87	5.49
Dividends	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Payout Ratio [%]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Prices: High	69.23	81.72	71.80	74.29	67.80	74.84	65.99	50.20	175.45	153.30
Prices: Low	41.41	36.51	25.56	28.60	39.18	40.54	24.46	11.43	29.87	98.71
P/E Ratio: High	NM	60.1	NM	NM	11.6	19.2	18.0	NM	NM	20.0
P/E Ratio: Low	NM	26.8	NM	NM	6.7	10.4	6.7	NM	NM	12.9

Income Statement Analysis (Million USD)										
Revenue	3,063	2,244	2,941	2,905	4,113	3,391	3,310	3,369	2,766	2,564
Operating Income	201	40	215	251	730	422	457	432	385	751
Depreciation + Amortization	205	131	115	231	258	246	234	263	235	156
Interest Expense	27.1	25.9	25.8	20.5	7.0	2.0	1.9	13.9	0.1	0.0
Pretax Income	-120	148	206	-393	626	427	381	-40	-54	762
Effective Tax Rate	4.55	2.33	180.25	-5.90	5.17	7.30	7.90	-142.03	26.47	12.84
Net Income	-115	144	-166	-416	593	396	351	-96	-39	664
Net Income (Normalized)	126	58	152	236	391	267	292	265	247	475

Balance Sheet and Other Financial Data (Million USD)										
Cash	2,164	2,547	2,989	1,955	1,830	1,991	1,764	1,004	672	934
Current Assets	3,600	3,860	3,833	3,788	3,346	3,078	3,793	2,832	2,613	1,584
Total Assets	7,516	7,121	6,865	6,824	7,316	6,721	6,884	6,349	5,778	4,380
Current Liabilities	1,318	845	650	908	961	1,001	1,588	1,101	974	470
Long Term Debt	461	470	430	187	265	171	171	503	619	211
Total Capital	5,700	5,689	5,577	5,472	5,901	5,217	4,737	4,171	4,308	3,693
Capital Expenditures	669	740	514	229	166	258	283	379	732	589
Cash from Operations	174	-327	1,341	207	-325	736	856	762	-33	705
Current Ratio	2.73	4.57	5.89	4.17	3.48	3.08	2.39	2.57	2.68	3.37
% Long Term Debt of Capitalization	8.10	8.27	7.71	3.42	4.49	3.28	3.61	12.05	14.37	5.71
% Net Income of Revenue	-3.8	6.4	-5.6	-14.3	14.4	11.7	10.6	-2.9	-1.4	25.9
% Return on Assets	1.72	0.36	1.96	2.22	6.50	3.88	4.32	4.45	4.74	12.14
% Return on Equity	-2.23	2.80	-3.21	-7.73	11.26	8.34	8.65	-2.66	-1.11	21.75

Source: S&P Global Market Intelligence. Data may be preliminary or restated; before results of discontinued operations/special items. Per share data adjusted for stock dividends; EPS diluted. E-Estimated. NA-Not Available. NM-Not Meaningful. NR-Not Ranked. UR-Under Review.

# First Solar, Inc.

## Sub-Industry Outlook

We have a neutral fundamental outlook for the semiconductors sub-industry for the next 12 months, as we anticipate Covid-19 constraining demand near-term but remain optimistic about secular trends related to 5G and cloud investments. While the semiconductor industry has felt the brunt of Covid-19, from both the supply and demand side of things, we think supply issues have largely been alleviated -- our concerns remain overwhelmingly on the trajectory of a recovery on the demand side. In terms of demand, our base case now assumes an industry decline of 6% in 2020, entirely due to the macroeconomic factors from Covid-19, after declining 12% to \$412 billion in 2019 [entirely due to tariff issues].

Despite uncertain economic conditions, we see cloud/enterprise investments holding up during tough times given the increasing use of the cloud as more employees work from home. We continue to anticipate that consumers will hold back on spending heavily on electronic devices until the holidays, with smartphone sales now setting up to decline 8% in 2020 and PCs falling 7%. However, we expect gaming demand to be relatively resilient on Covid-19 and new console demand. We are encouraged by recent stabilization in memory prices [situation is very fluid].

We think the communications space will see improving demand related to 5G investments in the coming years, albeit acknowledge some uncertainty regarding Covid-19 pushouts and additional bans to China customers [e.g., Huawei]. Unit demand for smartphones is anticipated to rebound in 2021 after a projected fourth consecutive annual decline in 2020, reflecting extended replacement cycles. As 5G is rolled out, end-user devices like smartphones and base stations will both need to be able to support 5G-related technology, with demand for connectivity semiconductors

like baseband processors and radio frequency (RF) chips witnessing the greatest boost.

We project semiconductor automotive demand to fall by a high single-digit percentage but will be better than the 15% plus end market plunge this year, while demand from the industrials space is also pressured. That said, we see some favorable secular tailwinds in both groups, with analog semiconductors particularly exposed to these trends. Long term, we expect content growth in automobiles to sharply outpace semiconductor industry growth assumptions, driven by a number of megatrends [autonomy, electrification, and connected infotainment] developing over the next decade.

While companies that outsource manufacturing typically have more stability in gross margins [a trade-off for capped upside], others that have their own manufacturing see more variability. Industry margins continue to be a function of manufacturing utilization and inventory supply-demand imbalances. We forecast some companies, especially in analog, maintaining higher inventory levels, reducing potential leverage. Companies in the industry seem more inclined to increase debt levels given their strong balance sheets and the low interest rate environment. Healthy free cash flow generation will likely result in greater shareholder return via share repurchases.

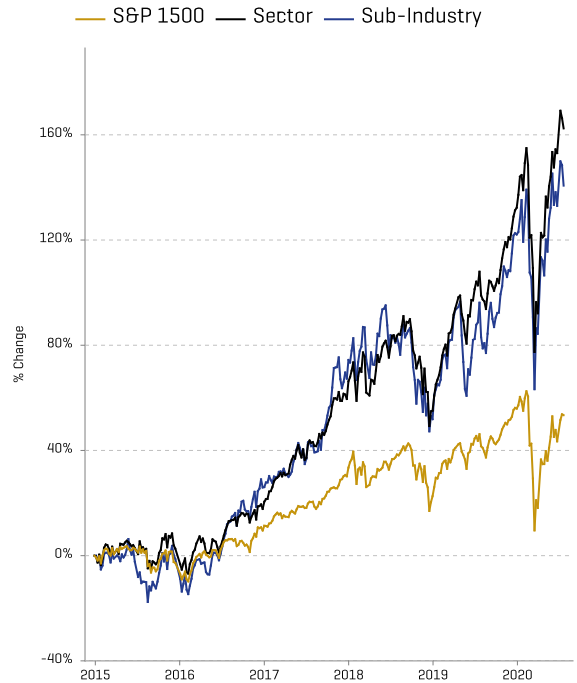
Year-to-date through June 30, the S&P semiconductors sub-industry index rose 5.2% versus a 7.9% decline for the S&P 1500 index. In 2019, the S&P semiconductors sub-industry index fell 44.1% versus a 28.3% increase for the S&P 1500 index.

**/Angelo Zino, CFA**

## Industry Performance

**GICS Sector: Information Technology**  
**Sub-Industry: Semiconductors**

Based on S&P 1500 Indexes  
Five-Year market price performance through Jul 25, 2020



NOTE: All Sector & Sub-Industry information is based on the Global Industry Classification Standard (GICS).

Past performance is not an indication of future performance and should not be relied upon as such.

Source: S&P Global Market Intelligence

## Sub-Industry: Semiconductors Peer Group\*: Semiconductors

Peer Group	Stock Symbol	Exchange	Currency	Recent Stock Price	Stk. Mkt. Cap. [M]	30-Day Price Chg. [%]	1-Year Price Chg. [%]	P/E Ratio	Fair Value Calc.	Yield [%]	Return on Equity [%]	LTD to Cap [%]
<b>First Solar, Inc.</b>	<b>FSLR</b>	<b>NasdaqGS</b>	<b>USD</b>	<b>62.16</b>	<b>6,583</b>	<b>26.7</b>	<b>-5.9</b>	<b>NM</b>	<b>57.27</b>	<b>Nil</b>	<b>-2.2</b>	<b>8.1</b>
Cirrus Logic, Inc.	CRUS	NasdaqGS	USD	64.80	3,783	13.8	32.3	25	66.13	Nil	13.5	NA
Cree, Inc.	CREE	NasdaqGS	USD	66.05	7,144	12.9	6.1	NM	NA	Nil	-2.8	18.7
Inphi Corporation	IPHI	NYSE	USD	121.74	5,870	11.5	95.0	NM	NA	Nil	-20.4	29.9
Lattice Semiconductor Corporation	LSCC	NasdaqGS	USD	29.62	3,988	9.4	76.4	90	20.16	Nil	14.8	25.0
ON Semiconductor Corporation	ON	NasdaqGS	USD	20.47	8,393	6.1	-8.3	NM	17.24	Nil	6.6	40.8
Power Integrations, Inc.	POWI	NasdaqGS	USD	117.89	3,518	-0.8	33.9	17	58.95	0.7	30.9	NA
ROHM Co., Ltd.	ROHCY	OTCPK	USD	33.68	6,610	-0.3	-6.1	NM	NA	2.1	3.5	5.4
Silicon Laboratories Inc.	SLAB	NasdaqGS	USD	102.25	4,467	7.7	-10.1	NM	72.65	Nil	1.8	24.5
United Microelectronics Corporation	UMC	NYSE	USD	3.340	8,130	30.0	51.8	23	NA	4.1	5.9	16.1
Universal Display Corporation	OLED	NasdaqGS	USD	156.69	7,381	6.0	-27.0	51	134.87	0.4	18.4	NA

\*For Peer Groups with more than 10 companies or stocks, selection of issues is based on market capitalization.

NA-Not Available NM-Not Meaningful.

Note: Peers are selected based on Global Industry Classification Standards and market capitalization. The peer group list includes companies with similar characteristics, but may not include all the companies within the same industry and/or that engage in the same line of business.

**First Solar, Inc.****Analyst Research Notes and other Company News****June 17, 2020**

02:46 pm ET... CFRA Downgrades Opinion on Shares of First Solar, Inc. to Sell from Hold [51.31\*\*]: We reduce our 12-month target price to \$48 from \$51, or 13.3x our '21 estimate, above peers to reflect FSLR's net cash position of \$1.1B. We keep our '20 EPS view at \$2.62 and '21's at \$3.62. While we keep estimates unchanged, we see downside potential, given a high likelihood that industry pricing declines are likely to be more pronounced than we previously anticipated. We now think industry oversupply is likely to persist through at least the first quarter of '21. FSLR has good near-term visibility, with a backlog of 12.3 GW that will fill demand through '21 [additional 7.5 GW pipeline in mid to late stage]. However, we are growing more cautious about its ability to sustain a book-to-bill above 1x and think recent industry pricing pressure could result in lower margin projects going forward. We continue to believe that FSLR's transformation carries significant risk over time, as it shifts towards a greater percentage of sales being module only from its historically focused systems installation business. /Angelo Zino, CFA

**May 08, 2020**

10:08 am ET... CFRA Keeps Hold Opinion on Shares of First Solar, Inc. [44.66\*\*\*]: We reduce our 12-month target to \$51 from \$55, or 14x our '21 estimate, above peers to reflect FSLR's net cash position of \$1.1B. We cut our '20 EPS view to \$2.62 from \$3.50 and '21 to \$3.62 from \$3.99. FSLR posts Q1 EPS of \$0.85 vs. \$0.64 loss, beating the \$0.31 EPS consensus. Despite lower-than-expected sales [\$532M vs. \$560M] and margins, the EPS beat reflects a tax benefit from the CARES act. While FSLR removed '20 view due to the risk of project push-outs and logistics issues, we are encouraged by the lack of cancellations and note FSLR has been able to largely run production as an essential business. FSLR has good near-term visibility, with a backlog of 12.3 GW that will fill demand through '21 [additional 7.5 GW pipeline in mid-to-late stage]. We think booked projects are coming at attractive/stable prices, which should support margins, but see a less favorable tax equity financing environment. We like FSLR's decision to accelerate the decommissioning of its legacy Series 4 panels. /Angelo Zino, CFA

**February 21, 2020**

02:02 pm ET... CFRA Keeps Hold Opinion on Shares of First Solar, Inc. [59.32\*\*\*]: We reduce our 12-month target to \$55 from \$62 on a P/E of 13.8x our '21 estimate, near peers. We cut our '20 EPS view to \$3.50 from \$3.64 and start '21 at \$3.99. FSLR posts Q4 EPS of \$2.01 vs. \$0.49, missing the \$2.91 EPS consensus. We note that revenue was below expectations, hurt by several factors including the delayed revenue recognition of certain project sales, and unfavorable weather conditions. Near term visibility remains healthy, as FSLR is effectively sold out through '20 and 2/3 sold out in '21 [2 gigawatts sold into '22]. While we like booking opportunities of 18.1 GW (8.2 GW mid-to-late stage), we are wary of FSLR being able to sustain at least a book-to-bill of 1x through '21. Cash burn is also an issue in '20, reflecting capacity expansion plans and \$350M cash outflow to settle a class action lawsuit. That said, we see execution risk as FSLR transitions to a third-party module provider and reviews options to sell its project development business. /Angelo Zino, CFA

**October 25, 2019**

12:24 pm ET... CFRA Reduces Opinion on Shares of First Solar, Inc. to Hold from Buy [52.1\*\*\*]: We cut our 12-month target price to \$62 from \$74 on a P/S of 2x our '20 estimate, above peers, supported by net cash per share over \$10, and near its three-year historical average. We keep our '19 EPS view at \$2.50 and '20 at \$3.64. FSLR posts Q3 EPS of \$0.29 vs. \$0.54, missing the \$1.11 EPS consensus. We note Q3 EPS and revenue miss entirely reflect the push-out of large projects into Q4. We positively view Series 6 production, which appears on target with Ohio-2 production ramp, but note some execution issues as yield is slightly behind schedule. We like YTD bookings of 5.4 gigawatts [1.1 GW since August Q2 call] and mid-to-late stage opportunities of 8.1 GW, with FSLR sold out through mid-21 adding good visibility. While we think FSLR is well-positioned long term and like planned cost per watt reductions, we are growing more concerned that U.S. bookings growth will slow in '20 as the U.S. ITC steps down. FSLR is postponing '20 guidance until February [typically done in December]. /Angelo Zino, CFA

**August 02, 2019**

09:39 am ET... CFRA Keeps Buy Opinion on Shares of First Solar, Inc. [66\*\*\*]: We up our 12-month target by \$2 to \$74 on a P/S of 2.4x our '20 estimate, above peers, supported by net cash per share of \$17.81, and near its ten-year historical average. We keep our '19 EPS view at \$2.50 and '20 at \$3.64. FSLR posts Q2 loss per share of \$0.18 vs. \$0.46 loss per share, missing the \$0.02 EPS consensus. We positively view FSLR's progress with its transitions to Series 6 panels, with the cost per watt to drop 30% by year-end compared to the start of the year. We are encouraged by 4.3 gigawatts of net bookings YTD, with future projected shipments of 12.9 gigawatts. As a result, we expect the book-to-bill to remain above 1 and like FSLR's improving visibility, as it is effectively sold out through the rest of '19 and '20 with 60% booked in '21. We think FSLR is benefiting from a stable pricing environment, which will allow it to book favorable projects and support margin expansion. We see greater momentum in Europe and would view an extension of the U.S. ITC as a catalyst. /Angelo Zino, CFA

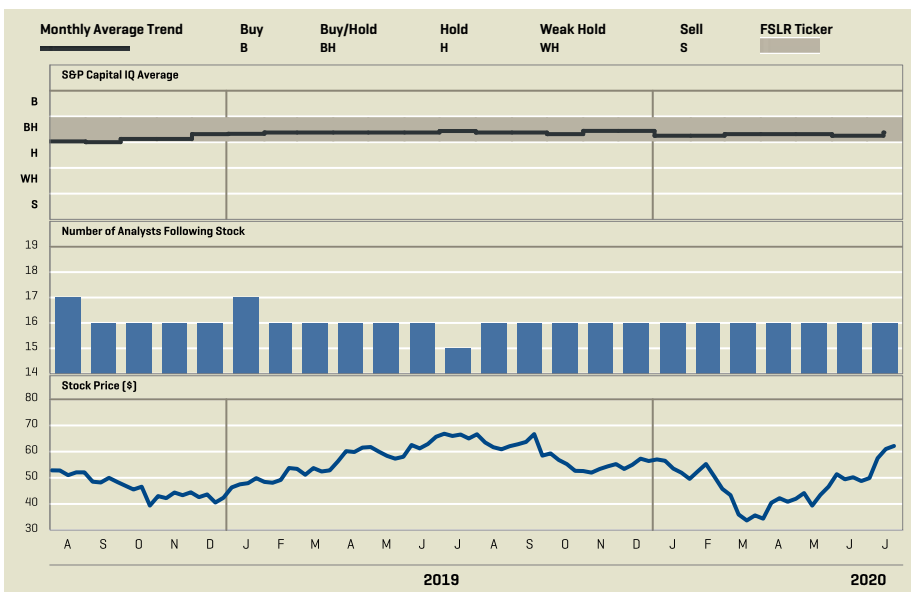
**June 05, 2019**

02:03 pm ET... CFRA Raises Opinion on Shares of First Solar, Inc. to Buy from Hold [60.79\*\*\*]: We up our 12-month target to \$72 from \$60 on a P/S of 2.3x our 2020 estimate, above peers, supported by net cash per share around \$16, and near its ten-year historical average. We keep our '19 EPS view at \$2.50 and '20 at \$3.64. Our upgrade reflects several factors. First, we see considerable margin improvement, on cost per watt improvements from the ramp of its Series 6 panels [about 30% reduction over the next three quarters]. Second, we see upside to ASPs, as Series 6 panels command a premium to its predecessor and industry supply tightens in the second half. We also see increasing installations in Europe given a resurgence in the utility scale market. We think FSLR will post a book-to-bill significantly above 1:1 in the second half on very favorable terms (e.g. offering upside to '20 and '21 revenue), as buyers look to lock in the 30% ITC before '19 end [scales down to 26% in '20 and 22% in '21]. Finally, we see sharp free cash flow improvement, as capital expenditures moderate. /Angelo Zino, CFA

Note: Research notes reflect CFRA's published opinions and analysis on the stock at the time the note was published. The note reflects the views of the equity analyst as of the date and time indicated in the note, and may not reflect CFRA's current view on the company.

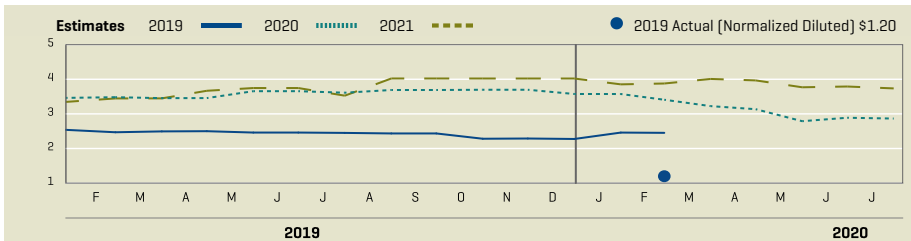
# First Solar, Inc.

## Analysts' Recommendations



	No. of Recommendations	% of Total	1 Mo. Prior	3 Mos. Prior
Buy	5	31	4	4
Buy/Hold	5	31	5	6
Hold	5	31	6	5
Weak Hold	1	6	1	1
Sell	0	0	0	0
No Opinion	0	0	0	0
<b>Total</b>	<b>16</b>	<b>100</b>	<b>16</b>	<b>16</b>

## Wall Street Consensus Estimates



Fiscal Years	Avg Est.	High Est	Low Est.	# of Est.	Est. P/E
2021	3.74	4.53	2.45	13	16.6
2020	2.87	3.39	2.29	12	21.7
<b>2021 vs. 2020</b>	<b>▲30%</b>	<b>▲34%</b>	<b>▲7%</b>	<b>▲8%</b>	<b>▼-24%</b>
Q2'21	0.88	1.16	0.61	7	70.8
Q2'20	0.25	0.65	-0.04	11	NM
<b>Q2'21 vs. Q2'20</b>	<b>▲252%</b>	<b>▲78%</b>	<b>▲1625%</b>	<b>▼-36%</b>	<b>NA</b>

Forecasts are not reliable indicator of future performance.

Note: A company's earnings outlook plays a major part in any investment decision. S&P Global Market Intelligence organizes the earnings estimates of over 2,300 Wall Street analysts, and provides their consensus of earnings over the next two years, as well as how those earnings estimates have changed over time. Note that the information provided in relation to consensus estimates is not intended to predict actual results and should not be taken as a reliable indicator of future performance.

**Note: For all tables, graphs and charts in this report that do not cite any reference or source, the source is S&P Global Market Intelligence.**

## Wall Street Consensus Opinion

### BUY/HOLD

### Wall Street Consensus vs. Performance

For fiscal year 2020, analysts estimate that FSLR will earn USD \$2.87. For the 1st quarter of fiscal year 2020, FSLR announced earnings per share of USD \$0.85, representing 29.6% of the total revenue estimate. For fiscal year 2021, analysts estimate that FSLR's earnings per share will grow by 30% to USD \$3.74.



**First Solar, Inc.****Glossary****STARS**

Since January 1, 1987, CFRA Equity and Fund Research Services, and its predecessor S&P Capital IQ Equity Research has ranked a universe of U.S. common stocks, ADRs (American Depositary Receipts), and ADSs (American Depositary Shares) based on a given equity's potential for future performance. Similarly, we have ranked Asian and European equities since June 30, 2002. Under proprietary STARS (Stock Appreciation Ranking System), equity analysts rank equities according to their individual forecast of an equity's future total return potential versus the expected total return of a relevant benchmark (e.g., a regional index [S&P Asia 50 Index, S&P Europe 350® Index or S&P 500® Index]), based on a 12-month time horizon. STARS was designed to meet the needs of investors looking to put their investment decisions in perspective. Data used to assist in determining the STARS ranking may be the result of the analyst's own models as well as internal proprietary models resulting from dynamic data inputs.

**S&P Global Market Intelligence's Quality Ranking**

(also known as **S&P Capital IQ Earnings & Dividend Rankings**) - Growth and stability of earnings and dividends are deemed key elements in establishing S&P Global Market Intelligence's earnings and dividend rankings for common stocks, which are designed to encapsulate the nature of this record in a single symbol. It should be noted, however, that the process also takes into consideration certain adjustments and modifications deemed desirable in establishing such rankings. The final score for each stock is measured against a scoring matrix determined by analysis of the scores of a large and representative sample of stocks. The range of scores in the array of this sample has been aligned with the following ladder of rankings:

A+	Highest	B	Below Average
A	High	B-	Lower
A-	Above Average	C	Lowest
B+	Average	D	In Reorganization
NR	Not Ranked		

**EPS Estimates**

CFRA's earnings per share (EPS) estimates reflect analyst projections of future EPS from continuing operations, and generally exclude various items that are viewed as special, non-recurring, or extraordinary. Also, EPS estimates reflect either forecasts of equity analysts; or, the consensus (average) EPS estimate, which are independently compiled by S&P Global Market Intelligence, a data provider to CFRA. Among the items typically excluded from EPS estimates are asset sale gains; impairment, restructuring or merger-related charges; legal and insurance settlements; in process research and development expenses; gains or losses on the extinguishment of debt; the cumulative effect of accounting changes; and earnings related to operations that have been classified by the company as discontinued. The inclusion of some items, such as stock option expense and recurring types of other charges, may vary, and depend on such factors as industry practice, analyst judgment, and the extent to which some types of data is disclosed by companies.

**12-Month Target Price**

The equity analyst's projection of the market price a given security will command 12 months hence, based on a combination of intrinsic, relative, and private market valuation metrics, including Fair Value.

**CFRA Equity Research**

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**Abbreviations Used in Equity Research Reports**

CAGR	- Compound Annual Growth Rate
CAPEX	- Capital Expenditures
CY	- Calendar Year
DCF	- Discounted Cash Flow
DDM	- Dividend Discount Model
EBIT	- Earnings Before Interest and Taxes
EBITDA	- Earnings Before Interest, Taxes, Depreciation & Amortization
EPS	- Earnings Per Share
EV	- Enterprise Value
FCF	- Free Cash Flow
FFO	- Funds From Operations
FY	- Fiscal Year
P/E	- Price/Earnings
P/NAV	- Price to Net Asset Value
PEG Ratio	- P/E-to-Growth Ratio
PV	- Present Value
R&D	- Research & Development
ROCE	- Return on Capital Employed
ROE	- Return on Equity
ROI	- Return on Investment
ROIC	- Return on Invested Capital
ROA	- Return on Assets
SG&A	- Selling, General & Administrative Expenses
SOTP	- Sum-of-The-Parts
WACC	- Weighted Average Cost of Capital

**Dividends on American Depositary Receipts (ADRs) and American Depositary Shares (ADSs) are net of taxes (paid in the country of origin).****Qualitative Risk Assessment**

Reflects an equity analyst's view of a given company's operational risk, or the risk of a firm's ability to continue as an ongoing concern. The Qualitative Risk Assessment is a relative ranking to the U.S. STARS universe, and should be reflective of risk factors related to a company's operations, as opposed to risk and volatility measures associated with share prices. For an ETF this reflects on a capitalization-weighted basis, the average qualitative risk assessment assigned to holdings of the fund.

**STARS Ranking system and definition:****★★★★★ 5-STARS (Strong Buy):**

Total return is expected to outperform the total return of a relevant benchmark, by a notable margin over the coming 12 months, with shares rising in price on an absolute basis.

**★★★★★ 4-STARS (Buy):**

Total return is expected to outperform the total return of a relevant benchmark over the coming 12 months, with shares rising in price on an absolute basis.

**★★★☆☆ 3-STARS (Hold):**

Total return is expected to closely approximate the total return of a relevant benchmark over the coming 12 months, with shares generally rising in price on an absolute basis.

**★★☆☆☆ 2-STARS (Sell):**

Total return is expected to underperform the total return of a relevant benchmark over the coming 12 months, and the share price is not anticipated to show a gain.

**★☆☆☆☆ 1-STAR (Strong Sell):**

Total return is expected to underperform the total return of a relevant benchmark by a notable margin over the coming 12 months, with shares falling in price on an absolute basis.

**Relevant benchmarks:**

In North America, the relevant benchmark is the S&P 500 Index, in Europe and in Asia, the relevant benchmarks are the S&P Europe 350 Index and the S&P Asia 50 Index, respectively.

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Quantitative recommendations are determined by ranking a universe of common stocks based on 5 measures or model categories: Valuation, Quality, Growth, Street Sentiment, and Price Momentum. In the U.S., a sixth sub-category for Financial Health will also be displayed. Percentile scores are used to compare each company to all other companies in the same universe for each model category. The five (six) model category scores are then weighted and rolled up into a single percentile ranking for that company. For reports containing quantitative recommendations refer to the Glossary section of the report for detailed methodology and the definition of Quantitative rankings.

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**STARS Stock Reports:**

Global STARS Distribution as of December 31, 2019

Ranking	North America	Europe	Asia	Global
Buy	33.4%	29.0%	41.1%	33.5%
Hold	56.1%	54.8%	46.4%	54.6%
Sell	10.5%	16.2%	12.5%	11.9%
Total	100.0%	100.0%	100.0%	100.0%

**Analyst Certification:**

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