

Silver News

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Investors Remain Bullish: GFMS Report



GFMS

GFMS predicts that silver prices will continue to rise

Investors will remain bullish on silver in 2011, according to a GFMS report, which also expects the average price to hover around \$28 an ounce. The interim market review noted that silver's strong price performance is due to growing investor demand as well as increasing industrial use as world economies improve.

Silver prices in the first 10 months of 2010, based on the London fix, averaged \$18.61, a rise of 32 percent year-over-year (that excludes early November's spike to a year-to-date high of \$28.55) representing an intra-year gain of 66 percent. The main driver of price remains investment demand and, in GFMS' view, this has elevated silver to well over fundamental equilibrium levels in the absence of such investment.

Investment volumes on a world investment basis (including coins) is projected to rise to a record level this year with net value reaching roughly \$4 billion. Conditions in 2011 are likely to remain conducive to high levels of investment, providing the chief support to further price gains. Investment earlier in 2010 owed much to confidence over world economic growth and thus industrial metals' demand. It also benefited from safe haven buying in May and June, due largely to the European sovereign debt crisis, according to the report.

Investor interest rose after the summer because of concerns over the solidity of the US dollar and potential future inflation stemming from the Federal Reserve's next round of quantitative easing. Further support came from a positive price trend. The fact that the all-time nominal high for silver (almost \$50/oz in 1980) remains a good way off, together with silver's close correlation to gold in spite of its historically greater volatility, continues to attract those seeking a more leveraged alternative to gold.

Fabrication demand is projected to rise by 10 percent in 2010 as a strong but partial recovery in industrial uses, record coin demand and slight growth in jewelry offtake counter losses in photography and silverware fabrication. Industrial demand looks set to rebound by 18 percent this year, because of an expansion in silver consumption in new end-uses such as solar panels, but also a result of a cyclical rebound in industrial production and the restocking of inventory by manufacturers..

A copy of the report can be obtained at the Silver Institute's website (www.silverinstitute.org.)

Scientists to Test Anti-Tarnish Coating for Silver Sculptures

Scientists from the A. James Clark School of Engineering at the University of Maryland in College Park are joining with conservators from Baltimore's Walters Art Museum to develop and test a new way to protect silver art objects with coatings that are nanometers thick.

The technique called Atomic Layer Deposition (ALD) will be used to create metal oxide films which, when applied to an artifact, are both transparent and optimized to reduce the rate of silver corrosion. The films are created when an object is exposed to two or more gases that react with its surface. "ALD gives us an exquisite level of control, literally at the atomic level," says Ray Phaneuf, a professor of materials science who is working on the project. "It's an effective, low-cost strategy to reduce corrosion that preserves artifact appearance and composition while complying with the rigorous standards of art conservation practice."

New York's Metropolitan Museum of Art has conducted preliminary investigations into using ALD on their silver collection.

The conditions under which any coating is to be placed on works of art is stringent. Its appearance must be acceptable for museum display. It has to be tough enough to withstand transportation and handling, because museum pieces are often lent out. Any coating must also be removable, so the object can be retreated to meet future standards of conservation and aesthetics. Last, the coating cannot harm the art piece no matter how long it is left on it.

Museum officials note that Antoine Louis Barye's 1865 *Walking Lion* sculpture is an excellent example of a piece that could benefit from a coating. It has been cleaned and lacquered twice since 1949, but in both cases ultimately experienced deterioration problems with its coatings. It is currently unlacquered and must be kept in a special exhibition case to prevent tarnish. "The *Walking Lion* represents a complex shape that, being difficult to coat with traditional lacquer, might benefit from ALD protection," says Walters Art Museum Conservation Scientist Glenn Gates.

The team will test the new technique first on small samples of fine and sterling silver and then on objects from Gates' own collection, such as 19th century demitasse spoons and Morgan silver dollars. While the Walters does not expect any pieces from its collection to receive the experimental treatment during the course of the study, once the procedure has been proven effective and safe, the *Walking Lion* would be a prime candidate.

The work is being performed with a grant from the National Science Foundation that allocated \$330,000 to the engineering school and \$80,000 to the Walters. In addition, the University of Maryland is contributing \$90,000 over three years to pay the salary of the graduate student who will conduct the chemical experiments.



WALTERS ART MUSEUM

Materials scientists and conservators at the Walters Art Museum and the A. James Clark School of Engineering at the University of Maryland see Antoine-Louis Barye's *Walking Lion* as a prime candidate to receive a new, nanometers-thick coating.



The newly expanded Savor Silver website highlights 10 Designers of Distinction from Mexico.

Silver Promotion Service Expands Savor Silver Website

The Silver Promotion Service (SPS), an arm of the Silver Institute, has expanded its Savor Silver website to include a section highlighting ten highly-regarded 'Designers of Distinction' from Mexico. The enhanced site now includes selections representative of their innovative designs as well as descriptions of their design philosophy. Visitors have the option to view the content in Spanish.

The site has also launched a newly-designated 'SilverMark Manufacturers' section. Selected by the SPS program, the four inaugural participants are Bastian from Germany, Gabriel from the United States, Metalsmith Sterling from Canada and Sun Jewels from India. In order to be designated a 'SilverMark Manufacturer,' an organization must have a strong silver jewelry design culture, international distribution, and agree to the SPS's annual terms and conditions regarding utilization of the SilverMark.

"We could not be happier about the way in which the online portion of the overall SPS program has developed," says Director Michael Barlerin. "The most recent enhancements represent both the first step towards an expansion and refinement of the categories of jewelry featured and the increasingly international focus of the overall program."

Bullion Coin Sales Breaking Records

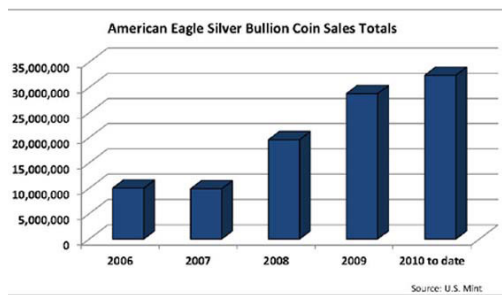
With silver coin minting globally projected to rise 23 percent this year, according to GFMS, (see story *Silver Could Hit \$30 in 2011* in this issue), it's no surprise that government and government-affiliated mints are reporting strong sales of silver bullion coins.

In the US, sales of American Eagle Silver Bullion coins have hit a record with customers buying over 32 million of the one-ounce coins as of November 30. This eclipses last year's total record sales of 28 million coins. For the month of November, sales reached 4,260,000, the highest monthly total since December 1986, when 3,696,000 ounces were sold, according to US Mint data.

Sales of American Eagle Silver Bullion coins have increased by 223 percent over the past five years.

The Royal Canadian Mint has reported an increase of 50 percent in silver Maple Leaf bullion coin sales over 2009 figures. For 2009, silver coin sales had reached 10,300,000 ounces.

The Australian Perth Mint's silver Kookaburra bullion coin may also see 50 percent increases over 2009, mint officials say.



Sales of US Silver Eagle coins will reach a new record in 2010.

Silver Found on Moon

Nearly a year after the discovery of water molecules on the moon, scientists have found evidence that the lunar soil contains other materials including methane, ammonia, hydrogen gas, carbon dioxide, carbon monoxide, sodium, mercury and silver.

NASA officials suggest that the newly-discovered materials may have been remnants of a comet impact. They also state that the amounts of silver and other materials found are not large enough to mine but could serve as a natural resource for a permanent lunar station.

“The observations by the suite of LRO [Lunar Reconnaissance Orbiter] and LCROSS [Lunar CRater Observation and Sensing Satellite] instruments

demonstrate that the moon has a complex environment that experiences intriguing chemical processes,” says Richard Vondrak, LRO project scientist at NASA’s Goddard Space Flight Center in Greenbelt, Maryland. “This knowledge can open doors to new areas of research and exploration.”

The analyzed lunar dust was kicked up last year by NASA instruments when they crashed into

a moon crater, but the newly-discovered materials were only uncovered recently by researchers at Brown University. “This place [the Cabeus crater, near the moon’s south pole] looks like it’s a treasure chest of elements, of compounds that have been released all over the moon, and they’ve been put in this bucket in the permanent shadows,” says Brown University geologist Peter Schultz.



NASA's LCROSS smacked into the lunar surface and kicked up dust that was shown to contain silver.

NASA

US MINT

Can Silver Cure the Common Cold?

Although silver's ability to kill harmful microbes without harming mammalian cells is accepted among medical professionals, the metal's infection fighting ability largely has been limited to bacteria and fungi associated with skin wounds and punctures. Now, Belgian scientists may have developed a method to destroy viruses and bacteria in the body that cause maladies such as the common cold, flu and gastric diseases.

Professor Willy Verstraete, a microbiologist from the University of Ghent, presented his findings at a recent meeting of the Society for Applied Microbiology in London. He said that by impregnating beneficial bacteria -- like *Lactobacillus fermentum*, normally found in yogurt -- with nanosilver particles, the bacteria keeps the silver clumped together, prohibiting it from circulating around the body. The silver kills the healthy bacteria, of course, but the combination remains intact and could be incorporated into a nasal spray, water filters and or even hand washes.

He and his team tested the nanosilver/healthy bacteria combination against the norovirus, which can cause upset stomach and vomiting, and found that the virus was stopped from causing infections. Verstraete told *The (UK) Telegraph*: "We are using silver nanoparticles, which are extremely small but give a large amount of surface area as they can clump around the virus, increasing the inhibiting effect. There are concerns about using such small particles of silver in the human body and what harm it might cause to human health, so we have attached the silver nanoparticles to the surface of a bacterium. It means the silver particles remain small, but they are not free to roam around the body."

Norovirus typically causes 90 per cent of the gastroenteritis cases around the world, according to the World Health Organization, and is normally spread through poor hygiene and contaminated food. The new method of delivering silver particles may also be effective against influenza, which normally attacks the respiratory system and is often spread by sneezing and coughing. Although some recently-introduced medicines can shorten the length of time someone endures flu symptoms, Verstraete noted that nasal sprays with nanosilver and healthy bacteria might be a more effective alternative.

Verstraete is working with pharmaceutical companies Johnson & Johnson and Janssen to determine if the method works against other viruses.

Silver Prices 1979-2010

<u>2010</u>	<u>High</u>	<u>Low</u>	<u>Average</u>
Nov	28.90	24.43	26.70
Oct	24.56	22.01	23.40
Sep	21.93	19.36	20.67
Aug	19.40	17.90	18.46
July	18.35	17.42	17.90
June	19.18	17.29	18.48
May	19.64	17.49	18.41
Apr	18.42	17.67	18.11
Mar	17.50	16.45	17.09
Feb	16.74	14.82	15.90
Jan	18.78	16.18	17.71

<u>Year</u>	<u>High</u>	<u>Low</u>	<u>Average</u>
2009	19.30	10.42	14.68
2008	20.69	8.79	14.97
2007	15.50	11.47	13.38
2006	14.85	8.82	11.62
2005	9.00	6.43	7.32
2004	8.21	5.51	6.67
2003	5.98	4.35	4.89
2002	5.11	4.22	4.60
2001	4.81	4.03	4.36
2000	5.55	4.56	4.97
1999	5.76	4.87	5.22
1998	7.26	4.62	5.51
1997	6.34	4.16	4.88
1996	5.82	4.68	5.18
1995	6.10	4.38	5.19
1994	5.78	4.57	5.28
1993	5.44	3.52	4.30
1992	4.32	3.63	3.94
1991	4.55	3.51	4.03
1990	5.35	3.94	4.82
1989	6.20	5.02	5.47
1988	8.06	6.01	6.53
1987	11.25	5.35	6.99
1986	6.32	4.85	5.49
1985	6.89	5.48	6.14
1984	10.17	6.25	8.15
1983	14.74	8.38	11.46
1982	11.30	4.81	7.93
1981	16.53	7.97	10.53
1980	50.35	10.20	20.66
1979	35.00	5.93	11.20

(COMEX settle)

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