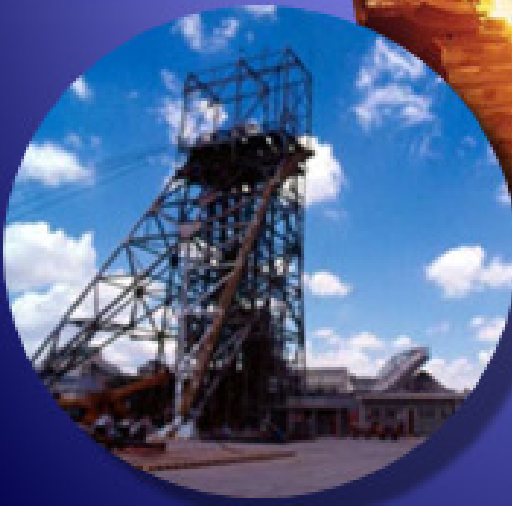


“South Africa’s Platinum Mining Crisis”

Presentation to the
Parliamentary Portfolio
Committee: Minerals
20th February 2013.

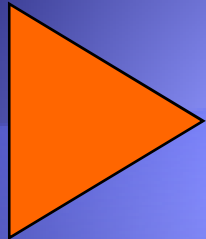
Roger Baxter
Senior Executive: Economics &
Strategy



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

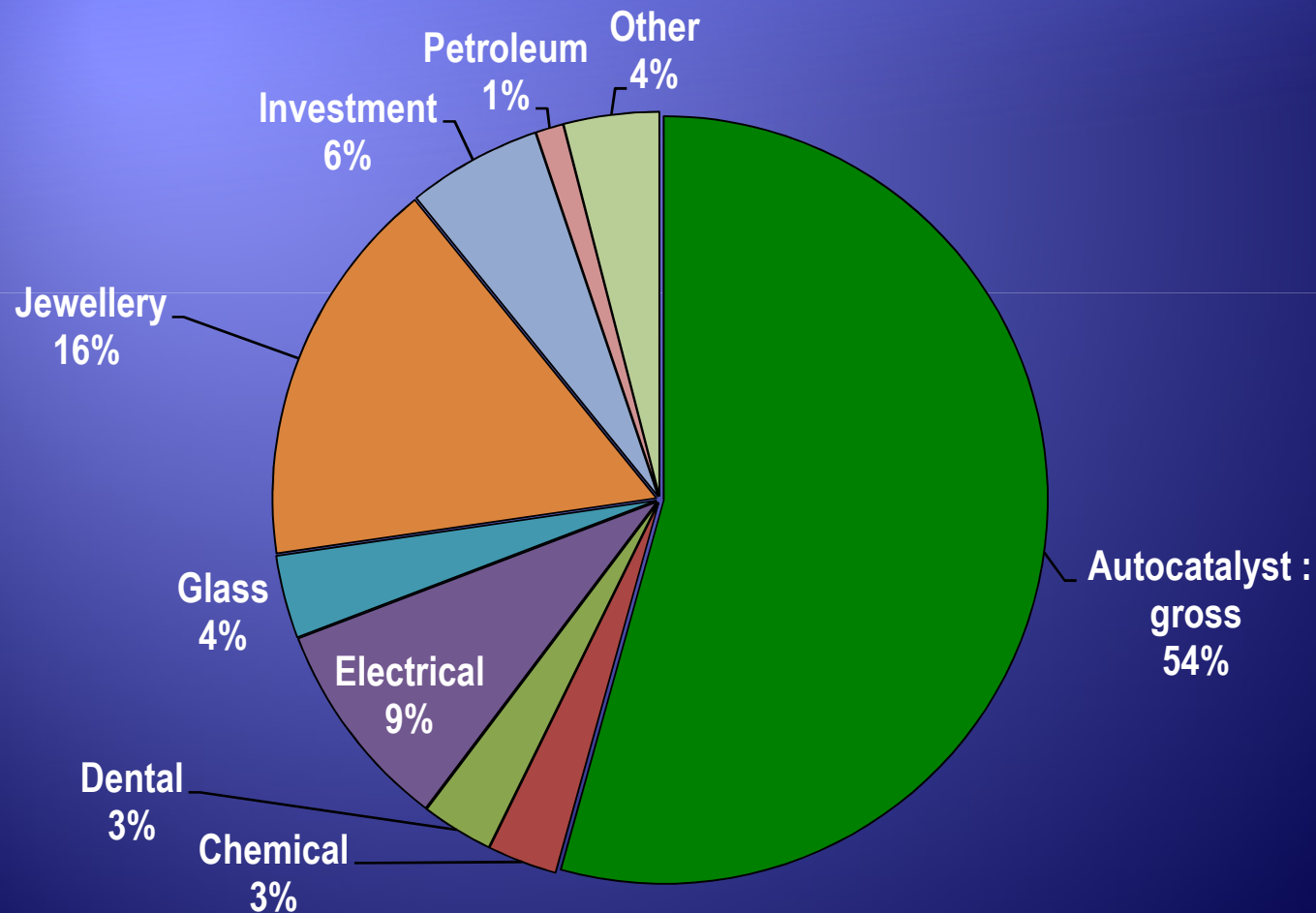
The prospects of PGMs at a global level are driven mostly by economic growth, investment demand and automotive/jewellery sales

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 2011)
- 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.

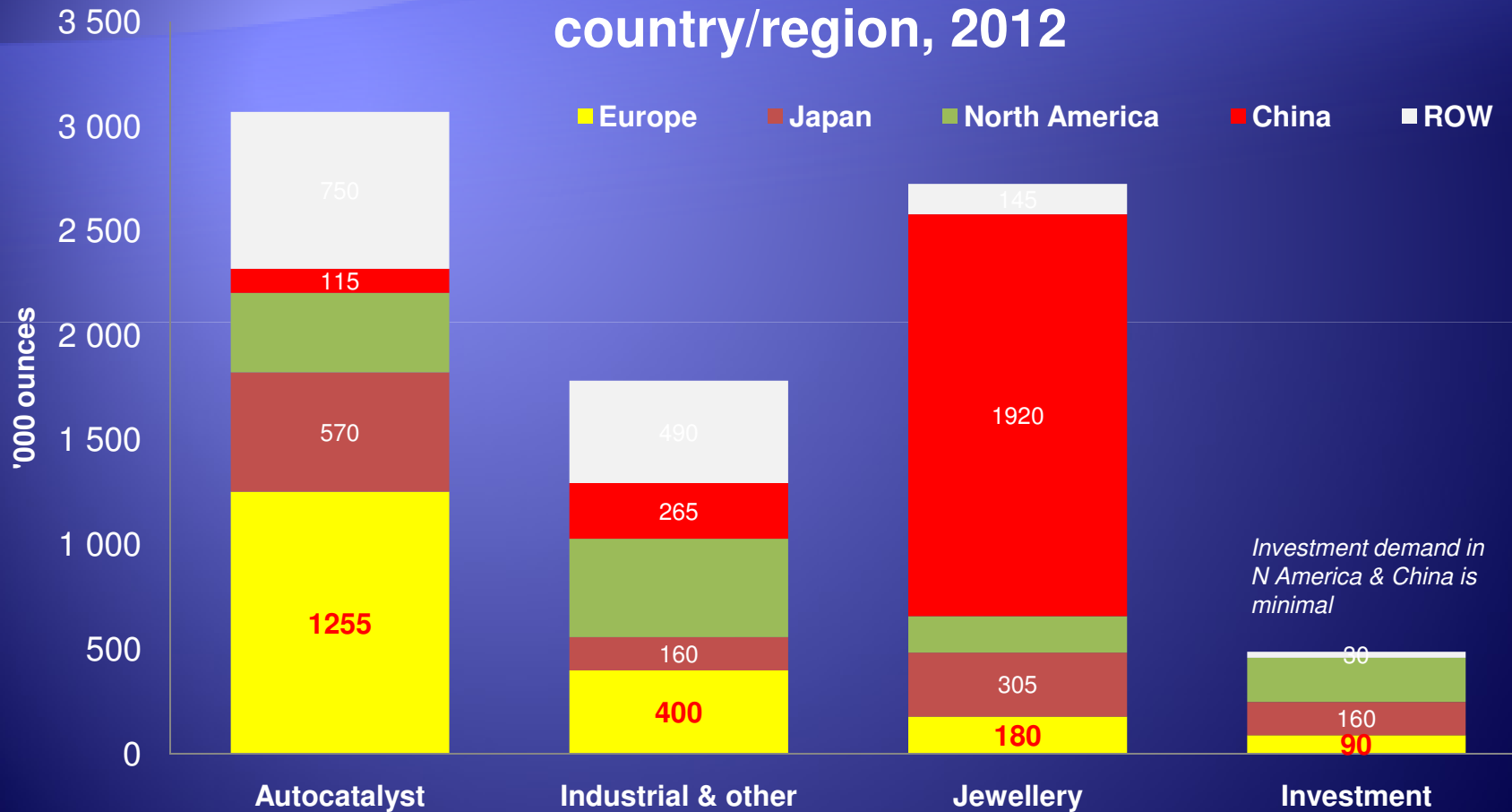
71% of platinum group metals are used for industrial applications

PGM demand by application (Source: JM Platinum, 2012)



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 2012 Interim review

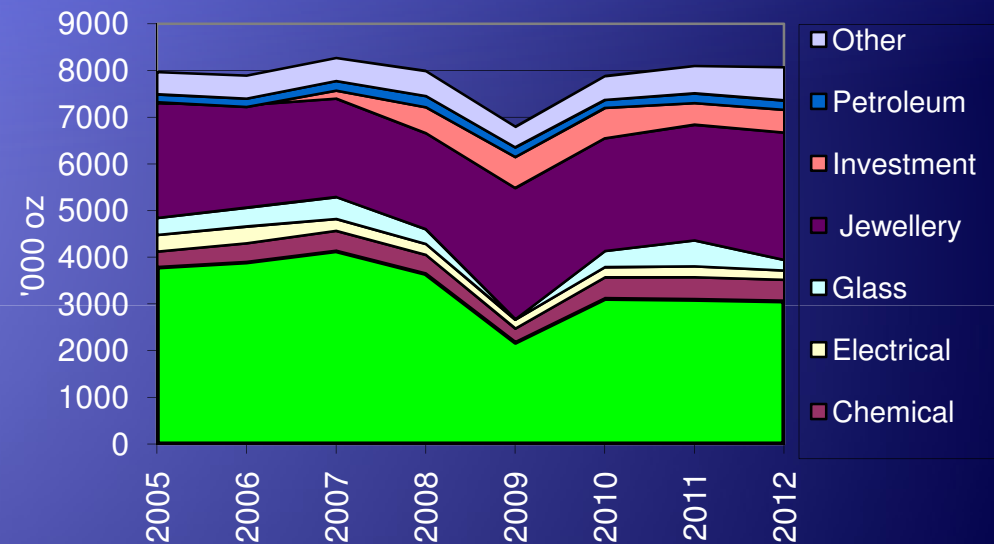


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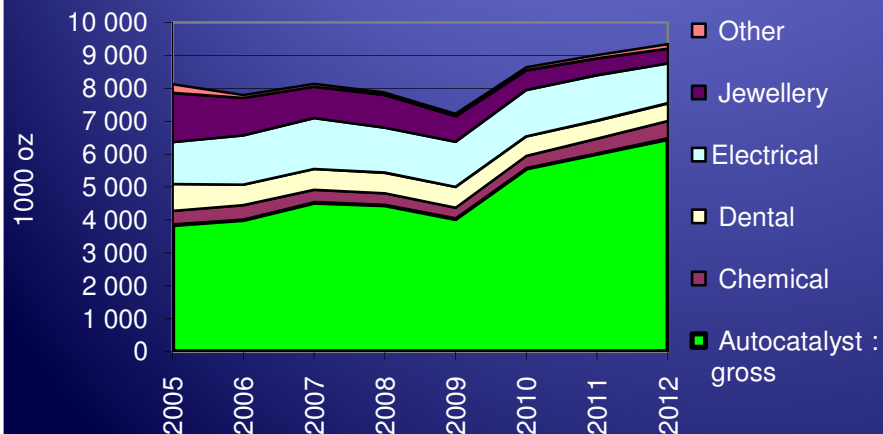
Platinum demand growth has been stagnant, while palladium demand has recovered

- Platinum demand has remained stagnant due to recession hit EU reducing demand for catalytic converters for diesel cars.
- Jewellery demand growth has been a strong point.
- South Africa is the major producer

Platinum demand by application



Palladium demand by application



Source: JMI

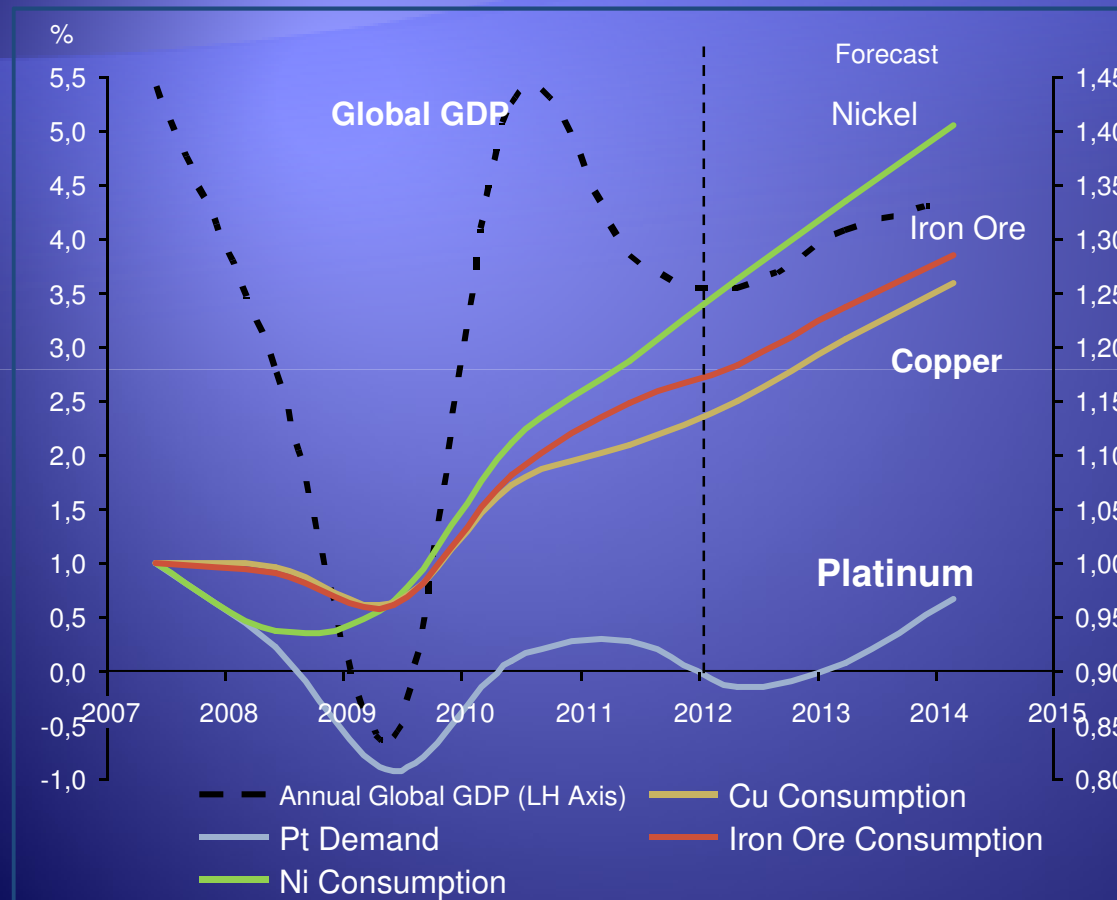
- Palladium demand has recovered due to its intensity in petrol catalytic converters and recovery in automotive sales in North America and Japan and continued growth in China.
- Palladium has benefitted from substitution out of platinum/rhodium to palladium.
- Russia is the major producer



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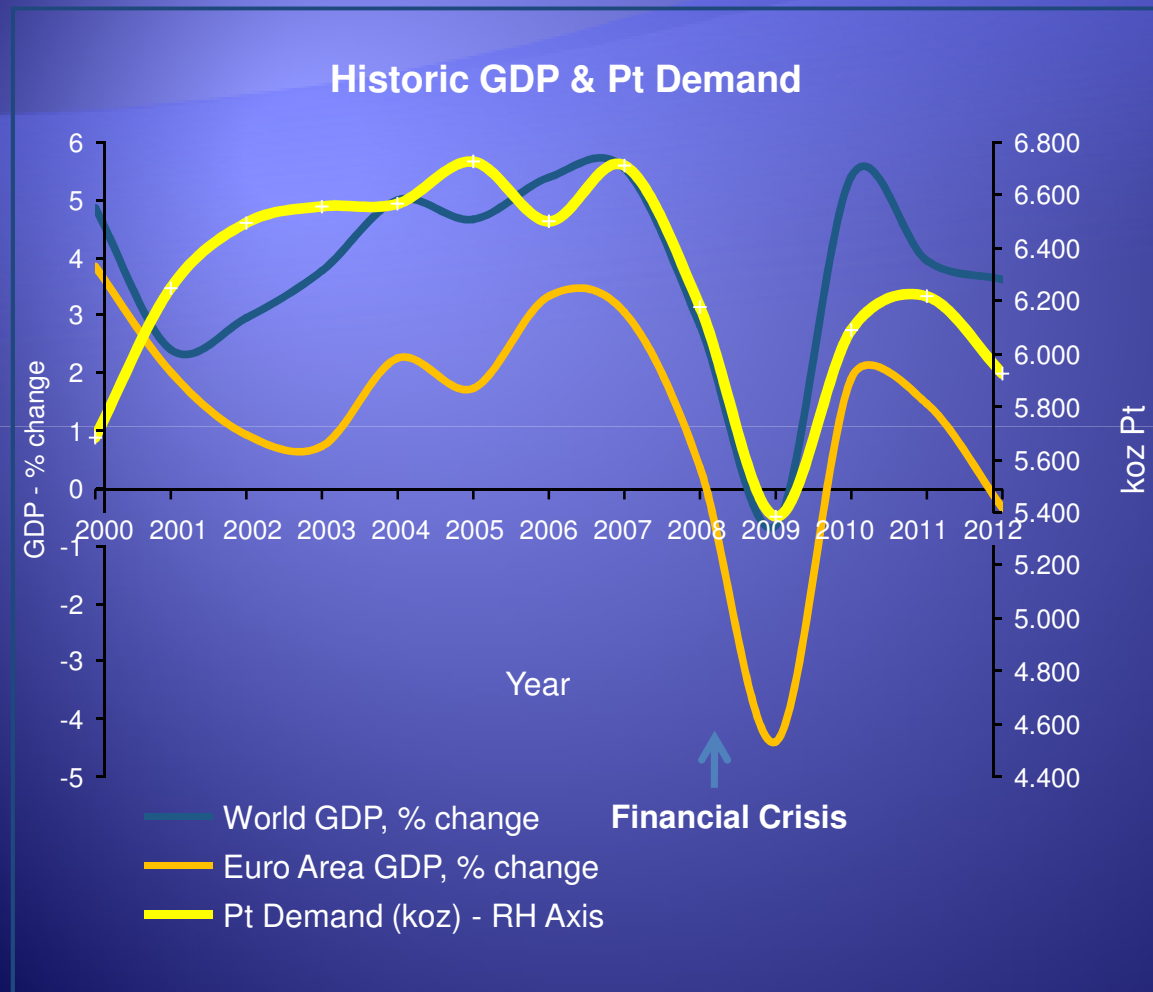
Compared to other commodities, platinum was the hardest hit by the Global Financial Crisis

7



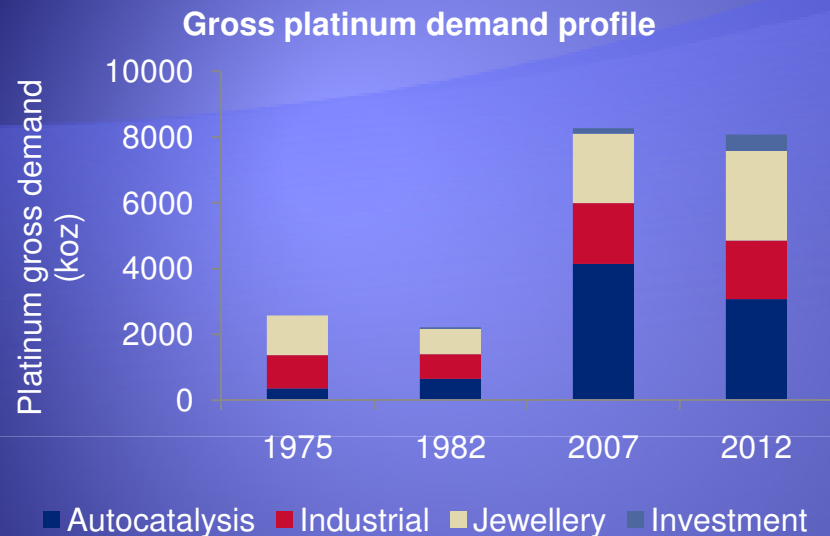
- Demand for industrial commodities was marginally impacted by 2009 financial crisis
- Platinum demand most impacted by both 2009 Financial and current Euro crises
- By 2014, Pt expected to still be below pre-crisis levels of demand.

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



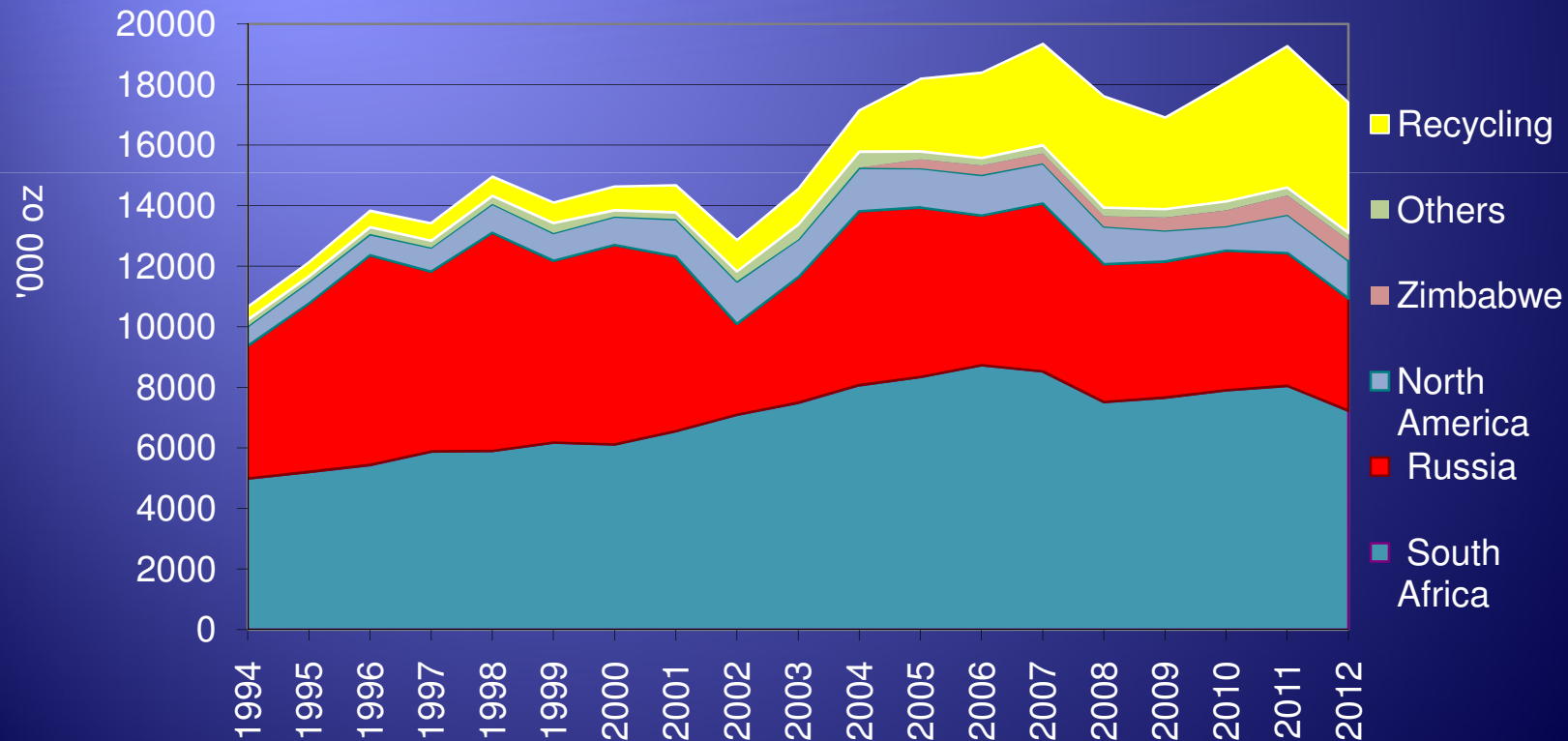
- In 2006 industry forecasted platinum demand growth of 5% (CAGR) from 2007 to 2012
- Demand decreased by 0.5% (CAGR) from 2007 to 2012, versus growth of 5.4% from 1982 to 2007
- Fundamental shift in demand composition impacted platinum price elasticity:
 - Autocatalyst demand growth under threat as 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

Source: Johnson & Matthey * Jewellery and industrial recycle from 2005 only

In addition, PGM 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)

Key sources of PGM metals



Source: JM

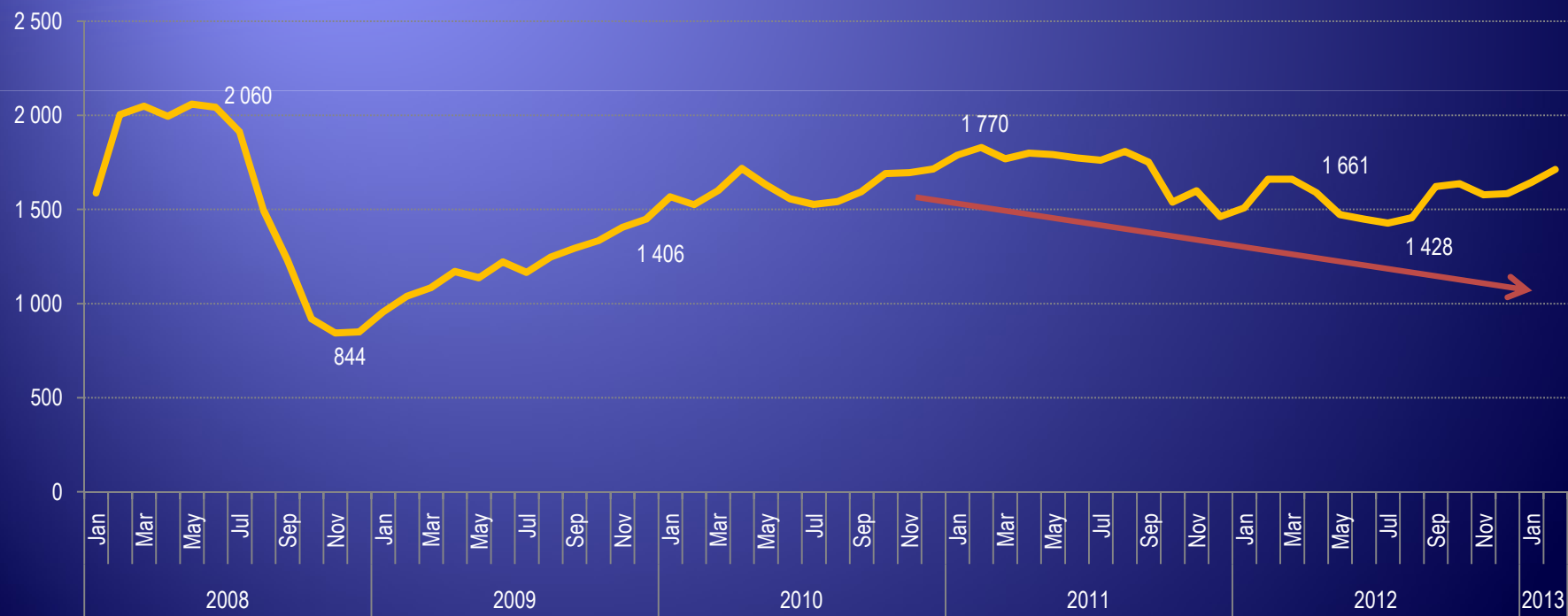


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Falling demand and modest growth in supply has led to some surpluses in the pgm market

- In period 2009-2011 the cumulative surplus in the platinum market was 1.1 million oz, before the strike induced deficit of 400 000 oz in 2012.
- The result has been a weakening in prices in 2011 and 2012.

Platinum Price, monthly avg (US\$ per oz)



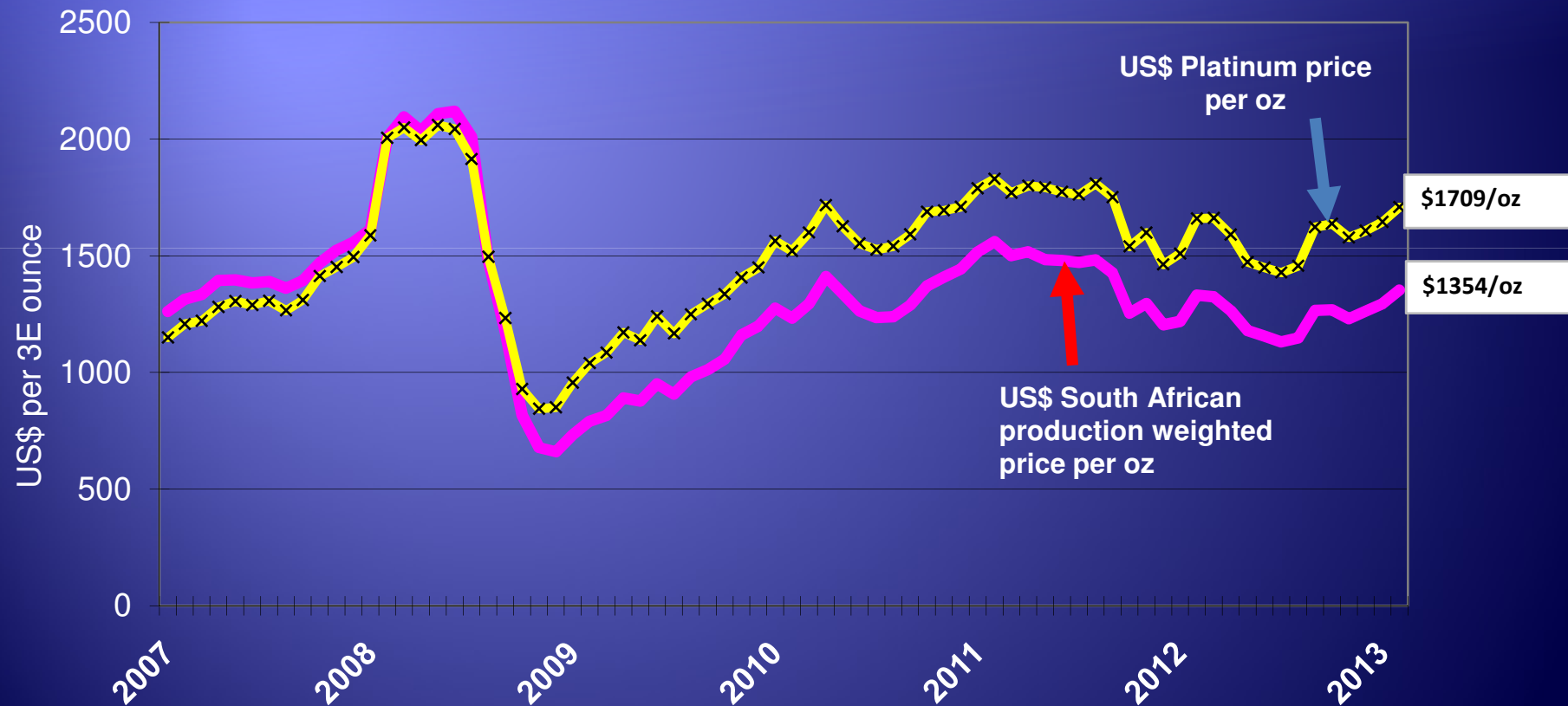
Source: www.platinum.matthey.com



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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 is the largest component 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 (5.7%), export earnings (11.1%), employment (437 000-direct & indirect)
 - 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

		2007	2008	2009	2010	2011	Average past 5 years
contribution to GDP	Real R'm	29 790	27 021	26 592	28 151	28 303	27 971
% of GDP	%	2.5	2.6	2.5	2.6	2.7	2.6
GDP growth rate	%	-1.7	-9.3	-1.6	5.9	0.5	-1.2
Contribution to GDP plus multipliers & induced effect	%	5.3	5.5	5.3	5.5	5.7	5.5
Share of Mining GDP	%	28.9	26.4	27.3	27.8	27.5	27.6
Production (PGMs)	M'oz	9 774 809	8 866 102	8 725 443	9 237 025	9 288 337	9 178 343
Production (PGMs)	Kgs	304 031	275 767	271 392	287 304	288 900	285 479
% growth in production	%	-1.1	-9.3	-1.6	5.9	0.6	-1.1
Sales value	R'm	78 414	91 353	57 782	73 787	83 853	77 037.8
Export earnings	R'm	66 064	77 904	33 313	65 894	73 234	63 281.8
Exports as % of total	%	12.3	11.1	6.0	10.5	9.8	9.9
Employment	number	186 408	199 948	184 162	181 969	194 980	189 493.3
Wages paid	R'm	18 303.6	23 302.8	24 456.8	26 553.7	30 414.9	24 606.4
Wages paid per worker (annual)	R' annum	98 191	116 544	132 801	145 924	155 990	129 890
Capex spent (top 5)	R'm	12 610	17 130	12 691	15 063	17 648	15 028.4
Taxes paid (top 5)	R'm	9 293	7 843	598	5 455	6 840	6 006.0
Dividends paid (top 5)	R'm	14 467	16 212	808	406	4 066	7 191.9
Social taxes (SLPs, etc)	R'm	210	320	308	250	461	309.8

Source: COM, DMR, StatsSA, SARB



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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)

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 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.

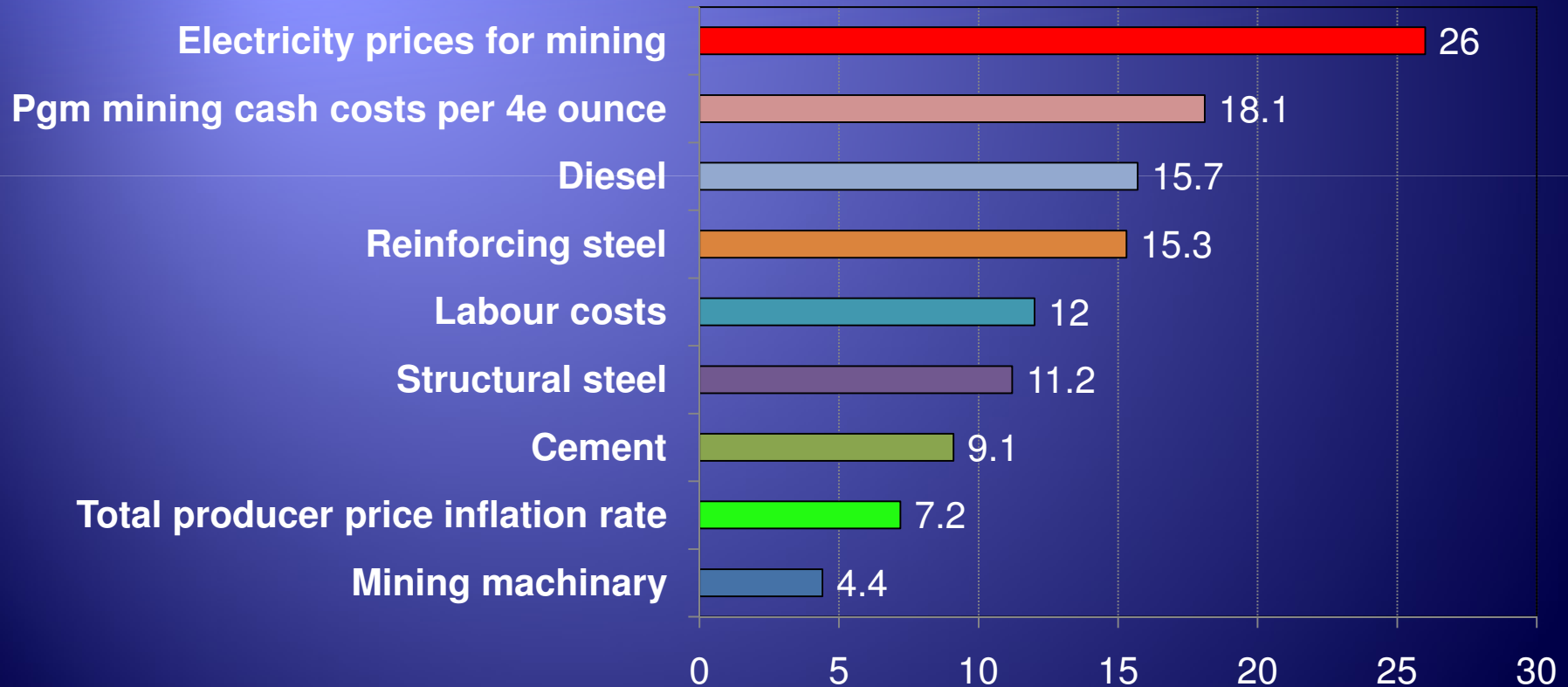
Input costs are increasing at a very rapid pace

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.

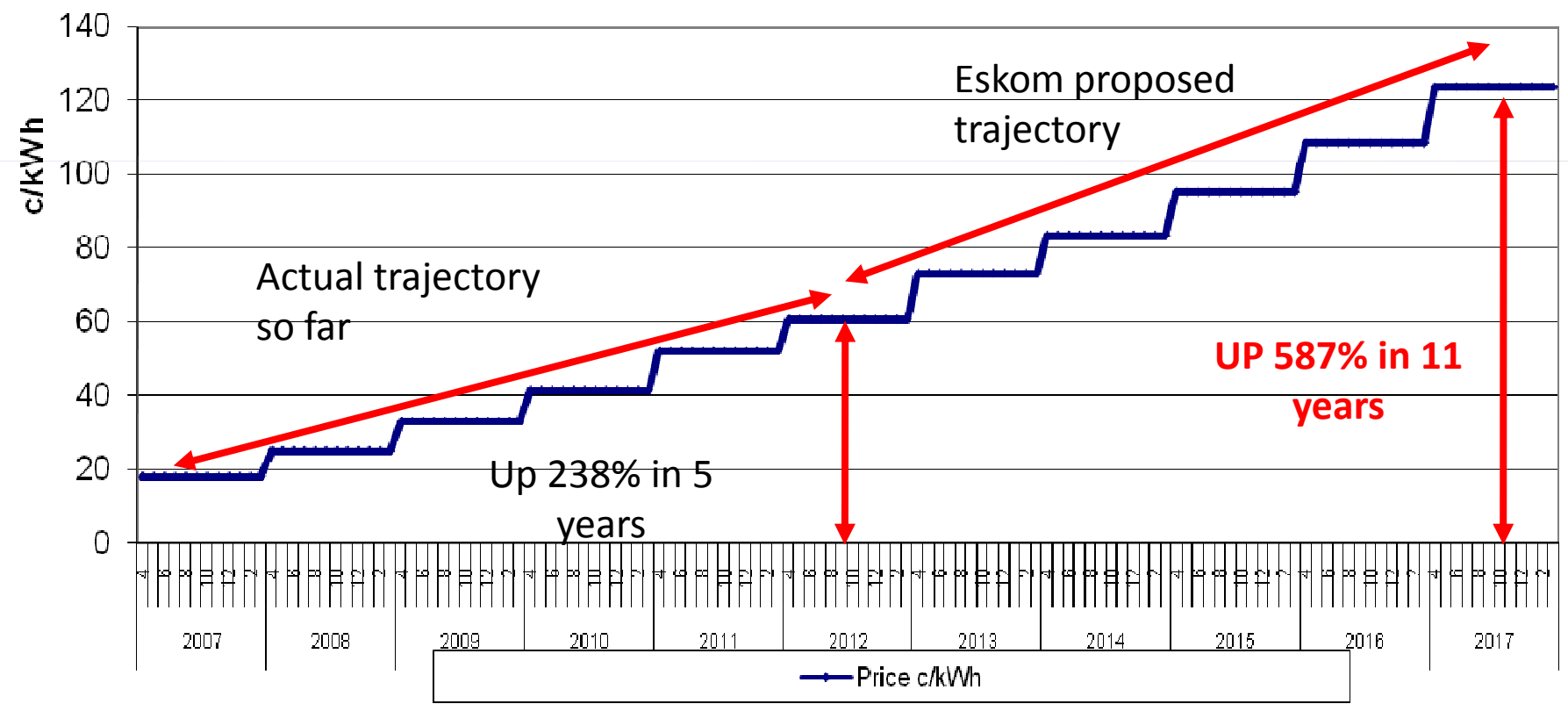
Inflation in input costs has simply been too high (and mostly out of control of the miners)

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

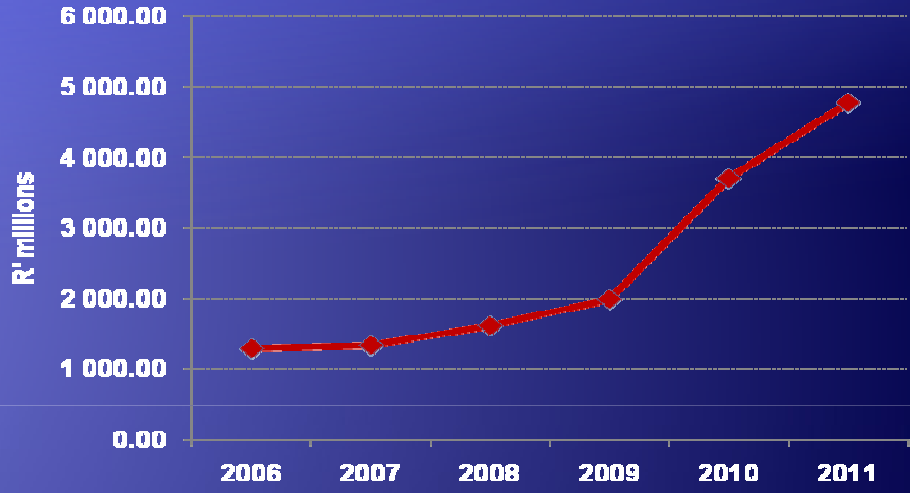


Electricity, steel, stores & labour costs increased by R28 billion (200%) between 2006 and 2011, while South African PGM production fell 7.8%.

Platinum Industry- stores & material costs



Platinum Industry- electricity costs



Platinum Industry- steel costs



Platinum Industry- labour costs

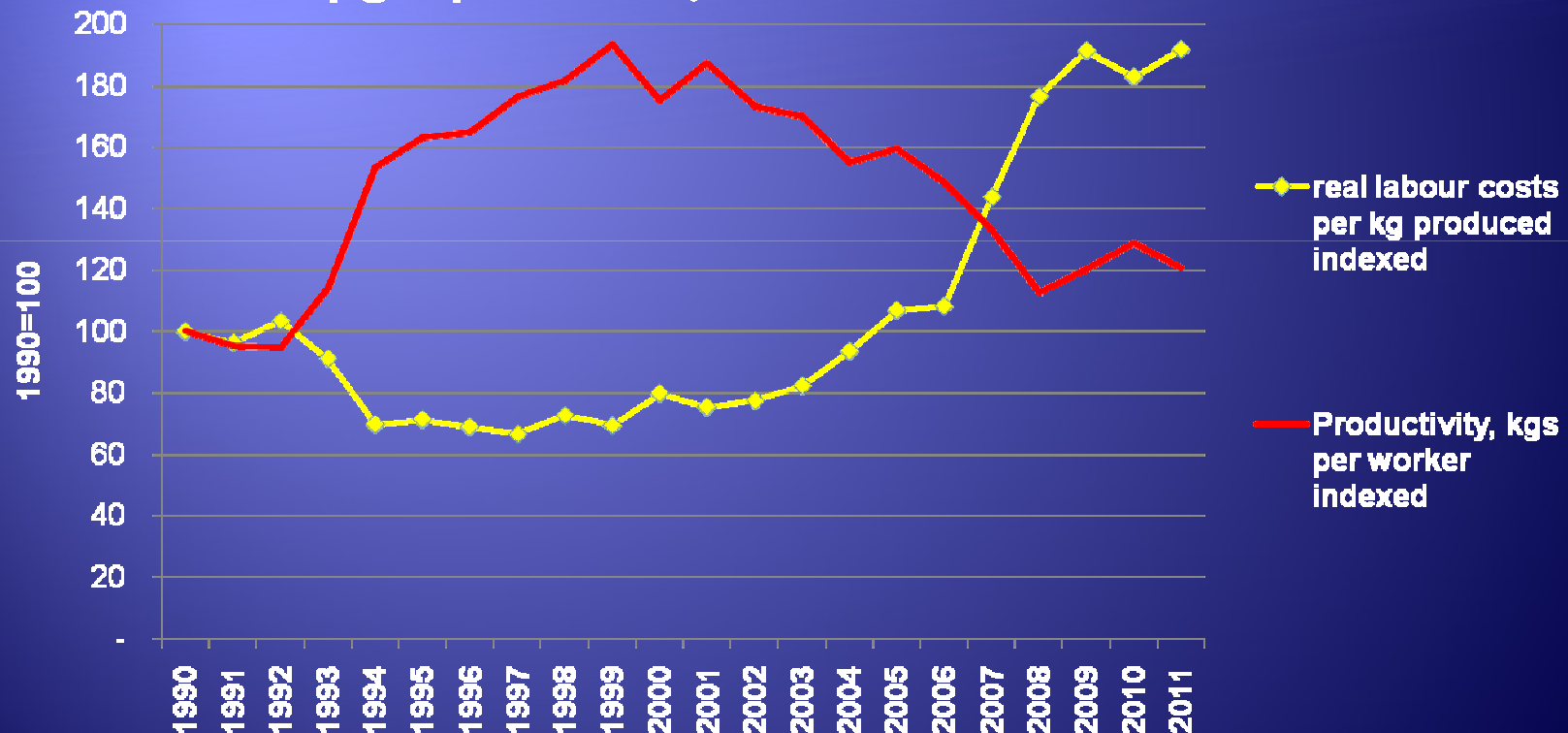


There has been structural changes in the RSA PGM mining sector, such as an increase in the mining of UG2 ores, which has reduced platinum grades

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

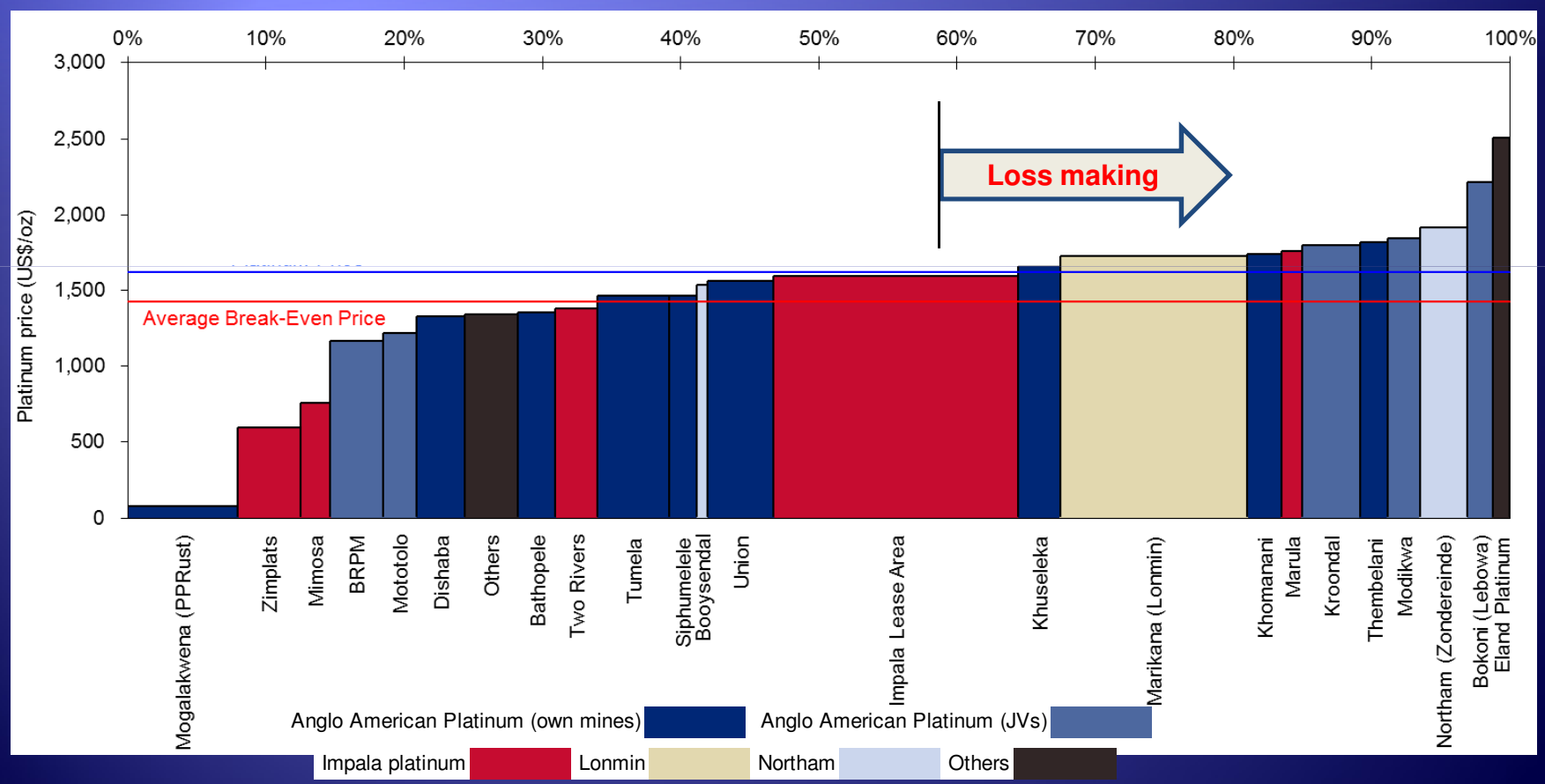
RSA platinum mining labour productivity (kgs produced per employee) and real labour costs per kg of pgm produced, based indexed to 1990



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), 59% loss-making in 2012 at average price of \$1556/oz



Source: Company reports, JP Morgan. Analysis is based on spot prices as at 10 January 2013



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 R10 billion in revenue was lost and many related industries were negatively affected by the strikes.
- Further strike action in 2013 could further undermine the PGM mining sector

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Mining Industry Growth, Development And Employment Task-team (MIGDETT) – Platinum Task Team (PTT)

- Tripartite: (government, business, organised labour), leadership driven. Established in June 2012.
- MIGDETT PTT declaration: developed.
- Short-term issues:
 - Loss-making operations.
 - Collectively working to help the industry through the crisis in the short-term.
 - Reduce cost pressures, while minimising job losses.
 - Mitigation plans in the event of job losses.

MIGDETT – Platinum Task Team (PTT)

- Long term issues: (repositioning the industry for growth).
Some examples include:
 - Taking a strategic “SA Inc” approach to the PGM mining industry and restoring investor confidence in the sector.
 - Reducing costs and improving productivity.
 - Collaborate on expanding demand (through R&D).
 - Expanding the potential of the mining sector (constraining costs and enhancing capability to meet growing demand).

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**

