CME Institute

Spread Trading Opportunities in Metals

New Opportunities in Trading Gold, Silver, Platinum and Palladium

Spread trading is a widely used trading strategy in the futures markets that offers some key advantages over outright futures trading (i.e., going long or short a single futures contract) and also has the potential to deliver better risk-adjusted returns. For many self-directed traders, examining futures spreads can open the doors to new trading opportunities. This is particularly true for the precious metals markets, where the underlying commodities have historically tended to demonstrate close economic linkages as well as distinct fundamental drivers that can create spreading opportunities using the associated futures contracts.

Spread trading using futures is relatively straightforward and involves simultaneously buying a particular contract and selling a contract against it. Every futures spread trade clearly has the features of a hedging transaction that alters the exposure for a trader from that of outright price fluctuations to the price differentials between the legs of the spread trade. In other words, the profitability of a futures spread strategy will depend of the price direction or, for that matter, the differences in the pace of price movement for the individual legs of the strategy. The choice of markets to be spread traded is wide open, but most traders look at similar contracts, or related markets, for spread trading opportunities. A closer relationship between the spread markets is more likely to ensure that the legs move in tandem enabling relatively stable price changes governed primarily by the pace of price moves between the legs (i.e., the relative performance of the legs). In fact, for that reason, these strategies are also sometimes referred to as relative value strategies in the buy-side sector.

Spread Trading

Now that we have gone through what a spread trade entails, we can explore the types of spread trades. Spreads may be broadly classified as intra-market spreads and inter-market spreads. Intra-market spreads are typically calendar spreads set up by buying one contract month and selling another with a different maturity date in the same futures market. Given the popularity of these spread trades as well as their contribution to futures rollover activity, most exchanges (including CME, CBOT, NYMEX and COMEX) offer dedicated calendar spread markets on their trading platforms that allow spread execution in a single order. Inter-market spreads, on the other hand, involve two separate, but related, futures markets with the legs having the same or near similar maturity time frames. Inter-market spread strategies, however, can involve some element of legging risk in that multiple orders may be required to effect the spread trade. Legging risk may be mitigated firstly by using dedicated inter-market spread contracts, if these are available, and alternatively by the choice of liquid underlying contracts for each leg in conjunction with the auto-spreading functionality offered by some software vendors on their trading screens.

It is probably clear by now from the preceding discussion what the main advantages of spread trading might be – reduced volatility and lower margin requirements in entering a spread since the legs are generally in related markets (although lower margin requirements may not be feasible if the legs are at different exchanges). However, another important feature of spreads that many market participants find beneficial is that spreads can exhibit smoother and longer-term trends. Compared to outright futures that can go through significant price swings, spreads can demonstrate extended trending price moves making it easier for traders to visualise patterns and thereby take a directional view or implement a technical trading strategy.

Spread Trading with Precious Metals

The precious metals complex that includes commodities such as gold, silver, platinum and palladium offers exciting trading opportunities to a global market participant base through a wide variety of instruments available in the market such as the futures and ETFs along with OTC spot and forward contracts. These markets have historically demonstrated a high degree of correlation with each other (see Table 1), but also each with some unique price drivers that can create spread trading opportunities. While market participants can choose from the range of instruments available for trade execution once they have identified their preferred strategies, the precious metals futures markets at NYMEX and COMEX (operated by CME Group) offer highly liquid and deep markets that enable the fast, efficient execution of spread strategies with the potential benefits of considerable margin savings (as all trades are centrally cleared through CME Clearing) and much alleviated legging risk. More importantly, these futures contracts are predominantly electronically traded (90%+) on CME Globex allowing easy access for participants across the world and high-quality trade executions virtually 24 hours a day.

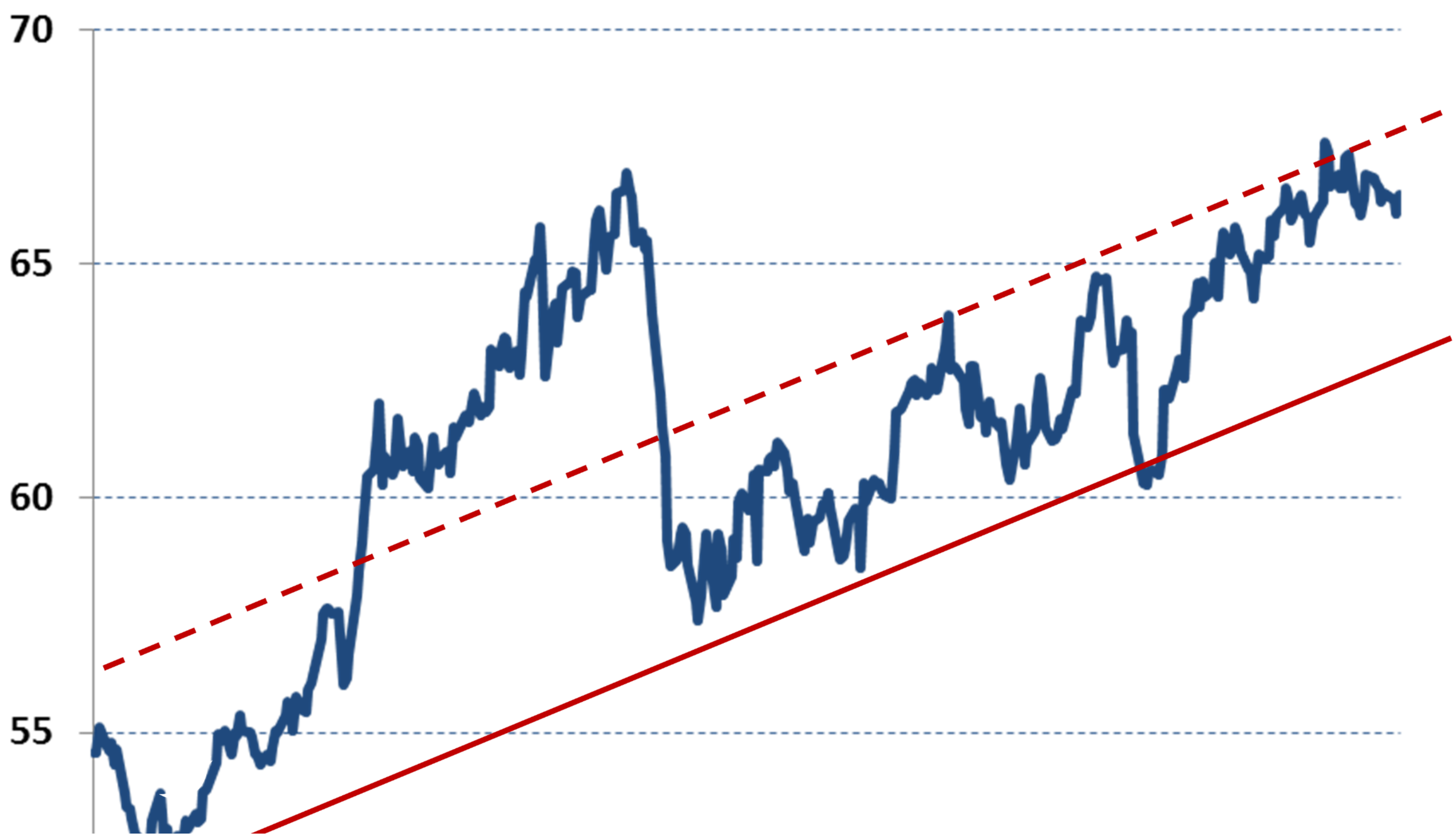
	Gold	**Silver**	**Platinum**	**Palladium**	**Crude Oil**	**S&P 500**
Gold	*1.00*					
Silver	0.78	*1.00*				
Platinum	0.61	0.61	*1.00*			
Palladium	0.33	0.35	0.68	*1.00*		
Crude Oil	0.01	0.03	0.01	0.01	*1.00*	
S&P 500	-0.28	-0.11	-0.004	0.16	0.18	*1.00*

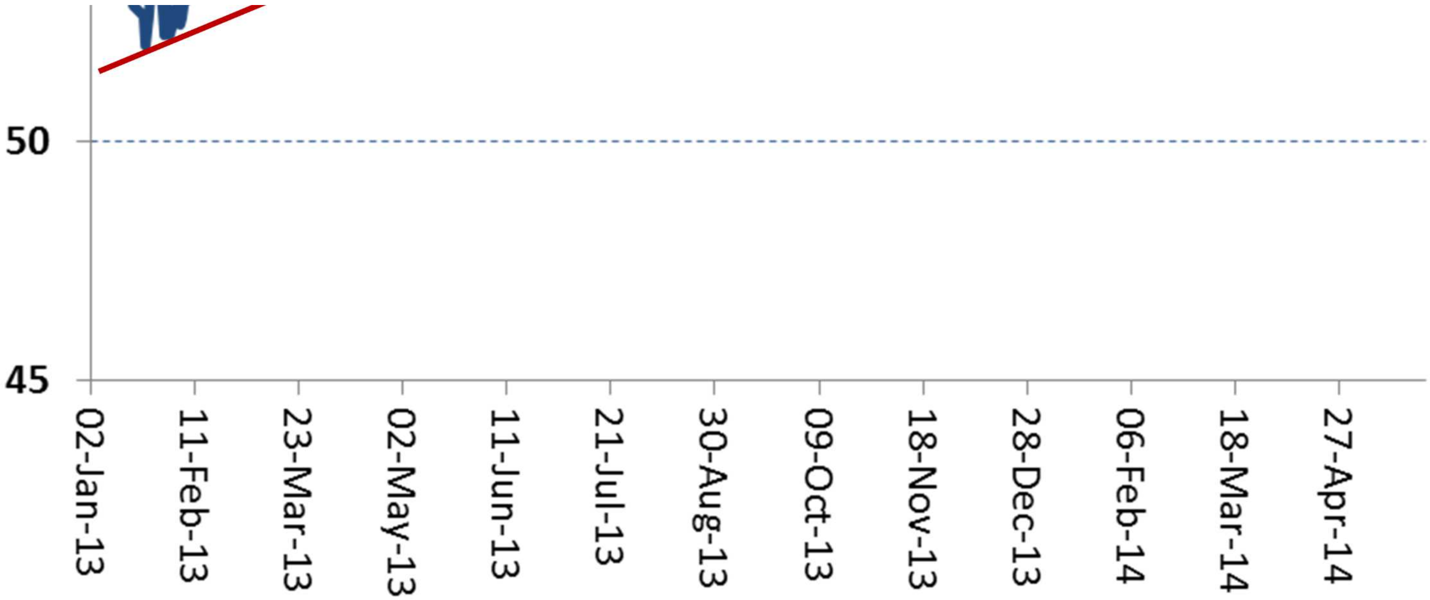
Table 1: Correlation Table for Precious Metals, Crude Oil and S&P 500 (Source: Bloomberg)

In Table 1, we have shown YTD 2014 inter-market correlations amongst the mostly actively traded futures contracts for precious metals, crude oil (WTI) and the S&P 500 Equity Index, all of which are offered by CME Group (listed under NYMEX, COMEX and CME). As observed from the correlation values in the table, precious metals have historically been closely linked and have shown a tendency to move together as compared to other assets such as crude oil or equity indexes. This should, in turn, provide excellent opportunities to explore further the spread relationships within the precious metals complex. In particular, we will focus on two spread relationships in the following sections based on the high degree of correlations in the underlying commodities – the gold-silver and gold-platinum spreads. These spreads are traded frequently in the marketplace and, more generally speaking, closely watched and monitored by market participants and analysts alike as a gauge for economic activity and the global macro environment. We will also provide some simple hypothetical trade examples and how these could be implemented using the futures contracts available in CME Group's metals marketplace. While we will not delve into the calendar spreads here, the reader should note that there are very deep and liquid futures spread markets available at NYMEX and COMEX for all the precious metals in Table 1.

Gold-Silver Ratio Trade

The Gold-Silver Ratio, or GSR, indicates the price of gold relative to silver and is simply the price of gold divided by the price of silver on a per troy ounce basis. Put another way, it reflects how many ounces of silver would be required to equal the value of a single ounce of gold. Over the past decade, the ratio oscillated between 45 and 60, and more recently has been in the 63-65 range. Although both metals are considered precious and tend to trend together, gold is viewed as a global currency and often used as an inflation hedge and safe-haven asset in times of market uncertainty, whereas silver has more of an industrial bent to it with nearly 50 to 60 per cent of the metal consumed for industrial end use as compared to a mere 10 per cent of gold. This makes silver prices more prone to cyclical factors and the pace of industrial activity. The gold-silver ratio could expand, as an example, if gold prices see a larger percentage gain relative to silver prices in times of economic uncertainty or financial stress, whereas silver prices can outperform gold in times of economic recovery as industrial demand picks up that would put the ratio under pressure. And, for this very reason, many market participants also watch the ratio closely for signs of the global macro picture.





Gold-Silver Ratio Chart based on COMEX Gold and Silver Futures Prices

In the context of the gold-silver ratio, it is important to realise that silver prices are generally more volatile compared to gold prices (at the time of writing, 20d historical volatility for gold and silver were around 14% and 20% respectively). What that means in simpler terms is that under market conditions where gold prices fall, silver prices are likely fall to a greater extent and vice-versa. The consequence of this is that the gold-silver ratio tends to be driven on numerous occasions principally by moves in the price of silver. This can perhaps be better appreciated by considering a recent market example – as both gold and silver prices took the plunge in April 2013, the gold-silver ratio shot up to multiple year highs as silver prices fell at a much faster pace relative to gold.

Trading the gold-silver ratio may be accomplished using an approach similar to outright futures. A trader more at ease with technical strategies can apply her favourite studies to determine a preferred point to enter and exit the spread. Fundamental traders, on the other hand, would generally assess the supply-demand balances and the macro conditions for each metal to take a directional view on the ratio before they initiate a trade. Irrespective of the trading approach, the gold and silver futures contracts at COMEX offer cost-effective and highly liquid instruments for the GSR trade. The following screenshot for the most active COMEX gold and silver futures contracts on CME Globex shows extremely tight and liquid markets for the metals. The top of the order book is generally 1-2 ticks wide and there is abundant depth in the book beyond the top level for both the contracts.

Contract	Gold Futures	Silver Futures
Symbol	GC	SI
Exchange	COMEX	COMEX
Contract Size	100 oz.	5000 oz.
2014 Average Daily Volume (Contracts)	165,000	56,000
Open Interest (May 30, 2014)	380,000	164,000

CC	Product	Description	Status	+	Qty	Bid	Ofr	Qty	Last	Change	Volume	Open Interest
− Gold Future												
GC	Gold Future	Aug14	Open	+ −	14	1,246.0	1,246.2	30	1,246.1	+0.1	47,584	249,640
					19	1,245.9	1,246.3	32				
					15	1,245.8	1,246.4	38				
					17	1,245.7	1,246.5	25				
					20	1,245.6	1,246.6	24				
					15	1,245.5	1,246.7	30				
					24	1,245.4	1,246.8	21				
					14	1,245.3	1,246.9	20				
					19	1,245.2	1,247.0	13				
					11	1,245.1	1,247.1	22				
SI	Silver Future	Jul14	Open	+ −	21	18.770	18.775	22	18.770	+0.088	11,715	108,086
					18	18.765	18.780	20				
					26	18.760	18.785	19				
					21	18.755	18.790	22				
					36	18.750	18.795	21				
					23	18.745	18.800	33				
					41	18.740	18.805	23				
					12	18.735	18.810	21				
					26	18.730	18.815	24				
					8	18.725	18.820	18				

COMEX Gold and Silver Futures Order Book on CME Globex (at 9:30 am ET on 2 June 2014)

Gold-Silver Ratio P&L Example

A trader believes that gold prices will outperform silver prices in the short term. She decides to go long the gold-silver ratio by buying one Aug-14 gold futures contract (GCQ4) at $1,244.40/oz and simultaneously selling one Jul-14 silver futures contract (SIN4) at $18.755/oz thus keeping the notional amounts for the legs nearly similar ($124,440 and $93,775 respectively). The trader has thus initiated the GSR trade at 66.4. The following tables show the trader's realised P&L should the GSR move in her favour (i.e., firms up) and against her (i.e., weakens).

GSR edges higher by 1%	**GCQ4**	**SIN4**
Trade Exit Prices	$1,284.70	$19.135
Liqudate GSR@	67.0	
Notional Amounts	$128,170	$95,675
Strategy Leg P&L	$3,730	-$1,900
Total P&L	**$1,830**	

GSR drops nearly 3%	**GCQ4**	**SIN4**
Trade Exit Prices	$1,284.70	$20.075
Liqudate GSR@	64.5	
Notional Amounts	$129,420	$100,375
Strategy Leg P&L	$4,980	-$6,600
Total P&L	**-$1,620**	

Margin Requirements

As a result of the strong historical correlation between gold and silver prices, CME Clearing currently provides significant margin offsets for opposite positions in COMEX gold (GC) and silver (SI) futures contracts. The margin offset applicable at present for GC and SI is 75% on a 1:1 basis that translates to an initial margin requirement of just 25% of the combined gross margin. At the time of writing, initial margin per contract for GC and SI was $6,600 and $9,075 respectively. Thus, for a long position in one gold futures contract and a short position in one silver futures contract, the total initial margin requirement will be $3,919 instead of $15,675.

Platinum-Gold Spread Trade

Platinum has crucial industrial and automotive applications, while also being used (increasingly) as an investment asset and in jewellery fabrication making it both a precious and an industrial metal. The largest industrial use for platinum is in automotive catalysts with platinum being the preferred metal for diesel after-treatment. The metal also sees widespread use in other industrial sectors such as the chemical process industry. While platinum has a wide variety of demand-side drivers, production of the metal is concentrated in just one country – South Africa. South Africa accounts for almost 75 per cent of the world's platinum supply. As a result, the metal's performance is not only vulnerable to market perceptions of global economic prospects and automotive sales, but also to supply-side constraints as has been the case recently given its production concentration in South African mines.

The price relationship and the price spread between gold and platinum could be a useful vehicle for a market participant looking at signals for shifts in the macro environment. Historically, platinum has been more expensive than gold since the white metal is about 15 times rarer than gold and has a myriad industrial uses compared to the yellow metal. However, gold can indeed get pricier in times of economic distress when the yellow metal sees increased demand as a safe-haven asset, as was the case during October 2008 when the financial crisis hit the markets, and again during August 2011 when worries about Eurozone debt reached new heights. On the other hand, in times of economic expansion and increasing automobile sales, platinum's premium over gold prices can rise even further as the metal will see increased use in catalytic convertors and industrial equipment. More recently though, mainly supply side concerns have prompted platinum price rallies as continued industrial turmoil in South African mines has resulted in outages and production cuts.

Platinum-Gold Price Spread (in U.S. dollars per troy ounce) Chart based on NYMEX Platinum and COMEX Gold

Futures Prices

CME Group offers one of the most liquid futures markets in the world for platinum listed at NYMEX making it a very convenient instrument for the market to manage risk and instantly capture trading opportunities such as the platinum-gold price spread strategy.

Contract	Gold Futures	Platinum Futures
Symbol	GC	PL
Exchange	COMEX	COMEX
Contract Size	100 oz.	50 oz.
2014 Average Daily Volume (Contracts)	165,000	12,000
Open Interest (May 30, 2014)	380,000	71,000

The 50-oz NYMEX platinum futures contract is widely used by a variety of market participants across the world and trades round the clock on CME Globex.

Platinum-Gold Spread P&L Example

A trader takes a view that supply-side disruptions are likely to continue for platinum that will cause the metal's premium over gold to rise even further. She buys two Jul-14 platinum futures contracts (PLN4) at $1,436.70/oz and simultaneously sells one Aug-14 gold futures contract (GCQ4) at $1,244.40/oz (since the platinum contract is half the size of the gold contract). The resulting notional amounts for the legs are quite similar, and are $143,670 and $124,440 respectively. The trader has thus entered the spread trade at $192.30 and is long the spread. The tables below show the trader's realised P&L should the spread widen further (in her favour) and narrow (against her).

Platinum-Gold Spread Widens	GCQ4	PLN4
Trade Exit Prices	$1,269.30	$1,508.50

Liqudate Spread@	$239.20	
Notional Amounts	$126,930	$150,850
Strategy Leg P&L	$-2,490	-$7,180
Total P&L	**$4,690**	

Platinum-Gold Spread Narrows	**GCQ4**	**PLN4**
Trade Exit Prices	$1,281.80	$1,451.10
Liqudate Spread@	$169.30	
Notional Amounts	$128,180	$145,110
Strategy Leg P&L	-$3,740	$1,440
Total P&L	**-$2,300**	

Margin Requirements

As with the gold and silver contracts, CME Clearing currently offers a significant 65% margin offset for opposite positions in platinum and gold futures on 2:1 basis. At present, the initial margin requirements per contract for platinum and gold futures are $2,750 and $6,600 respectively. With the offset accounted for, the initial margin would come to a total of $4,235 instead of $12,100 for a long position in two NYMEX platinum futures contracts and a short position in one COMEX gold futures contract.