

27 September 2010

Solar Photovoltaics

China solar PV credit agreements reach ~\$33.6B

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China solar PV framework agreements now accrue to ~\$33.6B

A latest tally of China state banks' framework credit agreements with key solar PV companies tips in at ~\$33.6B. We believe this quasi-capitalization of China's solar PV companies could have far reaching implications for the industry (e.g. asymmetric competition, circumvention of typical market mechanisms, national policies in nurturing a strategic industry, etc.) While these credit agreements raise concerns, much will depend on how, when and where they are put to use - permissible uses and terms of use are still not clear.

~\$33.6B solar PV framework credit agreements via CDB and others

Canadian Solar	RMB 15B (~\$2.2B) – April 28, 2009 - 3 State banks
Suntech:	RMB 50B (~\$7.4B) – April 6, 2010 - CDB
Trina Solar:	RMB 30B (~\$4.4B) – Apr 6, 2010 – CDB
Yingli Green Energy:	RMB 36B (~\$5.3B) – July 9, 2010 - CDB
Solarfun:	RMB 7B (~\$1.0B) – July 22, 2010 – Bank of China
JA Solar:	RMB 30B (~\$4.4B) – Sep 10, 2010 – CDB
LDK Solar	RMB 60B (~\$8.9B) - Sep 27, 2010- CDB

China credit policy - generous credit extension can create inefficiencies

As noted in our previous reports, we view China government policies toward the solar PV industry, and more broadly toward the renewable energy industry, as strategic from perspectives of nurturing a global industry, job creation, a buffer for energy security, and a hedge against climate pollution concerns. The initial extension of credit in 2009 to many companies despite weak balance sheets and challenged margin structures may have focused on supporting the industry and protecting jobs, but substantial funding now could be construed as help in positioning Chinese companies downstream in the solar PV industry, an area where these companies have failed to establish a meaningful presence. We note that a state sponsored pool of credit irrespective of competitive dynamics, business model sustainability and economic viability of companies breaks down the corrective mechanism of a functioning market, can create inefficiencies, and in the long-term can harm the competitive/economic case of the solar PV industry.

Valuation

We value solar PV companies on both revenue growth and profitability, as applicable, in a high-growth industry. With rapid industry growth we anticipate capacity expansion and a focus on market share to eclipse sustained profitability as capital spending and working capital needs dictate. We anticipate sustained profitability for industry leaders, and stock volatility through an industry-wide rapid growth phase. We focus on P/E where viable, and look to other measures such as TEV/Sales, TEV/EBITDA, P/TBV and DCF as checks.

Risks

Risks include but are not limited to: (1) rapidly changing market conditions, (2) changes to government subsidization policies, (3) the impact of many competing solar PV technologies, (4) the emergence of disruptive technologies, (5) material supply constraints, (6) a relatively immature industry infrastructure, (7) large capital investment requirements, (8) increasing competition with many new entrants, (9) competition from other renewable energy sources, (10) long warranty periods for solar panels, and (11) geopolitical risk.

Industry Update

Companies featured			
First Solar Inc. (FSLR.OQ),USD147.09 Buy			
	2009A	2010E	2011E
EPS (USD)	7.75	7.25	7.65
P/E (x)	18.8	20.3	19.2
EV/EBITDA (x)	13.3	13.1	11.3
Applied Materials (AMAT.OQ),USD11.63 Hold			
	2009A	2010E	2011E
EPS (USD)	-0.05	0.83	1.05
P/E (x)	-	14.0	11.1
EV/EBITDA (x)	81.0	6.2	4.6
Canadian Solar (CSIQ.OQ),USD12.98 Hold			
	2009A	2010E	2011E
EPS (USD)	0.67	0.78	1.19
P/E (x)	18.9	16.6	10.9
EV/EBITDA (x)	12.3	4.7	4.6
Energy Conversion Devices (ENER.OQ),USD4.75			
	2010A	2011E	2012E
EPS (USD)	-1.85	-0.33	-
P/E (x)	-	-	-
EV/EBITDA (x)	-	29.1	-
Evergreen Solar (ESLR.OQ),USD0.62 Hold			
	2009A	2010E	2011E
EPS (USD)	-0.41	-0.45	-0.25
P/E (x)	-	-	-
EV/EBITDA (x)	60.0	85.7	10.3
SunPower (SPWR.OQ),USD13.94 Buy			
	2009A	2010E	2011E
EPS (USD)	0.43	1.13	1.80
P/E (x)	65.0	12.3	7.7
EV/EBITDA (x)	13.1	3.9	3.8

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Appendix 1

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Equity rating key

Equity rating dispersion and banking relationships

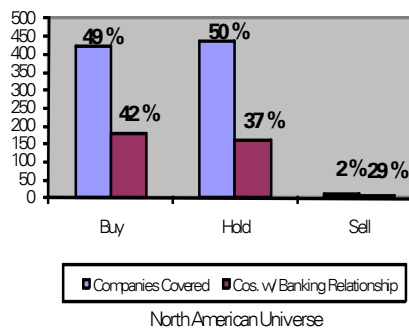
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