

Silver News

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Silver's 2011 Annual Average Price Posts All-Time Record at \$35.12: World Silver Survey 2012

World Silver Supply & Demand (million ounces) <i>(totals may not add due to rounding)</i>		
	2010	2011
Supply		
Mine Production	751.4	761.6
Net Government Sales	44.2	11.5
Old Silver Scrap	228.7	256.7
Producer Hedging	50.4	10.7
Implied Net Disinvestment	-	-
Total Supply	1074.7	1040.6
Demand		
Fabrication		
Industrial Applications	500.0	486.5
Photography	72.1	66.1
Jewelry	167.4	159.8
Silverware	51.2	46.0
Coins & Medals	99.4	118.2
Total Fabrication	890.1	876.6
Producer De-Hedging	-	-
Implied Net Investment	184.6	164.0
Total Demand	1074.7	1040.6

WSS 2012

“Silver posted an annual average price of \$35.12 in 2011, more than double the \$14.67 annual average price in 2009.”

Strong demand from investors in 2011 helped push silver prices to a record price accompanied by steep price volatility. Despite these higher prices, fabrication demand posted its second highest level since 2000, while retail silver investment demand for both physical bullion bars and coins & medals surged to record levels, according to the *World Silver Survey 2012*, released on April 19 by the Silver Institute.

Silver Price and Investment

Silver posted an annual average price of \$35.12 in 2011, more than double the \$14.67 annual average price in 2009. Global silver investment - implied net investment, silver bars and coins & medals - produced another historic high total last year of 282.2 million ounces the equivalent of approximately \$10 billion on a net basis, itself a record high.

Physical silver bar investment grew by 67 percent in 2011 to 95.7 million ounces, while global coins & medals fabrication rose by almost 19 percent to an all-time high of 118.2 million ounces. Western Europe and the United States, which beat 2010's record performance in terms of American Silver Eagle Bullion Coin sales, led this category. Elsewhere, strong demand in China accounted for a near 60 percent rise last year in its bullion coin output.

Fabrication Demand

Worldwide silver fabrication demand was 876.6 million ounces in 2011, down 1.5 percent but still reaching its second highest level since 2000. Last year, silver's use in industrial applications fell by 2.5 percent to 486.5 million ounces. Industrial fabrication in the first three quarters of 2011 was particularly strong, but the Eurozone crisis during the fourth quarter had a notable impact on industrial demand resulting

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in a small decline in the full year total. China posted a 5 percent gain in industrial fabrication led by household purchases, automobile demand and infrastructure spending.

Supply

Silver mine production rose by 1.4 percent to 761.6 million ounces in 2011 largely due to gains from by-product gold and lead/zinc mining. Mexico was the world's largest silver-producing country in 2011, followed by Peru, China, Australia and Chile.

Last year's scrap supply rose to 256.7 million ounces driven by gains in jewelry and silverware recycling on higher prices.

About the World Silver Survey

The 2012 edition of the *World Silver Survey* was independently researched and compiled by London-based Thomson Reuters GFMS. The Silver Institute has published this annual report on the global silver market since 1990. Copies can be purchased for US\$225 from the Silver Institute, 888 16th Street, Suite 303, Washington, DC, 20006, tel +1 202/835-0185; fax +1 202/835-0155, or from the Institute's web site at www.silverinstitute.org.

You can also email your request to the Silver Institute at info@silverinstitute.org

Johnson Matthey Relaunches its Iconic One-Ounce Silver Bars

After a 13 year hiatus, [Johnson Matthey](#) has resumed production of its .999 one-ounce silver bar to meet the growing demand for physical silver by the public.

The company has partnered with Sunshine Minting, Inc. to produce the bars which will replicate the bars produced in the late 1990's. The obverse features the Johnson Matthey logo, the weight and purity, with each bar having a unique serial number. The reverse displays the JM logo in a diagonal pattern.

Johnson Matthey is in the process of setting up distribution channels to make the bars readily available across the U.S. and Canada. They are also planning to add other small bar sizes.



Johnson Matthey has resumed production of its one-ounce silver bars

2011 U.S. Silver Jewelry Sales Strong

Seventy-seven percent of U.S. jewelry retailers reported that their silver jewelry sales increased in 2011 with 27 percent having an increase of over 25 percent over the prior year, according to [The Silver Institute's Silver Promotion Service](#) (SPS) 3rd Annual Silver Jewelry Sales Survey. As in past years, the online survey was conducted by researcher Nielsen/National Jeweler. The survey covered multiple measures of silver jewelry's sales performance during 2011 and included a section focusing specifically on the year-end holiday season.

Other key findings include:

- Fifty-three percent of retailers rated silver jewelry as having provided the best maintained margin during the 2011 holiday season; and
- Silver jewelry represented, on average, 37 percent of retailer unit volume and 27 percent of dollar volume.

SPS Director Michael Barlerin noted: "With 93 percent of retailers saying they are optimistic that the current sales boom will continue, their opinion reinforces what I have said at various industry events and meetings, a 'sea change' has definitely occurred for silver jewelry."

For an executive summary of the report, [click here](#).

Shareholders Can Choose Precious Metals Instead of Cash for Their Dividends

Publicly-traded companies now have an opportunity to pay shareholder dividends in physical precious metals, according to officials of [Gold Bullion International](#) (GBI) which recently introduced the program.

Gold Resource Corporation (NYSE Amex: GORO) is the first company to participate in the *GBI Physical Dividend Program*, saying that its shareholders have the ability to accept their dividend, payable April 23, 2012, to shareholders of record on April 10, 2012, in physical gold or silver instead of cash. Shareholders can take their monthly dividend in the company's gold and silver GRC Double Eagle one ounce .999 fine rounds.

"There is an increasing demand by both institutional and retail investors to own physical precious metals," said Savneet Singh, GBI's chief executive officer. "The program makes this a seamless and simple process for listed companies and their shareholders."

NYSE Liffe Responds to Investment Interest in Silver: Jennifer Ropiak

With continuing interest in silver as a trading and investment vehicle, we asked Jennifer Ropiak, Senior Vice President of Precious Metal Futures and Options Business Development at [NYSE Liffe U.S.](#), to discuss her organization's role in the silver market. NYSE Liffe U.S. was launched in September of 2008, and its first products were the 33.2 oz. mini gold and 1,000 oz. mini silver futures contracts, as well as 100 oz. gold and 5,000 oz. silver futures. Since then, they have added other asset classes, MSCI equity index futures, interest rate futures and options on mini silver and gold futures. Following are edited excerpts from this discussion.



Jennifer Ropiak

SN – What is your job at NYSE Liffe U.S.?

Ms. Ropiak - My job is first to facilitate access, increase participation and connect global participants in precious metals markets to our liquid mini gold and mini silver complex. A big part of that is educating investors and traders, about our products. That of course includes explaining the advantages of trading mini-silver futures. Our dominant metals contracts here at NYSE Liffe U.S. are our mini-gold futures and our mini-silver futures. We believe that they are ideally sized for individual traders and some smaller active traders. The mini silver contract size is 1,000 ounces, so that's one-fifth the size of the standard contract. This smaller size means that individual traders can participate in the market with proportionately less risk and that may allow them to have greater staying power. It might fit their portfolio better, too.

I also work closely with brokers and clearing members that have relationships with traders and investors. We conduct joint educational events with brokers, including webinars and live events at the NYSE. Based on feedback from some clients, it appears that silver is no longer 'poor man's gold.' It's a viable asset class. It provides portfolio diversification and hedges against currencies over time and also against inflation and deflation. Obviously, in many parts of the world, it's a form of savings and that trend may be coming to the United States, and if it is, then mini-silver futures are one way to facilitate that.

I also work on developing incentive programs, which currently include discounts for overseas traders, traders who also trade the ETFs on NYSE Arca, and active proprietary traders.

SN - Were you involved in the development of that product?

Ms. Ropiak - When I joined the firm in November of 2008, we had already launched the mini- silver futures. However, I was very much involved in the launch of our mini-silver options, which we launched on February 22nd. Our team could not be more excited about it because these are the only options on a mini-metal contract. For the first time, individual traders are going to have access to the flexibility of option strategies. We expect the options to provide a big boost to futures volume over time.

These contracts can be used for hedging – perhaps a trader has a big coin collection. If they think the price is going down they might want to protect themselves against a price decline via options and then unwind the position when they feel like the price decline is over. Or, a trader may want to trade based on volatility expectations. This is the first time that individual traders have the ability to use the smaller-sized contracts, and again, the smaller size provides proportionately less risk while enabling people to participate in the market in a meaningful way.

“Based on feedback from some clients, it appears that silver is no longer ‘poor man’s gold.’ It’s a viable asset class.”

SN - Are any traders or investors buying options with the intent of taking delivery of the physical silver?

Ms. Ropiak - On average, I would say that less than five percent actually goes to delivery, but that option is always there.

SN – What investing trends are you seeing?

Ms. Ropiak - Based on some of the research we've done, there clearly is interest in physical silver and mini silver futures and options are an additional vehicle for people to access silver. It's important for traders and investors to know that for the 1,000-ounce mini silver futures contract, the brands, the fineness, and the weight tolerances of the metal that we accept for delivery are identical to those at other US futures exchanges. I think it's important for people to get comfortable with the fact that this is a competitive market with identical delivery standards and we are the dominant market for the mini-size contracts.

Reusable Water Cup Purifier Uses Silver Nanoparticles

Independence Sales & Marketing, of Plano, Texas has introduced the [PurifiCup](#), a portable water purification system that uses silver nanoparticles to produce drinking water.

Company officials note that with many national parks and universities banning the sale of one-use plastic water bottles their cup system is timely because it is reusable. They say that the PurifiCup eliminates chemical and biological contaminants, along with 99.99 percent of over 600 types of bacteria, including E-Coli. The cup's technology also removes heavy metals such as mercury, lead, copper and cadmium, while preserving beneficial minerals.

The system employs a nanosilver membrane, activated carbon and ion exchange resins to filter and clean water. The three-stage filtering system is completely self-contained and can be attached to a standard water or soda bottle for additional filtering options. A counter on the filter helps users monitor capacity and the cup acts as a storage unit. The cup is made of FDA-approved food grade materials.

Each replaceable filter provides up to 100 cups of drinkable water from the tap or from water obtained from free-flowing freshwater lakes, rivers and streams.

The PurifiCup retails for about US\$50.



Click the picture to watch Purificup in action

Tiffany Unveils RUBEDO Metal for its 175th Anniversary

In honor of its 175th anniversary, [Tiffany & Co.](#) introduced RUBEDO, a new jeweler's metal which combines silver, gold, and copper. The company has not revealed the proportions of each metal which are being made into rings, pendants, necklaces and other jewelry items as part of its *1837 Collection*, the year that Charles Lewis Tiffany and John B. Young, opened a "stationery and fancy goods" store in New York City with a \$1,000 advance from Tiffany's father.

RUBEDO is the first such creation in the company's history, according to Chairman and CEO Mike Kowalksi. At a recent investor's call he described the metal as "a luminescent blend of copper, silver and gold, which our metallurgists took several years to develop. It has a radiant, innovative glow, and initial customer reception has been very strong."



TIFFANY & CO.

In honor of its 175th anniversary, Tiffany & Co. introduced *RUBEDO*, a new jeweler's metal which combines gold, silver and copper

Metallurgists experimented with different ratios over a long testing period until they achieved the desired color, company officials said. They noted that Tiffany was the first American company to incorporate the 925/1000 British standard of silver purity, and largely through the efforts of founder Charles Lewis Tiffany, the U.S. government adopted the standard, and later, the jeweler's standard for platinum (.950 pure), as well.

At the 1878 Paris fair, Tiffany became the first American silversmith to take home the Grand Prize for Excellence, awarded for its ingenious Japanesque silver of inlaid mixed metals and complex alloys of gold, silver, copper, bronze and platinum.

Among the RUBEDO creations is an elongated cuff that incorporates the hallmark at the cuff's edge. A similarly contoured ring carries the Tiffany legacy. Tiffany designers also contrast the warmth of RUBEDO with sterling silver in a pendant and necklace of interlocking circles.

In Latin, Rubedo means 'redness,' a word used by alchemists to describe the fourth and final stage of the *Magnus Opus* in which the legendary substance known as the *Philosopher's Stone* turns base metal into gold.

Want Better Solar Cells? Shape Them Like a Tree

Taking a hint that natural structures may be the most efficient, a team of chemists at the University of California, Davis are building 'fractal trees' from silver that could be the basis for a new type of solar cell.

Led by principal investigator Prof. Frank Osterloh, the team is mimicking how trees collect the most light on their leaves by cascading thousands of a new type of solar cell into a canopy shape – much like a tree – with the cells connected by silver 'branches.' The silver branches which are 1/50th the width of a human hair, are themselves branched, with more branches growing from them and ultimately forming a treelike pattern which allows for maximum solar collection. "We expect these structures will allow us to make better, more efficient solar cells," said Osterloh.

To make the actual solar cells, the silver branches are coated with light-absorbing polymers. When light particles hit the polymer coat, they produce short-lived electrons and holes in the polymer. The positively charged holes are collected through the silver branches, while the electrons move to the counter electrode to create an electrical current.

Osterloh's \$100,000 grant for the project came from the Research Corporation for Scientific Advancement, which has funded his solar energy research since 2010.

Silver Nanoparticles Can Detect Cyanide in Water

A colloidal solution of silver nanoparticles changes color from bright to pale yellow when a cyanide solution is added offering scientists a way to detect small amounts of the chemical. This color-changing property may be useful in areas such as gold mines where additional ways of detecting small cyanide leaks in the environment are welcomed.

The more cyanide introduced into the colloidal silver solution, the more pale it becomes, according to Salahoddin Hajizadeh, a researcher at Urmia University in Iran. This offers an indication of the now much cyanide has been introduced. The color change can be seen with the naked eye as well as using a simple spectrophotometer, a device that measures lights of many wavelengths.

"The pollution of water reservoirs with cyanide compounds is among the important environmental challenges," Hajizadeh told the Iran Nanotechnology Initiative Council (INIC). "Most of the reported colorimetric methods to measure cyanide are based on organic colors, so they are applicable in organic environments. Therefore, it is necessary to present a simple and cost-effective method to measure cyanide in aqueous solutions."

Trinity Bed Protection System Helps Patients Stay Safe with Silver

The [Trinity Bed Protection System](#) is a launderable antimicrobial bed cover that uses silver to help eliminate bacteria before it reaches hospital patients, according to company officials.

The cover – which encompasses both the mattress and bed deck - contains silver ions encapsulated in ceramic carriers built into a polymer matrix which officials say is better than other silver ion applications that can lose their antimicrobial power after repeated washings. The antimicrobial feature of the Trinity Bed Protection System removes 99.99 percent of bacteria from the surfaces it covers, officials say. The system is available in designs to fit almost all makes and models of hospital beds and stretchers.

Officials note that healthcare facilities typically clean the bed and mattress between each patient's use. Usually, the mattress is cleaned by a manual wipe down with a rag soaked in a diluted disinfectant but it may not be effective for several reasons. For one, the solution may not be properly diluted and, second, if the polyurethane coating on the mattress cover is compromised by a puncture, scratch, scuff, or wear, fluids and microorganisms may enter the mattress where they cannot be effectively removed by the disinfection process.

Trinity's cover provides an impermeable barrier between the patient and the mattress. Microbes from the patient cannot be transferred to the mattress or bed deck, and any material that may reside on the mattress from the previous patient cannot transfer to the current patient. The cover is disinfected using Trinity's proprietary laundering process between uses. When the patient is discharged, the cover is removed from the bed and replaced with a fresh cover that was disinfected by laundering.



[Click to watch the video](#)

Touchscreen Tablet For Kids Imbedded with Silver for Bacteria Protection

[Karuma](#), the tablet maker that produces the child-friendly PlayBase tablet, has now introduced the PlayBase+, a tablet with a glass touchscreen imbedded with silver ions to help reduce bacteria on the screen's surface.

The touchscreen employs Silver Seal technology which has been used to protect from microbes plastic keyboards, mice, smartphones and other electronic devices. Because of its structure, silver ions can be imbedded in plastic relatively easily, but glass presents some challenges because it has 'high chemical inertness,' meaning that it does not interact easily with other substances including silver ions. However, scientists have been able to lower this chemical inertness by altering the glass's structure thus allowing silver ions to enter and remain inside.

The PlayBase+ tablet has a seven-inch screen and offers 800x480 pixels per square inch resolution. It retails for US\$229. It is Wi-Fi ready and allows parents control over all content. As with the original PlayBase tablet, the PlayBase+ comes with the PlayCover, a shock-absorbent silicone cover that protects the tablet from water, scratches, dirt and damage from dropping. The cover can also act as a stand.



The PlayBase+ tablet for children has a glass touchscreen imbedded with silver ions to help reduce bacteria on the screen's surface.

Larry Kahaner
Editor

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Silver Nanoparticles May Help Fight Mouth Infections

Silver nanoparticles may be helpful in treating yeast infections in the mouth, according to researchers at the University of Minho in Portugal.

The team led by Professor Mariana Henriques of the University of Minho tested different sizes of silver nanoparticles to determine their anti-fungal properties against *Candida albicans* and *Candida glabrata* which can cause Thrush and dental stomatitis, an infection that affects denture wearers. These yeast infections are particularly difficult to treat because they form biofilms which, as opposed to free-floating bacteria, are not easily killed by antibiotics or washed away by soap or detergents because they are strong and adhere to the substrate – in this case gums.

During their tests, the scientists used artificial biofilms which mimic saliva. Then they added different sizes and concentrations of silver nanoparticles. They discovered that varying sizes of nanoparticles were all equally effective at killing the yeasts. The next step is to test the silver nanoparticles in mouthwash and on dentures. Henriques suggests that silver may be integrated into dentures to prevent bacteria from taking hold. "With the emergence of *Candida* infections which are frequently resistant to the traditional antifungal therapies, there is an increasing need for alternative approaches," she said. "Silver nanoparticles appear to be a new potential strategy to combat these infections. As the nanoparticles are relatively stable in liquid medium they could be developed into a mouthwash solution in the near future."

The research group's work was published in the Society for Applied Microbiology's journal [Letters in Applied Microbiology](#).

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