# July 30, 2014 – Silver in Solar

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I've been spending much time centering on the COMEX factors that determine silver prices and plan to continue to do so, since these factors are so compelling. However, on a longer term basis, the actual production and consumption of the metal will exert the greatest influence on price. So I thought I would review one particular demand component for silver, its use in solar power, before commenting on the market developments of a shorter term nature.

Often, the facts necessary to envision what the future may hold are right in front of us. The world relies upon electricity to power industry and an incredible array of personal electronic devices like never before. Nothing suggests this will change anytime soon other than for that trend to accelerate. Of all the elements in the periodic table, silver conducts electricity better than any other element. Therefore, there is little to suggest that silver won't play an increasing role in both the world production and consumption of electricity.

Today, I'd like to look at one role silver plays in the production of electricity, namely, in solar panels; but it's important to recognize that silver is an integral component in the overall production, consumption and transmission of the world's electricity. First, a few facts about the world's production and consumption of electricity.

In 2011, China passed the US as the world's largest producer and consumer of electricity for the first time and today produces and consumes 25% more than the US does. To give you some sense of China's burgeoning rate of growth in electricity, ten years ago, the US produced and consumed 50% more electricity than did China. Even if the torrid growth rate cools off, China's share of the world's production and consumption of electricity seems destined to continue to grow sharply. Here's a nifty interactive link to compare current and past usage by country http://yearbook.enerdata.net/world-electricity-production-map-graph-and-data.html

China has achieved its phenomenal increase in producing electricity largely on the back of new coal-fired power plants. Almost 80% of China's electricity comes from burning coal. In turn, China is the world's largest producer and consumer of coal, supplementing domestic production with hefty coal imports. China accounts for nearly 50% of the world's consumption of coal; meaning it consumes about the same amount of coal as the rest of the world combined. That's a lot of coal being burned in China.

The problem is that burning coal is a dirty business and a leading cause of pollution and this is why China has, effectively, the world's worst pollution problem. It's no accident that 16 of the world's 20 largest cities with the worst pollution are in China. None of this is lost on the leadership in China. For the present and future health concerns (and costs) of its 1.3 billion citizens, the issue of balancing the needs for electric power and air quality are uppermost in the minds of China's leadership. http://www.huffingtonpost.com/jeffrey-rubin/chinas-war-on-smog-will-p_b_5206683.html

In comparison to burning coal, the amount of air pollution generated as a result of producing electricity from solar panels is non-existent. On this basis alone, electricity produced from the sun becomes extremely attractive. Admittedly, the percentage of electricity produced from solar panels is very small, compared to coal-fired and other forms of electrical production, even other renewal sources, like hydro and wind power. It's cheaper (at least in the short run) to produce electricity with coal rather than solar. But while the current percentage of total world electricity produced from solar panels is low (less than 1%), it is growing very rapidly, particularly in China.

Despite the small share that solar power comprises of the world's total production of electricity, since silver is a prime component in the production of solar panels, the amount of silver being consumed on that small installed base is quite significant. According to the Silver Institute, next year some 100 million ounces of silver will be consumed in the manufacture of solar panels, making this the largest single segment of industrial silver consumption (at 12% of total world mine production). I should note that very little silver is recovered or recycled from installed solar panels.

The keys here are the low percentage of current solar electric production versus total world electric production, the hefty current consumption of silver in solar panels and the future growth rate of solar panel installation. As and when more solar panels are manufactured and installed on a worldwide basis, it would appear certain that the consumption of silver in this segment will grow. No one can know precisely how much silver will be consumed in this application in the future, but we can look at additional facts for guidance. Even though China's production and installation of solar panels is still low by world standards, its growth rate of new installations will likely make it the largest in the world in a few years.
http://en.wikipedia.org/wiki/Solar_power_by_country

How large of a share of total electric production could solar account for in China in the future? Currently, solar accounts for around 0.5% of total electrical production in China. The world's leader in solar generated electricity, Germany, gets 6% of its production of electricity from solar. Italy gets 7% of its total electric production from solar. Considering the pressing pollution problem in China, there's no reason to think that its leadership will not continue to embark on a program to vastly increase the share of solar in producing electricity.

Please remember that China has a command economy, meaning that its leadership is in an ideal position to make the types of decisions that will benefit its citizens and its leadership for the very long term. In other words, because the government in China has almost total control over the long term macroeconomic direction the country will take, it's hard to imagine the country not moving to solar generated power forcefully. As it is, the few people I know who visit China, rarely venture outside on bad pollution days. This is a circumstance that must and will be addressed.

Therefore, it's hard to see how increasing amounts of silver won't be consumed in the production and installation of solar panels, both in China and throughout the world. Along the way, should the long-anticipated shortage of silver develop in the interim, I can add the producers of solar panels as likely candidates to participate in an industrial user panic to secure physical silver inventories in order to maintain solar panel production lines.

There is no doubt that silver prices are currently controlled and manipulated by COMEX trading, but developments in the actual world of silver supply and demand suggest that control is not permanent. In a very practical sense, make sure you are holding silver before the big industrial users realize there isn't enough to go around.

Turning back to more recent developments, the CFTC announced yesterday that it brought and settled charges against JPMorgan for filing a series of false larger trader reports. These large trader reports must be filed whenever there is a change in the reporting position of any large trader. In turn, it is the information in these large trader reports that comprise the COT and Bank Participation Reports. The fine looked minimal to me ($650,000 vs the billions the bank customarily pays) and, of course, JPMorgan neither admitted nor denied guilt and promised to amend its evil ways. http://www.cftc.gov/PressRoom/PressReleases/pr6968-14

The CFTC didn't disclose in which markets JPMorgan filed incorrect reports, but certainly they may have included COMEX silver and gold. The ironic thing is that JPMorgan plays such a dominant role in both markets according to the actual data that I don't think that even if some of its large trader reports were false, it would alter the issue of dominance by much. For instance, even though its current concentrated short position in COMEX silver is way down from previous peak levels, JPMorgan still holds 15% of the entire net (minus spreads) short open interest (20,000 contracts out of 131,000 total net open interest).

A fifteen percent market share of any modern futures market by a single trading entity constitutes market control and manipulation on its face. That the CFTC can charge JPMorgan for filing false individual reports, yet at the same time overlook the continued blatant concentration JPM has held in COMEX silver and gold since acquiring Bear Stearns in 2008 can only be explained by gross incompetence or complicity (I'm sticking with conspiracy). I suppose the settlement is more related to some sort of Â?looking toughÂ? faÃ§ade by the CFTC for it allowing JPMorgan to continue to dictate silver and gold prices.

The settlement should bring other important considerations into perspective, such as, in this day and age of Dodd-Frank and the Volcker Rule, why the heck is JPMorgan or any large bank allowed to even speculate in futures on silver and gold; to say nothing of controlling prices? JPMorgan has fought tooth and nail to delay and obstruct speculative position limits in order to maintain continued control over gold and silver prices, while the CFTC has, in effect, sanctioned the ongoing price manipulation.

It would seem easy to conclude that this circumstance of JPMorgan being the big market bully and the CFTC deliberately looking away could continue indefinitely. After all, if the primary commodity regulator won't enforce commodity law, what's to stop the crooks at JPMorgan from continuing the scam? Fortunately, there does appear to be certain factors in place that should, in time, breaking this cycle of a cooperative market crime. One is the growing awareness of just how incompetent the CFTC and how crooked JPMorgan are increasingly being perceived. At least in the precious metals community, I am amazed at how pervasive is the growing consensus that silver is manipulated in price by JPMorgan and the CFTC is on board with that manipulation. If you're a market crook like JPMorgan that can't be good as even the Mafia would prefer to go about its dirty business unnoticed.

The prime disruptor to the continuing silver manipulation remains an eventual physical silver shortage. While its timing remains unknown, the preconditions necessary for such a shortage appear to be in place as seen in the extraordinary physical turnover in the COMEX-approved silver warehouses. Tight supply conditions, as is suggested by the silver warehouse turnover, can readily morph into outright shortage. After all, a shortage is nothing more than a tight physical market getting tighter to the point of noticeable delays in deliveries to buyers. A shortage doesn't mean no material at any price; it's more a case of an inability to deliver in a timely manner at then-prevailing prices to buyers.

The frantic physical silver warehouse turnover is unique to silver. That plus the industrial consumption component of silver demand are at the core of how and why a physical shortage could and should develop in silver. Since there are few verifiable signs of rapid warehouse turnover in gold and knowing that gold is not industrially consumed to any great degree (meaning total above ground gold stocks have always grown), it's hard for me to see how a physical shortage can occur in gold. That's not to say gold can't increase in price because it can and has; just not due to a physical shortage.

Come to think of it, that's probably at the heart of the biggest difference between gold and silver, namely, that it's unlikely for a shortage to develop in gold, while it's very likely for a shortage to develop in silver. Any objective reading of historical commodity price performance makes clear that nothing causes prices to explode like a physical shortage.

Of course, until the physical tightness in silver develops into a genuine shortage, the price manipulators on the COMEX will determine what prices do. Currently, the commercials responsible for maintaining the manipulation are not positioned for a silver shortage. That doesn't mean it is impossible for prices to rise sharply and the commercials to get overrun, but that's not the high probability bet. This was the high probability bet two months ago when the technical funds were massively short and the commercials (the raptors anyway) were holding record net long silver positions. The high probability bet two months ago did play out, although the big surprise (and disappointment) was how small was the price jump and how large and aggressive was the accompanying commercial selling.

To be fair, I suppose the high probability bet in the short term is for the collusive COMEX commercials to snooker the technical funds to the downside, given the historical scorecard. Offsetting that, the extremely high probability bet for the longer term is for the price of silver to climb far higher than most would imagine. Admittedly, that creates a dilemma or anxiety for silver investors (or at least it does to this silver investor).

Given all the facts, both short and long term, it would seem that the most prudent path is to hold silver for the long term. That is, unless you have been successful in trading on a short term basis. In essence, hold enough silver so as not to miss a surprise jolt to the upside, but be prepared to load the boat if the crooked commercials open the trap door on the technical funds again. I hate to talk out of both sides of my mouth, so I hope I've explained the reasoning behind the doubletalk.

Ted Butler

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Silver – $20.60

Gold – $1295

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