Links Between the Chinese and International Gold Prices

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As US monetary policy and nagging tail risks continue to take centre stage, it is tempting to view gold's fundamentals, among them Chinese demand, as irrelevant to gold price moves. A review of historical price data, however, suggests that China's appetite for gold can influence the price.

Since it started liberalising its gold market, China has grown to become both the world's biggest producer and the world's biggest consumer of gold. This has had a profound impact on the structure of the global bullion market. Lists of the major market players and principal vaulting and refining centres, as well as traditional physical flows, have all changed dramatically. What is less clear is the impact this transformation has had on the dynamics of the gold price. Our analysis of historical trends in local and international prices below illustrates that, while modest, there is evidence of Chinese demand having had a positive impact on the international price.

Links Between SGE Premiums and the International Price

If there is a robust price premium on the Shanghai Gold Exchange, it is logical to expect that this will be positive for the international price, as bullion gets sucked into China. Similarly, if there's an uncomfortable discount on the SGE, other things remaining equal, it should weigh on the international price, as bullion imports into China dry up and some gold may even find its way out onto the world market. Finally, investor attitudes towards gold could be coloured by perceptions of demand strength or weakness of the world's largest market.

In order to confirm and even quantify any linkage, we examined patterns between the Shanghai Gold Exchange (SGE) premiums' and the LBMA AM gold price. First, we calculated simple correlations over long periods as well as rolling one-week, two-week and one-month periods. We estimated correlations of the daily change in the LBMA AM gold price against:

(1) percentage SGE premiums (versus the LBMA AM gold price)
(2) percentage deviations of the SGE premium over its long-term mean (January 2005 through to August 2016), and
(3) the daily change in the premium.

We also examined correlations between daily price change and premiums lagged by one day.

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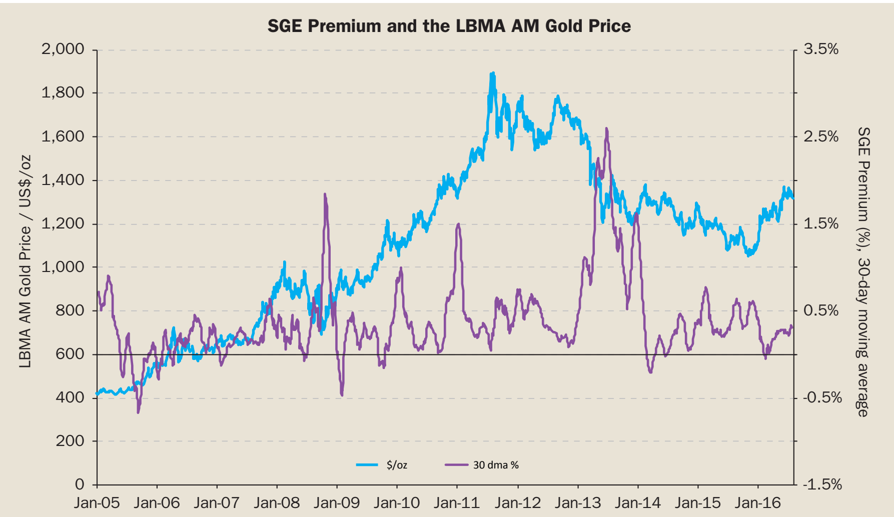
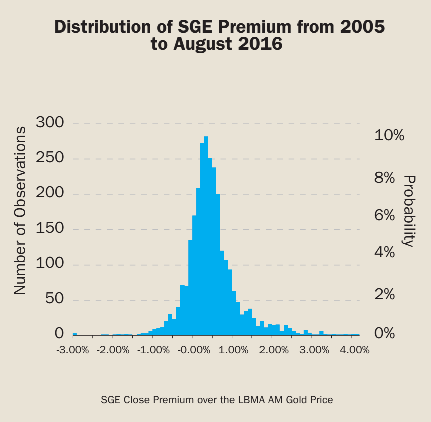
The results were disappointing. Over longer periods, the correlations between daily price changes and same-day premiums were in fact negative. One explanation for this could be the reverse of the relationship we are investigating: namely, the negative impact of rising prices on Chinese demand.



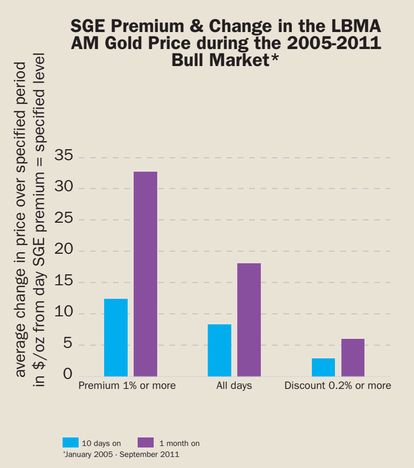
The correlation coefficients we calculated between price changes and the previous day's premiums were positive but very low and statistically insignificant. Rolling correlation coefficients were more in line with our thesis, being generally positive. However, for the most part, they were statistically insignificant.

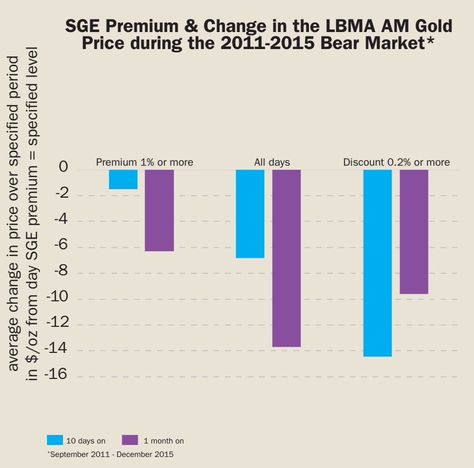
> *"The results of these estimations suggest that SGE premiums have a modest but positive and statistically significant impact on future gold price moves."*

We then investigated the marginal impact of premiums on prices in the context of a more complex model. Over the past ten years, the most consistent driver of gold price moves has been the US dollar and, as such, we decided to include it in the model. Moreover, we considered the possibility that the impact of Chinese demand and SGE premiums on gold prices comes with a lag. Intuitively, a high premium today can trigger increased shipments of bullion to China over the next few days, which in turn can affect the price. We therefore attempted a series of regressions of daily gold price changes against changes in the dollar index and lagged percentage SGE premiums. The results of these estimations suggest that SGE premiums have a modest but positive and statistically significant impact on future gold price moves.



We finally examined possible links between stronger than normal premiums and discounts, and price moves. Specifically, we looked at average price changes for the LBMA AM gold price, following days when the SGE price was at a premium of at least 1% or a discount of at least 0.2% compared to the LBMA AM gold price. The two thresholds were chosen as they represent one standard deviation from the mean. This was done for





two contrasting periods – the earlier bull run (which for this exercise, we have delimited at 4 January 2005 and 5 September 2011, when the price topped out at $1,896.50) and the more recent retreat (which we have taken as 6 September 2011 to end-2015).

The results of this exercise also support a positive link between SGE differentials and the LBMA AM gold price. For example, during the bull run, the gold price on average rose by $33 one month on from days in which the SGE premium was 1% or greater, but by only $2 one month after days that had seen an SGE discount of 0.2% or more. China's influence was also apparent when the bear market had taken hold. For instance, on average, the gold price only fell by $1 within a 10-day window after days when the SGE premium was 1% or more, but declined by $14 following discounts of over 0.2%.

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Conclusion

To conclude, although the relationship is far from straightforward, historical data points to a positive link being in place between the international price and developments in China, and so monitoring SGE differentials remains important. This is particularly the case if, as we believe, investor sentiment can be influenced by the underlying physical market. That certainly appears true at present, with some participants' enthusiasm seemingly cooled by India's currently sluggish bullion imports and the hefty loco-Mumbai discount.

Neil Meader is the Research and Consultancy Manager at Metals Focus. The role centres on the creation and supervision of the company's main consultancy contracts and the top-down review of all its precious metal supply and demand statistics. Prior to that, he ran Metallis Consulting Limited, an independent precious metals consultancy, which, among other studies, produced the first truly comprehensive report on country-level jewellery and retail investment gold stocks.

Before that, he was Head of Precious Metals Research & Forecasts at Thomson Reuters GFMS, where he was ultimately responsible for the unit's supply/demand numbers and price forecasts. This marked the culmination of 12 years at GFMS, where he worked his way up from junior analyst to research director. During that time, he was responsible for the field research in Italy, France, Germany and Canada plus aspects of the United States, Mexico, the Middle East and India.

His early career saw him working as an analyst for soft commodity trading companies and, prior to that, for one of the oil majors. He has a degree in economic history from Exeter University, which featured a dissertation on grain trading.

1 We used the difference of the US$/oz equivalent of the SGE closing price to the LBMA AM gold price, the latter being the international reference price that is nearest in terms of time to the SGE close.