Precious Metals Commodity Management LLC

Weekly Precious Metals News Articles: November 7, 2020

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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. Enjoy-

Gold

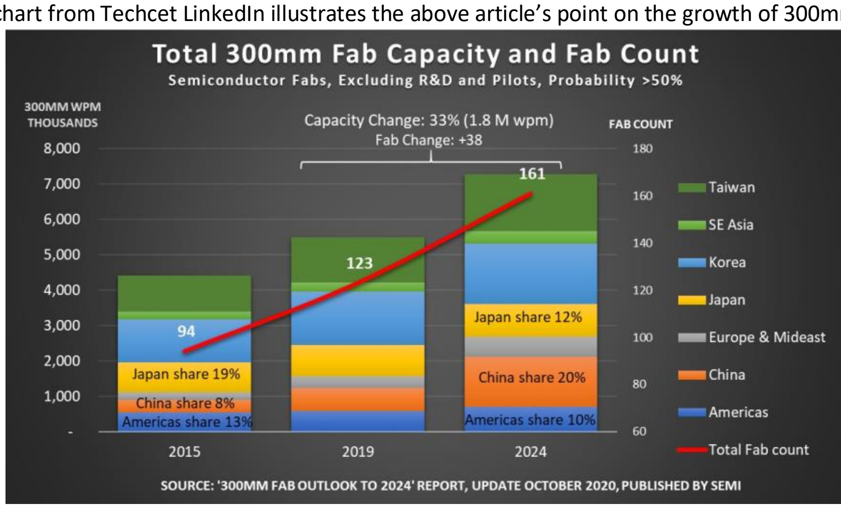
- **You need some gold to protect against inflation and economic chaos – Jim Cramer**
    - "What do you do; what do you buy if you want some insurance against inflation or just general economic chaos," he asked. "It's time-honored. You need some gold."
    https://www.kitco.com/news/2020-11-04/You-need-some-gold-to-protect-against-inflation-and-economic-chaos-Jim-Cramer.html?utm
- **Comparing Recent U.S. Presidents: New Debt Added vs. Precious Metals Production**
    https://www.visualcapitalist.com/gold-and-silver-coin-production-during-u-s-presidencies/
- **Central Banks Sell Gold for First Time in a Decade**
    - Turkish and Uzbek central banks lead selling in third quarter
    - Overall gold demand fell 19% year-on-year: World Gold Council
    https://www-bloomberg-com.cdn.ampproject.org/c/s/www.bloomberg.com/amp/news/articles/2020-10-29/central-banks-sell-gold-for-first-time-in-decade-as-virus-bites
- **Central Banks sell gold for 1st time in a decade**
    - Net sales totaled 12.1 tons of bullion in the third quarter, compared with purchases of 141.9 tons a year earlier, according to a report by the World Gold Council
    https://www.livemint.com/market/commodities/central-banks-sell-gold-for-1st-time-in-a-decade-11604064839306.html
- **Gold slips as likely Republican US Senate dents large stimulus hopes**
    - Gold prices fell on Wednesday as bets that the Democrats will be unable to take control of the U.S. Senate in the razor-edge American election dashed hopes for a larger U.S. coronavirus stimulus.
    https://www.cnbc.com/2020/11/04/gold-markets-coronavirus-us-elections.html
- **The Quarterly Cycles of Gold In 2020**
    - Summary: Performance of gold is encouraging for the past 2-weeks after a two-month slide. If gold ascends, miners will follow eventually. The target gold price remains at $2,200 per oz by year end.
    https://seekingalpha.com/article/4384816-quarterly-cycles-of-gold-in-2020

Semiconductor Related Articles (impacting Precious Metals electronics):

- **Q3'20 Global Semiconductor Sales Increase 11% Compared to Q2'20**
    - SIA today announced worldwide sales of semiconductors totaled $113.6 billion during the third quarter of 2020, an increase of 11.0% over the previous quarter and 5.8% more than the third quarter of 2019

https://www.semiconductors.org/q3-global-semiconductor-sales-increase-11-percent-compared-to-q2/

- **What is Apple silicon? Mac computer transition to iPhone chips explained**
  - Apple's fourth media event of the year will take place online on November 10. It comes just a few weeks after the launch of the iPhone 12, and is expected to reveal the first Mac computers powered by Apple's new in-house processors.
  - Referred to as Apple silicon, the chips powering these Macs are expected to be closely related to the new A14 Bionic chip used by the iPhone 12 and iPad Air. https://www.gearbrain.com/apple-silicon-chip-for-mac-2648605317.html
- **300mm Fab Spending to Boom Through 2023**
  - 300mm fab investments in 2020 will grow by 13% year-over-year (YoY) to eclipse the previous record high set in 2018 and log another banner year for the semiconductor industry in 2023, SEMI reported today in its 300mm Fab Outlook to 2024. The COVID-19 pandemic has sparked the 2020 surge in fab spending by accelerating digital transformations worldwide, and the increase is expected to stretch into 2021. https://www.semi.org/en/news-media-press/semi-press-releases/300mm-fab-outlook
    This chart from Techcet LinkedIn illustrates the above article's point on the growth of 300mm wafers.



Silver

- **Terawatt scale by 2050**
  - In a new paper published in the journal of Renewable and Sustainable Energy, renowned PV scientist Pierre Verlinden examines the solar industry's trajectory towards the 70 TW of installed capacity that will be needed by 2050, as the best choice for meeting climate targets set out in the 2015 Paris agreement. Silver consumption and recycling, according to Verlinden, will be the biggest challenges in the years to come, as well as ensuring balanced growth and avoiding a major installation rush in the years close to 2050.
  - Several studies have shown that, to achieve this goal, a cumulative deployment of about 70 Terawatts of PV, corresponding to 6–10 kW of PV per capita, and an annual production of PV systems of 3–4 TW p.a. will be necessary by 2050.
  - Matt: 3TW to 4TW per annum capacity by 2050 would require 2.5 Billion Toz – 3.3 Billion Toz of Silver, or 2.5x to 3.3x todays total global supply of silver, at today's loadings. Renewable power grid balancing on TW scale will require huge amounts of hydrogen PEM fuel cells where limitations or Iridium and Platinum could also be a tangible constraint. https://www.pv-magazine.com/2020/11/03/terawatt-scale-by-2050/
- **San Francisco bullion dollars offered to authorized purchasers**

- One million 2020 American Eagle silver bullion dollars struck at the San Francisco Mint are to be offered Nov. 2 to the U.S. Mint's network of 12 authorized purchasers at a slightly higher premium per coin than that charged for the same coins struck at the West Point Mint.
  https://www.coinworld.com/news/us-coins/san-francisco-bullion-dollars-offered-to-authorized-purchasers

- **Is silver a buy or a sell at the moment?**
  - Silver prices have risen 38.3% since the beginning of the year, compared to 25.7% for gold.
  - Physical demand for silver in 2019 is up 12.3% compared to 2018.
  - Silver bulls must break $27 daily/weekly to open the door for a journey above the $30 mark
  - Similar to other precious metals, silver's performance this year was outstanding. The price of silver has risen by 38.3% since the beginning of the year, compared to the gold price of 25.7%.
    https://washingtonnewsday.com/news/is-silver-a-buy-or-a-sell-at-the-moment/
- **The Silver Institute Oct 2020 – The Silver News**
  - Silver Exchange Traded Product Holdings Nearly Triple in First Three Quarters of 2020
  - A New Method for Making Silver Ion Infused Glass Helps Study Tiniest Substances
  - Micro-Engraving Gives British Royal Mint Bullion Coins Extra Security
  - Silver-Based Antibacterial, Antiviral Flight Crew Uniforms Introduced
  - Tiny Silver Fibers in Masks Can Check for Breathing Problems
  - Silver Nanoparticles from Shrub Help Produce Eco Friendly Pesticide
  - Silver Offers New Colors to Plastic Cases Printed by 3D Machines

  https://www.silverinstitute.org/wp-content/uploads/2020/11/SNOct2020.pdf

Precious Metals Mining:

- **Implats CEO encouraged by first-quarter production results**
  - Impala Platinum (Implats) started its new financial year off strongly, with gross tonnes milled at managed operations having improving by 18% year-on-year to over 6.1-million tonnes for the first quarter, ended September 30.
  - The increase in milled tonnes was primarily owing to the maiden inclusion of Impala Canada, but production at Marula also aided this performance and helped to offset slightly lower milled volumes from Impala Rustenburg and Zimplats.
    https://www.miningweekly.com/article/implats-ceo-encouraged-by-first-quarter-production-results-2020-10-30
- **Barrick Gold Stock Is Soaring Because Surging Gold Prices Were Fantastic for Earnings**
  - Barrick Gold (GOLD) rode gold prices higher in the third quarter, as the company reported better-than-expected earnings. Its stock is rising.
  - The Canadian mining giant posted an adjusted profit of $726 million, or 41 cents a share, an increase of 78% from last year and ahead of expectations for EPS of 33 cents
    https://www.barrons.com/articles/barrick-gold-stocks-soars-as-higher-gold-prices-boost-earnings-51604593238
- **Anglo American Platinum closes ACP Phase B resulting in temporary build up in work-in-progress inventory**
  - AMPLATS has lowered its refined production and sales guidance for 2020 to 2.5 million PGM ounces (previously 3.1-3.3 million PGM ounces). There is no change to other guidance, including M&C production which remains at between 3.6 – 3.8 million PGM ounces.
    https://www.moneyweb.co.za/mny_sens/anglo-american-platinum-limited-anglo-american-platinum-closes-acp-phase-b-resulting-in-temporary-build-up-in-work-in-progress-inventory/
- **Amplats closes ACP Phase B following ongoing water leaks**
  - As a result of the closure of the ACP Phase B unit, the company has lowered its refined production and sales guidance for 2020 to approximately 2.5 Moz PGMs (previously guided to be between 3.1 and 3.3 Moz of PGM).

https://www.miningreview.com/platinum-group-metals/amplats-closes-acp-phase-b-again-amid-ongoing-water-leaks/

- **Franco-Nevada's Q3: A Record-Breaking Quarter**
    - Franco-Nevada's gold equivalent sales grew to 134,817 toz.
    - The revenues, operating cash flow, and net income set new record highs of $279.8 million, $212.2 million, and $153.9 million respectively.
    - The net debt declined to -$466.8 million.
    https://seekingalpha.com/article/4385318-franco-nevadas-q3-record-breaking-quarter
- **Wheaton Precious Metals is now the largest gold and silver-focused company in London**
    - The streaming model has been highly successful for Wheaton Precious Minerals
    https://www.proactiveinvestors.co.uk/companies/news/929548/wheaton-precious-metals-is-now-the-largest-gold-and-silver-focussed-company-in-london-929548.html

E-Waste & Precious Metals Recycle Related:

- **Gold recycling hits 8-year-high on record prices**
    - High gold prices pushed the recycling of the yellow metal to an eight-year-high of 41 tonnes in the September quarter, with both consumers and some of the distressed jewelers recycling their inventory to meet immediate cash requirements.
    https://www.thehindubusinessline.com/money-and-banking/gold-recycling-hits-8-year-high-on-record-prices/article33023442.ece
- **Metals experts talk pandemic impact and forecast demand - E-Scrap News**
    - The e-scrap metals market saw a significant impact from the coronavirus pandemic, which made obtaining supply a challenging task.
    https://resource-recycling.com/e-scrap/2020/11/05/metals-experts-talk-pandemic-impact-and-forecast-demand/
- **Urban Mining: An Unimaginably Valuable Mine On Earth**
    - Electronic waste has 50 times higher concentration of precious metals than ores which are mined from Earth
    https://www.entrepreneur.com/article/358884
- **Magnetic North Acquisition Corp. Completes Acquisition of Intergild Adavanced Recycling Technologies**
    - Magnetic North intends to merge Intergild into the Company's previously announced and closed investment in CXTL Recycling Canada Corp. to augment CXTL's e-waste recycling solution. Intergild will add significant expertise and a process that allows for the selective separation of the plastic, fiber and metal components of e-waste, and the crystallization of the metals, into marketable commodities
    https://www.scrapmonster.com/news/magnetic-north-acquisition-corp-completes-acquisition-of-intergild-adavanced-recycling-technologies/1/77256

Platinum

- **Electrified car registrations overtake diesel in Europe for the first time**
    - Registrations of electrified cars overtook those of diesel in Europe for the first time ever in September, marking a significant milestone in diesel's decline from its dominance of just a decade ago. Electrified cars made up slightly more than 25% of new registrations reported for the month, beating out diesels (24.8%) by the thinnest of margins, but surpassing them nonetheless.
    https://www.autoblog.com/2020/10/29/electric-cars-surpass-diesel-europe/
- **New fuel cell catalyst competes with platinum - Futurity**

- Thus far scientists have been unable to develop a viable alternative. A few researchers, including Sun and Guo, have developed new catalysts that reduce the amount of platinum required, but an effective catalyst that uses no platinum at all remains elusive. https://www.futurity.org/new-fuel-cell-catalyst-competes-with-platinum/

- **Ultra-small hollow alloy nanoparticles for synergistic hydrogen evolution catalysis**
  - Researchers have made exciting progress in the preparation of HER catalysts, using a simple one-pot method to synthesize ultra-small hollow ternary alloy nanoparticles, including PtNiCu nanoparticles, PtCoCu nanoparticles and CuNiCo nanoparticles. During synthesis, the displacement reaction and oxidative etching played important roles in the formation of hollow structures. https://www.eurekalert.org/pub_releases/2020-10/scp-uha102820.php
- **Seagate Expects to Start Selling 50TB HAMR Hard Drives in 2026**
  - Matt: HAMR drives use 1.7x the loadings of a typical HDD, but use zero Ruthenium. https://uk.pcmag.com/hard-drives/129627/seagate-expects-to-start-selling-50tb-hamr-hard-drives-in-2026
- **Advent Technologies to collaborate with Los Alamos, UT Austin, RPI, UNM and Toyota in the development of next-generation HT-PEM fuel cell technology - Green Car Congress**
  - We at Advent are committed to bringing HT-PEM technology to the market. Drawing on our leadership team's decades of experience, we intend to commercialize and scale-up membrane electrode assembly (MEA) production while working closely with Tier-1 manufacturers and original equipment manufacturers. We believe that HT-PEM represents not only a breakthrough for heavy-duty automotive technology but also for aviation, portable, and off-grid power generation. https://www.greencarcongress.com/2020/11/20201103-advent.html

Fuel Cells/Hydrogen Economy Related Articles:

- **Hyundai to supply 4,000 fuel cell trucks to China**
  - Hyundai has signed two letters of intent with Chinese companies to supply a total of 4,000 fuel cell trucks to China by 2025. This is the second major order in connection with Hyundai's H2 truck XCIENT, following the order for 1,600 units from Switzerland. https://www.electrive.com/2020/11/04/hyundai-signs-letters-of-intent-for-fuel-cell-fleet-in-china/
- **Hydrogen fuel's role in the renewable energy transition**
  - Air Liquide Group recently published a video highlighting seven ways H_2 is making a difference: (1) Enabling renewable energy (storage), (2) Distribution, (3) (long-term) Resilience, (4) Mobility, (5) Low Carbon Industry, (6) Heating, (7) (heavy) Industry Feedstock https://www.hydrogenfuelnews.com/hydrogen-fuels-role-in-the-renewable-energy-transition/8540796/?mc_cid=978a09a8f4&mc_eid=70c1246d58
- **It's Time For Elon Musk To Admit The Significance Of Hydrogen Fuel Cells**
  - In the end, in spite of a relatively slow start, many analysts expect that the hydrogen energy market will take off, driven by both private and public investment around the world. I believe it would behoove Musk — and all of us — if he took another look at hydrogen if for no other reason than to stay true to his mission of combating climate change. https://www.forbes.com/sites/forbestechcouncil/2020/11/02/its-time-for-elon-musk-to-admit-the-significance-of-hydrogen-fuel-cells/
- **Hyundai's First Hydrogen SUV Celebrates Huge Milestone**
  - Hyundai sold just 267 units in America in 2019, compared to 73,326 of the Hyundai Kona.
  - Toyota sold 1,502 units of the Toyota Mirai, the Nexo's closest competitor, in the US last year.
  - Hyundai has now sold over 10,000 Nexos in South Korea since the fuel cell electric SUV first went on sale in March 2018. Matt: 10,000 Nexos = 560,000 gr Pt -or- 18,006 Toz o Pt https://carbuzz.com/news/hyundais-first-hydrogen-suv-celebrates-huge-milestone
- **In bid for clean air, 'hydrogen wars' pit Europe vs China for $700-bn business**

- The Danish company Niels-Arne Baden has a problem: the factory he's building for Green Hydrogen Systems is too small. Plans for the Denmark site to be one of the largest for assembling the machines that make hydrogen from electricity were finalized about a year ago. But demand for those electrolyzers is growing so fast that Baden's now planning to double its size. "When I joined this company in 2014, there was no market," Baden said. "Then last year, it was 'Kaboom!', and we were up to our ears in opportunities." https://www.livemint.com/news/world/in-bid-for-clean-air-hydrogen-wars-pit-europe-vs-china-for-700-bn-business-11604244289597.html

- **Chinese cities race for subsidies in fuel cell gold rush**
  - China's push to promote hydrogen fuel cells as the next big thing in the auto industry has led to a slew of ambitious plans to develop the sector as local authorities vie for hundreds of millions of dollars in incentives.
  - State-owned SAIC Motor, based in Shanghai, recently announced its first medium-term strategy for fuel cells. The automaker aims to roll out at least 10 models and gain the capacity to produce 10,000 vehicles per year by 2025, and will shift to domestic sourcing as it looks to become globally competitive by 2030. https://asia.nikkei.com/Business/Automobiles/Chinese-cities-race-for-subsidies-in-fuel-cell-gold-rush

Palladium

- **New vehicle sales see a v-shaped recovery, according to BBVA Research Auto Sales Chartbook**
  - Research published its October USA auto sales chartbook, noting vehicle sales have experienced a v-shaped recovery, increasing 36 percent in the third quarter of 2020 from the previous quarter. However, sales are still 10 percent below levels observed in 3Q2019. https://markets.businessinsider.com/news/stocks/new-vehicle-sales-see-a-v-shaped-recovery-according-to-bbva-research-auto-sales-chartbook-1029772279
- **New Energy Vehicles to Make up 20% of China's New Car Sales by 2025**
  - Sales of electric, plug-in hybrid and hydrogen-powered vehicles in China, the world's biggest auto market, are forecast to rise to 20% of overall new car sales by 2025 from just 5% now, the State Council said on Monday. https://www.usnews.com/news/technology/articles/2020-11-02/china-expects-sales-of-nev-to-make-up-20-of-total-new-sales-by-2025

PGM Minor Metals (Rhodium, Iridium, Ruthenium)

- **Ruthenium/Iridium: Shintech Louisiana LLC will invest $1.49 billion in new monomer production facility**
  - Gov. John Bel Edwards and Shintech Louisiana LLC announced the company will invest $1.49 billion to develop a new chlor alkali and vinyl chloride monomer production facility and to expand an existing PVC manufacturing facility in Plaquemine, LA. The company is a wholly owned subsidiary of Shin-Etsu Chemical Co. Ltd., the world's largest PVC producer, according to a news release from Louisiana Economic Development (LED). https://www.plasticstoday.com/materials/shintech-louisiana-llc-will-invest-149-billion-new-monomer-production-facility
- **Ruthenium Catalyst: Different development of nylon 6 DTY and FDY |CCFGroup**
  - Nylon 6 Filament Market: In October, it is the second time in the year of 2020 when nylon filament factories have intensively reduced their inventory burden. The last time happened in April when the demand for mask ear straps broke out. But there is a fundamental difference between the two waves of price increase and destock. https://www.ccfgroup.com/newscenter/newsview.php?Class_ID=D00000&Info_ID=2011049490004

BEV / LiB Battery Market News

- **Volvo's first heavy-duty electric trucks will hit the road in 2022**
  - Volvo announced that it will be among the first manufacturers to start selling heavy-duty electric trucks in 2021, with volume production beginning in 2022. The 44 tonne (48 ton) trucks would have a range of up to 300 km (186 miles), depending on the configuration https://www.engadget.com/volvos-first-fully-electric-trucks-will-go-on-sale-next-year-124427959.html
- **California Auditor Slams Expensive and Slow Cleanup of Battery Recycling Plant**
  - Cleaning up the abandoned Exide battery recycling plant in Los Angeles County will cost California taxpayers nearly $400 million dollars in addition to other costs the state has already paid and the regulatory agency in charge is woefully behind schedule, the state auditor found.
  - The battery recycling plant in the city of Vernon released toxic chemicals into the surrounding residential neighborhood for decades. This month, a federal judge approved a bankruptcy plan that would allow Exide Technologies to abandon the site with minimal costs incurred. https://www.courthousenews.com/california-auditor-slams-expensive-and-slow-cleanup-of-battery-recycling-plant/
- **Tesla fined $14M in Germany for battery recycling violation**
  - Tesla has been ordered to pay a fine of 12 million euros ($14 million) in Germany for alleged non-compliance with a law requiring automakers that sell electric cars to take back batteries to dispose of in an environmentally friendly way.
  - Tesla reported the fine, which was imposed by the German Federal Environmental Agency, in a filing to the U.S. Securities and Exchange Commission.
  - In the filing Tesla said it has continued to take back battery packs as required under vehicle end-of-life rules and the fine is primarily related to administrative requirements. https://www.autonews.com/automakers-suppliers/tesla-fined-14m-germany-battery-recycling-violation
- **Making recycling the standard in growing energy storage sector**
  - US firm Renewance is collaborating with GlidePath Power Solutions to advance battery recycling and repurposing efforts for the energy storage industry. https://recyclinginternational.com/business/making-recycling-the-standard-in-growing-energy-storage-sector/31866/
- **The issues with lithium-ion battery recycling – and how to fix them**
  - Design-for-recycling is not perceived to be high up the list of priorities for battery manufacturers but solutions do exist. Lithium-ion device recycling is technically feasible but requires an improvement in its business case to take off. https://www.pv-magazine.com/2020/10/28/the-issues-with-lithium-ion-battery-recycling-and-how-to-fix-them/
- **'China must put EV battery reuse at heart of net-zero ambition'**
  - The centralized nature of policymaking in Beijing would enable component standardization to ease the transition from EV to stationary energy storage use, according to Greenpeace East Asia.
  - Environmental NGO Greenpeace has said China's leaders must put the repurposing of electric vehicle (EV) batteries at the heart of plans to be carbon neutral by 2060.
  - The East Asian branch of the charity has calculated 12.85 million tons of lithium-ion batteries will no longer be useful for e-mobility in China during the next decade. Repurposing those devices for energy storage use, rather than manufacturing new batteries, would save 63.34 million tons of carbon emissions, Greenpeace East Asia said this morning. https://www.pv-magazine.com/2020/10/30/china-must-put-ev-battery-reuse-at-heart-of-net-zero-ambition/
- **Proposing cradle-to-grave evaluations for all vehicles**
  - Evaluations of any vehicle's ecological impacts usually don't reach from cradle to grave. They focus on the car's energy use and greenhouse gas (GHG) emissions while it operates1. Most evaluations do not include embodied energy or emissions—what's used and emitted during manufacturing. They do

not count GHGs or toxins emitted while extracting and smelting ores, producing the vehicle's electronics, lubricants, brake fluid, solvents, body and tires. Evaluations do not count what is emitted while designing, forming, cutting and bending metals and plastics…and transporting materials between stations. They don't count miners' or assembly workers hazards. They don't count the ecological and public health impacts of vehicle maintenance, repair, disposal or recycling. https://wsimag.com/science-and-technology/63818-proposing-cradle-to-grave-evaluations-for-all-vehicles

Regards –