

“South Africa’s Platinum Mining Crisis”

Presentation :
30 January 2014.

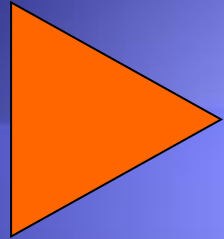
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CHAMBER OF MINES OF SOUTH AFRICA

Putting South Africa First

Presentation Outline



The Global Platinum Environment

The South African Platinum Mining Industry

Challenges Facing the industry

Taking a Strategic Country Perspective of
the Industry

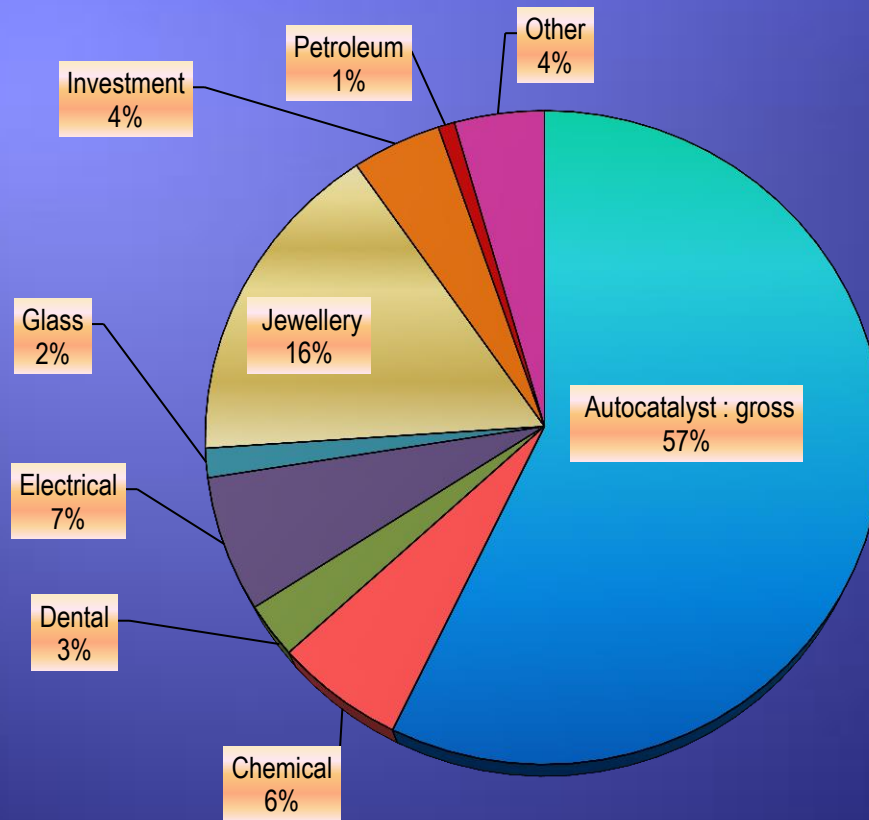
The prospects of PGMs at a global level are driven mostly by economic growth, investment demand and automotive/jewellery sales

Since 2008, the global platinum group metals market has been hit by the multiple effects of:

- The slide into recession in Europe due to the sovereign debt crisis (the biggest PGM market in 2012)
- The slowdown in economic growth in China (towards a soft landing).
- The continued below potential growth performance of the US economy.
- Structural demand changes:
 - Negative secondary supply (recycling)
 - The substitution and thrifting of platinum and rhodium with palladium.
 - The erosion of the rhodium market
 - Changes in demand towards jewellery away from industrial uses.

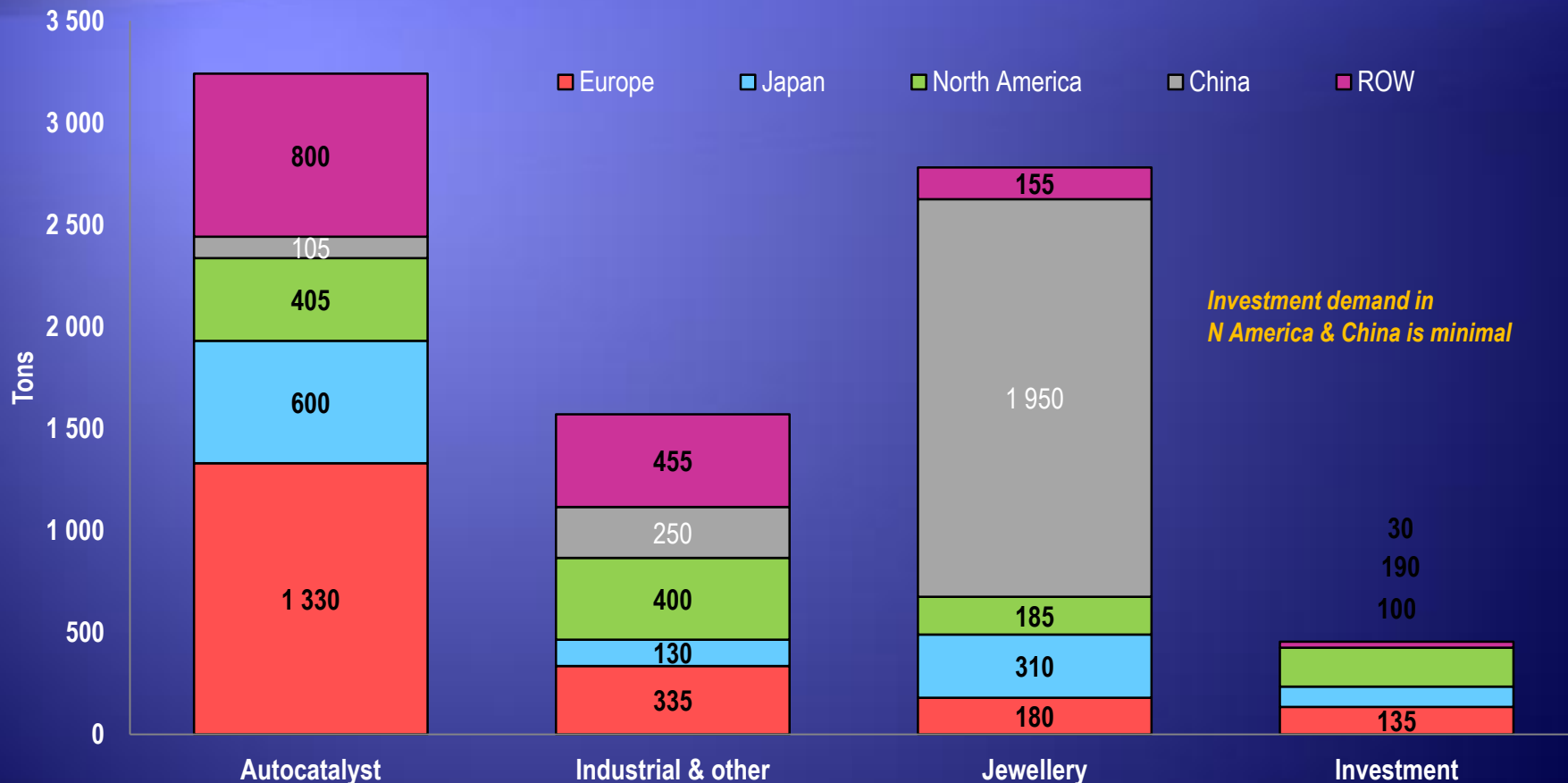
>70% of platinum group metals are used for industrial applications

PGM demand by Application, 2013 (Source: JM, Platinum 2013)



A large portion of the platinum market is located in recession-hit Europe and China

Platinum demand by application and country/region, 2012

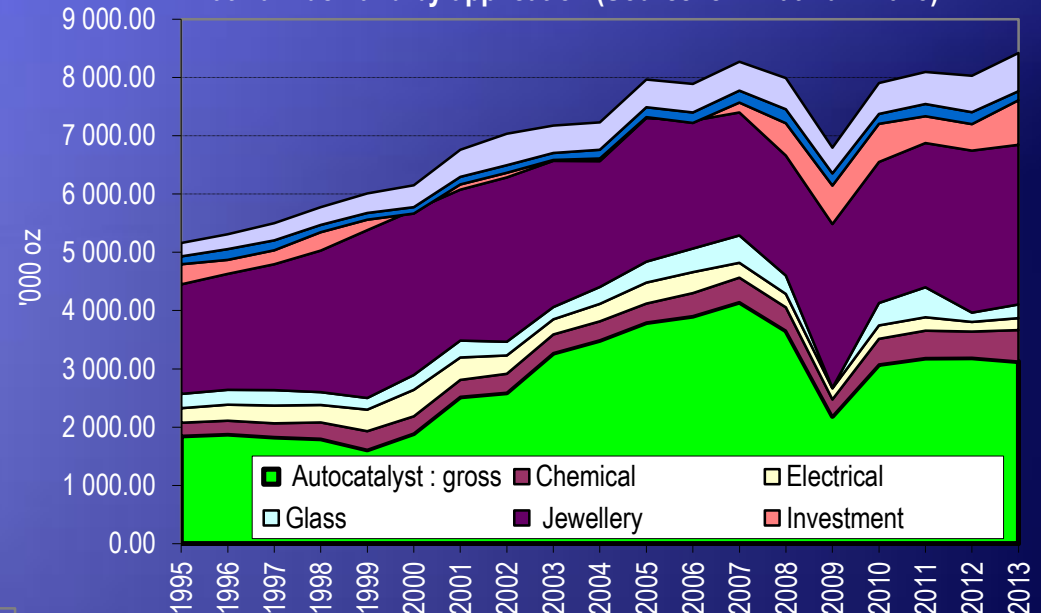


Source: Johnson Matthey, Platinum 2013

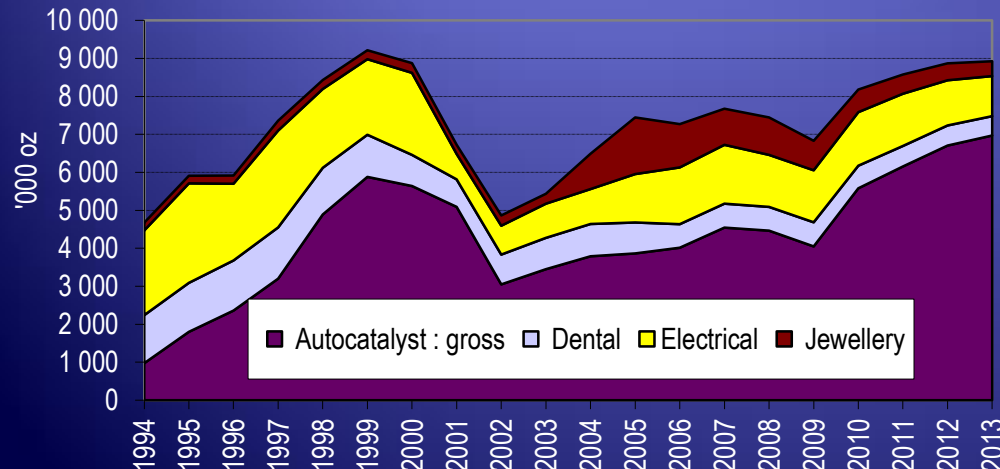
Platinum demand growth has been weak, while palladium demand has recovered

- **Platinum** demand has only just recovered to pre-crisis levels.
- Jewellery demand growth has been a strong point.
- South Africa is the major producer

Platinum demand by application (Source: JM Platinum 2013)

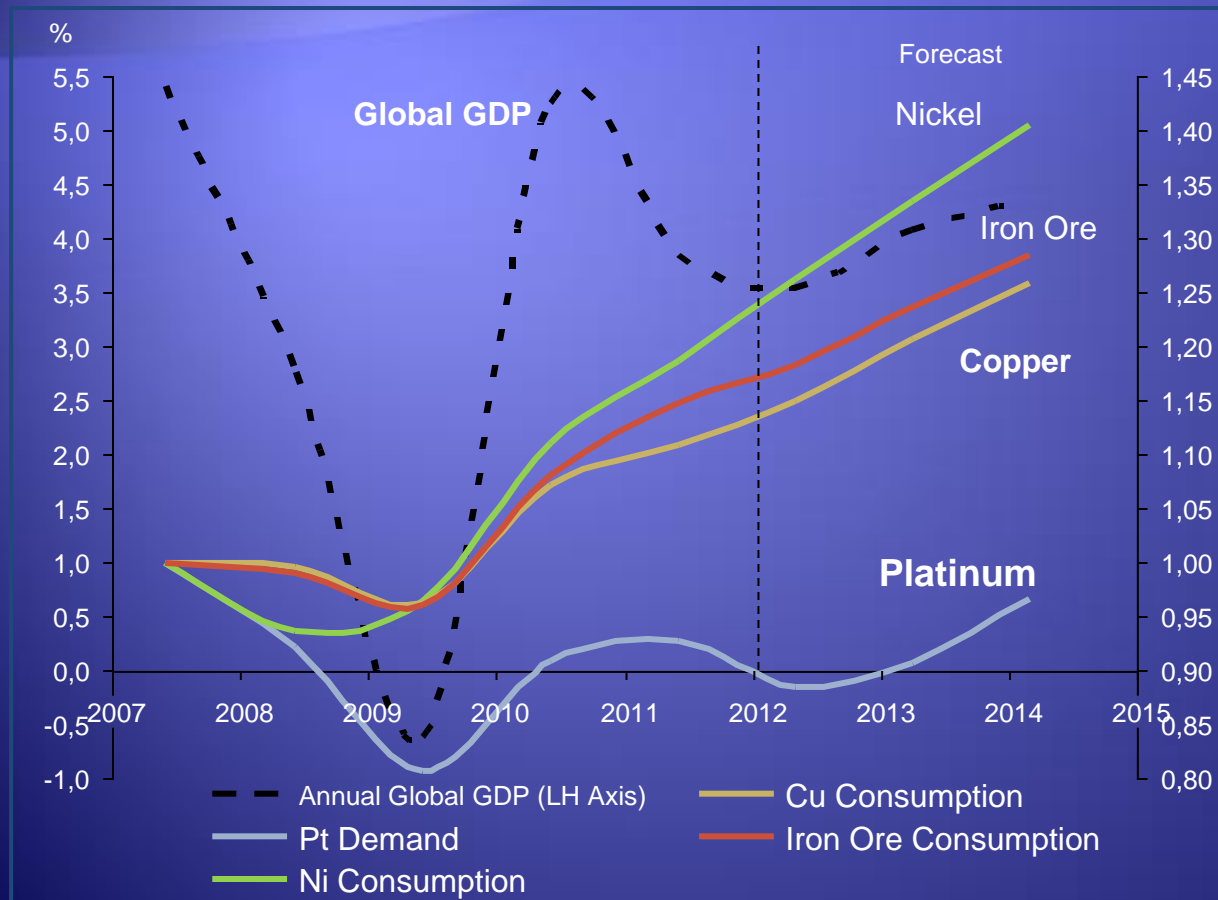


Palladium demand by Application (Source: JM, Platinum 2013)



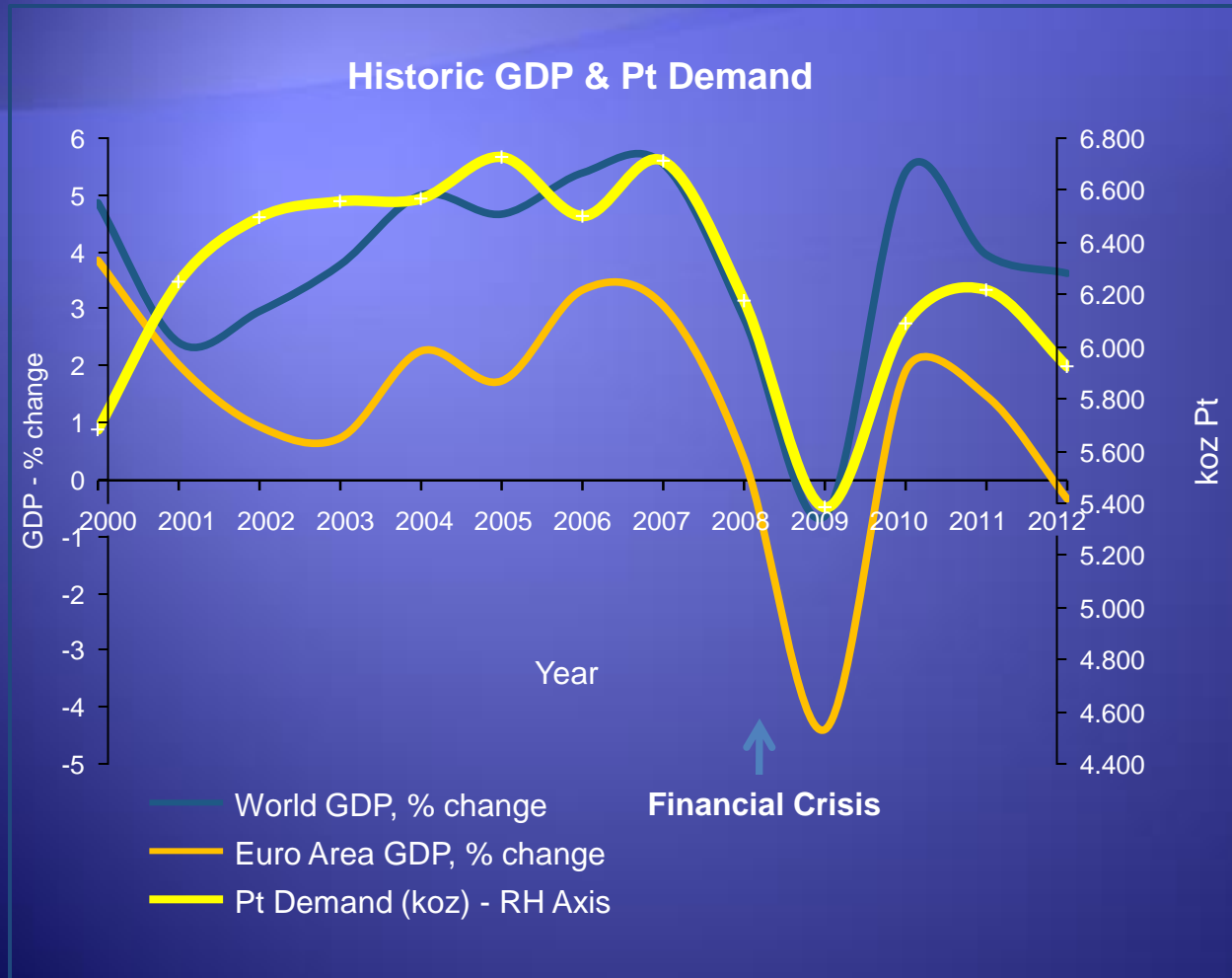
- **Palladium** demand has recovered due to its intensity in petrol catalytic converters and recovery in automotive sales in North America and Japan and continued growth in China.
- Palladium has benefitted from substitution out of platinum/rhodium to palladium.
- Russia is the major producer

Compared to other commodities, platinum was the hardest hit by the Global Financial Crisis



- Demand for industrial commodities was marginally impacted by 2009 financial crisis
- Platinum demand most impacted by both 2009 Financial and current Euro crises
- By 2014, Pt expected to still be below pre-crisis levels of demand.

Economic weakness in EU zone resulted in downward pressure on the spot price of Platinum



- GDP is a key driver to Pt demand
- Pt demand is mainly driven by carbon emission legislation hence Euro dependence
- Europe consumes 40% of Pt demand and 40% is used in autocats
- Platinum has not recovered because its demand most impacted by **Euro crisis** and **increased recycling**
- Automotive producers have reduced load rates and thrifted away from platinum towards palladium

Previous demand expectations stimulated the creation of over capacity

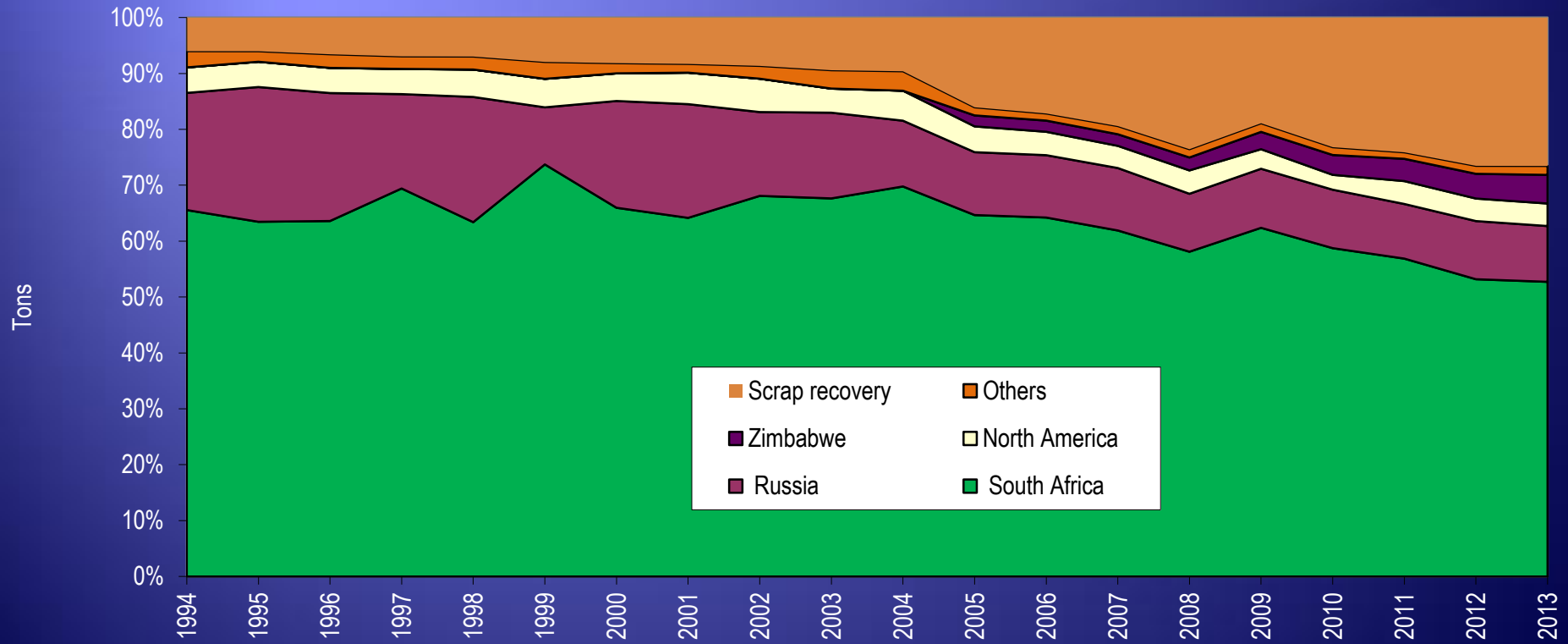


- In 2006 industry forecasted platinum demand growth of 5% (CAGR) from 2007 to 2012
- Demand decreased by 0.5% (CAGR) from 2007 to 2012, versus growth of 5.4% from 1982 to 2007
- Fundamental shift in demand composition impacted platinum price elasticity:
 - Autocatalyst demand growth under threat as vehicle manufacturers continue to reduce load rates
 - Non-bridal jewellery demand in China is price sensitive – and so is global jewellery recycling
 - Investment demand increased price volatility
- However, the structural changes seen over the last 5 - 10 years in the South African platinum mining industry resulted in a decline CAGR of 1.7% for the past 5 years

In addition, Platinum supply has grown due to a surge in scrap supply

- Since 2006 South Africa's production of PGMs has been shrinking, while recycling and other producers have gained (i.e. A net loss to RSA)

Platinum supply by source (Source: JM, Platinum 2013)



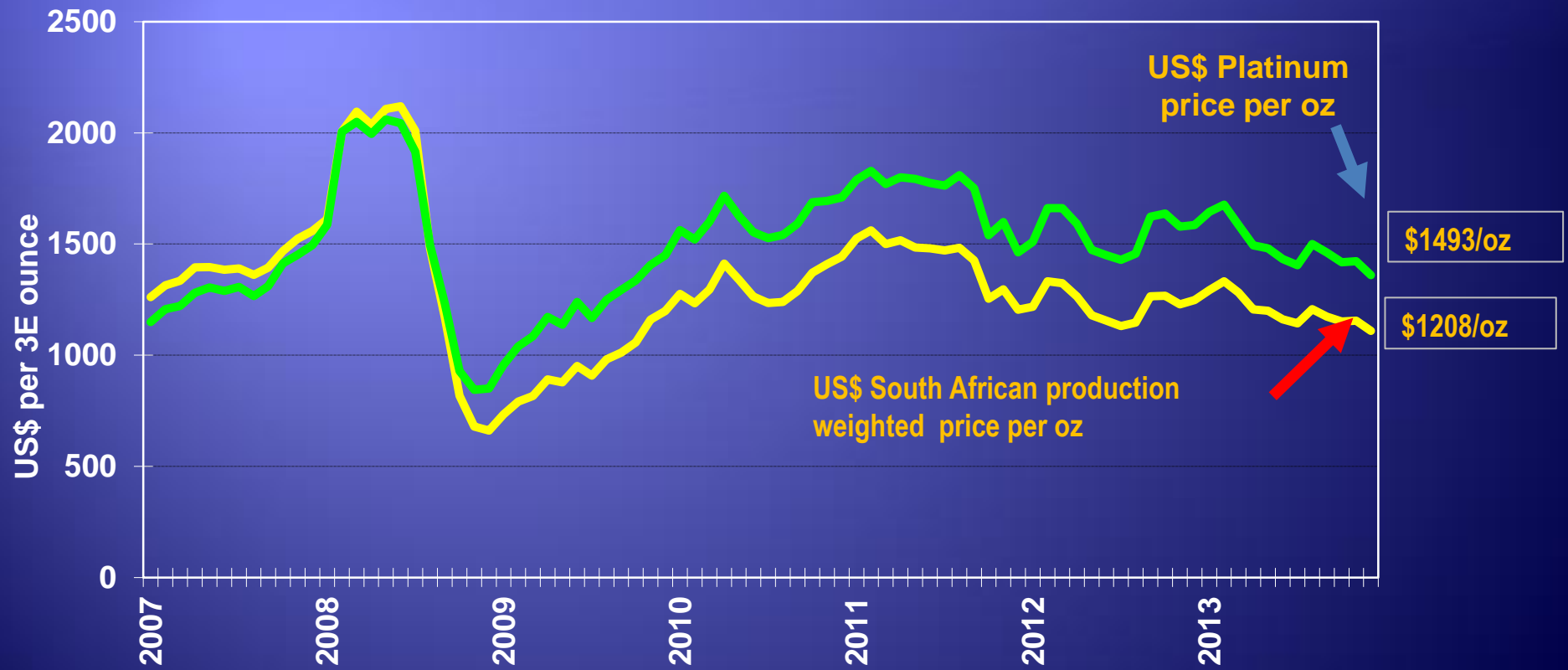
Falling demand and modest growth in supply has led to some surpluses in the pgm market

- In period 2009-2011 the cumulative surplus in the platinum market was 1.1 million oz, before the strike induced deficit of 340 koz in 2012 & 605 koz in 2013.
- The result has been a weakening in prices from 2011.



The RSA production weighted basket price is lower than the platinum price

Platinum, palladium and rhodium production weighted PGM basket price for South Africa versus the platinum spot price



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PGM mining has grown to become one of the largest components of the RSA mining sector

- **In 2011, the pgm mining sector:**
 - Was the largest component of the South African mining sector on the basis of its contribution to GDP (2.7%), export earnings (11.1%), and employment (194 980).
 - Produced 289 tons of PGM, valued at R84 billion.
 - Employed 194 979 employees and paid them R30,4 billion in salaries and wages.
 - Paid R7.3 billion in corporate tax (5 largest companies).
 - Paid R500 million in community investment.

PGM Mining, a significant contributor to the economy, exports, taxes and employment

		2008	2009	2010	2011	2012	Average past 5 years
contribution to GDP	Real R'm	27,021	26,592	28,151	28,303	24,921	26,998
% of GDP	%	2.3	2.2	2.4	2.7	1.9	2.3
GDP growth rate	%	-9.3	-1.6	5.9	0.5	-11.9	-3.3
Contribution to GDP plus multipliers & induced effect	%	4.9	4.7	5.0	5.7	4.1	4.9
Share of Mining GDP	%	26.4	27.3	27.7	28.7	22.6	26.5
Production (PGMs)	M'oz	8,866,102	8,725,443	9,237,025	9,288,337	8,177,145	8,858,810
Production (PGMs)	Kgs	275,767	271,392	287,304	288,900	254,338	275,540
% growth in production	%	-9.3	-1.6	5.9	0.6	-12.0	-3.3
Sales value	R'm	91,353	57,782	73 787	83,853	69,204	75,195.8
Exports as % of total merchandise exports	%	13.0	10.4	11.8	11.2	9.0	11.6
Employment	number	199,948	184,162	181,969	194,980	197,847	191,781.1
Wages paid	R'm	23,302.8	24,456.8	26,553.7	30,414.9	34,400.0	27,825.7
Wages paid per worker (annual)	R' annum	116,544	132,801	145,924	155,990	173,872	137,815
Capex spent (top 5)	R'm	17,130	12,691	15,063	17,648		15,633.0
Taxes paid (top 5)	R'm	7,843	598	5,455	6,840		5,184.3
Dividends paid (top 5)	R'm	16,212	808	406	4,066		5,373.1
Social taxes (SLPs, etc)	R'm	320	308	250	461		334.9

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Since late 2011, SA PGM Mining in crisis, hit by a combination of:

- Falling pgm demand and prices (especially for platinum and rhodium)
- Rapidly escalating input costs
- Structural changes in the industry (shift to UG2 ores)
- Falling productivity
- Illegal strike action

This has resulted in a significant 59% of the pgm mining sector being in a marginal or loss-making position on a cash cost and sustaining capex basis on average in 2012
(average price was \$1556/oz)

SA PGM Mining in crisis – contribution to the economy has fallen:

- In 2012, total PGM production fell by 10.4% to 254.3 tonnes.
- Platinum mining's direct share of GDP plunged from 2.7% in 2011 to 1.9% in 2012.
- Due to the decline in the rand PGM price and lower production, total PGM sales fell by 17.6% to R69.2 billion.
- Between June 2012 (just before the major strikes in July 2012) and September 2013 employment on South Africa's platinum mines declined by 15,627 to 191,286 jobs.
- About 45% of the PGM mines are loss-making.
- Further restructuring is inevitable.

The PGM mining industry is in crisis mode

- The industry's safety performance has improved, but more needs to be done (very big focal point).
- Demand has been weak and prices have fallen.
- Input costs are rising too quickly.
- Productivity has been falling.
- Strikes and industrial activity are affecting production.
- Despite R1.7 billion being invested by the industry in community development in the past 6 years, it is still perceived to be contributing too little to communities and the development of the country.

Input costs are increasing at a very rapid pace

A large proportion of the input costs are driven by “administered prices” such as electricity & water or by international pricing (steel and diesel). Between 2007-2012:

- Electricity prices to the mining sector has risen from 18 c/kWh in 2007 to 61 c/kWh in 2012. This is a significant 238% increase.
- Diesel costs have risen by an average of 15.7% per annum on the back of higher international oil prices (up 69.3% overall).
- Reinforcing steel prices have increased by 15.3% per annum in the same period (57.5% in total).
- Average remuneration paid per worker employed in the RSA mining sector grew by 12% per annum between 2007 and 2012, nearly 5 percentage points higher than producer inflation.

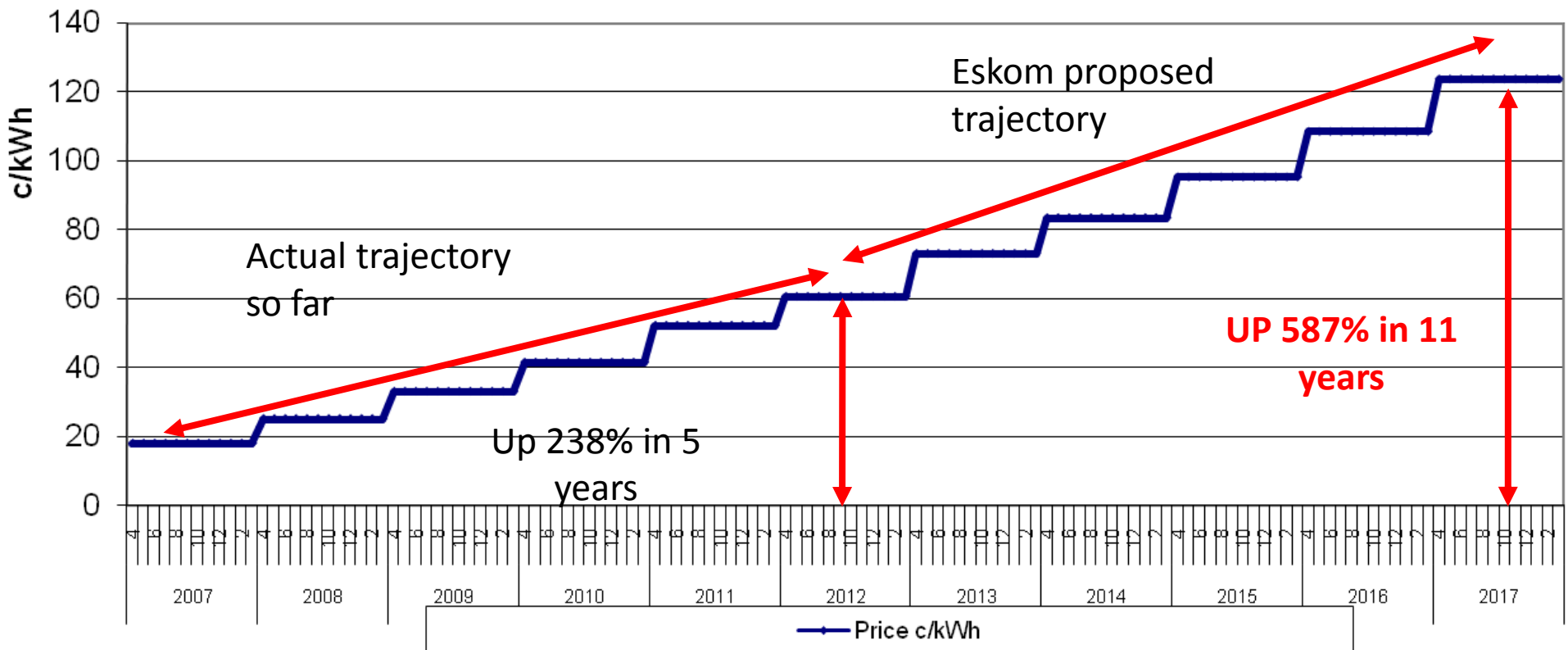
Inflation in input costs has simply been too high (and mostly out of control of the miners)

Cost inflation affecting the mining sector, average annual increase in costs, 2007 to 2012
(Source: StatsSA, CoM EAU)



Eskom's proposed price increase in MYPD3 will result in a 587% increase in price in 11 years (platinum industry cannot afford this increase)

Electricity price for large industrial users, 2007-2017

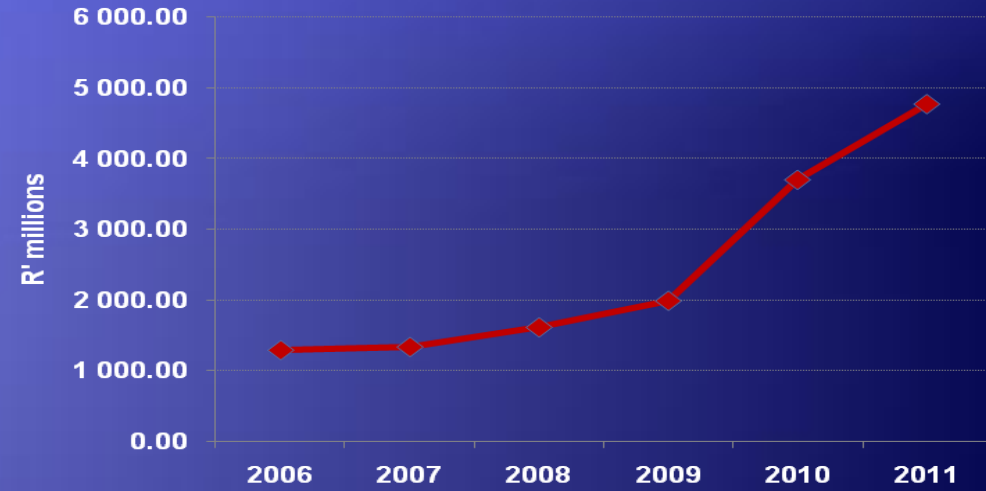


Electricity, steel, stores & labour costs increased by R28 billion (200%) between 2006 and 2011, while South African PGM production fell 7.8%.

Platinum Industry- stores & material costs



Platinum Industry- electricity costs



Platinum Industry- steel costs



Platinum Industry- labour costs

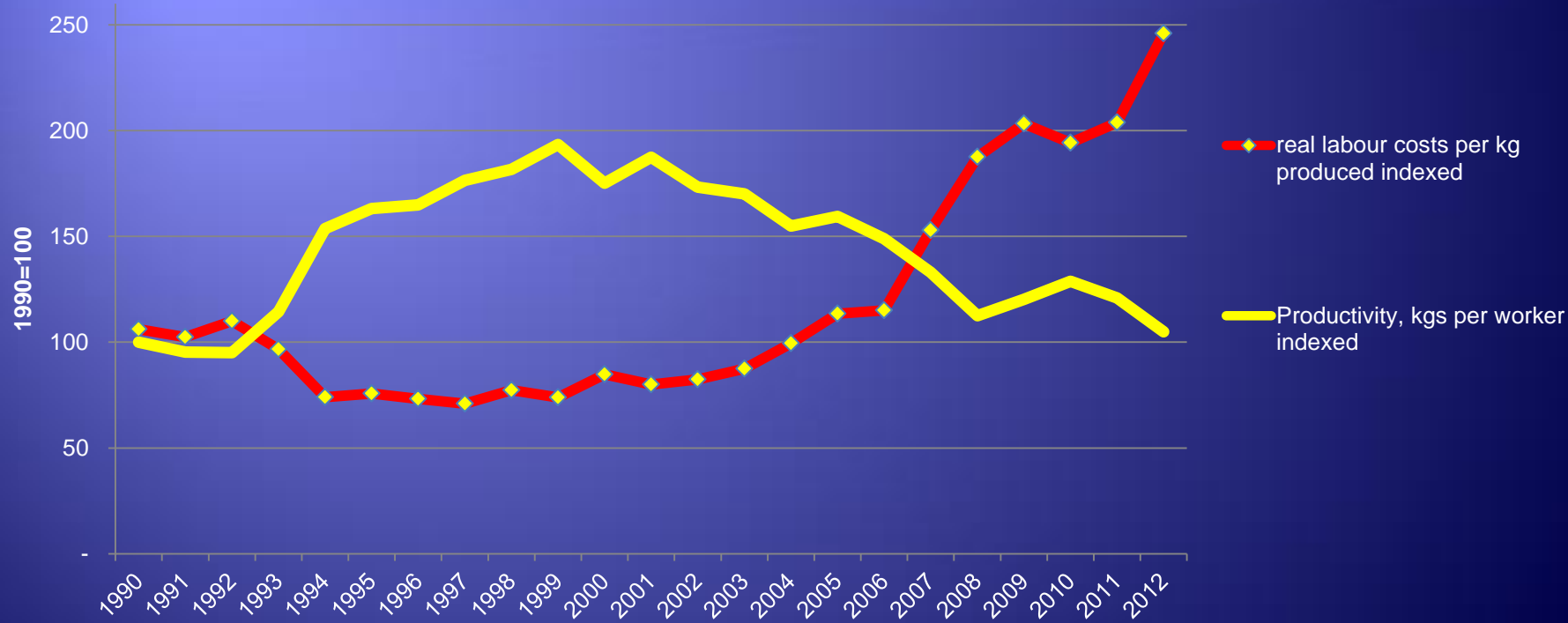


There has been structural changes in the RSA PGM mining sector, such as an increase in the mining of UG2 ores, which has reduced platinum grades

Precious metal	Merensky ore % of recovered metals	UG2 ore % of recovered metals
Platinum	59%	41%
Palladium	25%	34%
Rhodium	3%	9%
Ruthenium	8%	12%
Iridium	1%	1.9%
Osmium	0.8%	1.7%
Gold	3.2%	0.4%
Total	100%	100%

Productivity has fallen, while real costs per unit of output have risen quickly

RSA platinum mining labour productivity (kgs produced per employee) and real labour costs per kg of pgm produced, based indexed to 1990

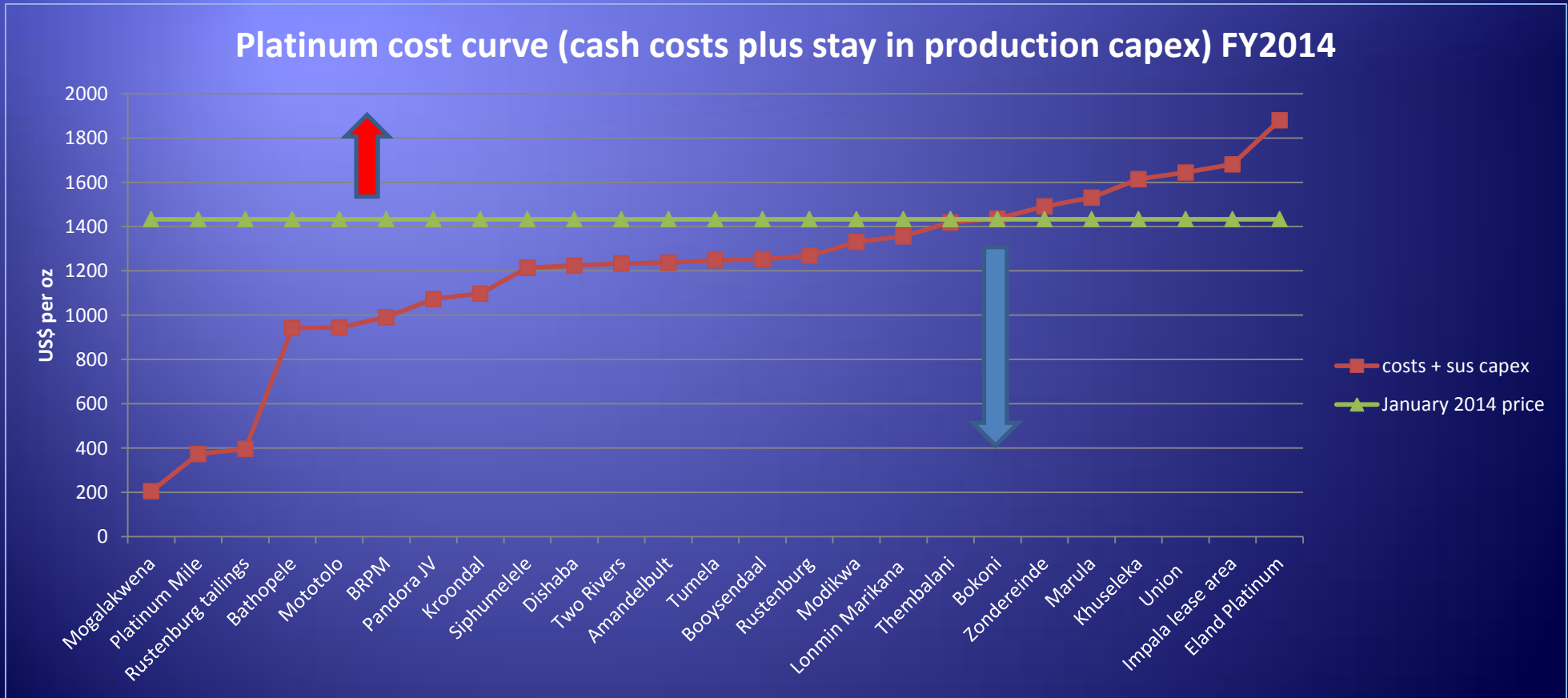


Source: DMR/StatsSA/Chamber



Tough actions required to ensure the long term sustainability of the industry

Platinum mining industry breakeven analysis (cash cost + maintenance capex), 45% marginal or loss-making in Jan 2014 at average price of \$1446/oz



The Illegal Strikes in 2012 exacerbated the situation

- The PGM mining sector was hard hit by the illegal strikes and the Marikana Tragedy.
- 50 lives were lost and the reputation of the PGM sector and South Africa as a key mining investment destination was tarnished by the developments.
- The strike induced decline in production exacerbated the cost squeeze faced by the industry, as there was less production covering the overhead cost structure of the industry.
- Approximately R13 billion in revenue was lost and many related industries were negatively affected by the strikes.
- Further strike action in 2014 could further undermine the PGM mining sector

Every day lost to strike activity in 2014 is significant for the industry and country

<u>DESCRIPTION OF LINE ITEM</u>	2013 data	
	<u>UNITS</u>	<u>PER DAY</u>
1 Revenue	Rand	<u>197,701,871</u>
2 Purchases of goods and services	Rand	66,926,196
3 Electricity/water costs	Rand	18,112,036
4 Capital expenditure per day	Rand	30,312,158
5 Taxes and royalties	Rand	7,358,295
6 Dividends to shareholders	Rand	426,778
7 Wages and salaries paid	Rand	87,711,730
TOTAL LOST REVENUE AND FOREX PER DAY	Rand	<u>197,701,871</u>
TOTAL OPPORTUNITY COST PER DAY (lost sales, costs incurred, lost payments, etc.)	Rand	408,549,064

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The Deputy President's Mining Dialogue Process and the Minister's Peace Accord

- All stakeholders signed a “Peace Accord” in February 2013, focused on calming the situation and restoring law and order in affected areas.
- In August 2013, the stakeholders developed a “Framework Agreement for a Sustainable Mining Industry” under the leadership of the country's Deputy-President. The focus of the DP's Mining dialogue process is to:
 - Stabilise the industrial relations environment.
 - Promote law and order.
 - Get the mining industry back on track from an investment and growth perspective.

Way Forward

- It is imperative that South Africa maintains its dominant position in the supply of PGM's, given our rich endowment of PGM resources
- We need to restore stability to our production cycle and reposition the industry for growth by focusing on competitiveness.
- All stakeholders have a role to play in contributing to community development including all tiers of government, mining companies, communities and organised labour.
- There is a critical need to restore investor confidence in the sector and create an stable environment to promote investment in PGM mining.
- Promoting beneficiation and R&D.
- These goals are best achieved through collaborative efforts with all stakeholders, agreeing on the challenges to be dealt with and working on the best way forward.

Conclusion

**Platinum mining matters for the growth,
development and transformation of South
Africa**