



CPM Group LLC

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CPM Group

www.cpmgroup.com

CPM Group

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CPM Group Overview

Who We Are

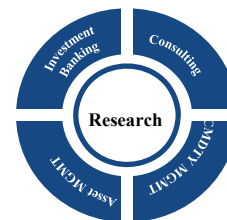
- CPM Group is an independent commodities research, consulting, commodities and asset management, and investment banking firm that provides comprehensive research, analysis, and advisory services.
- Our advisory services are driven by the results of our research and analysis.
- CPM Group is the trusted advisor to producers, consumers, institutional investors, governments, regulatory authorities, and high net worth individuals regarding commodities markets and the financial management of exposure to commodities-oriented investments.
- Founded in 1986, CPM Group was created via a management acquisition of the Commodities Research Group at Goldman Sachs.
- CPM Group is known for its research, analysis, and commentary on metals markets and other commodities, its overall economic analysis of commodities markets, and its expertise in financial engineering using derivatives to structure optimized positions for commercial, investor, and financial market participants.



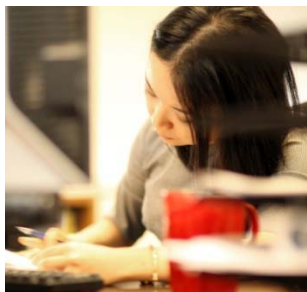
Commodities Research and Consulting

CPM Group is focused on precious, base, and specialty metals, and also covers energy and agricultural commodities.

- **Commodities Research** is the heart of CPM's business. Our research provides an independent source of in-depth information on and analysis of commodities markets.
- CPM's short to long term analyses are based on both macroeconomic and microeconomic approaches. CPM uses a top-down analysis of economic, financial, and political trends both globally and in major countries and regions to provide an umbrella overview of the economic environment in which commodities markets will develop. This is combined with a detailed bottom-up analysis of supply and demand for each sector of each commodity's market.
- We produce research reports on supply, demand, market, and price information, as well as projections under varying market conditions and prices. Our time-sensitive research products are structured to meet the needs of our diverse base of clients with forecast horizons ranging from one-week to ten-years.
- CPM's relationships with on-the-ground analysts, associations, commodity exchanges, and other market participants in China provide reliable and credible data and insights on commodity markets in China, which are otherwise known for their opaque fundamentals. CPM Group's research and analysis has a clear competitive advantage given China's significant role in these markets.



Commodities Research and Consulting



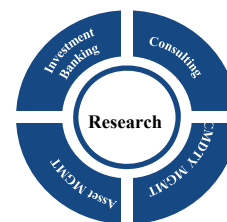
Commodities Coverage

- **Precious Metals**
- **Base Metals**
- **Specialty Metals**
- **Energy and Agricultural Markets**



Commodity Reports

- **Precious Metals Advisory** monthly updates on the Gold, Silver, Platinum, Palladium & Rhodium markets
- **Base Metals Advisory** monthly updates on the Aluminum, Copper, Lead, Nickel, Tin & Zinc markets
- **Yearbooks** on Gold, Silver, and Platinum Group Metals
- **Customized Analyses & Reports**
- **Long-term studies** on the precious and specialty metals markets. Reports typically include:
 - 10-year supply, demand, price projections
 - Proprietary fabrication, investment demand, mine production, and secondary supply statistics
 - Discussion of forecasting methodology outlining assumptions utilized in projections
 - Supply, demand and price projections under alternate scenarios
 - Detailed supply by country and mine-project reference guide
 - Breakdown of production costs
 - Relevant political and trade policy analysis

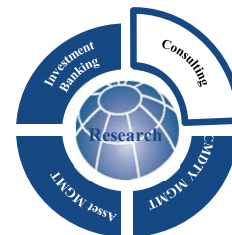


Commodities Research and Consulting



Consulting

- We provide in-depth expert **Consulting Services** on commodities markets, with a focus on the mining and metals, energy, and agricultural industries.
- The scope of consulting services we provide ranges from broad industry related topics to advisory services focused on specific markets, end uses for individual commodities, expert witness analysis and testimony, as well as advice on corporate strategies.
- CPM also serves as the metal price advisor and **Independent Market Consultant** to many mining companies, technical consultants, financial institutions and other commercial market participants providing:
 - Annual gold, silver and PGM 10-year price studies as well as 10-year price outlooks for precious metals; specialty metals such as tungsten, vanadium, molybdenum, manganese; and other commodities on a frequently updated basis.
 - Presentations to Boards of Directors and Executive Committees regarding the outlook for metals prices and market conditions, as well as existing institutional shareholders and prospective strategic and financial investors.
 - Fielding questions from commercial entities, institutional investors, and governments regarding market fundamentals and the outlook for metal prices.



Consulting - Case Study

Case Study: Materion

Materion produces highly engineered advanced precious-metal bearing materials used in consumer electronics, medical devices, and heavy industrial equipment.

The company was undertaking long-term strategy and corporate development planning, and sought CPM's advisory services for research analyzing potential strategic plans and operational opportunities.

Assignment

- Provide Materion with information and analysis to determine the best plan of action for increasing efficiency and maximizing the use of Materion's refining capacity.
- Identify additional sources of feed stock for Materion's refining capacity.
- Explore regional possibilities for production and end-market demand opportunities.

CPM's Deliverables

- Developed two comprehensive reports on the precious metals refining industry, one specific to the Asian market and the other excluding Asia.
- Provided Materion with specific actionable recommendations to aid the company make decisions with regard to improving efficiencies in domestic markets and expanding overseas to take advantage of growth opportunities.
- Provided company with scenario analysis of the impact of precious metals prices on recovery of scrap material from different sources.
- Analyzed various sources of precious metals feedstock, ranging from doré to end-of-life electronic scrap, to maximize utilization of Materion's existing refining capacity.
- Produced a separate report and executive presentation on effective precious metal price risk management, structures, and programs.

Commodities Management

Producers, consumers, processors, intermediaries, governments, and investors that have commodity price exposure seek CPM Group to advise and assist them in managing their price risks. As an independent advisor that never takes the other side of clients' trades, CPM guides clients through the commodity price risk management process.

Producers

- Nana
- Primero
- Great Panther
- Fortuna Silver
- Luismin
- Freeport McMoRan
- Newmont
- Barrick
- AngloGold

Consumers

- U.S. Dept. of Treasury
- Ford Motor Co.
- Materion
- Noble Biomaterials
- Z-Power
- General Motors
- Chrysler
- Volkswagen
- Nissan
- Honda

Hedging Advisor and Manager

- Analyze a company's commodity price exposures and risks.
- Structure and execute strategies to manage price risks.
- Provide price protection while preserving exposure to higher prices for producers and exposure to lower prices for consumers.
- Analyze and modify existing hedge positions, restructuring disadvantageous hedge books.
- Use risk management to optimize financial leverage.

Materials Management Consultant

- Negotiate metal leases and alternative supply and financing arrangements.
- Secure favorable smelting and refining terms.
- Act as an agent to maintain anonymity and obtain optimal prices.
- Evaluate proposals presented by trading counterparties.
- Solve complex problems related to physical logistics.

Ongoing Hedging Advice

- Review commodity management programs, on-going advice and management.
- Train and educate company professionals on mechanics of commodity price risk management.
- Access to CPM's proprietary commodity research and analysts.



Commodities Management

- **CPM's commodities management services are delivered without limiting or tying client companies** to any particular structure or financial institution, a hallmark of our impartial, unbiased approach to obtaining highly competitive terms for our clients.
- **CPM is neither a trading counterparty nor a principal.** As a non-dealer market participant, CPM aligns its interests with those of its clients.

Tailoring Programs To Client's Needs

- Developing the proper commodity price risk management program for each client consists of quantifying and qualifying:
 - Commodity price risks
 - Analyzing current strategy
 - Counterparty evaluation
 - Impact on finances
 - Developing and customizing hedging plan
 - Providing alternative price risk programs
 - Proper price discovery and execution
 - Ongoing monitoring and management

CPM enhances clients' commodity management programs by creating strategies that consist of many key factors, including the following three:

- **Structuring**

CPM structures zero initial cost hedging strategies for clients, providing the protection against adverse price moves a company seeks while preserving exposure to beneficial price developments. Properly timed and priced CPM hedging strategies can greatly enhance clients' financial positions.

- **Pricing**

Proper price discovery is best achieved via an auction process with suitable counterparty bidders.

Initial set-up of favorable trading lines is crucial, a step in the process where CPM's expertise is invaluable.

- **Timing**

CPM, through its in-house research team, is constantly informed of fundamental market changes that have short- and long-term influences on prices.



Commodities Management - Case Study

Case Study: United States Mint, The Department Of The Treasury

The U.S. Mint in 2013 began planning the restart of the Platinum Eagle bullion coin program. Implementing a platinum metal purchasing and hedging strategy was key to assuring program profitability.

CPM has been an advisor to the U.S. Mint since the 1990s. CPM advised the Mint in developing its platinum bullion coin program, improved precious and base metals sourcing and management in the 1990s, and advised the Mint on a potential palladium coin program.

Assignment

- Advise the U.S. Mint on potential procurement and hedging strategies.
- Provide minimal exposure to price fluctuations of the platinum market.
- Ability to procure additional metal or return excess according to coin sale fluctuations to avoid supply shortages or unsellable inventory.
- Greatest cost savings in transportation and transaction fees, and administrative overhead.

CPM's Deliverables

- CPM provided a comprehensive analysis of potential procurement and hedging strategies, developing the creation and implementation of an efficient strategy to meet the Mint's needs.
- Perfect hedging, effectively eliminating the Mint's exposure to platinum metal price risk.
- Lower direct cost to the United States Mint, as well as lower implementation cost due to ease of administration compared to previous experience with precious metals leasing.
- Flexibility to add additional leased metal when needed and exit the lease when market conditions are no longer favorable for procurement through leasing or continuation of the bullion coin program
- With CPM's advice, the U.S. Mint was able to reduce its anticipated metal expenditures by around \$50 million or 35%.

Commodities Management - Case Study

Case Study: NANA

NANA Development Corp., an Alaska native corporation, receives a royalty of net proceeds of production from the Red Dog zinc and lead mine, the second largest zinc and third largest lead mine in the world in 2011.

NANA, as part of its debt obligations, is required to hedge its zinc exposure using puts for the following calendar year by the current year's end to ensure cash flow levels and debt coverage ratios.

The Company was spending several million dollars on puts and was not matching cash flows with its hedging program, resulting in over and under hedging throughout the year.

Assignment

- CPM provided a comprehensive analysis of NANA's zinc and lead price exposures through various financial and hedging models.

CPM's Deliverables

- CPM developed appropriate hedging volumes and floor price levels to match NANA's cash flow needs with hedging structures.
- CPM implemented a hedging program for NANA that included achieving downside price protection at zero initial cost, with a known mark to market exposure, while providing upside participation to higher zinc and lead prices.
- CPM introduced additional suitable trading counterparties and assisted in negotiating trading lines.
- With CPM's advice, NANA was able to reduce its upfront initial hedge premia by 77%.

Asset Management



Asset Management Services

- CPM structures and manages portfolios of commodities-oriented investments for institutions and family offices. CPM's advice ranges from providing investors views of short-term and long-term market conditions, and prices, to explicit strategies and tactics used to build and maintain investment portfolios.
- CPM draws on the analytical expertise and knowledge of its team of research analysts and its investment banking group, as well as its execution expertise.
- CPM adopts an investment profile as opposed to a short-term trading posture in all of its asset management work.

Products

- **Managed Accounts** - CPM offers discretionary managed accounts, in which our professionals manage investments leveraging the firm's in-house independent research.
- **Funds** – CPM presently manages some specialty funds as sub-advisors to institutional and high net worth individual investors.
- **Non-Exchange Traded Metals Management** - CPM specializes in procuring, arranging, and maintaining secure and confidential storage of metal in addition to instituting insurance, accounting, and auditing programs for client metal positions.
- **Principal Protected Notes and Accounts** - CPM structures and manages accounts that emulate principal protected vehicles with reduced bank fees and more flexibility than bank-issued notes.



Investment Banking



Investment Banking

- CPM Group's Investment Banking practice provides corporate and project finance advice on a wide range of strategic and corporate finance matters tailored to clients in the mining industry and related natural resource industries.
- The Investment Banking group manages the firm's financial advisory relationships.
 - CPM is focused on being a leading independent advisor to companies exploring, developing, producing or consuming precious, base and specialty metals, coal, oil & gas and power.
 - We are organized to integrate market intelligence from CPM Group's Commodity Research and Commodities Management groups to provide advice and execution excellence on complex transactions across financial products and commodities in order to help our clients grow.
 - As a longstanding market participant in commodities, CPM has broad experience advising clients throughout the various stages of the commodity cycle over the past four decades.
- As an independent financial advisor, we assist clients in mergers and acquisitions and asset disposal programs, as well as providing advice on corporate financial transactions such as debt issuance, strategic partnerships, joint ventures, and hedging transactions.
- We deliver effective solutions to our clients by combining our industry and commodity experience with financial product expertise.



Investment Banking



M&A

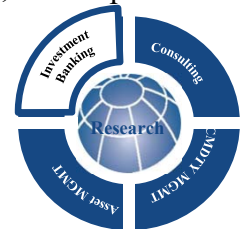
- In our **M&A** practice, we serve as either a sell-side or buy-side advisor regarding assets or companies.
- For **sell-side assignments**, we run a process that includes preparing the asset or company for sale, identifying target investors, producing presentation materials, and managing the steps in the process from initial contact through to closing.
- As a **buy-side advisor**, we run a process that is guided by the client's investment criteria, identify acquisition targets, assist with due diligence, and advise on structure and terms.

Project Finance

- Our **Project Finance** practice specializes in advising companies on financing for development assets.
- We assist clients in formulating a project financial plan and provide advice and assistance in securing strategic partners, project debt financing and commodity linked capital.
- In transactions where **offtake or roasting/smelting/refining contracts** are required, we work closely with our clients to identify potential counterparties and assist in structuring and executing long-term agreements that will support project financing.

Debt Advisory

- We have extensive experience with the **Leveraged Finance and Project Finance** capital markets and provide advice on a range of debt products, including:
 - Project debt sourced from Commercial Banks, Export Credit Agencies, Development Banks, Multi-lateral Agencies, Equipment Finance Companies;
 - Corporate bank loans;
 - Structured debt products; and
 - High yield bonds.



Investment Banking - Case Study

Project Finance Advisory: Timmins Gold Corp.

Timmins Gold Corp. is a public Canadian company with a market capitalization of US\$25 million and no revenue prior to engagement of CPM Group.

Timmins required US\$15-25 million of debt capital to complete development of gold project located in Mexico.

Life of mine production expected to average 80,000 oz gold per year.

Client was looking to minimize hedging requirements and maintain operational flexibility.

Capital Raising Issues

- No corporate track record of developing and managing operating assets.
- Brownfield project with new crushing equipment installed to improve recovery rates.
- Difficult debt market conditions.

CPM's Involvement

- Identified debt sourcing options, conducted market sounding and advised on optimal funding arrangements.
- Structured US\$25 million term and revolving credit facilities.
- Developed detailed financial model and information memorandum used by arranger as the basis for their due diligence process and documentation, reducing the time required to obtain credit approval.
- Supported associated US\$14 million equity raise.
- Assisted in sourcing of gold refining relationships and contracts.
- Assisted in the selection and appointment of due diligence consultants: technical, insurance, environmental, legal and model auditor and defining their scopes of work.

Investment Banking- Case Study

Buy-Side Advisory: SeAH Molybdenum Investment

SeAH Holding Corp. engaged CPM Group as exclusive buy-side advisor for molybdenum investments.

Based on the analysis conducted by CPM Group, SeAH Holdings Corp. identified an opportunity and made a US\$13 million investment in Avanti Mining at the corporate level.

Formed investment consortium with Korean Resources Corporation (“KORES”) and explored project level investment in Avanti Kitsault.

Assignment Issues

- CPM Group engaged as exclusive buy-side advisor to SeAH for molybdenum investments.
- Based on the analysis conducted by CPM Group, SeAH Holdings Corp. identified an opportunity and made a US\$13 million investment in Avanti Mining at the corporate level.
- Formed investment consortium with Korean Resources Corporation (“KORES”) and explored project level investment in Avanti Kitsault.

CPM’s Involvement

- Analyzed molybdenum market fundamentals, reviewed universe of development stage projects, benchmarking the projects and conducting project risk evaluation.
- Identified and valued targets and, structured and executed transaction.
- Developed detailed financial models used to conduct discounted cash flow, comparable trading and comparable transaction valuation analyses.
- Sourced and directed advisors on technical due diligence.
- Assisted in negotiating and drafting shareholders agreement and offtake agreement.

Trade Recommendations

CPM Group has advised clients on short to long term trading strategies since its inception in 1986. Beginning in 2018 it has begun a program to provide shorter term trade recommendations to a broader range of clients.

The strategies attempt to skew exposure toward profits and limit losses.

Markets Included:

Gold Silver Platinum Palladium Copper Petroleum

Strategies Provided:

Spot, futures, forward buying and selling Options strategies

Spot trades durations typically are one to two weeks.

Options strategies durations typically are one to five months.

CPM Group also manages investment positions for clients.

The CPM Group Team



Jeffrey Christian
Founder, Managing Partner



Carlos Sanchez
Director Commodities and Asset Management

Areas of Expertise:	<ul style="list-style-type: none"> World renowned metals and commodities expert Economic analysis and financial engineering expertise advising on hedging, metals and mining for 30 yrs. 	<ul style="list-style-type: none"> Commodities management Commodities research and analysis
Experience:	<ul style="list-style-type: none"> Designed commodity risk management and hedging programs for producers and consumers. Has advised Soros Quantum Fund, Tudor Investment Corp. and many others on metals and mining investments. 	<ul style="list-style-type: none"> Former head of commodities research at CPM Group Currently advising producers, consumers and investors that have commodities price risk exposure Currently advising the US Mint on its silver procurement program
Relevant Transactions:	<ul style="list-style-type: none"> Advised Primero on hedging to enable silver price participation on legacy silver stream financing Advised multiple auto manufacturers on hedging input costs of PGMs Advised Silver Standard on investment of cash in silver bullion Advisor to Barrick, Newmont and AngloGold Ashanti on gold price hedging and gold loans. 	<ul style="list-style-type: none"> Advised NANA Development Corp. on Zinc and Lead hedging Advised silver mining company on hedging its complicated tax and fixed exposures. Advised a silver producer on securing floor prices while maintaining exposure to higher prices for its silver. Advised manufacturer on hedging its precious metals purchases.
Prior Firms:	<ul style="list-style-type: none"> Goldman, Sachs & Co. J. Aron & Company 	<ul style="list-style-type: none"> Deutsche Bank Bankers Trust
Education:	<ul style="list-style-type: none"> University of Missouri, Columbia – BJ 	<ul style="list-style-type: none"> NYU Stern School of Business – BS

The CPM Group Team



Rohit Savant,
Director of Research



Elliot Kalson
Chief Operating Officer

Areas of Expertise:

- Gold, Silver & PGMs
- Commodity Research
- Project analysis

- Corporate and Operational Finance
- Budgeting and Cost Management
- Strategic Planning and Organizational Leadership

Experience:

- Awarded LBMA prize for most accurate platinum and palladium forecaster in 2011
- Provided consulting to major mining company on production costs and substitution in end-uses.
- Provide consulting services to hedge funds, private equity firms, & individual traders on commodities under review.

- 5+ years Operational and Accounting experience in the Financial Industry
- Reduced Corporate Expenses by over 50%
- Designed and Implemented Financial Systems and reports to better understand the organizational flow of funds.

Relevant Transactions:

- Developed an independent PGMs market analysis for a capital raise for Lonmin.
- Conducted feasibility study for U.S. Mint’s production of palladium American Eagle bullion coins.
- Developed strategic plan for Materion for transforming company’s precious metals refining operations into a global business.

Education:

- Baruch College – MBA
- Sydenham College – B.Com

- Yeshiva University - BS

The CPM Group Team



Andrew Zemek
Special Advisor



Shelley Goldberg
Special Advisor

Areas of Expertise:

- Molybdenum, Copper, Zinc/Lead, Tungsten
- Commodity Research
- Project analysis

- Global Resources & Commodity Sector Strategist
- Portfolio, hedge and price risk investment manager
- Environmental sustainability and social impact focused

Experience:

- 35+ years in the metals & mining industry;
- Frontline experience of running and financing of mineral exploration and mining companies;
- Former Chairman of the Association of Mining Analysts in London;
- 15+ years of international consulting experience;
- Worked on projects in 20 countries on 5 continents
- Approved trainer for Euromoney and the LME.

- Ran her own energy fund, G3 Capital Partners, LLC, and ran the largest fund-of funds devoted to natural resources with Swiss private bank, Union Bancaire Privée;
- Chief Commodity strategist for Brevan Howard Asset Management LLP, a 42-billion-dollar hedge fund and for Roubini Global Economics;
- Consultant with Deloitte’s Global Markets on trading, price and operations risk management.

Relevant Transactions:

- IPO of KGHM Polish Copper in Warsaw and London (1997)
- Bankable Feasibility Study and negotiation of a financing package for the Black Angel Zn/Pb mine in Greenland;
- Sale of Polish assets of an Australian junior to an American private equity firm.
- Ongoing advisory assignments in the non-ferrous and minor metals space.

- Led a dispute litigation engagement between an investment and central bank regarding valuation of over 200 gold options;
- Oversaw due diligence on a \$44 billion acquisition by Enron for the metals trading arm of Metallgesellschaft;
- Ongoing commodities derivatives trader, macro-based transactions involving hedging, asset allocation, project finance and securitization. Originated, priced and executed multi-currency derivatives, swaps and arbitrage strategies. Analyzed price-risk exposure and hedged and enhanced proprietary portfolios.

Education:

- Warsaw School of Economics – MA in Economics
- Post grad courses in mineral economics – Uni of Lulea, Sweden, Imperial College, London

- Tufts University - BA
- New York University Stern School of Business - MBA



Collaborators

CPM Group traditionally has collaborated with a wide range of companies. Many consulting companies, for example, will subcontract CPM to undertake precious metals and specialty metals research or consulting programs. In addition to maintaining a policy of being open to cooperation, CPM has a range of companies with which it endeavors to undertake more meaningful cooperative efforts.

- RMG Consulting Group
- EELO Solutions
- FEA Energy
- DMT
- Stealthmark

Partners

CPM Group has entered into Partnership agreements with several Chinese precious metals companies. These companies translate, publish, and distribute CPM Group's annual precious metals Yearbooks as well as engaging in a wide range of market development, training, research, analysis, and advisory work.

- China Gold Association
- China National Gold Corp.
- Jingyi Gold
- Huatong Silver Exchange
China Silver
Ebaiyin

CPM Group – Contact Details

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