

MORGAN CREEK

CAPITAL MANAGEMENT

ALTERNATIVE THINKING ABOUT INVESTMENTS

New China Perspectives



Welcome to the weekly issue of Morgan Creek's *New China Perspectives*. It is comprised of research from Morgan Creek's China-based investment team together with curated articles of interest. In addition to timely political and economic news covering greater China, Morgan Creek's China team seeks to provide in-depth perspectives on investing in the technology, consumer and healthcare sectors in the region. Our research leverages the "on the ground"

insights of our team together with Morgan Creek's decades-long experience in covering the region. Our team are focused, thematic investors primarily covering the technology, consumer, and healthcare sectors and investing in private companies and early-stage managers with deep local expertise. To learn more about our team and investment offerings, please email chinateam@morgancreekc.com.

Best Regards,

Handwritten signature of Mark W. Yusko.

Mark W. Yusko
CEO & CIO

NOTES FROM THE BUND¹

This is the third installment of a four-part series exploring China's corporate debt. The prior newsletter introduced the Chinese Photo Voltaic ("PV") industry development, which was greatly supported by the local governments using debt and land. China now is a leader in the global market. In this newsletter, we will dive deeper into China's achievements.

When the global PV market started to thrive in 2004, several Chinese PV companies presented themselves in the world arena. However, during that time, there were two key issues in China's market:

- Supply: overseas players controlled key technology and raw materials;
- Demand: domestic users did not drive consumption, with exports comprising 90% of total sales.

Then in 2008, demand was hit hard. China's PV industry faced with an anti-dumping and anti-subsidy probe from foreign administrations. Exports to the US dropped by 50% and to the EU by 70%. Even worse, on the supply side Chinese players were forced to buy raw materials at higher costs and sell the products at lower prices. This resulted in substantial losses in the industry with several companies going bankrupt.

Supply assurance: safeguard upstream autonomy

The technological revolution of wafers

Silicon wafers are an important component in the creation of solar cells. They are widely popular in contrast to other wafer materials due to their thermal stability, ease of processing, and durable nature. Silicon wafers can be placed into two categories: monocrystalline (Mono-Si) and polycrystalline (Poly-Si) silicon. The difference is as

follows:

Characters	Mono-Si	Poly-Si
Extra process required	Yes	No
Avg. conversion efficiency	19%	17%
Decay rate in 25 years	16.2%	20%
Costs	Expensive	Cheap

Table 1: Differences between Mono-Si and Poly-Si²

Poly-Si was primarily used until 2015 because of its lower costs. Chinese companies played a disproportionate role in the industry transformation to Mono-Si. Contrary to the consensus, Longi, a key producer of Mono-Si, was founded in 2000 with the assertion that Poly-Si would be replaced once Mono-Si achieved economies of scale.

The Chinese authorities adopted a similar playbook to what we discussed in our prior article: in the initial stages, the government supported the company through agent construction projects, in which the government built and leased plants to Longi. The Longi Ningxia factories, for example, entitle the Mono-Si producer to free land use rights for the first five years, and then pay RMB 25 per square meter to the authorities. For all projects in the area³, the government spent RMB 8 billion. In the first eight months of 2022⁴, Longi contributed RMB 1.4 billion in GDP to the area, or 3% of the city's total industrial production.

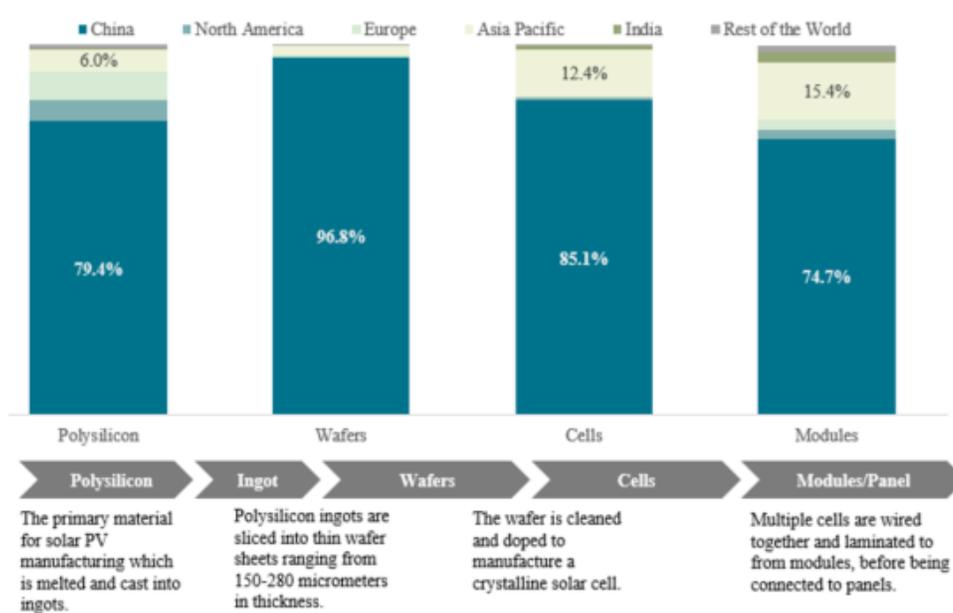
2015 was a blessing of a year for the industry. On the government side, China released the Top Runner program, which mandates that a specific amount of solar farm capacity built each year, must only use panels that meet the Top Runner efficiency standards. The policy encouraged a wide adoption of Mono-Si domestically. On Longi's side, it managed to reduce the price of Mono-Si to roughly the same price as Poly-Si. This resulted in the company's success in localizing the technology of diamond wire cutting, making it 4-5 times faster than the traditional slurry cutting enabling thinner wafers with less waste and a higher cell yield. For obvious reasons, Mono-Si now prevails over Poly-Si as a key component in the PV industry.



Figure 1: Mono-Si overtakes Poly-Si as the key component in PV⁵

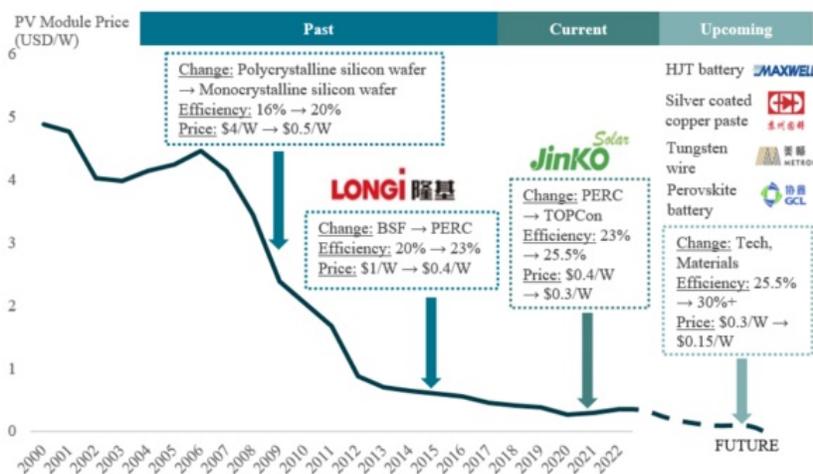
Achieve dominance over the whole supply chain

With continuous government policy support for the industry, Chinese enterprises achieved economies of scale and a more than 80% decline in cost. Today, China can cover all the manufacturing stages of solar panels and represents nearly 80% of global market share.



*Figure 2: Chinese companies dominate the global solar PV industry chain*⁶

China continues leading PV innovation in an effort to drive costs even lower.



*Figure 3: Chinese companies lead global innovation*⁷

An example of government stimulating electric vehicle demand is when the Shanghai government introduced Tesla into the city's Lin-gang area. In 2019 alone¹¹, the local government granted loans of up to RMB 16.3 billion.

Economic benefits through the journey

Since 2011⁸, China has invested \$50 billion in new PV supply capacity and created over 300 thousand manufacturing jobs along the value chain. China now demonstrates a degree of self-sufficiency in upstream channels, with the industry expected to contribute 1% of the nation's GDP growth annually.⁹

We will discuss the playbook from the government side, namely Hefei, to explore how the local government uses this mechanism to help boost its growth in our next newsletter.

[Click here](#) to see back issues of New China Perspectives

CHINA NEWS SPOTLIGHT

China Publishes Rules to Revive Offshore Listings: China's securities watchdog published rules on Friday to

regulate offshore listings, reviving foreign initial public offerings (IPOs) by Chinese firms after a regulatory freeze imposed in July 2021. The trial rules, published by the China Securities Regulatory Commission (CSRC) and effective from March 31, are designed to guide companies wanting to access liquid capital markets. [Read More.](#)

Goldman Strategists See 24% Jump in Chinese Stocks by Year-End: Goldman Sachs Group Inc. strategists expect the selloff in Chinese stocks since late January to reverse as the nation's economic reopening delivers windfall profits for businesses. The US investment bank sees potential for the MSCI China Index to reach 85 points by the end of 2023, an increase of about 24% over its close last week, according to a note from strategists including Kinger Lau. The gauge climbed as much as 1.6% in Monday's session amid a broad China rebound. [Read More.](#)

China Set to Leave Lending Benchmarks Unchanged as Economic Recovery Seen on Track: China is widely expected to leave its benchmark lending rates unchanged at the monthly fixing on Monday, a Reuters survey showed, as investors believe the world's second-largest economy is on track to recover from COVID-19 slumps. [Read More.](#)

Arm China Cuts more than 100 Jobs After a 96% Dive in Profits Last Year Amid Tough Chip Market: Arm China, the joint venture of SoftBank Group-owned chip firm Arm Ltd, laid off more than 100 people across three departments last week following a rough 2022 that saw profits plummet by 96 per cent, according to two people familiar with the matter. Departments losing staff include those for high-performance computing (HPC) and system-on-a-chip (SoC) designs, the people said, and most workers will be compensated according to how many years they have been with the company plus three months of pay. [Read More.](#)

China's BYD Poised to Vie with Tesla in Luxury EV Market: Chinese electric vehicle maker BYD is expanding operations overseas, setting a unit sales target for 2023 with an eye toward overtaking American rival Tesla. Operating in more than 40 nations including Japan and countries in Southeast Asia and Europe, BYD plans to sell nearly 2 million EVs this year. "Our dream will come true as a result of research and development efforts over 20 years. We will change the global industrial structure for luxury cars," said Wang Chuanfu, founder and chairman of BYD, at an online unveiling of its luxury Yangwang brand on Jan. 5. [Read More.](#)

China's Tech Giants are Launching ChatGPT Clones — and Beijing is Watching Closely: Chinese technology giants over the past week have announced their intentions to launch ChatGPT-style products, joining the artificial intelligence arms race sparked by the popular chatbot. But announcements from China's biggest firms have not said they are working on all-encompassing platforms like the U.S.' ChatGPT, a move which could worry Beijing which heavily censors internet content. Instead, companies from Alibaba to NetEase have spoken about the technology in application-specific scenarios. [Read More.](#)

US FDA Accepts BLA for Henlius' Biosimilar HLX02: The US Food and Drug Administration (FDA) has accepted the biologics licence application (BLA) for Shanghai Henlius Biotech's proposed biosimilar HLX02 (trastuzumab for injection). Accord BioPharma (Accord US), the business partner of Shanghai Henlius Biotech, has submitted the BLA. The application is seeking approval for the biosimilar to treat HER2-overexpressing metastatic breast cancer, and metastatic gastric or gastroesophageal junction adenocarcinoma. [Read More.](#)

Coherus and Junshi Biosciences Announce Positive Final Overall Survival Results of JUPITER-02, a Phase 3 Clinical Trial Evaluating Toripalimab as Treatment for Recurrent or Metastatic Nasopharyngeal Carcinoma: Shanghai Junshi Biosciences Co., Ltd ("Junshi Biosciences", HKEX: 1877; SSE: 688180) and Coherus BioSciences, Inc. ("Coherus", Nasdaq: CHR5) today announced positive results of a final analysis of overall survival ("OS") from the pivotal study JUPITER-02 (NCT03581786), a randomized, double-blind, placebo-controlled Phase 3 clinical trial evaluating toripalimab in combination with gemcitabine and cisplatin as the first-line treatment for patients with recurrent or metastatic nasopharyngeal carcinoma ("NPC"). This final analysis demonstrated a statistically significant and clinically meaningful improvement in OS in NPC patients treated with toripalimab plus chemotherapy compared to chemotherapy alone. These data are being submitted for presentation at an upcoming medical meeting. [Read More.](#)

¹ The Bund is a historic waterfront area in central Shanghai, where Morgan Creek's office is located. From the 1860s to the 1930s, it was the rich and powerful center of the foreign establishment in Shanghai, operating as a legally protected treaty port. The picture above is part of the historical waterfront.

² Source: What is the difference between Monocrystalline and Polycrystalline solar panels <https://ifwrenewables.ie/>

³ Note: There was a total of 7 Longi plants in the area.

⁴ Source: Ningxia Hui Autonomous Region Development and Reform Commission

⁵ Source: National Bureau of Statistics

⁶ Source: China Photovoltaic Industry Association (CPIA)

⁷ Source: Solarbuzz LLC, China Photovoltaic Industry Association (CPIA), Loyal Valley Capital 2022 AGM

⁸ Source: International Energy Agency (IEA)

⁹ Source: China's 2050 power could be Zero Carbon for under 1% of GDP: study <https://www.solarpaces.org>; Oct 12th, 2022

Important Disclosures

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