

3.4. Bankability

Thirty-four module companies are listed as Tier 1 module manufacturers, with a total annual capacity of 94GW. Compared with the 1Q list, seven names have been added: Talesun, JA Solar, ZNshine Solar, Shinsung Solar, BYD, Sharp, and Swelect. Five dropped out: Hareon, HT-SAAE, Neo Solar Power, AU Optronics, and Vikram, due to not meeting the criterion of having supplied modules to projects non-recourse financed by six commercial banks in two years, as tracked by the Bloomberg New Energy Finance desktop.

Table 3: Module manufacturers meeting Bloomberg New Energy Finance's tier 1 criteria as of 2Q 2018

Firm/brand	Annual in-house module capacity (MW/year)	Firm/brand	Annual in-house module capacity (MW/year)
Canadian Solar*	8,110	SunPower*	1,900
Trina Solar*	8,000	BYD*	1,700
Jinko Solar*	8,000	Changzhou Almaden	1,500
Hanwha Q Cells*	8,000	China Sunergy	1,450
JA Solar*	7,000	REC Group*	1,400
Risen	6,600	Adani/ Mundra*	1,200
Longi*	6,500	Akcome	1,000
GCL Systems*	5,400	ET Solar	1,000
Suntech/ Shunfeng*	3,300	Boviet*	700
Seraphim	3,000	Lightway Solar	660
Chint/ Astronergy*	2,500	Tata Solar Power	500
Znshine Solar	2,300	Waaree	500
First Solar*	2,200	Hansol Technics	480
Talesun	2,200	Heliene	250
Renesola	2,000	Sharp	210
Eging	2,000	Shinsung Solar	200
Phono Solar*	2,000	Swelect	110
		Total	93,870

Source: Bloomberg New Energy Finance. Note: See Methodology [here](#). * denotes module makers for which a technical due diligence report is available from DNV GL. Contact Tara.Doyle@dnvgl.com for details.

Figure 12 shows the Altman-Z scores for publicly listed PV manufacturers as of 4Q 2017. The Altman-Z score is a ratio of metrics of a manufacturing company's financial health, and a useful indicator of the probability of a company entering bankruptcy within the next two years. The higher the value, the lower the probability of bankruptcy. A score above 2.6 indicates bankruptcy is unlikely, below 1.1 bankruptcy should be considered a possibility.

Chinese manufacturer Yingli (NYSE: YGE) is still in default of some loans, and is undergoing restructuring. This keeps it out of the tier 1 list regardless the six-bank criterion. The China-based company reported in a [statement](#) of its fourth-quarter and full-year 2017 results that although