Weekly Precious Metals News Articles: June 17, 2022

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Below is a cross section of relevant news article to the world of Precious Metals:

Markets, Supply & Demand, Investment, and Industrial Applications.

Printable PDF version attached. Enjoy-

Gold

- **We expect interest rates to remain high and push gold into a correction: Bart Melek - Video - BNN**
  - Bart Melek, global head of Commodity Markets Strategy at TD Securities, joins BNN Bloomberg and discusses his outlook for commodities after the U.S. Fed's interest rate announcement today. Melek says that gold has done its job being a stable asset amid high inflation, but over time if interest rates continue to rise it may be in line for a correction.
- **Could gold nanoparticles help treat cancer?**
  - Konstantin Sokolov, Ph.D., professor of Imaging Physics, and Aaron Schwartz-Duval, Ph.D., T32 Cancer Nanotech postdoctoral fellow, recently published a paper about gold nanoparticles' potential for cancer therapy (Advanced Science, "Prospecting Cellular Gold Nanoparticle Biomineralization as a Viable Alternative to Prefabricated Gold Nanoparticles"). Here, they discuss gold nanoparticles, how they work and what's next in the field.
- **Russia's Return Set to Boost Central-Bank Gold Buying**
  - DUE to the current political and economic turmoil worldwide, central banks are expected to show only a "modest" increase in their gold buying following last year's rebound according to leading analysts, writes Gabriela Daurignac at BullionVault.
  - This 2022 growth will primarily be due to the return of Russia buying gold amid Western sanctions over its invasion of Ukraine, with central banks in "many [other] emerging markets...struggling with headwinds from soaring energy and agricultural prices," says specialist consultancy Metals Focus.
- **The ECB Is No Longer an Inflation-Targeting Central Bank**
  - The real goal of policy makers is keeping the euro zone's weakest members from leaving the currency union — and that may be impossible.
- **Gold Rises (1.3%) After Release of Inflation Data**
  - Gold prices rose Friday as May inflation data indicated prices climbed to new four-decade highs.
  - Front-month gold futures rose $22.70, or 1.2%, to $1,871.50 a troy ounce, advancing for three of the past four weeks.
  - Yields on the 10-year Treasury note settled Friday at 3.156%, compared with 3.041% on Thursday. Higher yields on government bonds can make gold, which doesn't pay investors a fixed income for simply owning the yellow metal, less appealing to hold.

Semiconductor Related Articles (impacting Precious Metals electronics):

- **TSMC upbeat about coming decade**
    - TSMC has recorded new revenue highs for 12 consecutive years, with its 2021 revenue swelling 24.9% from its 2020 level, Liu said, reiterating its goal of achieving 30% revenue growth in 2022. The company is entering a period of high structural growth, with surging demand for 5G and high-performance computing (HPC) applications spurring needs for more advanced chips, he said.
- **Chipmakers to spend record $109b on fab machines this year**
    - Factories hope to buy their way out of shortages – with Taiwan leading the pack
- **TSMC chairman Mark Liu describes how the world's largest chipmaker is reimagining the semiconductor industry**
    - For over half a century, semiconductors have been at the heart of technological innovation, with advancements in technology marching to the cadence of developments in semiconductor performance, energy consumption, and cost. Now, with the ever-growing demand for high-performance computing (HPC), as well as 5G and A.I. applications, the need for technological advancement has skyrocketed, paving the way for a newly imagined future for semiconductor technology, where infinite possibilities can be realized.
- **China's semiconductor output in May rebounds as Covid-19 restrictions ease**
    - Production of integrated circuits last month rebounded 6 per cent from April, but it was still 10 per cent lower than a year earlier
    - Total chip production in the first five months this year amounted to 134.9 billion units, down 6 per cent from the same period in 2021
- **Japan, US partner on 2nm chip R&D and manufacturing**
    - Japan is looking to become a major player in the race to commercialize the next generation of chip technology and will partner with the US to realize its goal. According to a report from Nikkei Asia, private companies from the two countries will work together on research and mass production.

Silver

- **Silver Institute - Market Trend Report: Silver in Brazing and Solder Alloy Materials**
    - In 2021, 47.7 million troy ounces (Moz) of silver went to solder and brazing alloy markets, according World Silver Survey 2022. According to Precious Metals Commodity Management, that demand is forecast to grow 23% to 58.8 Moz by 2030. This represents a 2% annual compound growth rate (CAGR) for this segment. This forecasted rise in demand is based on projected global infrastructure growth, including increasing plumbing and pipe joining, strong vehicle demand (both internal combustion engine (ICE) and electric vehicles (EV).
    - *Matt: White paper researched and written by me.*
- **The dollar could be rolling over, that could give silver a boost!**
    - Despite these positive developments, silver can change direction on a dime in a merciless manner; thus, we like leaving quite a bit of room for error and/or keeping things small. Traders with high-risk tolerance could consider a bull call spread with a naked leg using the August 22.50/23.50 call spread and a naked 19.90 put. This creates a trade with little out-of-pocket expense and a profit potential of close to $4500. The risk is theoretically unlimited (like being long a futures contract) below $19.50. The market is currently near $22.00, so it gives the strategy about $2.50 in room for error at expiration. Because of the unlimited risk, it might be necessary to hedge downside risk by selling mini futures should the market move sharply lower.
- **Silver Price Forecast – Silver Markets Continue to Face the Same Headwinds**
    - Silver markets have gapped higher during the trading session on Thursday as we continue to see a lot of volatility in the markets overall. Silver is volatile under the best of conditions, so it does make a lot of

sense that this market finds itself trying to jump to the $22 level again. The $22 level is an area that has been like a magnet for price, so it would not surprise me at all to see a bit of hesitation. If we were to break above there, then the market has to deal with the 50 Day EMA as well.

Precious Metals Mining:

- **Flooding to halt 60% of PGM output for month at Sibanye-Stillwater US mine**
  - Access to the Stillater East and Stillwater West is difficult. We won't get as many people in that we would like," said James Wellsted, senior vice-president of corporate affairs at the PGM and gold producer. "Our East Boulder section is continuing unaffected by the event," he said. It produced about 230,000 ounces 2E PGMs in Sibanye-Stillwater's last financial year. The entire mine produced about 600,000 oz 2E PGMs last u
  - Nobody was injured in the flooding which began on Monday (June 13) and was the result of warm weather which triggered unusual ice melt followed by heavy rains. The outcome was rivers in the region burst their banks and flooded parts of the mine and surrounding region.
- **Sibanye to restart South Africa gold operations after signing wage deal**
  - Sibanye said the wage deal would be effective from July 1 and the restart would be phased over three months to ensure the safe resumption of gold mining operations.
  - Members of the National Union of Mineworkers (NUM) and Association of Mineworkers and Construction Union, who make up the vast majority of workers at Sibanye's gold operations, have been on strike at Sibanye's gold operations since March 9.

E-Waste & Precious Metals Recycle Related:

- **Treaty tightens regulations on global e-scrap trade**
  - Basel Convention changes approved this week may drastically reduce – or at least complicate – U.S. exports of non-hazardous e-scrap. Countries on June 15 approved e-scrap-related changes to the Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal, which is an international treaty governing how waste is moved around the world. More than 180 countries are party to the convention, but the U.S. is not.
  - The amendment's impact on U.S. e-scrap and reuse companies will depend on exactly which materials are being shipped (and whether the shipment contains a high enough level of hazardous materials to meet thresholds).
  - "In a nutshell, this means that there will likely be much less of a global circular economy when it comes to e-scrap," said Adam Shine, president of New York processing company Sunnking and current chair of the Electronics Division of the Institute of Scrap Recycling Industries. "There are a tremendous amount of materials that are shipped out of the U.S. for the purpose of repair and reuse and, as it stands, this will no longer be allowed to any country that is a party to Basel."
- **Recycling process promises 'better than new' silicon wafers**
  - Scientists in China have developed a new recycling process for PV modules that can recover intact silicon cells from end-of-life products, and process them back into wafers. As part of the recycling process, the wafers are purified and surface-treated, making them suitable for integration into new, high-efficiency cells and modules.
- **28 arrested, 112 catalytic converters seized in illegal car parts operation in Inland Empire**
  - Authorities arrested 28 people and confiscated 112 catalytic converters in a sweeping investigation of an illegal car parts operation in the Inland Empire, San Bernardino County sheriff's officials said.
- **The EU's new universal charger policy claims to tackle e-waste**

- Slashing e-waste was a major driver in European Union lawmakers' proposal yesterday to mandate a universal charger for mobile phones and other devices. But there are still a lot of other factors that have to come together for the measure to make a meaningful difference in the world's e-waste problem.
- Piled together, unused and discarded chargers add up to about 11,000 metric tons of e-waste in Europe annually, according to the European Parliament. They're hoping to shrink that pile by eliminating the need for different chargers for different devices — so in just a couple years, most new mobile phones will likely need to come with a USB-C charging port to be sold in the EU. Making the switch to USB-C will ultimately help consumers save up to 250 million euros a year "on unnecessary charger purchases," the EU says.

- **A copper smelting plant is coming to Augusta. A local group is warning of the negative environmental impact**
    - *Matt: Set to support the e-waste recycle smelting targeting Copper and Precious Metals*
    - The Savannah Riverkeeper submitted nine pages of formal comment to the Georgia Environmental Protection Division (GaEPD) in opposition to Aurubis Richmond, LLC's new industrial facility and the requests the company made in its air quality permit application.
    - The Riverkeeper asserted Aurubis' permit request "includes a shockingly high number, over 30, of highly dangerous pollutants, from arsenic to o-Xylene, to be released in and around the facility."

Platinum

- **Powerful platinum catalyst remains liquid at room temperature**
    - Researchers have created a form of platinum that can remain liquid at room temperature, by mixing tiny amounts of the precious metal with gallium. This new liquid platinum performs catalytic reactions more efficiently than a solid platinum catalyst, using far less of the metal.

Fuel Cells/Hydrogen Economy Related Articles:

- **Largest hydrogen fuel blending in the world coming to Atlanta power plant - H_2 News**
    - The hydrogen fuel blending was combined in both a partial and full load on an M501G natural gas turbine. Matt: This is a full size power plant power turbine running 20% H2 and 80% Natural Gas
    - The hydrogen fuel blending took place at the Plant McDonough-Atkinson owned by Georgia Power, in Smyrna, Georgia. The combination took place as a part of a demonstration project. It was the first to have validated a 20 percent H2 blending on an advanced class gas turbine in North America. Moreover, it also represents the largest of its kind to date, with a 20 percent mix, which reduces the carbon emissions by 6.5% percent when compared with natural gas alone.
- **Hydrogen generation from organic waste, non-recyclable plastic**
    - H_2-Industries uses a liquid organic hydrogen carrier (LOHC) technology, which it considers to be the cheapest, safest, and most reliable transportation method. Its system is based on integrated thermolysis plant units based on pre-assembled scalable modules in standard container frames, which are designed to produce hydrogen from non-recyclable plastic waste such as hydrocarbons like polyethylene, biogenic residues from agriculture, forestry, food waste, and sewage sludge.
    - "Thermolysis is not waste combustion, but rather a high-temperature conversion process without oxygen or air to produce hydrogen," Stusch explained. "The thermolysis units decompose waste at temperatures of around 900 C and close to ambient pressure in the presence of steam reforming. The integrated process splits and regroups the feedstock molecules into a hydrogen-rich gas mixture and, finally, the hydrogen is purified from this mixture."
- **Researchers develop first pure hydrogen powered gas turbine**
    - The development is viewed as an important milestone in energy production.

- The milestone was reached partway through May 2022, directing the researchers into this innovation. It was at that time that the researchers were first able to run the gas turbine on 100% pure H_2. Ultimately, the researchers were seeking to generate electricity without also causing any CO_2 emissions.

- **SK Innovation invests $30M in ammonia fuel-cell startup Amogy**
  - Amogy has completed a demonstration test ofan ammonia-based fuel cell system in a 5kW-class drone and a 100kW tractor, and plans to apply the technology to trucks and ships by next year. Amogy plans to develop a 500kW ammonia-based fuel cell that can be combined to generate up to 500 MW.
- **Bosch announces $1.3B hydrogen technology investment by 2025 - H_2 News**
  - The largest automotive supplier in the world is turning its attention to H_2 tech and its industry potential. Bosch, the largest automotive components supplier in the world has announced that it intends to invest $1.3 billion into hydrogen technology by 2025.
- **World's first hydrogen-powered aircraft is 'Made-in-Holland' and zero emission**
  - The world's first-ever larger passenger aircraft (40-80 seats) powered by liquid green H_2 is to fly between the Netherlands and London in 2028. A unique feat: a major Dutch partnership is building a H_2 system for aircraft, completely green, from fuel to propulsion. The system is scalable to larger aircraft. And it is entirely of Dutch origin. This will make the Netherlands the world's leading supplier of H_2-powered aircraft.
- **SoCalGas scores $750,000 grant for hydrogen from biogas development project - H_2 News**
  - The California Energy Commission (CEC) has announced that it has awarded Southern California Gas Co (SoCalGas) a grant for $750,000 for a hydrogen from biogas project.
- **Adani, Total in $50 billion green hydrogen pact**
  - France's TotalEnergies SE and Adani Group have agreed to invest $50 billion over the next 10 years in India to produce green hydrogen and develop an ecosystem around it as they seek to cut their reliance on fossil fuels and transition to zero net carbon emissions.

Palladium

- **Gold slides over 2%, palladium sheds 7% as dollar stands tall**
  - Dollar scales fresh 2-decade peak
  - Silver falls 4%, platinum sheds over 4%
  - China demand concerns adding to autocatalysts' fall- analyst

PGM Minor Metals (Rhodium, Iridium, Ruthenium, Osmium)

- **Green hydrogen collaboration forms between RWE and SGN**
  - The partnership will be focused on providing Scottish rural communities and towns with green hydrogen gas that will be used for home heating. SGN and RWE signed a Memorandum of Understanding (MoU) for the investigation and development of electrolyzers which will be powered by the RWE's ten Scottish onshore wind farms. Those wind farms have a combined 213-megawatt capacity and will be using the Scottish gas network to supply homes and businesses with H_2.

Clean Energy General News

- **OreDay 2022 – Wide range of presentations**
  - *Matt: I present 5th at the 2:11 mark.*
  - Clean Energy Mineral Constraints
- **Toyota focuses on fuel cell and hybrid vehicle manufacturing despite criticism**
  - There is one thing that is certain, Toyota representatives failed to answer questions directed towards their lobbying efforts and instead focused on the wants of their customers. A plan to electrify their cars has not been established yet, but they are pushing for hybrid electric vehicles amongst their consumers.

- **Japanese solar building up resiliency against curtailment**
    - According to Japan's Institute for Sustainable Energy Policies (ISEP), the island of Kyushu had around 10.5 GW of PV and 600 MW of wind capacity installed under the country's feed-in scheme by the end of 2021. The curtailment rate in the region for the entire year was estimated at around 4.4%, up from 3.8% in the preceding year.
    - “In addition, about 4 GW of nuclear power generation is in operation at any given time, and the VRE output curtailment is also greatly affected by the operation of these nuclear power plants,” said ISEP.
    - The energy sources are curtailed on the island in the following order of prioritization: thermal, biomass, solar and wind, hydroelectric, nuclear, and geothermal.
    - “The use of pumped hydro storage and storage batteries is effective, but further promotion and optimization of online control of VRE, review of the minimum output of thermal power generation, demand response and virtual power plants are required,” said ISEP.

BEV / LiB Mineral & Battery Market News

- **Toyota pushes back against criticism about pace of electric vehicle transition**
    - Automaker says it needs to offer a variety of powertrains -- such as hybrid and fuel cell vehicles -- to suit different markets and customers.
- **(UK) Petrol prices hit new record high as £1,500 EV grant axed**
    - UK petrol and diesel prices surged to new record highs on Monday as the government announced it was scrapping the last remaining subsidies for electric vehicles (EVs).
    - Average pump prices for petrol rose to 185.44p a litre, while diesel hit 191.21p, according to the latest RAC figures.
    - Drivers could previously use the scheme to claim up to £1,500 towards the cost of a plug-in car costing less than £32,000 through the electric vehicle grant.
- **As EVs drive off with Li-Ion supply, the push to stationary storage alternatives accelerates**
    - The throes of a lithium shortage are increasingly upending long-term supply strategies and stoking demand for alternative technologies for stationary energy storage projects. Once seen as synonymous with renewable batteries, stationary Li-ion faces strong headwinds due to rapidly accelerating demand from the automotive sector as EVs capture the mainstream.
- **Battery metals: How quickly can supply ramp up**
    - A couple of weeks ago, Goldman Sachs sent shockwaves through battery metals markets, issuing a prediction that cobalt and lithium in particular were due for a sharp price decline in the next two years. But London-based Benchmark Mineral Intelligence is loudly pushing back, outlining its reasons why it believes the call on lithium was wrong. Meanwhile, US analyst Wood Mackenzie says that the battery raw material chain will remain tight, but notes that recycling could help to ease the supply deficit.
- **Hedge Funds Stand Back to Let Elliott Do Battle with LME**
    - Only Elliott and Jane Street meet deadline for judicial review.
    - If successful, others could sue LME over role in nickel crisis
- **BYD to supply Tesla with batteries as it looks to become key producer**
    - The company is going to supply Tesla batteries “very soon,” Lian Yubo, executive vice president at BYD, told the state-owned television, describing the relationship between the two companies as “friendly.”
    - “We really respect Tesla, and we are good friends with Elon Musk,” he said. “We are preparing very soon to supply Tesla batteries, everyone is friends.”

Regards –