

## Platinum

Platinum is a silvery white colored metal which has properties similar to those of other precious metals such as; malleability, ductile but it is heavier than other precious metals. This metal is extremely rare which makes it more precious than gold or silver. Platinum, in its true form, is concentrated only in two areas of earth, South Africa and Russia. At other places of the world, it is produced as a by-product. The total global production of platinum is 5.945 million troy ounces, which is around 7 percent of total gold production and 1 percent of total silver production across the globe. These figures depict the level of scarcity of this precious metal.

### **The demand for this metal is fragmented across below mentioned industries (2008):**

- Autocatalysts - 41.71%
- Jewelry - 22.07%
- Other Industrial Usage - 27.24%
- Investment - 8.97%

**Automotive catalytic converter** applications are the largest current users of platinum. An Autocatalyst is a cylinder of circular or elliptical cross section made from ceramic or metal formed into a fine honeycomb and coated with a solution of chemicals and platinum group metals. It is mounted inside a stainless steel canister (the whole assembly is called a catalytic converter) and is installed in the exhaust line of the vehicle between the engine and the silencer (muffler).

Vehicle exhaust contains a number of harmful elements which can be controlled by the platinum group metals in autocatalysts. Autocatalysts convert over 90 per cent of hydrocarbons, carbon monoxide and oxides of nitrogen from gasoline engines into less harmful carbon dioxide, nitrogen and water vapour. Autocatalysts also reduce the pollutants in diesel exhaust by converting 90 per cent of hydrocarbons and carbon monoxide and 30 to 40 per cent of particulate into carbon dioxide and water vapour.

As more jurisdictions around the world implement higher clean air standards, **the demand for platinum from automobile makers is expected to increase as well.** Interestingly, the higher demand for diesel-powered vehicles due to increasing energy costs is expected to fuel still more demand for platinum.

**Industrial Usage:** Currently platinum is utilized in a number of industrial processes, technologies and commercial applications. Its unique chemical and physical properties make platinum an excellent raw material, catalyst or ingredient for manufacturing processes. Consumer and industrial items made with platinum include such items as flat panel monitors, glass fibre, medical tools, computer hard drives, nylon and razors, among others.

**Investment demand** implies demand arising through Exchange Traded Funds.

## Demand & Supply

South Africa has been occupying the number 1 slot in terms of total platinum supply, followed by Russia. Total global platinum supply stood at 5.945 million ounces in 2008 and the same is expected to rise to 6.055 million ounces for the current year, according to Johnson Matthey's report.

An expected rise in supply this year will create a small surplus of 110,000 ounces, mainly because of increasing South African supplies despite lower underlying production. This would happen by higher sales of refined metal in 2009. Sales of metal from Russia are forecast to decline to 745,000 ounces with a fall in output at its two major mines.

According to Johnson Matthey projections, total demand for platinum is projected to decline by 270,000 oz to 5.915 million oz. This fall would be mainly led by 33 percent decline in Autocatalysts' demand and the similar fall in other industrial usage. However, net jewelry demand may rise, following with growing investment demand.

The fall in Autocatalysts' demand is perceived mainly because of lower vehicle production during economic slowdown. However, the same may pick up next year onwards when economic recovery normalizes. Developing nations are expected to play a bigger role in this.

Demand for platinum across the sectors started falling with the onset of the recent financial crisis. The **jewelry demand** for platinum is still expected to decline in Europe and North America as these two regions were hardly hit by the recent recession. However, overall jewelry demand is likely to pick up in the current year, with China buying more platinum jewelry. Chinese economy has started growing and helped global economy recover from this downturn.

Industrial demand from various sectors is expected to be subdued in the current year as the recent economic slowdown has resulted in less demand. As soon as the economy opens up, industrial usage of platinum will rise.

### Demand for platinum in Autocatalysts in the future

As the number of cars on the road increases, further cuts in pollution per vehicle are needed to keep improving air quality. Many governments, including those of the USA, Japan and the EU continue to apply increasingly stricter emissions standards. Advanced autocatalysts for gasoline and diesel cars and heavy trucks are being developed by Johnson Matthey in partnership with the world

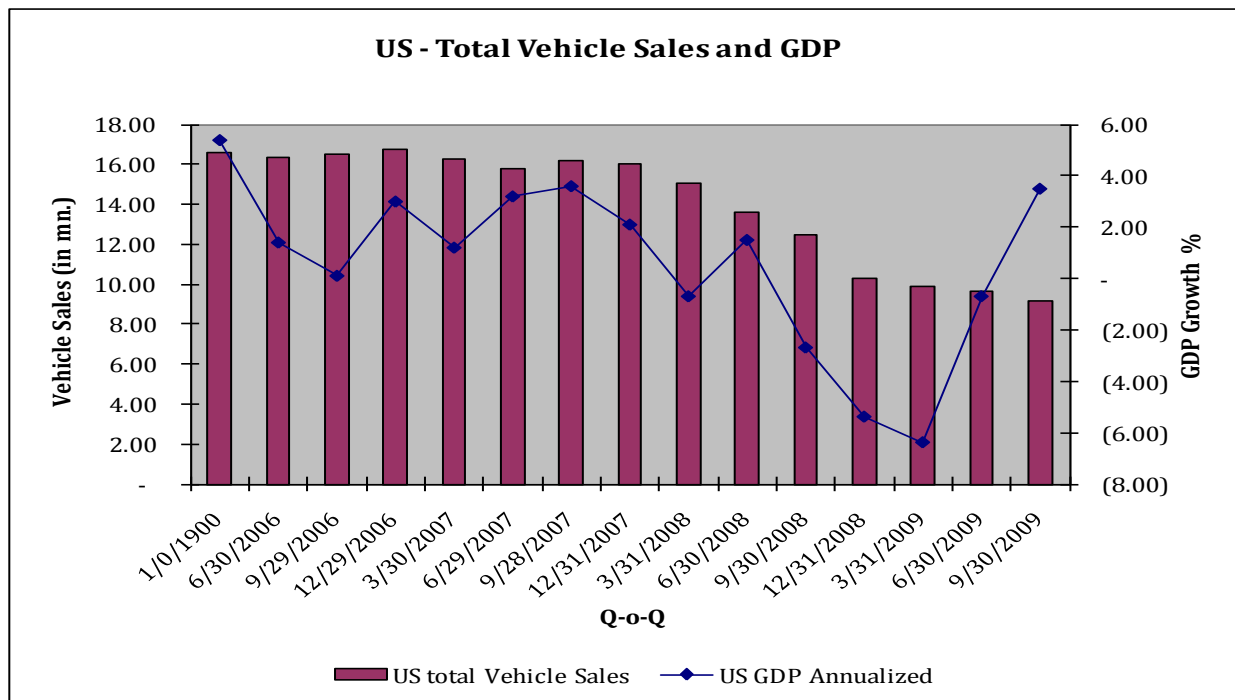
S	('000 Oz)	2005	2006	2007	2008	2009 (E)
u	South Africa	5,115	5,295	5,035	4,515	4,725
p	Russia	890	920	910	810	745
p	North America	365	345	325	620	585
l	Others	270	270	280		
y	<b>Total Supply</b>	<b>6,640</b>	<b>6,830</b>	<b>6,550</b>	<b>5,945</b>	<b>6,055</b>
	Autocatalyst	3,025	3,045	3,335	2,580	1,680
	Jewelry	1,965	1,640	1,585	1,365	2,450
	Investment	15	(40)	170	555	630
	Chemical	325	395	390		
	Electrical	360	360	425		
	Glass	360	405	430	1,685	1,155
	Petroleum	170	180	205		
	Others	475	490	490		
	<b>Total Demand</b>	<b>6,695</b>	<b>6,475</b>	<b>7,030</b>	<b>6,185</b>	<b>5,915</b>

Source: Johnson Matthey

automotive industry to meet the new rules. These will lead to greater use of the catalyst metals platinum, palladium and rhodium.

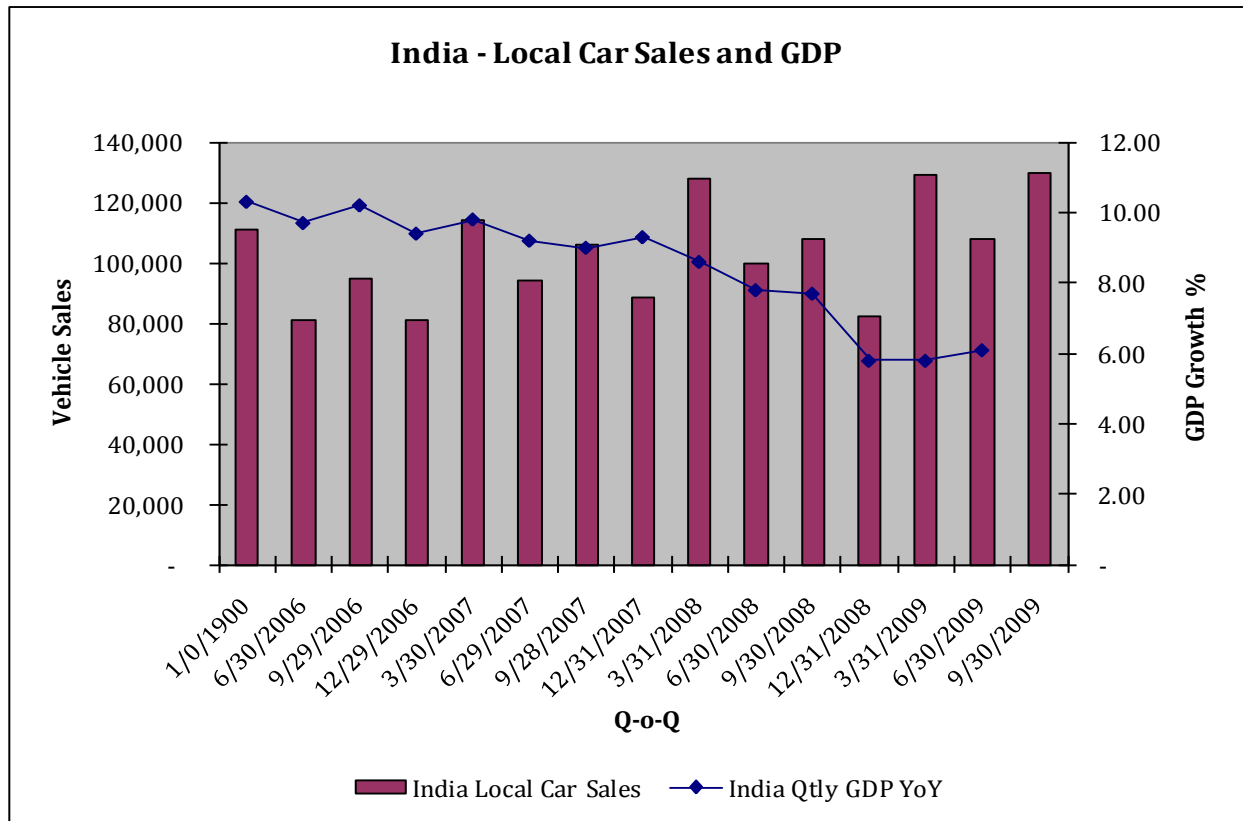
Auto sector is also likely to improve as the recession gradually cools off. Major economies such as; the US, euro zone, Japan, China and India have already posted improving GDP growth numbers, recently. The US economy grew by 3.5 percent in the third quarter while Japan posted 4.8 percent growth in its GDP for the same period. Euro zone GDP also recovered and posted a growth of 0.40 percent in the 3Q'09, after having declined by 0.20 percent in the previous quarter. Chinese real GDP growth recorded 8.90 percent for the third quarter against 7.90 percent in the corresponding quarter of the last year. India and China led the global recovery by recovering from the recession since early this year. Stock markets have bounced back from this year beginning.

**Total vehicle sales in the US** has risen to 10.45 million in October from 9.20 million in September. US domestic vehicle sales have also grown to 7.94 million in October as compared to 6.80 million vehicles in the month before. The US GDP has just come out of its worst recession in the modern history. Vehicle sales in the US began to decline in from 2008 beginning which later resulted in platinum prices plunging by the year end.



Source: Bloomberg

Indian auto sector is likely to grow in line with its domestic economic growth, spurred by the global recovery from the worst recession since 1930s. India saw its local car sales rising since the beginning of this year and the same has reached to 129,683 vehicles in September ending quarter, from 107,531 in the previous quarter. Indian GDP expanded by 6.10 percent in June ending quarter from 5.80 percent in the quarter before.

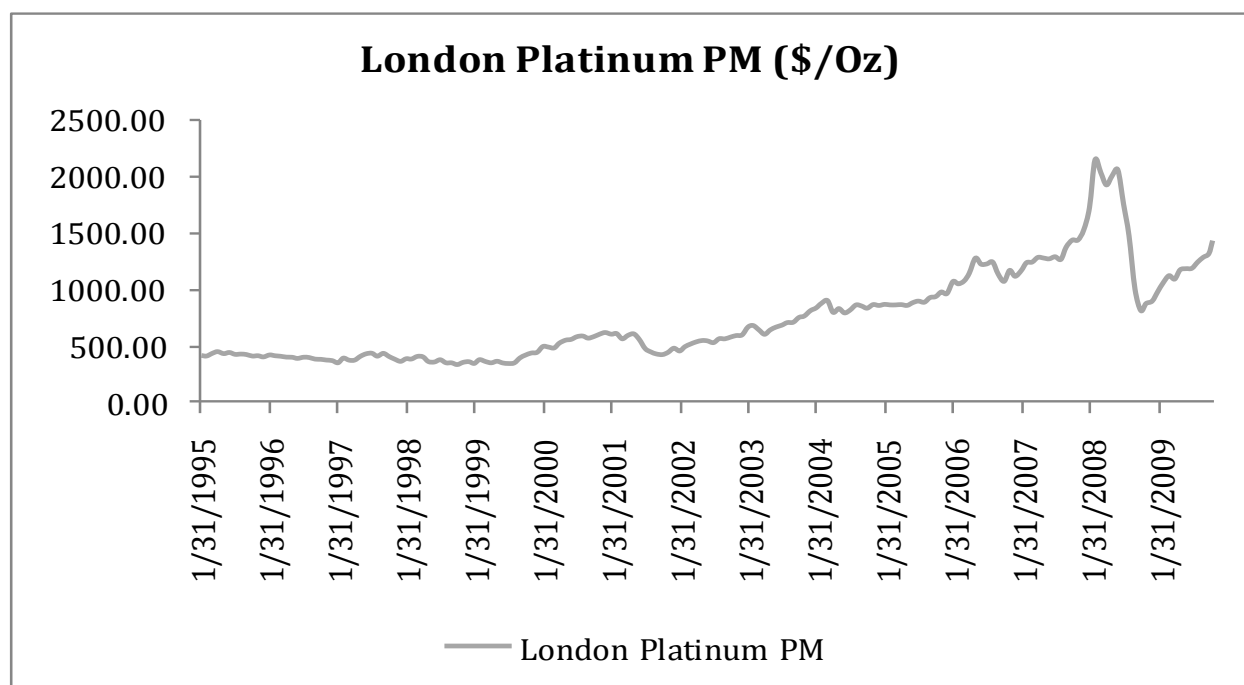


Source: Bloomberg

Indian auto sector is poised to grow in the future along with the economic expansion and a few new launches scheduled in the near future. Rising demand for auto vehicles will encourage the demand for autocatalysts which are made of using platinum metals.

**Price Trend:** As this is very scarce metal, any demand-supply mismatch can bring about a huge volatility in price levels. However, the London physical market provides the reference rate through its “**London fix for platinum**” which is considered as benchmark rate across the world.

**London PM Fix (Since 1995)** – London PM fixing for platinum is mainly accepted by producers and large traders of platinum. Platinum prices started declining by 2008 year ending after having gone to record levels in the beginning of the same year. Platinum, once again, started rising in London with the advent of the year 2009 in which economic recovery gradually picked up. London platinum PM was fixed at \$1,435/oz yesterday (Nov 19, 2009).

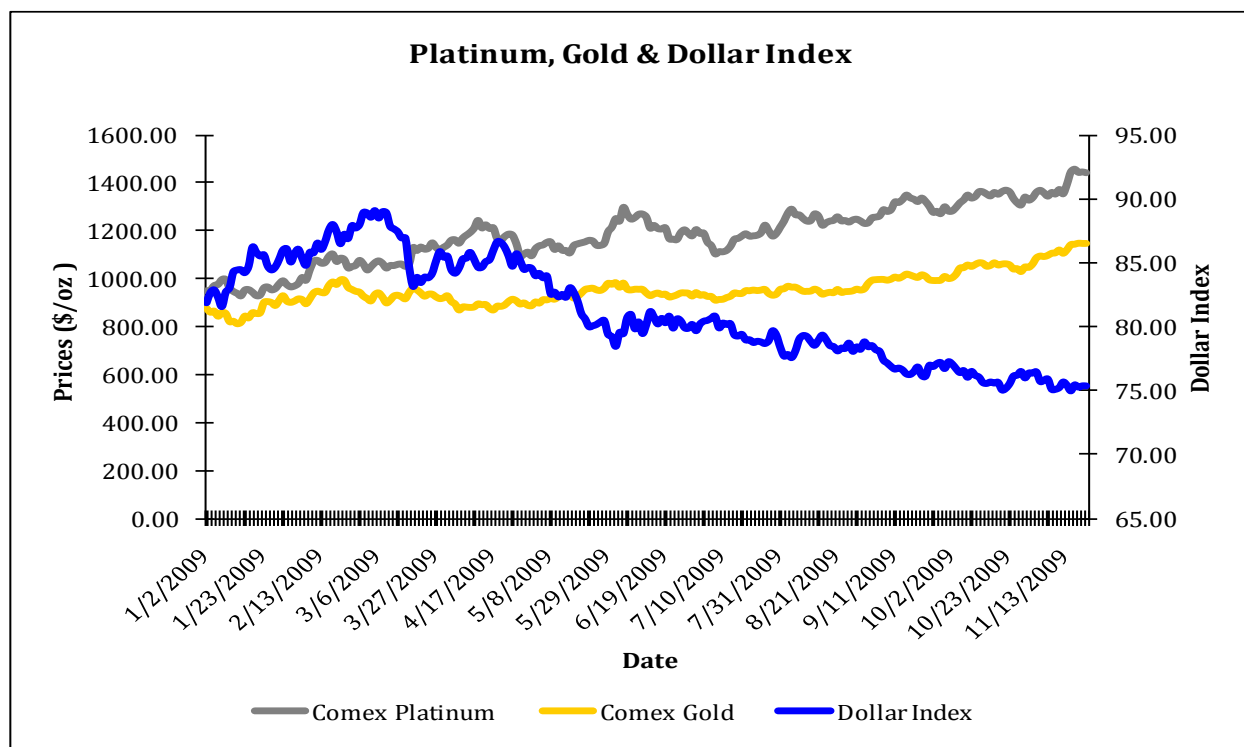


Source: Bloomberg

#### Major trading centers of platinum:

- New York Mercantile Exchange (NYMEX)
- Tokyo Commodity Exchange (TOCOM)
- Multi Commodity Exchange, India (MCX)
- National Commodity & Derivative Exchange, India (NCDEX)

Comex prices are considered as benchmark for futures trading in platinum. Platinum futures are also available on Tokyo Commodity Exchange (TOCOM) and Multi Commodity Exchange (MCX) in India. Recently, National Commodity & Derivative Exchange (NCDEX) India has also launched its platinum contracts for futures trading.



Source: Bloomberg

Platinum prices have outperformed gold and other precious metals this year as the dollar index declined. Precious metals move inversely to the dollar and hence, both gold and platinum moved higher in response with the declining dollar index. COMEX spot platinum has risen more than 52 percent year-till-date while gold gained 30 percent for the same period. Dollar index has lost nearly 8 percent against a basket of six major currencies.

## Technical Analysis

### Trend Analysis & Retracement Theory:

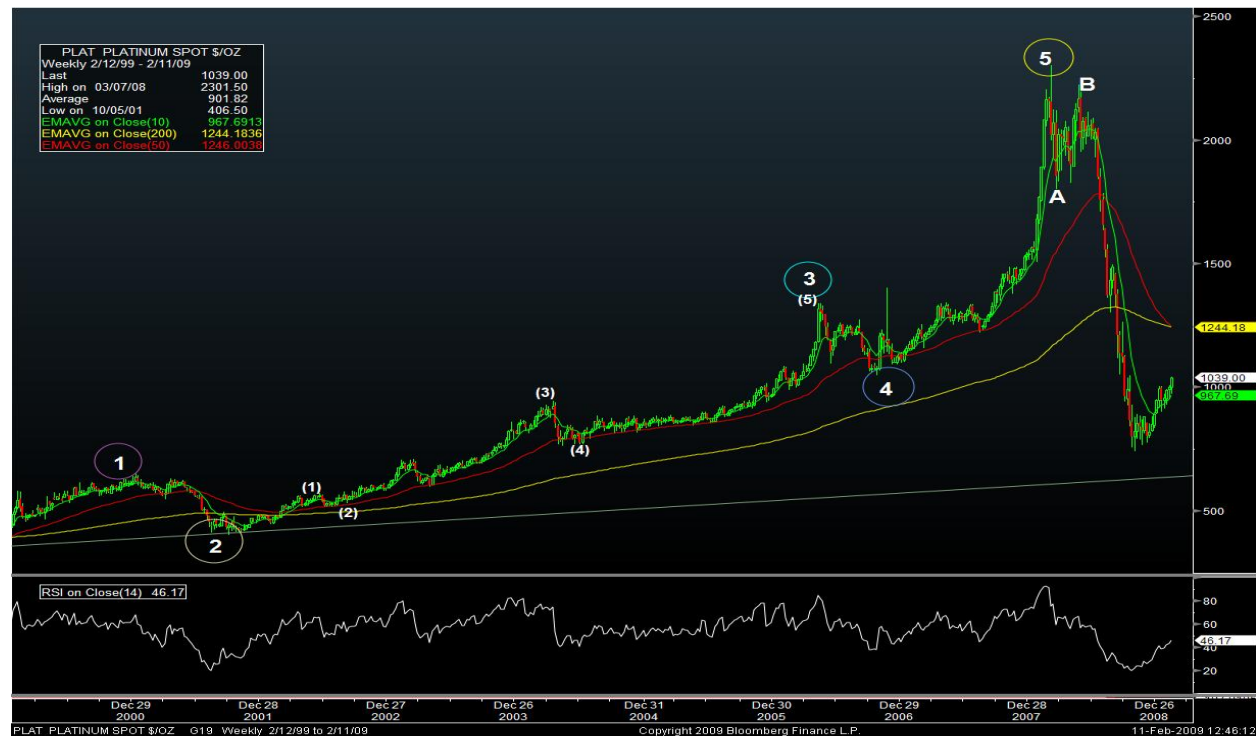
Historically, Platinum prices are trading in the direction of North as prices have moved higher from the lows of \$324 (1981) to \$2290 (2008) levels in a time span of 17 years. Market witnessed a steep correction of more than 70 % for its fall and prices posted a low of \$732 in the last Quarter of the year 2008. Currently, prices are again trading higher suggesting prices to move higher in the short to medium term. Market has completed 38.2% correction for the downfall from \$2290 to \$772 levels. Prices are heading for 50% correction which is at \$1510 levels and market has the potential to break these levels in near term. Looking at the Monthly charts we may see further high move in this precious metal up to 1690 levels. Short term weekly & daily charts show a possibility of price correction on to the lower side up to \$1350-\$1380 levels before it starts rallying higher again.

### Indicator Analysis:

Prices are trading above average band of Bollinger bands in monthly charts suggesting potential for prices to test the upper band. RSI (14) in monthly charts is trading at 0.56 levels also showing potential for prices to trade higher in the short term. However, RSI (14) in daily charts is retracing from overbought zone to lower levels suggesting a near term price correction on to the lower side.

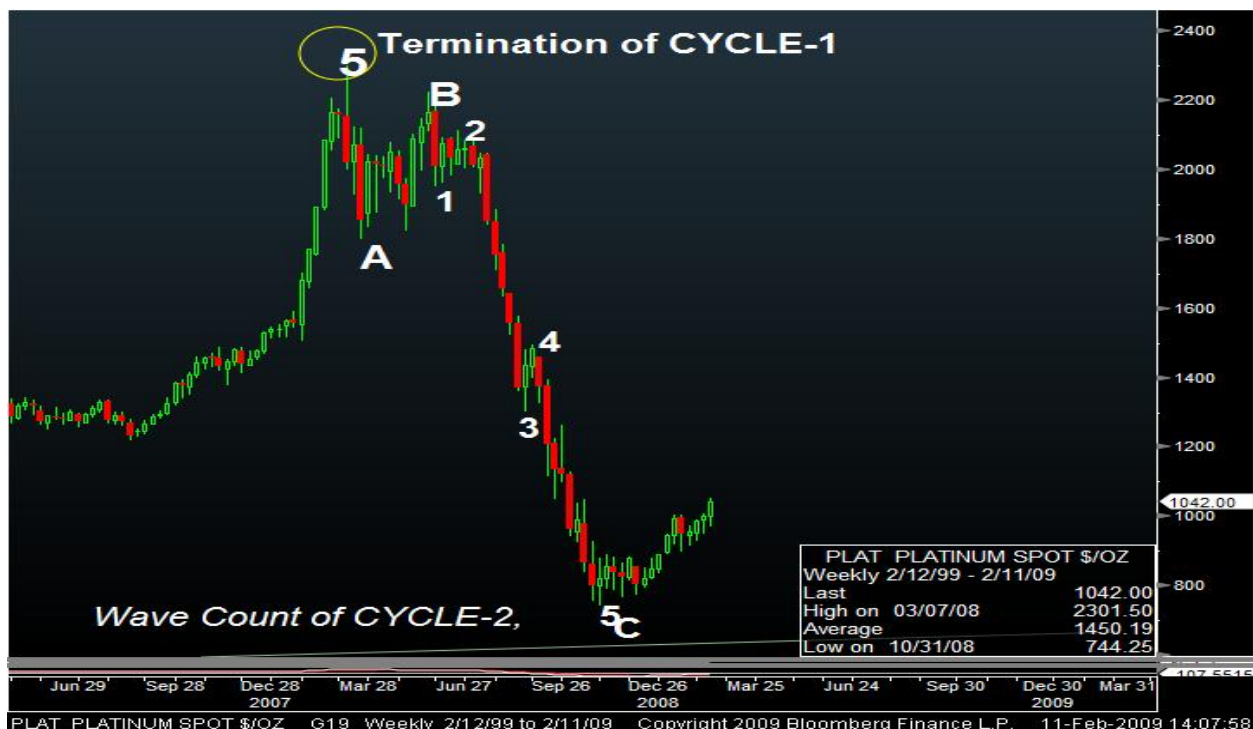


### Elliot Wave Analysis:



## Weekly Chart

The Primary wave-5 that made an end at \$2301.50 in the month of March 2007 was the ever historical peak for the platinum prices. Since then platinum prices witnessed a massive correction which established a decline of -67.66 percent and pegged a low of \$744.25 levels. Market has perceived a completion of CYCLE-1 phase, which took more than 7 years to rally from \$351 to \$2301.50 levels. After making an end of CYCLE-1, or primary wave-5, platinum prices are into a correction phase, wherein it has almost completed the A-B-C move of CYCLE-2 and pegged near the crucial support i.e. at the top of primary wave-1. Besides, CYCLE-2 has already moved more than 76.4 per cent retracement of the CYCLE-1 rally, which suggests an end of CYCLE-2. Moreover, bottom of CYCLE-2 is above the top of primary wave-1, supporting the principles of wave theory.



**Outlook using wave count:** As said above, platinum price chart has completed CYCLE-2 and CYCLE-3 has just begun which has long way to go in future suggesting an optimistic bullish view on the prices.

### Platinum contracts' specifications on both NCDEX & MCX:

Particulars	NCDEX	MCX
Name of Commodity	PLATINUM	PLATINUM
Ticker symbol	PLATINUM	PLATINUM
Trading hours	Mondays through Fridays - 10:00 AM to 11:30 PM 10:00 AM to 11:55 PM (during US day light saving period) Saturdays - 10:00AM to 02:00 PM Expiry Date - at 11:30 PM / 11:55 PM *  All timings are as per Indian Standard Timings (IST) *during US day light saving period	Mondays through Saturdays  Monday to Friday: 10.00 a.m. to 11.55 p.m. Saturday: 10.00 a.m. to 2.00 p.m.
Unit of trading	250 Grams	250 Grams
Delivery unit	250 Grams	250 Grams
Quotation/base value	Rs per 1 Gram	Rs per 1 Gram
Tick size	Rs 0.50 (i.e. 50 paise)	50 paise per 1 gram
Maximum Order Size		5 Kg.
Price limit	Base daily price fluctuation limit is (+/-) 4%. If the trade hits the prescribed daily price limit, the price limits will be relaxed up to (+/-) 6% without any break/ cooling off period in the trade. In case the daily price limit of (+/-) 6% is breached, then after a cooling off period of 15 minutes, the daily price limit will be further relaxed up to (+/-) 9%. Trade will be allowed during the cooling off period within the price band of (+/-) 6%.  In case of price movement in International markets which is more than the maximum daily price limit (currently 9%), the same may be further relaxed in steps of 3% with the approval of FMC.	4%
Initial Margin	NCDEX will use Value at Risk (VaR) based margin calculated at 99% confidence interval for one day time horizon. NCDEX reserves the right to change, reduce or levy any additional margins including any mark up margin.	5%
Special Margin	In case of additional volatility, a special margin at such other percentage, as deemed fit, will be imposed in respect of outstanding positions, which will remain in force as long as the volatility exists, after which the special margin may be relaxed	In case of additional volatility, a special margin at such percentage, as deemed fit, will be imposed immediately on both buy and sale side in respect of all outstanding position, which will remain in force for next 2 days, after which the special margin will be relaxed.
Position limits	Client level: 100 Kgs  Member level: 300 Kgs or 15% of the open market position, whichever is higher.  The above limits will not apply to bonafide hedgers. For bonafide hedgers the Exchange will decide the limits on a case-to-case basis.	For individual client: 100 Kgs For a member collectively for all clients: 300 Kgs or 15% of the market - wide open position, whichever is higher.
Quality specification	Fine Platinum Bars of minimum 99.95% purity bearing a serial number and an identifying stamp of a supplier approved by LPPM	Fine Platinum of minimum 99.95% purity Physical Form: Bars (Ingots) It should be serially numbered bars supplied by LPPM approved suppliers or other suppliers as may be approved by MCX to be submitted along with supplier's quality certificate.
Basis	Ex - Mumbai (exclusive of all taxes, sales tax / VAT as the case may be, levies and other expenses)	Ex-Mumbai (excluding all taxes, levies and other expenses)
Delivery center	Mumbai	Mumbai at Exchange designated Vaulting/Warehouse/Clearing House Facilities.
Delivery Logic	Intention Matching	Both Option

**Note: For detailed contract specifications, visit;**

[http://www.ncdex.com/product/Precious\\_Metals.aspx?comm=PLTNUM](http://www.ncdex.com/product/Precious_Metals.aspx?comm=PLTNUM)

<http://www.mcxindia.com/SitePages/ContractSpecification.aspx?ProductCode=PLATINUM>

To unsubscribe please mail us at [commodity@karvy.com](mailto:commodity@karvy.com)

#### **Disclaimer**

The report contains the opinions of the author that are not to be construed as investment advice. The author, directors and other employees of Karvy, and its affiliates, cannot be held responsible for the accuracy of the information presented herein or for the results of the positions taken based on the opinions expressed above. The above-mentioned opinions are based on the information which is believed to be accurate and no assurance can be given for the accuracy of this information. There is risk of loss in trading in derivatives. The author, directors and other employees of Karvy and its affiliates cannot be held responsible for any losses in trading.

Commodity derivatives trading involve substantial risk. The valuation of the underlying may fluctuate, and as a result, clients may lose their entire original investment. In no event should the content of this research report be construed as an express or an implied promise, guarantee or implication by, or from, Karvy Comtrade that you will profit or that losses can, or will be, limited in any manner whatsoever. Past results are no indication of future performance. The information provided in this report is intended solely for informative purposes and is obtained from sources believed to be reliable. Information is in no way guaranteed. No guarantee of any kind is implied or possible where projections of future conditions are attempted.

We do not offer any sort of portfolio advisory, portfolio management, or investment advisory services. The reports are only for information purposes and not to be construed as investment advice.

For a detailed disclaimer please go to following URLs:

<http://www.karvycomtrade.com/disclaimer.asp>

<http://www.karvycomtrade.com/riskDisclaimer.asp>