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# TABLE OF CONTENTS

## INDUSTRY SNAPSHOT 4

## OVERVIEW OF THE SA MINING INDUSTRY 4

General exploration expenditures by region  
6

Key mineral industry statistics for SA  
8

SA's role in world mineral reserves, production & exports  
10

Provincial overview  
11

## GENERAL MINING INDUSTRY DATA

Safety: fatalities and fatality frequency rates  
12

Employment and remuneration in SA mining industry  
14

Income and expenditure of all SA mining  
15

## AGGREGATE AND SAND

Total sales, employment and earnings  
16

## BASE MINERALS

Chromite production and sales  
17

Iron ore and copper production and sales  
18

Manganese production and sales  
19

## COAL INDUSTRY DATA

Annual South African coal production, sales and exports  
20

Analysis of coal sold by member coal producers  
22

Employment on coal mines  
24

## DIAMOND DATA

South African diamond production and sales  
24

Estimated production by country  
25

Employment & earnings on SA diamond mines  
27

## GOLD INDUSTRY DATA

Global production and SA's contribution  
28

South African gold output and sales  
29

Average grade of Chamber member gold producers, 2004 – 2013  
30

Employment & earnings on Chamber gold mines, 2003 – 2013  
30

## 2013 QUARTERLY SUMMARY OF PRINCIPAL OPERATING RESULTS OF CHAMBER GOLD PRODUCERS

Gold production, average grades, revenue and profit data  
31

Cash operating cost data, taxation, capex and dividends  
32

Average unit cash operating costs and profits  
33

## PGM DATA

SA platinum and PGM production  
34

SA share of pgm reserves and production & employment and earnings on sa pgm mines, 2013  
35

Platinum supply and demand  
36

Annual average platinum price, 2013  
37

Palladium supply and demand  
38

Rhodium supply and demand  
39

## SILVER INDUSTRY DATA

Annual SA silver production and sales, 1911 - 2013  
41

## URANIUM INDUSTRIAL DATA

Uranium output, 1971 – 2013  
43

Cumulative uranium output  
44

# The South African mining sector in 2013

## OVERVIEW

### Contribution to Investment and GDP

In 2013, the mining sector accounted for 8.3% of GDP directly, on a nominal basis (2012: 8.6%). Although this is a downward trend from the industry's peak some decades ago (from 21% contribution to GDP in 1970), the mining industry nevertheless continues to make a valuable contribution to the South African economy, most notably in terms of foreign exchange earnings, employment and economic activity. Nominal mining GDP of R279.7 billion was recorded in 2013, up from R270.2 billion in 2012.

Mining sector real fixed investment, which has shown signs of recovery from the global financial recession since 2011, dipped to -5.5% in 2010 and only grew by 1.7% in 2013, down from a 4.3% growth in 2012. In addition to a slump in commodity prices, other country-specific factors such as regulatory uncertainty, infrastructure constraints and other issues affected investment by mining companies.

Despite the decline in the growth rate of mining sector real investment, mining still accounted for 19.4% of private sector investment and 12.2% of total investment in the economy in 2013, down from 20.2% in that year and by 12.6% in 2012.

Total mining production was 4% higher in 2013 relative to 2012. The 4% growth in annual mining production followed a decrease of 3.2% in 2012 and a decrease of 0.9% in 2011. Whereas platinum group metals (pgm) production contracted by 13% in 2012, it increased by 3.9% in 2013. Manganese, copper and iron ore production increased by 22.5%, 15.7% and 6.6% from 2012 to 2013. These increases served to counter the 1.4% and 0.1% decrease in coal and gold production in that same period. Diamond production increased from 7.2 million carats in 2012 to 7.5 million carats in 2013, a 4.1% increase from 2012.

### SA Mineral Sales and Exports

South African mineral sales increased by 5.8% in 2013 to R384.9 billion (Table 1). This follows a 1.9% contraction in mineral sales in 2012.

The change in mineral sales in 2013 was driven by a 5.4% growth in coal sales to R101.4 billion, a 33.2% rise in manganese sales to R14.4 billion and a 20% increase in iron ore sales to R63.1 billion. This is compared to a 16% contraction in iron ore in 2012, a 13% increase in copper sales to R5.8 billion, a 42% increase in chrome sales to R11.8 billion in 2013 in contrast to a 4% contraction in 2012 to R8.3 billion, and a 15.4% decrease in gold prices leading to a 1.4% decrease in the value of gold sales to R72.3 billion. Gold, PGMs, iron ore and coal accounted for 79.5% of South Africa's total mineral sales in 2013, compared to 81% in the previous year.

Total primary mineral sales exports increased by 4% in 2013 to a total of R279.5 billion from R269 billion in 2012. This accounted for 30.5% of South Africa's total merchandise exports.

## Contribution of SA Mining over the past decade

In the past decade, the mining sector has contributed just over R2.4 trillion to the country's GDP and R2.4 trillion to the country's export earnings, in real money terms (Fig. 1).

### TABLE 1: COMMODITY SUMMARY

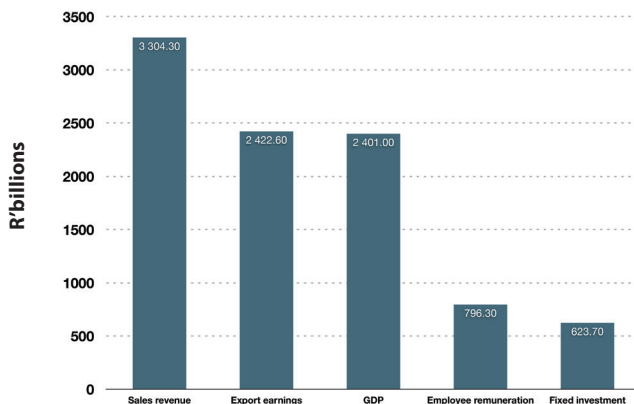
COMMODITY	JANUARY TO DECEMBER 2013			
	Local sales R1000	Total sales R1000	Total exports R1000	% Exports Total sales
Gold	3 312 818	57 158 710	53 845 893	94.2
Platinum Grp Metals	8 886 103	84 234 637	75 348 535	89.5
Diamonds	7 543 783	12 335 974	4 792 191	38.8
Silver	43 179	452 851	409 672	90.5
<b>SUB TOTAL</b>	<b>19 785 882</b>	<b>154 182 172</b>	<b>134 396 290</b>	
Chrome	5 870 717	11 762 549	5 891 833	50.1
Copper(Content)	4 056 792	5 817 573	1 760 781	30.3
Iron Ore	5 782 442	63 142 942	57 360 500	90.8
Lead Concentrate	0	683 220	683 220	100.0
Manganese	1 506 434	14 416 184	12 909 750	89.6
Nickel	1 216 372	6 957 625	5 741 253	82.5
Other Metallic	11 868	540 781	528 913	97.8
Coal	49 569 211	101 382 695	51 813 484	51.1
Feldspar	101 444	101 444	0	0.0
Limestone & Lime	2 804 944	2 825 483	20 539	0.7
Other Non-metallic	9 215 171	9 383 214	168 043	1.8
Miscellaneous *	5 477 748	13 745 787	8 268 039	60.1
<b>SUB TOTAL</b>	<b>85 613 144</b>	<b>230 759 498</b>	<b>145 146 354</b>	<b>62.9</b>
<b>GRAND TOTAL</b>	<b>105 399 026</b>	<b>384 941 670</b>	<b>279 542 644</b>	<b>72.6</b>

Source : Minerals Bureau, Department of Mineral Resources, as at September 2014

\*Includes strategic & minor commodities otherwise not enumerated.

Note; totals might not add due to rounding.

### Figure 1: The contribution of mining to SA over the past decade expressed in 2013 real money terms



Source: CoM Statistical Unit

## Global exploration expenditure

**A**ccording to the Metals Economics Group (MEG), the industry's aggregate exploration total increased by 19% in 2012. Although less than the 50% increase in 2011, most mining companies increased their exploration budgets in 2012. This trend was not sustained in 2013, as most companies responded to lower metal prices by cutting on exploration spending. 2013 saw a 30% decrease in the global nonferrous metals exploration budget to US\$14.4 billion from a record high of US\$20.5 billion in 2012. In 2013, the junior sector struggled to raise funds and faced capital constraints, while the big industry players pulled back on capital and exploration spending in order to protect margins in the face of unfavourable metal prices.

Exploration allocations for all regions decreased in 2013, with the largest dollar value decreases observed in Latin America and Canada. Nevertheless, Latin America remained the most popular exploration destination, attracting 27% of global spending in 2013, with gold accounting for the largest share of the region's exploration spend.

Africa dropped from second place to third in terms of global share of the exploration budget, with Eurasian countries taking over the second position. The share of Africa's exploration remained unchanged at 17% in both 2012 and 2013. Major African exploration destinations included Democratic Republic of Congo (DRC), Burkina Faso, South Africa, Zambia, and Ghana. A continued focus on West Africa, Burkina Faso in particular, resulted in gold receiving the largest allocation in 2013. The budgets for base metals fell only 14%, raising their share of the overall budgets from 22% to 27%.

Eurasian countries had the second-largest aggregate budget, led by allocations for Russia and China, and by four other countries – Kazakhstan, Turkey, Sweden, and Finland – that each attracted more than \$75 million in exploration budgets in 2013. For the first time since 2009, Russia reclaimed the region's top position, accounting for 30% of total allocations. Gold replaced base metals as the region's top exploration target, led by major allocations of gold in Russia, China, and Kazakhstan.

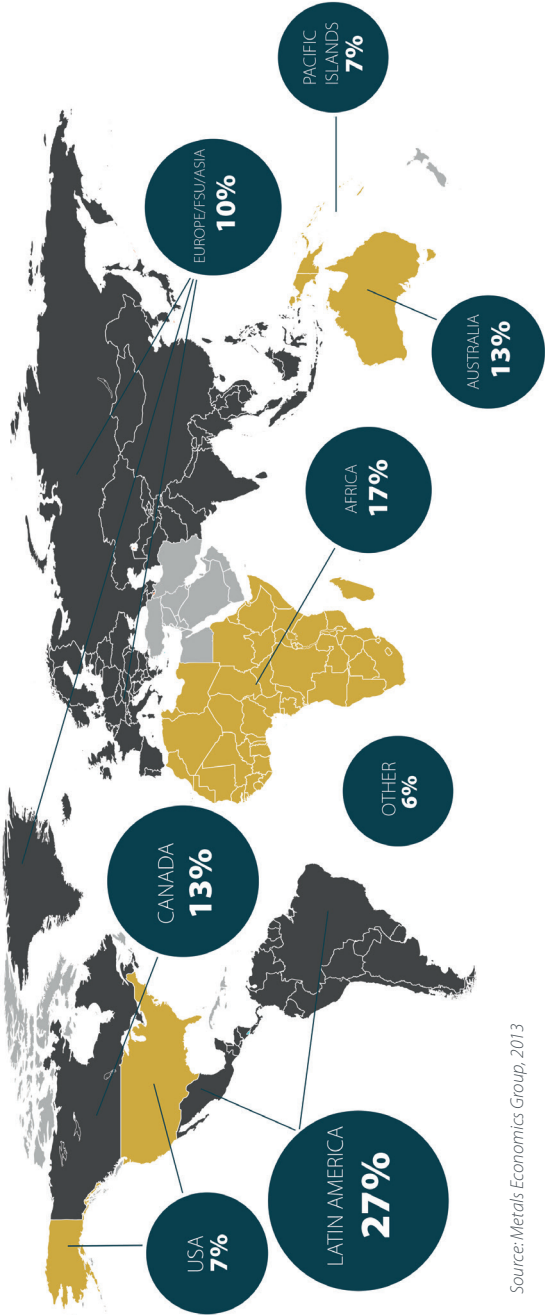
Canada saw a 41% decrease in exploration spending in 2013, the largest decrease across all regions, which resulted in Canada falling to fourth place with 13.3% of worldwide allocations. Ontario accounted for 31% of Canadian exploration budgets, followed by British Columbia with 17%. The decline in gold allocations was proportionally less than for most other targets, raising gold's share of total Canadian budgets from 49% in 2012 to 52% in 2013. Exploration spending for base metals decreased by 47% in Canada, lowering their share in Canada's exploration budget to about 19%.

Australia accounted for 13.1% of worldwide exploration allocations in 2013 and held fifth place, a position it has held since 2003. Its allocations decreased only 25%, leaving it just \$25 million behind Canada. Western Australia remained the principal exploration destination in Australia, accounting for 54% of the country's total exploration spend in 2013. Gold remained the top exploration target. Gold allocations fell by only 21%, raising gold's share of overall spending from 43% in 2012 to 45% in 2013.

Gold and copper exploration in the United States kept it in sixth place regionally, ahead of the Pacific Islands. Nevada had the largest share (41%) of the country's 2013 budget total, and three states – Nevada, Arizona, and Alaska – together accounted for 68%. Gold remained the preferred exploration target, although a 42% drop in expenditure lowered gold's share of overall U.S. budgets from 54% in 2012 to 50% in 2013. Base metals allocations decreased 28% year-on-year, however, their share of the U.S. total budget increased from 31% in 2012 to 36% in 2013.

Among the Pacific Islands, exploration allocations for Papua New Guinea, Indonesia, and the Philippines accounted for the bulk of the region's 7% of the world total, with budgets split mainly between gold (55%) and base metals (41%). Although it remained in last place regionally, Pacific/Southeast Asia had the smallest dollar decrease (\$383 million) of all regions in 2013, narrowing the gap between itself and the United States from \$324 million in 2012 to \$78 million in 2013.

FIGURE 2: WORLDWIDE NONFERROUS EXPLORATION BUDGETS BY REGION, 2013



Source: Metals Economics Group, 2013

DESCRIPTION	Units of measure	2004
<b>GROSS DOMESTIC PRODUCT</b>		
Direct contribution of mining to GDP	R'millions nominal terms	91 198
Direct contribution of mining to GDP	R'millions constant 2005 prices	104 915
Direct contribution of mining to GDP	R'millions 2013 money terms	153 714
Mining GDP growth rate	% YoY	1.5
Direct contribution of mining to GDP	US\$ equivalent	14 139
South African GDP	R'millions nominal terms	1 415 273
South African GDP	R'millions constant 2005 prices	1 492 330
Mining's contribution as % of total GDP nominal terms	%	6.4
Mining's contribution as % of total GDP real terms	%	7.0
<b>FIXED INVESTMENT</b>		
Direct contribution of mining to fixed investment (GFCF)	R'millions nominal terms	17 917
Direct contribution of mining to fixed investment (GFCF)	R'millions constant 2005 prices	18 950
Direct contribution of mining to fixed investment (GFCF)	R'millions 2013 money terms	30 199
Total private sector fixed investment (private GFCF)	R'millions nominal terms	165 866
Total SA fixed investment (GFCF)	R'millions nominal terms	226 180
Mining fixed investment growth rate	% YoY	-19.2
Direct contribution to fixed investment (GFCF)	US\$ equivalent	2 778
Mining's contribution to private sector fixed investment (GFCF)	%	10.8
Minings contribution as % of total investment	%	7.9
<b>SALES AND EXPORTS</b>		
Total primary mineral sales	R'millions nominal terms	125 307
Total primary mineral sales	US\$ equivalent	19 428
Total primary mineral sales	R'millions 2013 money terms	211 205
Mining industry primary exports	R'millions nominal terms	89 673
Mining industry primary exports	US\$ equivalent	13 903
Mining industry primary exports	R'millions 2013 money terms	151 144
Total SA merchandise exports	R'millions nominal terms	310 525
Total SA exports (goods and services)	R'millions nominal terms	394 923
Primary mineral exports as % of total SA merchandise exports	%	28.9
Primary mineral exports as % of total SA exports	%	22.7
Mining export earnings per unit of GDP created	ratio	1.0
<b>EMPLOYMENT</b>		
Mining industry direct employment	numbers	448 909
Total private non-agricultural employment	numbers	5 117 048
Total SA formal non-agricultural employment	numbers	6 660 960
Mining as % of total private non-agricultural employment	%	8.8
Mining as % of total non-agricultural formal employment	%	6.7
Remuneration paid to employees in mining	R'millions current	33 656
Remuneration paid to employees in mining	R'millions 2013 money terms	56 727
Average annual remuneration per mineworker	Rand	74 973
<b>EXCHANGE RATES</b>		
Rand per US\$ exchange rate	R/US\$	6.45
Rand per Euro	R/Euro	8.01
Rand real effective exchange rate	Rand index	110.13
<b>COMMODITY PRICES</b>		
Gold price	Rand per kilogram	84 785
Gold price	Rand/kg real 2013 money terms	142 905
Gold price	US\$/oz	409
Platinum price	Rand per kg	175 382
Platinum price	Rand/kg real 2013 money terms	295 607
Platinum price	US\$/oz	846
Palladium price	Rand per kg	47 701
Palladium price	Rand/kg real 2013 money terms	80 400
Palladium price	US\$/oz	230
Rhodium price	Rand per kg	203 580
Rhodium price	US\$/oz	982
PGM production weighted average basket price	Rand per 3E kg produced	138 228
PGM production weighted average basket price	Rand/3E kg 2013 real money terms	232 983
PGM production weighted average basket price	US\$ per 3E oz produced	667
Coal price - average for local sales (received price)	R/tonne (FOB)	76
Coal price - average for export sales (received price)	R/tonne (FOB)	213

Sources: COM, SARB, StatsSA, DME, SACR, Johnson Matthey Platinum Reports.

Prep: COM Economics Advisory Unit

As At July 2014



2005	2006	2007	2008	2009	2010	2011	2012	2013	Total / average past decade	yo y % chg
105 992	132 301	156 970	196 526	196 521	228 230	274 530	270 096	279 691	1 932 055	3.6
105 992	105 364	105 336	99 396	94 057	99 383	99 687	96 082	99 076	1 009 288	3.1
172 972	207 095	229 425	257 529	240 451	267 748	306 689	285 643	279 691	2 400 958	-2.1
1.0	-0.6	0.0	-5.6	-5.4	5.7	0.3	-3.6	3.1		-0.4
16 661	19 550	22 251	23 816	23 292	31 170	37 850	32 899	28 983	250 612	-11.9
1 571 082	1 767 422	2 016 185	2 256 485	2 408 075	2 673 772	2 932 730	3 138 980	3 385 369	23 565 373	7.8
1 571 082	1 659 121	1 751 165	1 814 594	1 786 900	1 843 008	1 909 343	1 956 444	1 993 433	17 777 420	1.9
6.7	7.5	7.8	8.7	8.2	8.5	9.4	8.6	8.3	8.2	-4.0
6.7	6.4	6.0	5.5	5.3	5.4	5.2	4.9	5.0	5.7	1.2
16 743	27 715	40 206	58 645	64 140	62 431	68 815	74 658	79 602	510 872	6.6
16 743	24 904	32 705	41 690	44 124	41 709	45 107	47 062	47 849	360 843	1.7
27 323	43 383	58 764	76 849	78 478	73 241	76 876	78 956	79 602	623 671	0.8
196 267	236 118	281 869	343 405	323 470	324 123	346 332	369 472	410 825	2 997 747	11.2
263 754	324 083	406 257	520 723	518 785	512 305	550 362	593 387	654 427	4 570 263	10.3
-11.6	48.7	31.3	27.5	5.8	-5.5	8.1	4.3	1.7	9.12	
2 632	4 095	5 699	7 107	7 602	8 526	9 488	9 094	8 249	65 270	-9.3
8.5	11.7	14.3	17.1	19.8	19.3	19.9	20.2	19.4	17.0	-4.1
6.3	8.6	9.9	11.3	12.4	12.2	12.5	12.6	12.2	11.2	-3.3
143 448	194 358	224 325	302 633	241 345	300 292	370 640	363 756	383 983	2 650 088	5.6
22 548	28 721	31 799	36 675	28 605	41 011	51 101	44 307	39 790	343 985	-10.2
234 098	304 235	327 870	396 573	295 295	352 288	414 058	384 695	383 983	3 304 299	-0.2
102 487	138 879	162 203	221 926	176 390	224 956	282 013	269 120	279 543	1 947 188	3.9
16 110	20 522	22 993	26 895	20 906	30 722	38 882	32 780	28 968	252 681	-11.6
167 252	217 392	237 073	290 813	215 819	263 907	315 049	284 611	279 543	2 422 603	-1.8
358 361	447 690	537 516	704 293	556 432	656 597	789 764	814 861	917 602	6 093 641	12.6
459 719	571 540	683 074	857 898	691 267	793 058	935 707	987 994	1 118 794	7 493 674	13.3
28.6	31.0	30.2	31.5	31.7	34.3	35.7	33.0	30.5	32.0	-7.8
22.3	24.3	23.7	25.9	25.5	28.4	30.1	27.2	25.0	26.0	-8.3
1.0	1.0	1.0	1.1	0.9	1.0	1.0	1.0	1.0	1.0	0.3
444 132	456 337	495 150	518 729	491 794	498 906	512 878	524 632	510 099	4 901 566	-2.8
5 531 523	6 263 866	6 603 548	6 668 991	6 357 356	6 257 633	6 344 891	6 397 869	6 391 636	61 934 360	-0.1
7 110 705	7 910 778	8 322 650	8 469 409	8 218 498	8 156 954	8 332 118	8 426 801	8 464 675	80 073 548	0.4
8.0	7.3	7.5	7.8	7.7	8.0	8.1	8.2	8.0	7.9	-2.7
6.2	5.8	5.9	6.1	6.0	6.1	6.2	6.2	6.0	6.1	-3.2
36 683	39 448	50 073	60 886	66 092	74 319	86 972	93 608	100 812	642 548	7.7
59 864	61 749	73 186	79 786	80 866	87 187	97 160	98 996	100 812	796 332	1.8
82 595	86 445	101 127	117 376	134 389	148 963	169 577	178 426	197 632	1 291 500	10.8
6.36	6.77	7.05	8.25	8.44	7.32	7.25	8.21	9.65	7.58	17.5
7.91	8.52	9.66	12.05	11.70	9.71	10.08	10.55	12.82	10.10	21.5
112.50	108.88	105.05	94.09	101.41	113.85	110.89	104.09	94.31	105.52	-9.4
90 822	131 323	157 241	229 417	260 644	286 402	367 978	440 762	435 644	248 502	-1.2
148 215	205 564	229 821	300 630	318 908	335 993	411 084	466 134	435 644	299 490	-6.5
445	604	697	872	971	1 225	1 569	1 668	1 411	987	-15.4
183 488	248 431	295 684	418 164	326 977	379 171	401 374	410 346	462 350	330 137	12.7
299 440	388 877	432 167	547 966	400 069	444 824	448 392	433 966	462 350	415 366	6.5
897	1 142	1 304	1 576	1 205	1 611	1 721	1 555	1 490	1 335	-4.1
41 211	69 703	80 481	93 359	71 531	123 926	171 635	170 646	225 595	109 579	32.2
67 254	109 108	117 630	122 338	87 521	145 384	191 741	180 469	225 595	132 744	25.0
201	320	355	352	264	526	736	646	727	436	12.5
420 597	990 292	1 404 040	1 741 395	431 741	578 595	472 179	336 612	331 097	691 013	-1.6
2 056	4 552	6 191	6 564	1 592	2 458	2 025	1 275	1 067	2 876	-16.3
156 896	248 214	316 359	414 208	257 083	309 889	334 044	324 666	372 669	287 226	14.8
256 044	388 538	462 385	542 782	314 551	363 546	373 175	343 354	372 669	365 003	8.5
767	1 141	1 395	1 561	948	1 316	1 432	1 230	1 201	1 166	-2.3
86	92	108	153	187	181	210	237	270	160	13.9
296	314	361	737	512	561	735	687	695	511	1.1

**Table 3: South Africa's role in world mineral reserves, production & exports, 2012 (latest available data)**

Commodity		Reserve Base			Production		Exports	
	Unit	South Africa's Reserves	SA's Rank in World's Reserves	SA's Percentage of World's Reserves (%)	SA's Rank in World's Mineral Production	SA's Percentage of World's Mineral Production (%)	SA's Rank in World's Mineral Exports	SA's Percentage of World's Mineral Exports (%)
Aluminium		-	-	-	-	9.8	6	-
Alumino - Silicates (Ore)	Mt	51	1	-	-	-	-	-
Antimony (Metal)	kt	27	5	1.5	2	1.7	-	-
Chromium	Mt	3 100	1	85.0	1	45.8	2	21.0
Coal	Mt	30 156	8	3.5	7	3.3	6	6.0
Copper	kt	11 000	11	1.6	10	0.1	11	0.3
Ferro-Chromium	kt	-	-	-	1	37.0	1	55.2
Ferro-Mn/Fe-Si-Mn	kt	-	-	-	-	-	-	-
Ferro-silicon	kt	-	-	-	7	2.4	33	3.1
Fluorspar (Contained CaF)	kt	41 000	3	17.1	6	2.5	-	-
Gold (Metal)	t	6 000	2	11.8	6	54.0	-	-
Iron Ore	Mt	650	12	0.8	6	2.2	5	4.4
Lead (Metal)	kt	300	6	2.1	10	1.1	14	1.4
Manganese (Metal)	Mt	150	1	24.0	2	60.0	1	29.1
Nickel	Mt	3 700	7	4.9	10	2.2	-	-
Platinum Group Metals	t	63 000	1	95.5	1	-	-	-
Phosphate Rock (Contained Concentrates)	kt	1 500 000	-	2.2	12	1.2	-	-
Silicon (Metal)	kt	-	-	-	8	2.5	6	4.5
Silver (Metal)	t	-	-	-	20	0.2	-	-
Titanium minerals (Metals)	Mt	71,3	4	10.2	2	16.6	-	-
Uranium (Metal, up to \$US 80/kg U)	t	# 279 100	6	5.2	11	1.1	-	-
Vanadium (Metal)	kt	3 500	3	25.0	2	33.0	-	-
Vermiculite	kt	14 000	1	-	1	23.3	-	-
Zinc (Metal)	kt	14 000	8	3.3	26	0.3	24	0.4
Zirconium Minerals (Metals)	kt	14 000	2	29.0	2	25.8	-	-

Source: DMR &amp; U.S. Geological Survey, Reston, Virginia

- = not available

# Resource

# TABLE 4: PROVINCIAL OVERVIEW (LATEST AVAILABLE DATA)

	EC	FS	GP	KZN	LP	MP	NW	NC	WC
Capital	Bisho	Bloemfontein	Johannesburg	Ulundi & PiMB	Polokwane	Nelspruit	Mafikeng	Kimberley	Cape Town
Total area (000km <sup>2</sup> )	168,965	129,825	18,178	94,361	125,753	76,494	104,881	372,889	129,462
% of SA area	13.8	10.6	1.4	7.7	10.3	6.3	8.6	30.5	10.6
Total population - 2011	6,562,053	2,745,590	12,272,263	10,267,300	5,404,868	4,039,939	3,509,953	1,145,861	5,822,734
% of total SA population	12.7	5.3	23.7	19.8	10.7	7.8	6.8	2.2	11.2
Total GDP 2010 (R'billions-current prices)	272.74	179.77	1194.14	565.22	256.89	269.86	239.02	71.14	485.54
Mining GDP 2010 (R'billions-nominal terms)	0.69	21.60	32.81	9.48	66.83	61.25	74.33	16.67	1.10
Mining - % Contribution to provincial GDP 2010	0.2	7.6	11.5	3.3	23.5	21.5	26.1	5.9	0.4
Official unemployment %, 2012	28.6	32.9	25.4	19.8	20.2	28.9	26.2	29.9	23.2
Number of people living on less than US\$2 per day (at PPP), 2011	241,759.0	66,641.0	108,300.0	491,337.0	166,983.0	107,926.0	107,370.0	19,897.0	36,024.0
Number of people that have access to piped water, 2011	1,332,345.0	625,003.0	1,964,164.0	1,660,935.0	982,455.0	604,009.0	720,641.0	186,993.0	983,015.0
Households without electricity - 2011 (%)	26.0	6.0	19.0	22.0	13.0	11.0	14.0	10.0	4.0
% Prevalence of HIV 2012 (%)	10.8	12.1	11.2	15.1	7.1	12.7	12.5	6.8	5.2

Source: StatsSA Census 2011, StatsSA General Household Survey, Department of Trade & Industry, DMR, SA Survey 2012

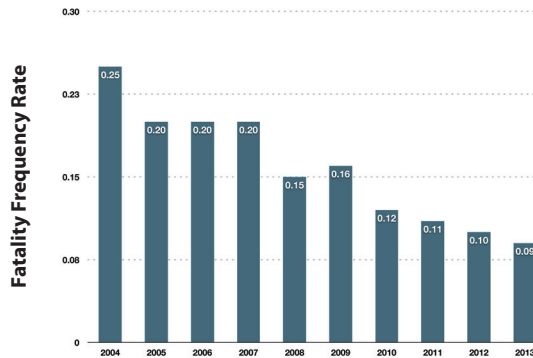
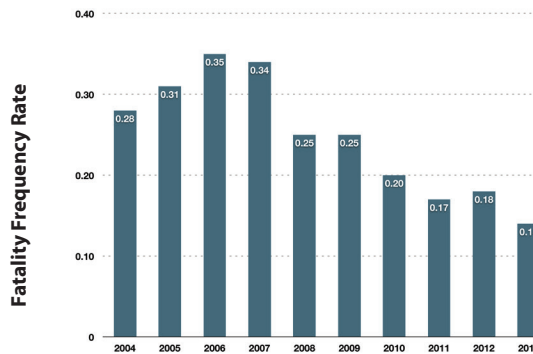
**Table 5: Industry fatalities – 2003-2013**

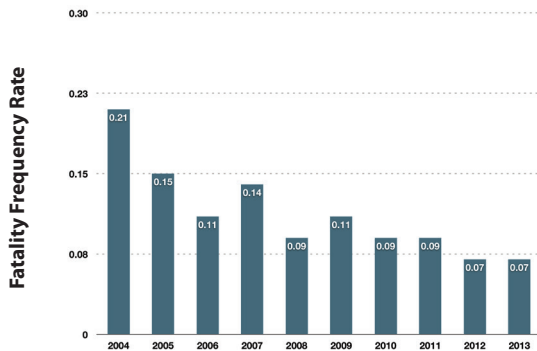
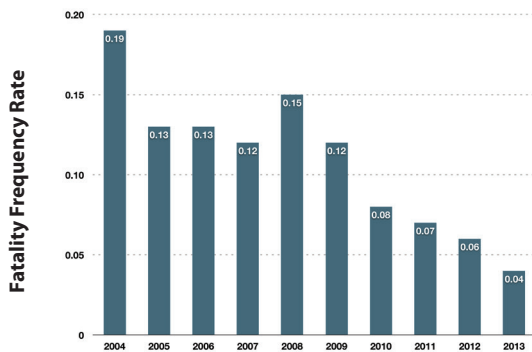
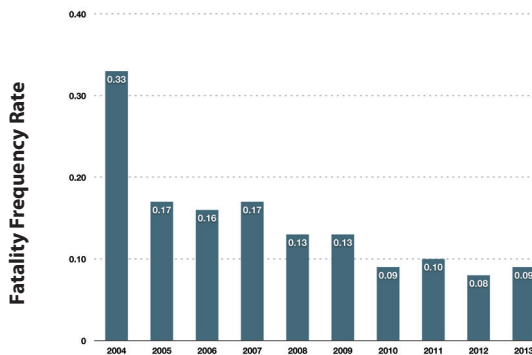
COMMODITY	2004	2005	2006	2007	2008	2009	2010	2011	2012	**2013
Gold	108	105	114	115	85	81	62	51	53	37
PGM's	65	47	40	53	36	41	34	37	28	28
Coal	20	16	20	15	20	18	12	12	11	7
Chrome	16	6	2	4	*	*	*	*	*	*
Diamonds	15	7	3	12	*	*	*	*	*	*
Copper	2	0	2	1	*	*	*	*	*	*
Clay	3	3	2	8	*	*	*	*	*	*
Iron Ore	1	2	2	4	*	*	*	*	*	*
Granite DS	2	0	0	1	*	*	*	*	*	*
Limestone	3	5	5	1	*	*	*	*	*	*
Other	11	10	10	6	30	28	19	23	20	21
<b>TOTAL</b>	<b>246</b>	<b>201</b>	<b>200</b>	<b>220</b>	<b>171</b>	<b>168</b>	<b>127</b>	<b>123</b>	<b>112</b>	<b>93</b>

Source: Department of Mineral Resources, as at June 2013

Note: \* - Now included in Other

Note: \*\*2013 data is provisional

**Figure 3: FFR – All Sectors****Figure 4: FFR – Gold Mines**

**Figure 5: FFR – Platinum Mines****Figure 6: FFR – Coal Mines****Figure 7: FFR – Non-gold (platinum, coal & other)**

**Table 6: Average number of people in service by commodity**

YEAR	Gold	PGM's	Iron Ore	Copper	Chrome	Manganese	Diamonds	Coal	Aggregate and Sand	Other Mines and Quarries	South Africa
2004	179 964	150 630	7 142	4 042	6 765	3 243	21 186	50 327	4 080	21 530	448 909
2005	160 634	155 034	7 493	3 746	7 893	3 336	22 033	56 971	5 210	21 782	444 132
2006	159 782	168 530	8 859	3 993	7 899	3 332	19 686	57 778	5 133	21 345	456 337
2007	169 057	186 411	13 858	-	9 796	3 240	19 471	60 439	5 833	27 045	495 150
2008	166 063	199 948	13 256	-	12 279	3 976	18 474	65 484	6 428	32 821	518 729
2009	159 925	184 163	13 727	-	10 966	5 003	11 602	70 791	6 852	28 765	491 794
2010	157 019	181 969	18 216	-	13 982	5 879	11 468	74 025	7 009	29 339	498 906
2011	144 799	194 745	22 361	-	16 911	7 460	12 046	78 579	7 123	28 854	512 878
2012	142 201	197 847	23 380	-	19 758	8 726	12 176	83 240	7 544	29 760	524 632
2013	131 591	191 261	21 145	3 536	18 359	9 866	13 547	87 768	7 579	25 447	510 099

Source: Department of Mineral Resources

As At June 2014

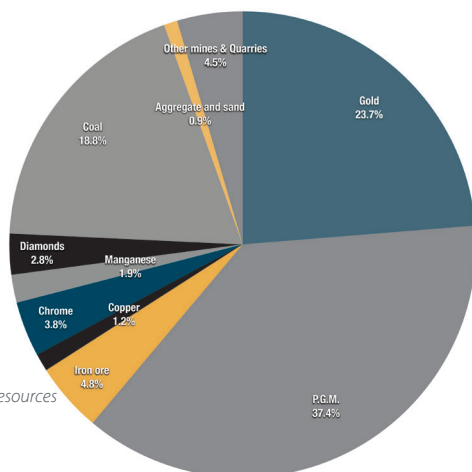
**Table 7: Number of employees & earnings, 2013**

COMMODITY	Employment numbers in SA Mining Industry	% of total no. of employees	Total Employee Earnings (Rmillion)
Gold	131 591	25.8	23904.9
P.G.M.	191 261	37.5	37709.1
Iron ore	21 145	4.1	4845.1
Copper	3 536	0.7	1245.2
Chrome	18 359	3.6	3844.1
Manganese	9 866	1.9	1948.5
Diamonds	13 547	2.7	2869.7
Coal	87 768	17.2	18933.6
Aggregate and sand	7 579	1.5	941.4
Other mines & Quarries	25 447	5.0	4570.0
<b>TOTALS</b>	<b>510 099</b>	<b>100.0</b>	<b>100 811.7</b>

Source: Department of Mineral Resources

As At July 2014

**Figure 8: Percentage earnings on all SA mines, including contractors – 2013**



Source: Department of Mineral Resources

As At June 2014

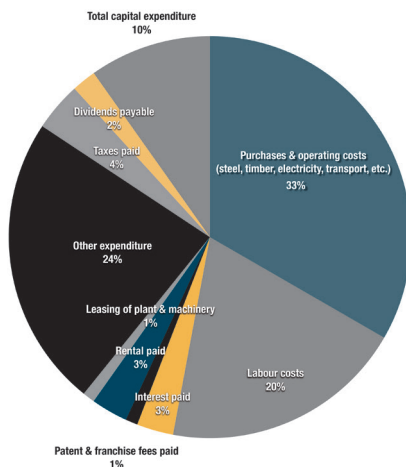
## Income & Expenditure

The South African mining industry's total income in 2013, using quarterly unadjusted data, was estimated at R546.1 billion (R497 billion in 2012), while expenditure after accounting for depreciation and impairments was R549.9 billion (R488 billion in 2012). See Fig. 9.

**Figure 9: Mining industry expenditure (ZAR mn), 2013**

Industry Exp - R549.9-bn

Industry Income - R546.1-bn

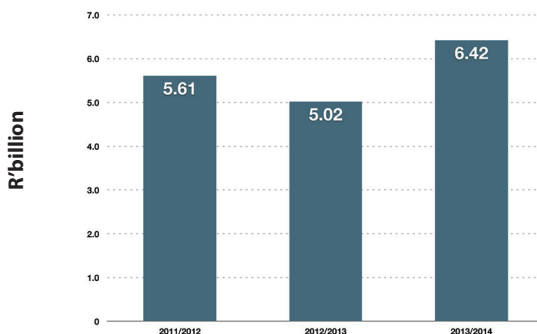


Source: StatsSA QFS, December 2013

R188 billion was spent on purchases and operating costs such as timber, steel, explosives, electricity, transport and uniforms (R154 billion in 2012). R112 billion was paid on salaries and wages for mine employees, up from R93 billion in 2012; capex in 2013 amounted to R53 billion, down from R59.2 billion in 2012; R20.6 billion was paid in taxes, slightly below the R21.4 billion tax amount paid in 2012; R8.6 billion was paid in dividends, down from the R11.6 billion dividend pay-out in 2012, and; R16.3 billion was paid on interest, up from R14.3 billion paid in 2012.

Furthermore, the mining industry also contributed to the national fiscus through royalties and taxes, having paid R5.6 billion in 2011/2012 and R5.02 billion in 2012/2013. The estimated royalties for 2013/2014 is R6.4 billion (Figure 10).

**Figure 10: Mining industry, royalties paid**



Source: National Treasury Revenue Estimates, 2013

In addition, it is important to dispel the myth that all mined products are exported from South Africa in raw form with very little downstream beneficiation taking place locally. Nearly 100% of South Africa's cement and building aggregates are made locally and 80% of the country's steel is made locally from locally mined iron ore, chrome, manganese and coking coal, using furnaces that are 95% powered by electricity from coal fired power stations (the 20% imported steel is speciality steel products not made locally). Over 30% of the country's liquid fuels are produced within the country from locally mined coal and 95% of electricity is generated in power plants that use locally mined coal. Most domestic chemicals, fertilisers, waxes, polymers and plastics are fabricated using locally mined minerals and coal and 13% of the world's platinum catalytic converters are made in South Africa.

In October 2013, the first National Jewellery Forum was held in Johannesburg. The forum brings together mining and jewellery manufacturing associations and government to create entrepreneurs with the requisite skills to enable South Africa to become a global jewellery hub.

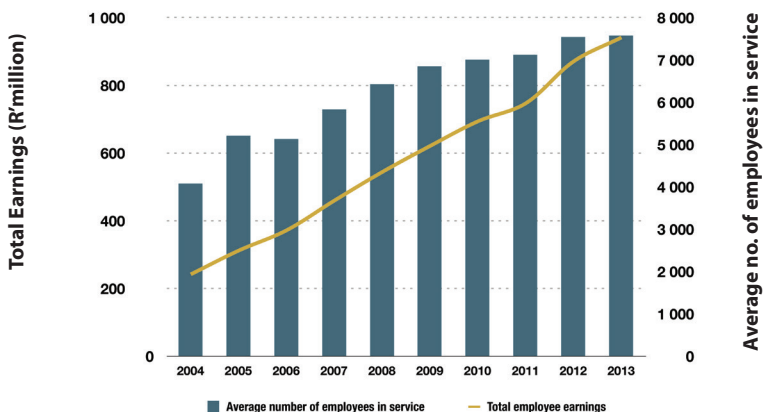
In 2013, SA aggregate sand production increased by 13.6% to 61.4 million tons (MT), though the sales value increased by 18.2% to R5.3 million (Table 8). The sector employed 7 579 people (2012: 7 544), and paid a total of R941 424 (2012: R870 694) in salaries (Fig. 11).

**Table 8: Aggregate & sand sales**

Year	Mass (1 000t)	Value (R1 000)
2004	47 381.7	2 085 363.9
2005	50 186.6	2 233 340.9
2006	58 563.4	2 789 556.0
2007	63 872.8	3 374 162.2
2008	58 608.5	3 775 002.5
2009	53 603.6	3 895 685.7
2010	52 624.7	3 864 613.2
2011	52 285.6	4 066 141.8
2012	53 373.6	4 476 359.5
2013	61 413.6	5 326 800.5

Source: Department of Mineral Resources, as at September 2014

**Figure 11: Employment & earnings – SA aggregate & sand quarries**



Source: Department of Mineral Resources, as at September 2014



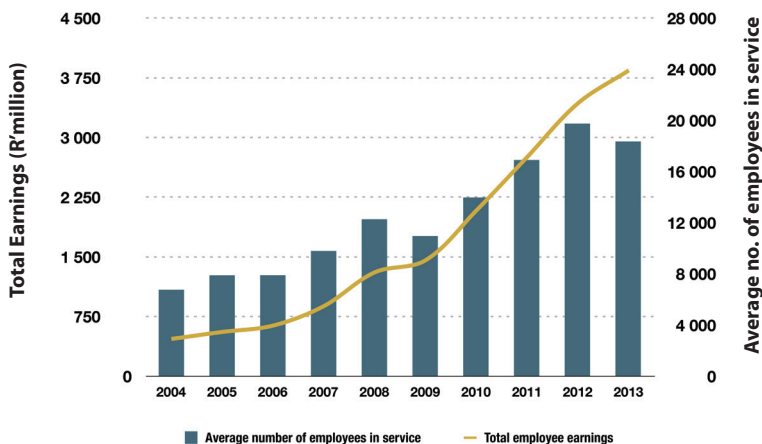
In 2013, SA chromite production increased by 21% to 13.6 MT. Domestic sales value increased by 25% to R5.9 billion in 2013. This follows a 13% contraction in 2012 which resulted in a domestic sales value of R4.7 billion. Export sales grew by a remarkable 65% to R5.9 billion in 2013 from R3.6 billion in 2012 (Table 9), and total sales grew by 63% from R8.3 billion to R11.8 billion in 2013. The sector employed 18 359 people (19 758 in 2012) and paid a total of R3.8 billion in salaries in 2013, up from R3.4 billion in 2012 (Figure 12).

**Table 9: SA Chromite production & sales**

YEAR	Production  Metric Tons	Total Sales		Export sales as percentage of total sales	
		Mass 1 000t	Value R1000	Mass %	Value %
2004	7 677	7 256.2	1 687 739.5	7.1	18.9
2005	7 552	6 785.3	1 910 565.8	9.7	23.1
2006	7 426	7 127.5	2 309 763.9	10.4	21.9
2007	9 665	8 281.6	3 006 448.4	10.8	21.9
2008	9 683	7 878.3	5 398 951.0	9.7	23.5
2009	7 561	6 589.1	3 652 368.4	25.9	43.0
2010	10 871	9 196.1	6 618 781.2	21.0	37.2
2011	10 721	9 433.8	8 619 546.7	21.2	37.6
2012	11 310	9 154.3	8 277 305.4	27.0	43.4
2013	13 645	12 651.3	11 762 549.3	32.9	50.1

Source: Department of Mineral Resources, as at September 2014

**Figure 12: Employment & earnings - SA chromite mines**



Source: Department of Mineral Resources, as at September 2014

## Copper

In 2013, copper production grew by 16% to 80 821 tonnes from 69 859 tonnes, a recovery from the 22% production contraction in the previous year. Domestic sales value increased by 13% to R4.1 billion, up from R3.6 billion in 2012, while export sales grew by 12% to R1.8 billion from R1.6 billion in 2012 (Table 10). Total sales grew by 13% to R5.8 billion, up from R5.2 billion in the previous year.

**Table 10: SA copper production & sales**

YEAR	Production	Total Sales		Export sales as percentage of total sales	
	Metric tons	Mass 1 000t	Value R1000	Mass %	Value %
2004	102.6	113.2	2 026 122.3	25.9	23.9
2005	103.9	112.0	2 583 099.8	26.8	25.4
2006	109.6	108.2	4 956 077.7	22.6	21.5
2007	117.1	113.9	5 853 850.9	32.8	31.2
2008	97.2	101.4	5 627 920.0	32.4	26.8
2009	92.9	94.9	3 859 751.0	28.3	26.5
2010	83.6	112.4	4 369 326.1	49.6	27.7
2011	89.3	85.9	5 432 849.4	29.7	27.5
2012	69.9	81.2	5 155 060.7	32.7	30.6
2013	80.8	82.3	5 817 573.3	31.9	30.3

\* Revised as at September 2014

Source: Department of Mineral Resources

## Iron Ore

Global iron ore reserves are estimated to be at 170 billion tons of crude ore with an iron ore content of about 81 billion tons (USGS). Global iron ore production decreased slightly by 0.7%, and the price of iron ore averaged US\$126/dmt in 2013, a 2% decrease from the 2012 price of US\$128.5/dmt, and 14% below 2010 prices of US\$145.9/dmt. The increase in global iron ore production was attributed to a 3.2% increase in global steel demand, largely due to increased infrastructure and construction activity, especially in Asia.

**Table 11: SA iron ore production & sales**

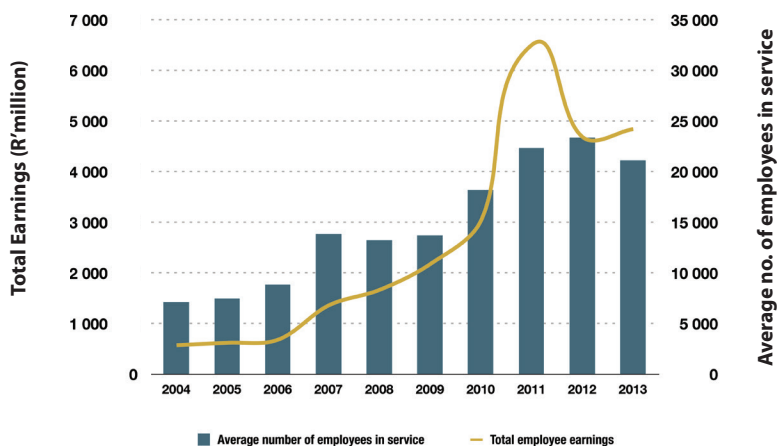
YEAR	Production	Total Sales		Export sales as percentage of total sales	
	Metric tons	Mass 1 000t	Value R1000	Mass %	Value %
2004	39 322.1	37 176.0	4 585 485.1	66.6	75.0
2005	39 542.1	38 637.3	7 519 572.2	68.9	83.1
2006	41 371.9	39 406.6	9 931 281.2	69.5	85.9
2007	42 083.1	43 174.3	13 755 560.3	71.3	87.3
2008	48 982.5	44 023.8	22 241 835.7	74.4	91.1
2009	55 313.1	52 919.3	27 131 734.5	84.2	93.0
2010	58 709.3	58 053.5	43 418 605.5	81.8	92.5
2011	58 056.9	61 735.3	62 651 894.1	84.1	93.3
2012	67 100.5	65 502.5	52 642 808.0	87.2	91.5
2013*	71 543.1	67 475.7	63 142 942.2	86.2	90.8

\* Revised as at September 2014

Source: Department of Mineral Resources

In 2013, South Africa produced 71.5 MT of iron ore, a 7% increase on the previous year's production of 67.1 MT (Table 11). Local sales grew by 30% to R5.8 billion from R4.4 billion in 2012, while export sales value increased by 19% from R48.2 billion in 2012 to R57.4 billion in 2013. Total iron ore sales value grew by 20% to R63.1 billion, from R52.6 billion in 2012. The iron ore sector employed 21 145 people, down from 23 380 people in 2012, and paid R4.8 billion in wages, up from R4.7 billion in 2012 (Figure 13).

**Figure13: Employment & earnings - SA iron ore mines**



Source: Department of Mineral Resources, as at September 2014

## Manganese

South Africa accounted for 22.4% of the global manganese production in 2013 (USGS), followed by the USA, China (18.2%) and Gabon (12%).

**TABLE 12: SA Manganese production & sales**

YEAR	Production	Value of Total Sales	Value of Export Sales	Export sales as % of total sales
	Metric tons	R1 000	R1 000	%
2004	4 282.0	1 738 719.4	1 082 284.6	62.2
2005	4 611.7	2 200 826.3	1 518 965.3	69.0
2006	5 213.3	2 245 835.0	1 518 652.5	67.6
2007	5 996.1	3 571 426.8	2 636 526.1	73.8
2008	6 807.1	17 343 408.0	15 581 559.6	89.8
2009	4 578.8	5 586 612.7	5 003 011.1	89.6
2010	7 171.7	10 660 590.2	9 340 025.7	87.6
2011	8 651.8	9 895 067.3	8 569 853.8	86.6
2012	8 943.4	10 820 654.0	9 685 811.5	89.5
2013*	10 957.1	14 416 184.2	12 909 749.8	89.6

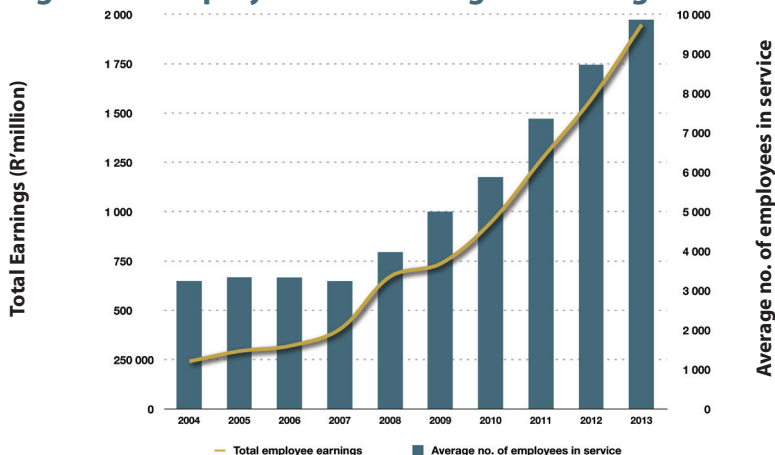
\* Revised as at September 2014

Source: Department of Mineral Resources

Global manganese reserves are estimated to be at 570 million tonnes, with South Africa accounting for about 75% of the world's identified manganese resources, followed by Ukraine at 10% (USGS). In 2013, SA manganese production increased by 23% to 10.9 MT from 8.9 MT in 2012. The export sales value grew by 33% from R9.7 billion in 2012 to R12.9 billion in 2013, and domestic sales increased to R1.5 billion from R1.1 billion in 2012 (Table 12, page 19).

The manganese sector employed 9 866 employees in 2013, down from 8 726 in 2012, and paid a total of R1.9 billion in salaries & wages, up from R1.6 billion in 2012 (Figure 14).

**Figure 14: Employment & earnings - SA manganese mines**



Source: Department of Mineral Resources, as at September 2014

## ANNUAL SA COAL PRODUCTION SALES & EXPORTS, 2004 – 2013

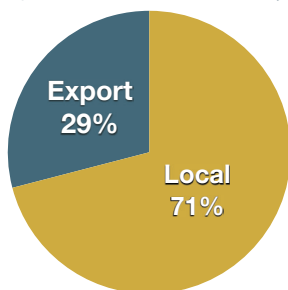
Coal consumption grew by 3% in 2013, well below the 10-year average of 3.9%. Coal's share of global primary energy consumption reached 30.1%, the highest since 1970. Consumption outside the OECD rose by a below-average 3.7%, but nonetheless accounted for 89% of global growth. Although the world's largest producer and consumer of energy in 2013, China recorded the weakest absolute growth since 2008. However, China still accounted for 67% of global growth. India experienced its second largest volumetric increase on record and accounted for 21% of global growth in energy consumption. OECD consumption increased by 1.4%, with increases in the US and Japan offsetting declines in the EU.

**TABLE 13: SA Coal production & sales**

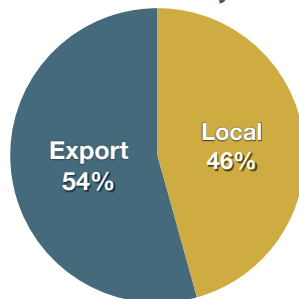
YEAR	Production	Local Sales		Export Sales		Total Sales	
	Metric tons	Mass 1 000t	Value R1000	Mass 1 000t	Value R1000	Mass 1 000t	Value R1000
2004	243 371.5	178 674.9	13 644 186.2	67 946.5	14 494 479.4	246 621.4	28 138 665.6
2005	244 988.2	173 437.3	14 878 140.0	71 442.1	21 155 176.0	244 879.4	36 033 316.0
2006	244 832.4	177 049.0	16 245 873.7	68 747.3	21 620 934.2	245 796.3	37 866 807.9
2007	247 666.4	182 769.6	19 718 642.1	67 675.4	24 447 656.2	250 445.1	44 166 298.4
2008	252 699.1	197 033.0	30 104 160.8	60 630.7	44 706 203.8	257 663.7	74 810 364.6
2009	250 538.1	184 676.7	34 442 650.1	60 539.5	31 006 559.2	245 216.1	65 449 209.3
2010	257 205.8	186 366.2	33 702 228.7	66 769.8	37 477 184.4	253 136.0	71 179 413.1
2011	252 756.8	177 705.3	37 285 726.1	68 807.1	50 548 677.6	246 512.4	87 834 403.7
2012	258 575.8	185 668.7	43 921 277.0	76 008.6	52 226 904.3	261 677.3	96 148 181.3
2013*	256 282.1	183 914.4	49 569 211.3	74 565.8	51 813 484.1	258 480.2	101 382 695.4

Source: Department of Mineral Resources, as at September 2014

Global coal production grew by 0.8%, the weakest growth since 2002. Indonesia (9.4%) and Australia (7.3%) offset a decline in the US (-3.1%), while China (1.2%) recorded the weakest volumetric growth in production since 2000. In 2013, South African coal production fell by 0.9% to 256.3 MT from 258.6 MT in 2012 (Table 13). Total coal sales by value increased by 4% from 2012, to an amount of R100.4 billion (Table 13, page 20). Approximately 71% of production was sold locally at a value of R49.5 billion, whilst the balance of production (29%) was exported at a value of R50.9 billion (Fig 15 & Fig 16).

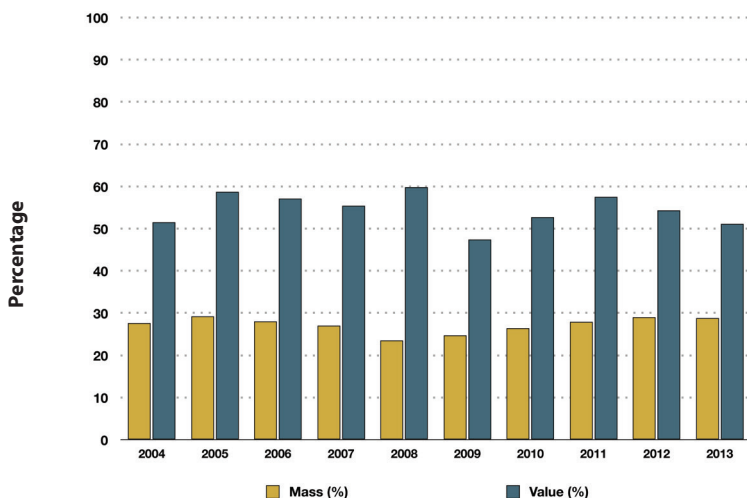
**Figure 15: Coal sales by volume**

Source: Department of Mineral Resources,  
as at September 2014

**Figure 16: Coal sales by value**

Source: Department of Mineral Resources,  
as at September 2014

The Richards Bay Coal Terminal (RBCT) achieved a record-breaking 70.2 million tons of coal in 2013. RBCT is now focused on pushing forward its Phase VI expansion plan, which will increase its name-plate capacity from 91MT to 110MT per annum. Total exports through the RBCT increased by 3% in 2013 from 68MT in 2012, still short of its full potential. Transnet Freight Rail (TFR) however, improved on its performance and transported 70.8 MT of coal to RBCT, an increase of 3.4% year-on-year.

**Figure 17: Export sales as percentage of total sales**

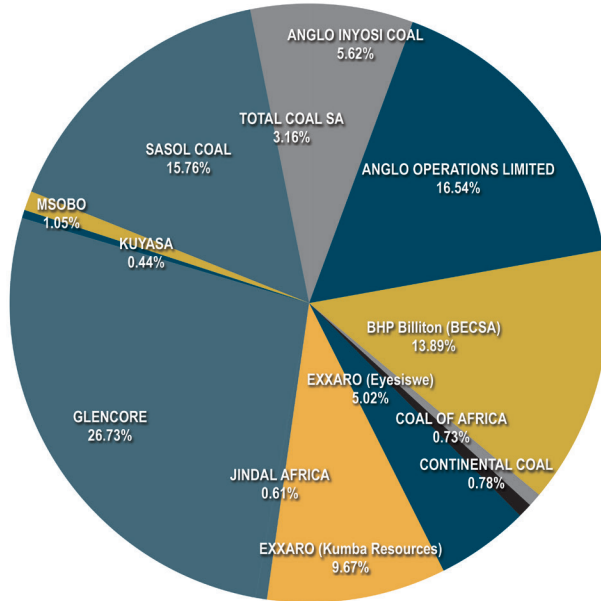
Source: Department of Mineral Resources,  
Revised as at September 2014

# ANALYSIS OF COAL SOLD BY CHAMBER MEMBER COAL PRODUCERS IN 2013

COAL MINE	2013 Total Sales tons	2013 Total Sales value (R)	COAL MINE	2013 Total Sales tons	2013 Total Sales value (R)
<u>ANGLO INYOSI COAL</u>	12 779 683	4 695 995 683	<u>EXXARO (Eyesiswe)</u>		
Kriel	8 102 636		(continued)		
Zibulo Colliery	4 677 047		New Clydesdale	543 605	
<u>ANGLO OPERATIONS</u>		13 814 575 140	NBC - North Block		
<u>LIMITED</u>	41 755 805		Complex - Grootpan,		
Goedehoop	4 943 674		Strathrae, Glisa	2 571 105	
Isibonelo	4 977 523		<u>EXXARO (Kumba</u>		
New Denmark	3 586 917		<u>Resources)</u>	22 189 036	8 075 223 021
New Vaal	17 105 704		Grootegeeluk	18 056 663	
SACE - Greenside	3 239 615		Leeuwpán	3 789 136	
SACE - Kleinkopje	3 820 732		Tshikondeni	343 237	
SACE - Landau	4 081 640		<u>JINDAL AFRICA</u>	570 570	512 329 195
<u>BHP BILLITON (BECSA)</u>	30 528 273	11 604 828 157	Jindal Mining	570 570	
BHP Billiton (BECSA) -			<u>GLENCORE</u>	46 730 431	22 323 616 147
Kutala, Klipspruit &			GLENCORE (incl. Op-		
Middelburg	30 528 273		timum, Shanduka,		
<u>COAL OF AFRICA</u>	1 290 376	609 809 445	Kangra, Umcebo		
Mooiplats	326 723		and		
<u>CONTINENTAL COAL</u>	1 945 339	650 273 346	Koornfontein)	46 730 431	
Mashala Resources -			<u>KUYASA</u>	1 649 853	363 555 493
Ferreira mine + Penumbra	564 677		Delmas	1 649 853	
Ntshovelo Mining -			<u>MSOBO</u>	1 266 390	876 636 631
Vlakovarkfontein	1 380 662		Spitzkop	724 490	
<u>EXXARO (Eyesiswe)</u>	14 983 262	4 192 995 394	Tselentis	541 900	
Arnot	1 733 311		<u>SASOL COAL</u>	38 800 000	13 167 560 000
Matla	10 135 241		Sasol Mining	38 800 000	
			<u>TOTAL COAL SA</u>	4 264 064	2 637 770 085
			<u>TOTAL COAL SA</u>	4 264 064	

**GRAND TOTAL 218 753 082 83 525 167 737**

Source: CoM Statistical Unit

**Figure 18: Percentage of coal value by Chamber members**

Source: COM Statistical Services

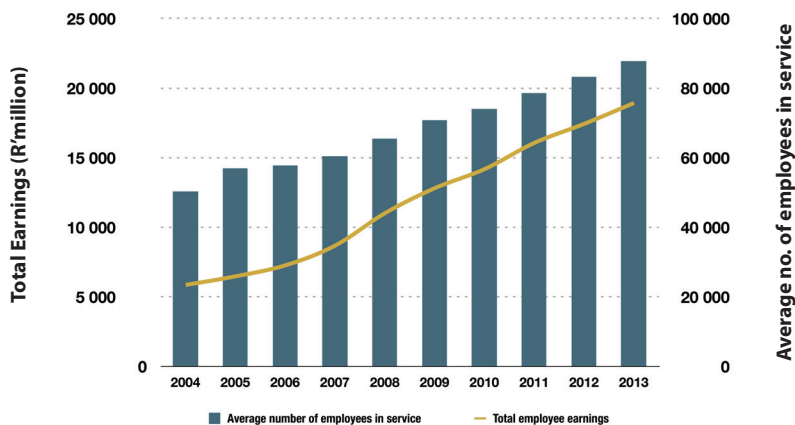
**Table 15: Monthly analysis of coal sales by Chamber members, 2013**

MONTH	Sales Tons (metric tons)	Sales Value ('R)
January	18 077 567	6 534 657 240
February	17 622 314	6 480 686 722
March	17 900 475	7 165 930 139
April	19 144 342	7 031 805 004
May	18 110 974	6 025 210 377
June	18 469 832	6 755 185 571
July	19 692 142	7 378 471 549
August	18 352 566	6 603 931 995
September	17 840 700	6 575 067 592
October	20 154 040	8 077 951 533
November	18 643 608	7 522 756 624
December	14 744 522	7 373 513 392
<b>TOTAL</b>	<b>218 753 082</b>	<b>83 525 167 737</b>

Source: CoM Statistical Services

In 2013, the number of people employed in the local coal mining industry increased by 5.4% to 87 768, with employees earning R18.9 billion in salaries and wages, up from R17.4 billion in 2012 (Fig.19).

**Figure 19: Employment & earnings - SA coal mines**



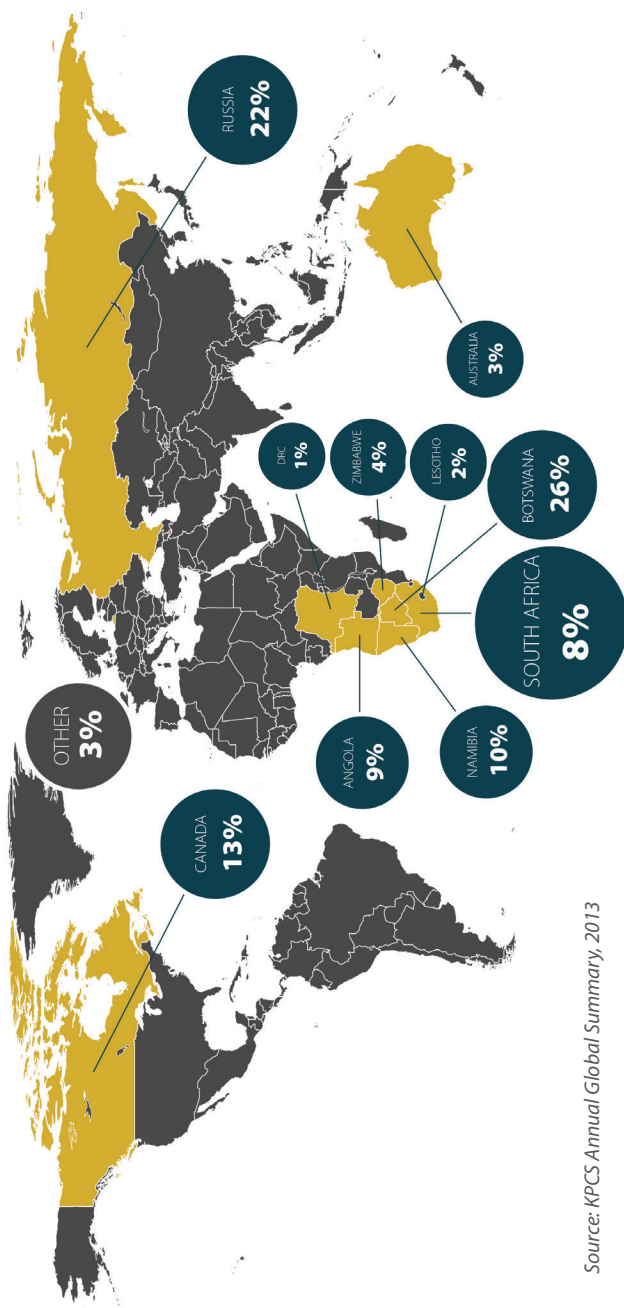
Source: Department of Mineral Resources, as at September 2014

## Diamond production and sales, 2004 – 2013

In 2013, global diamond production as estimated by the Kimberley Process Certification Scheme (KPCS) increased by 2% to 130.5 million carats, from 128 million carats in 2012. Leading producers by volume include Russia (29%), Botswana (18%), DRC (12%), Australia (9%) and Canada (8%). Leading producers by value are Botswana (26%), Russia (22%), Canada (14%), Namibia (10%) and Angola (9%), (Figure 20). The global value of rough diamonds produced increased by 11.4% to approximately R14.1 billion (Figure 20, page 25). South African diamond production increased by 12.4%, from 7.2 million carats in 2012 to 8.1 million carats in 2013 (Table 16, page 26).



**FIGURE 20: GLOBAL DIAMOND PRODUCTION FOR 2013, PER COUNTRY,  
BY VALUE IN US\$ (TOTAL VALUE \$14.1-BILLION)**



Source: KPCS Annual Global Summary, 2013

**G**lobally, diamond producers recovered 130.935 million carats in 2013, an increase of 2.4% from 2012. The market value of diamonds recovered was US\$16.868 billion, an increase of 10.7% from 2012. Producer sales were helped by a greater weight of gem and near-gem quality diamonds sold in 2013 compared to 2012, including from stockpiles. Global trade of rough and polished diamonds reached US\$276.214 billion in 2013, an increase of 8.4% from 2012.

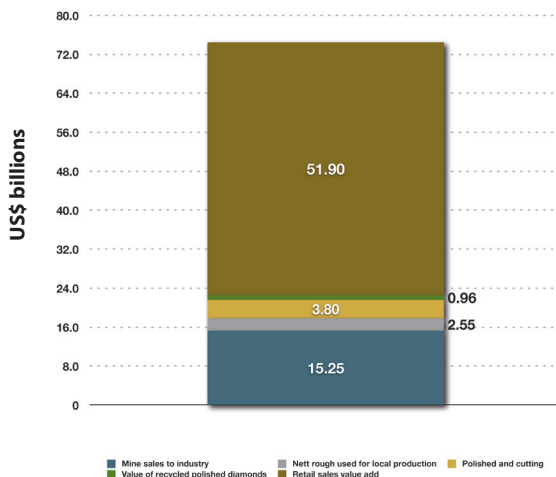
Research by Tacy Ltd. and Pharos Beam, indicates that the annual 2013 diamond pipeline looks almost similar to that of 2012: the rough supplies into the value chain totalled \$15.56 billion (2012: \$15.5 billion). Global diamond jewellery retail sales grew by 3.3% from \$72.1 billion in 2012 to \$74.48 billion in 2013. China saw significant growth on the consumption side, but the nature of the demand has changed: the Chinese market has become similar to the US market, with greater preferences for mass-marketed, lower-quality diamonds. There was also some growth in polished diamond demand in the US and Japan. In India, however, demand for polished diamonds in the domestic jewellery market declined by circa 5 percent.

The major challenges faced by the industry in 2013 were caused by internal pressures. For instance, the industry faced reduced financing facilities - with some banks withdrawing altogether- which accelerated shifts of business to Indian entrepreneurs (i.e., five new DTC Sightholders). The industry also experienced growing challenges from synthetic diamonds, with more synthetics set in jewellery. In contrast, there were less synthetic diamonds in undisclosed loose trading, and in grading and certification issues and compliance and integrity matters.

The IDEX Diamond price index estimated diamond prices depreciating by 2.9% in 2013, to 132.9 from 136.8 in 2012 (Fig. 22, page 27).

In 2013, the number of people employed in the local diamond mining industry increased by 11.3% to 13 547, with employees earning R2.9 billion in salaries and wages, up from R2.4 billion in 2012 (Figure 23, page 27).

**Figure 21: The Diamond pipeline, 2013  
(US\$ billions)**



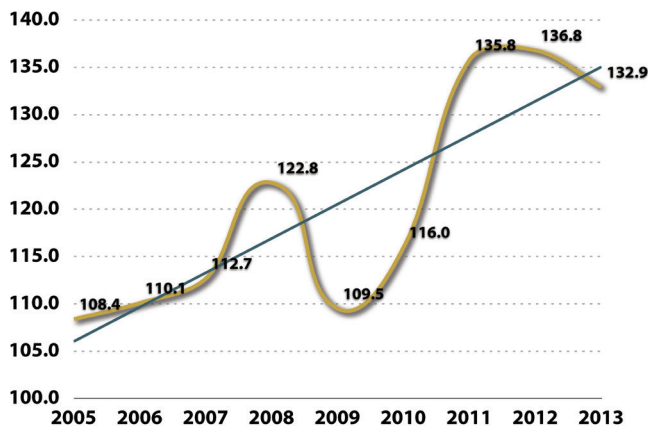
**Table 16: SA  
production, carats**

YEAR	Carats
2004	14 295 000
2005	15 776 427
2006	15 153 542
2007	15 250 215
2008	12 894 875
2009	6 112 834
2010	8 868 390
2011	7 046 644
2012	7 245 402
2013	7 543 783

Source: Department of Mineral Resources

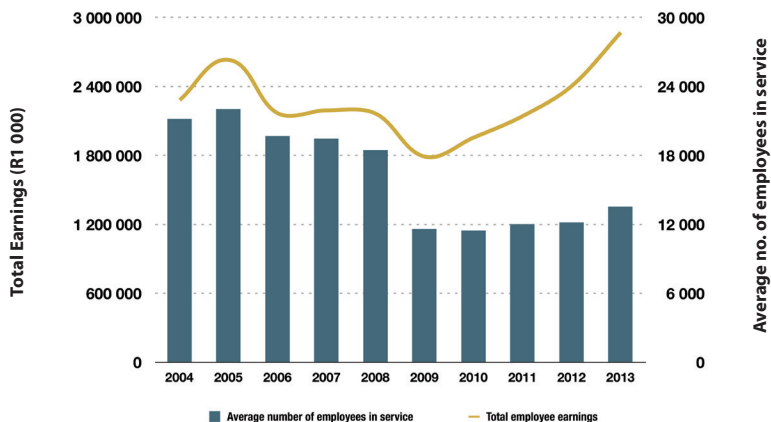
Source: IDEXONLINE, 2013

**Figure 22: IDEX Online polished diamond price index 2005-2013**



Source: IDEXONLINE, 2013

**Figure 23: Employment & earnings SA diamond mines**



Source: Department of Mineral Resources

**G**lobal gold production was 5.6% higher in 2013 compared to 2012, an increase from 2 861 tonnes to 3 022 tonnes. This was owing to increases in production from Brazil, Canada, China, the Dominican Republic, and Russia, which combined, more than offset production decreases in Peru, Tanzania, South Africa, and the United States. Gold production in China continued to increase, and the country remained the leading gold-producing nation. South Africa maintained its 6th position in the world rankings, at 167 tonnes, producing an estimated 5.5% of the global total (2012: 167.2 tonnes, 5.8% of the global total) (Table 17).

The estimated gold price in 2013 was 18.3% lower than the price in 2012, a decrease from US\$1,669 an ounce in 2012 to US\$1,410.86 an ounce in 2013 (Figure 24). Throughout the world, high-cost mines, expansion projects, and development projects were placed on hold because of the drop in the price of gold. Global jewellery consumption increased because of the low price of gold and improved economic environment. Gold used in other industrial uses was relatively unchanged.

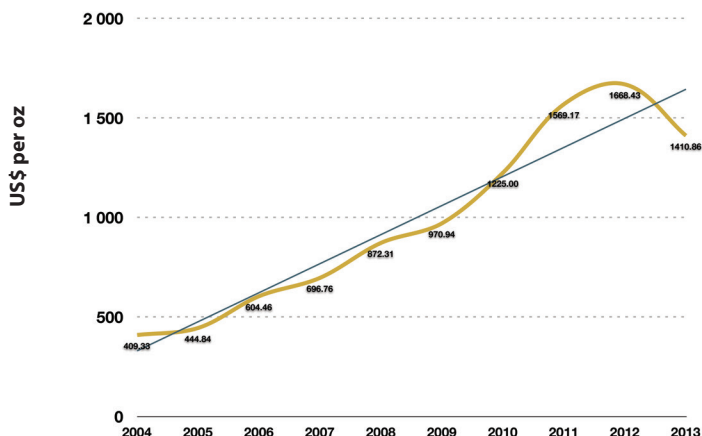
**Table 17: Global gold production**

YEAR	World gold production (tons)	SA gold production (tons)	SA – % of total
2004	2 504.0	342.0	13.66
2005	2 561.5	297.3	11.61
2006	2 496.4	275.1	11.02
2007	2 498.5	254.7	10.19
2008	2 430.1	217.6	8.96
2009	2 612.6	204.9	7.84
2010	2 741.2	195.3	7.13
2011	2 839.3	191.0	6.73
2012	2 860.9	167.2	5.85
2013	3 022.1	167.0	5.53

Source: Gold Fields Mineral Services / Chamber of Mines

Note: S.A. gold includes gold from Boputhatswana.

**Figure 24: Gold price (annual average), US\$/oz**



Source: StatsSA, SARB

In 2013, the gold mining industry was the second largest mineral exporter after platinum group metals. Approximately 6% of production was sold locally at a value of R4.9 billion, while the balance of production (94%) was exported at a value of R72 billion.

**Table 18: SA gold output**

YEAR	Metric tons treated (1 000)	Fine gold (kg's)	Realised value (R1 000)
2004	66 517	341 998	28 877 447
2005	53 817	297 312	27 214 685
2006	52 743	275 119	36 414 038
2007	56 362	254 685	38 394 267
2008	53 640	217 649	47 660 255
2009	48 870	204 923	51 246 219
2010	49 924	195 316	55 865 874
2011	50 754	191 014	70 352 730
2012	43 533	167 236	73 326 883
2013*	42 581	167 016	72 335 870

Source: Department of Mineral Resources, as at September 2014

Note: Data includes non-members of the Chamber- compiled from Government sources of information

**Table 19: SA gold sales**

YEAR	Total Sales		Export Sales		Export sales as percentage of total sales	
	Metric tons	Value R1000	Metric tons	Value R1 000	Mass %	Value %
2004	347.0	29 329 870.0	343.1	28 982 777.0	98.9	98.8
2005	270.1	24 601 241.0	265.4	24 181 619.3	98.3	98.3
2006	283.1	37 443 091.9	277.4	36 722 301.6	98.0	98.1
2007	242.6	38 035 724.4	229.3	35 953 993.3	94.5	94.5
2008	198.8	45 992 244.0	190.0	43 994 482.7	95.6	95.7
2009	187.2	48 695 502.7	180.6	46 994 168.8	96.5	96.5
2010	184.1	53 093 146.9	176.9	51 037 449.2	96.1	96.1
2011	185.7	68 891 412.8	175.5	65 258 301.7	94.5	94.7
2012	176.2	76 824 504.2	164.9	71 961 756.6	93.6	93.7
2013	130.8	57 158 710.3	123.3	53 845 892.7	94.2	94.2

Source: Department of Mineral Resources, as at September 2014

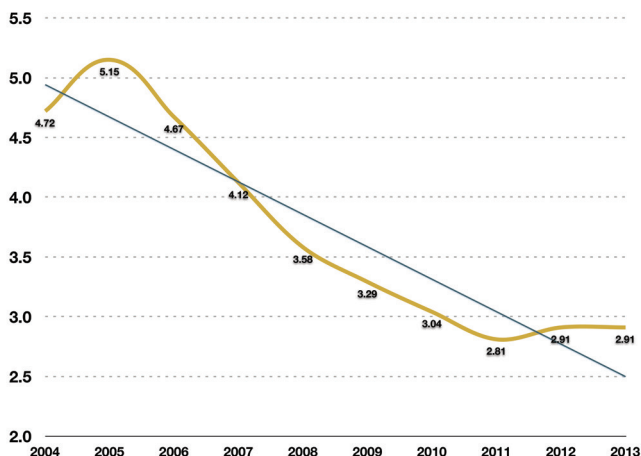
**Table 20: SA gold, ore milled & grade/ton**

YEAR	Ore milled (metric tons)	Production (kg)	Grade (g/M ton)
2004	59 702	282 030.6	4.72
2005	49 609	255 290.4	5.15
2006	50 349	235 042.5	4.67
2007	53 257	219 223.1	4.12
2008	50 999	182 489.8	3.58
2009	65 545	170 298.2	3.29
2010	73 803	160 646.4	3.04
2011	75 569	149 708.1	2.81
2012	66 119	124 252.0	2.91
2013	73 885	131 404.7	2.91

Source: Department of Mineral Resources, as at September 2014

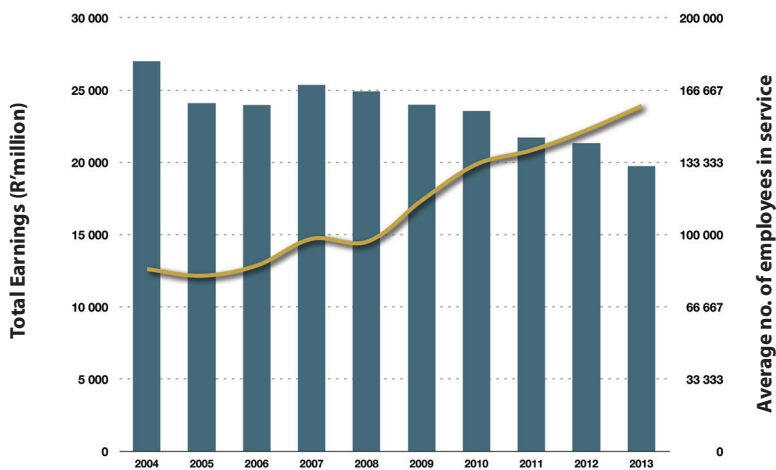
South Africa's gold grade per ton has dropped from 5.15 in 2005 to 2.91 in 2013, though slightly higher than its 2011 level of 2.81 (Table 20, page 29 & Figure 25). In 2013, the local gold mining industry employed 131 591 people (2012: 142 201), with employees earning R23.9 billion in salaries and wages, up from R22.2 billion in 2012 (Fig. 26).

**Figure25: SA gold grades (g/m ton)**



Source: Department of Mineral Resources

**Figure26: Employment & earnings – SA gold mines**



Source: Department of Mineral Resources, as at September 2014

**Table 21: Chamber gold producers**

PRODUCTION OF MAJOR GOLD PRODUCERS				
QUARTER	Ore milled metric tons (1 000)	Kilograms fine gold (Total)	Grade g/ton milled	Total fine gold (kgs)
January - June	36 561	61 352.0	2.69	69 038.7
July - December	37 324	70 052.7	3.13	77 434.9
<b>TOTALS AND AVERAGES</b>	<b>73 885</b>	<b>131 404.7</b>	<b>2.91</b>	<b>146 473.6</b>

REVENUE			
QUARTER	Operating revenues (R1 000)	Revenue/metric ton milled ('R)	Net sundry revenue & expenditure
January - June	27 094 044	741.06	DR 2 336 529
July - December	29 728 001	796.49	DR 631 230
<b>TOTALS AND AVERAGES</b>	<b>56 822 045</b>	<b>769.06</b>	<b>DR 2 967 759</b>

PROFITS			
QUARTER	Operating profit/ metric ton milled ('R)	Total operating profit (R1 000)	Total profit before tax and Capex (R1 000)
January - June	250.29	9 150 874	2 386 503
July - December	279.00	10 413 173	4 372 420
<b>TOTALS AND AVERAGES</b>	<b>264.79</b>	<b>19 564 047</b>	<b>6 758 923</b>

Source: CoM Statistical Unit

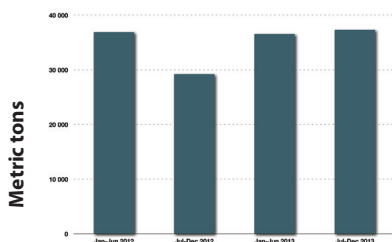
NB: For detailed company working results, go to : [www.chamberofmines.org.za](http://www.chamberofmines.org.za)

+Includes Rand Mines Milling and other producers

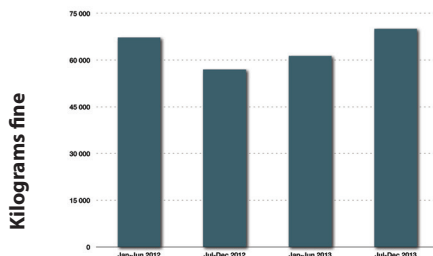
In addition, gold production by non-Chamber members has been ascertained to be 20 542.7kgs.

NOTES: Operating Revenue (a) includes revenue from gold and silver and, in certain cases, revenue from other sources, but excludes revenue from uranium and sulphuric acid. Certain mines have entered into gold hedging transactions, the effect of which is brought into account in gold revenue.

Net Sundry Revenue & Expenditure (b) includes interest, royalties, payments to Far West Rand Dolomite Water Association, tribute revenue, etc.

**Figure 27: Ore milled, 2013: Chamber member gold mines**

Source: CoM Statistical Unit

**Figure 28: Kilograms, fine gold, 2013: Chamber member gold mines**

Source: CoM Statistical Unit

**Table 22: Chamber gold producers**

<b>CASH OPERATING COSTS</b>				
<b>QUARTER</b>	<b>Total R1000</b>	<b>Costs/ metric ton milled</b>	<b>Costs/ kilogram gold (‘R)</b>	<b>Total other costs</b>
<b>January - June</b>	17 943 170	490.77	292 463	4 427 842
<b>July - December</b>	19 314 828	517.49	275 719	5 409 523
<b>TOTALS AND AVERAGES</b>	<b>37 257 998</b>	<b>504.27</b>	<b>283 536</b>	<b>9 837 365</b>

<b>TAXATION/CAPEX/DIVIDENDS</b>			
<b>QUARTER</b>	<b>Tax &amp; state's share of profits (estimated) (‘R)</b>	<b>Capex (less recoupments) R1 000</b>	<b>Dividends (‘R)</b>
<b>January - June</b>	346 467	5 909 044	192 259 071
<b>July - December</b>	543 667	5 850 642	0
<b>TOTALS AND AVERAGES</b>	<b>890 134</b>	<b>11 759 686</b>	<b>192 259 071</b>

Source: CoM Statistical Unit

## NOTES

The gold producers above treated 2 643 442 metric tons of material to produce 626 055 kilograms of uranium oxide of grade = 0,237 kg/ton.

The financial results are published in accordance with international financial accounting standards.

DRDGold : DRDGold's production has not been included in the major Chamber producer data but has been included in the total Chamber member's data.

Sibanye Gold: Sibanye has changed their mines' financial reporting from quarterly to six monthly. Thus the six monthly tables above.

Village Main Reef (abbreviated VMR): joined the Chamber in March 2013. Their mines' data is included in major Chamber producers as from April 2013.

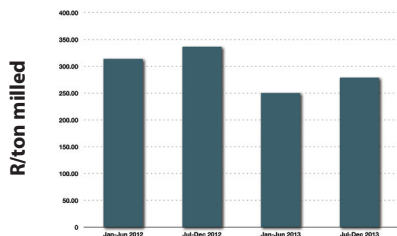
VMR: Blyvooruitzicht went into liquidation process as from 6 August 2013 and thus their results are included from 1 April to 6 August 2013.

VMR: Buffelsfontein is a discontinued operation and the gold from cleanup for the July to December 2013 is not included in the major Chamber producer data but has been included in the total Chamber member's data.

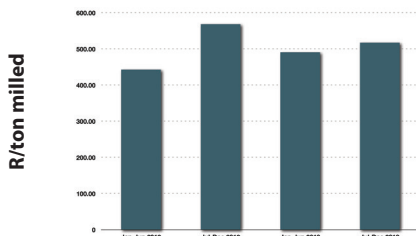
Retrenchment costs are included net of other costs.

The data in this report refers to South African operations only.

Totals may not add due to rounding.

**Figure 29: Operating profit per ton milled, 2013: Chamber member gold mines**

Source: CoM Statistical Unit

**Figure 30: Cash operating costs per ton milled, 2013: Chamber member gold mines**

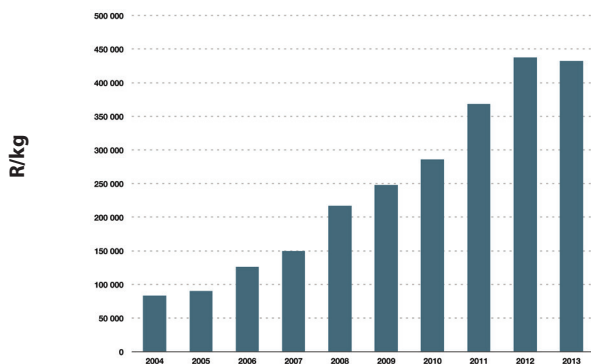
Source: CoM Statistical Unit



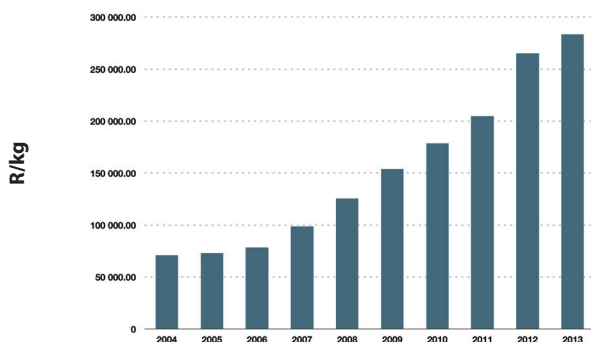
**Table 23: Annual average costs & profits: Chamber gold producers**

YEAR	Operating revenue/ metric ton (R)	Operating revenue/ kilogram (R)	Cash operating costs/ metric ton (R)	Cash operating costs/ kilogram (R)	Operating profits/ metric ton (R)
2004	393.53	83 304	335.16	70 949	58.37
2005	464.29	90 223	376.02	73 070	88.27
2006	588.79	126 126	366.21	78 447	222.58
2007	616.23	149 702	406.09	98 653	210.14
2008	776.36	216 967	449.27	125 557	327.09
2009	644.15	247 927	400.03	153 967	244.12
2010	622.42	285 947	388.93	178 679	233.49
2011	729.84	368 405	405.73	204 800	324.11
2012	822.47	437 670	498.52	265 281	323.95
2013	769.06	432 420	504.27	283 536	264.79

Source: CoM Statistical Unit

**Figure 31: Operating revenue/kg (annual), 2004 - 2013:  
Chamber member gold mines**

Source: CoM Statistical Unit

**Figure 32: Cash operating costs/kg (annual), 2013:  
Chamber member gold mines**

Source: CoM Statistical Unit

## PGM industry in crisis

The South African PGM mining sector is one of the largest components of the South African mining sector on the basis of GDP and export earnings, and is a significant contributor to the South African economy: In 2013, the PGM mining industry generated R84 billion in sales, a 21.7% increase from sales of R69 billion in 2012. This was in spite of the wildcat strikes of 2012 which continued into 2013.

Despite the significant role and contribution of the platinum mining sector to the South African economy, the platinum mining industry continues to be in crisis. The industry has been hit by a combined impact of slowing global demand, falling prices, rapidly escalating domestic production costs (that have added to the high cost structure of the industry) and the impact of the wildcat strikes that hit the industry in 2012, and continued into 2013. The platinum mining industry lost around R15.3 billion in output as a result of strikes in 2012.

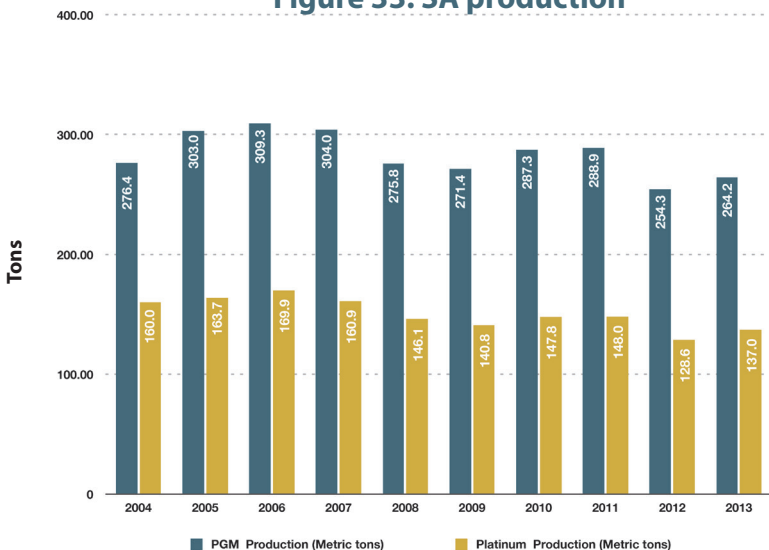
Owing to continued global economic concerns, the average annual prices of platinum and rhodium decreased for the second consecutive year. The palladium average yearly price was higher in 2013 than that in 2012, likely owing to increased consumption in the automobile sector. Platinum prices remained higher than those for rhodium for the second consecutive year, and remained below those for gold during the first quarter of 2013 before increasing above gold prices.

The weakness in the main PGM market of Europe, combined with increased availability of scrap and recycled metal, and some substitution of platinum by palladium, has exacerbated the weakness in the platinum market. The damage to the reputation of South Africa as a reliable supplier of platinum to global markets has prompted the move to greater secondary recycling. Based on prices of about US\$1600 per ounce of platinum, combined with cash costs and sustained capital expenditure, approximately 59% of the platinum mining industry is either marginal or loss-making. This is an untenable situation and restructuring and job losses are inevitable.

### PGM production & labour

South Africa's PGM production increased by 3.9% from 254.3 tonnes to 264.2 tonnes in 2013 (Fig. 33). Platinum production also increased by 6.6, from 128.6 tonnes to 137 tonnes in 2013.

Figure 33: SA production

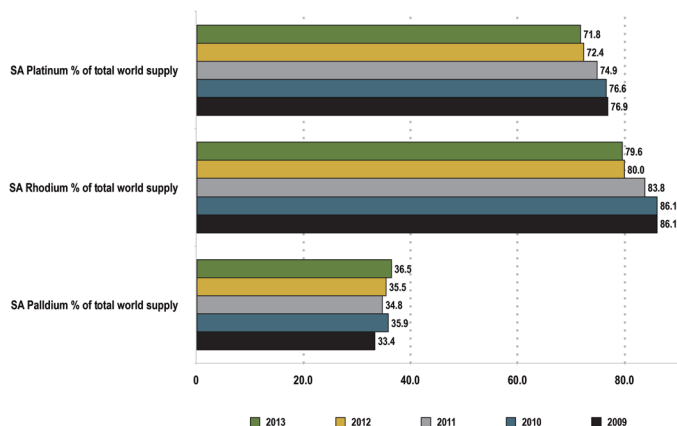


\* Revised as at September 2014

Sources: Department of Mineral Resources; Vermaak, C.F. The platinum-group metals, 1995; Johnson Matthey; Platinum various editions; South African Minerals Bureau

In 2013, South Africa accounted for 79.6% (2012: 79.8%) of primary rhodium production, 71.8% (2012: 72.4%) of primary platinum production and 36.5% (2012: 35.6%) of primary palladium production (Fig. 34).

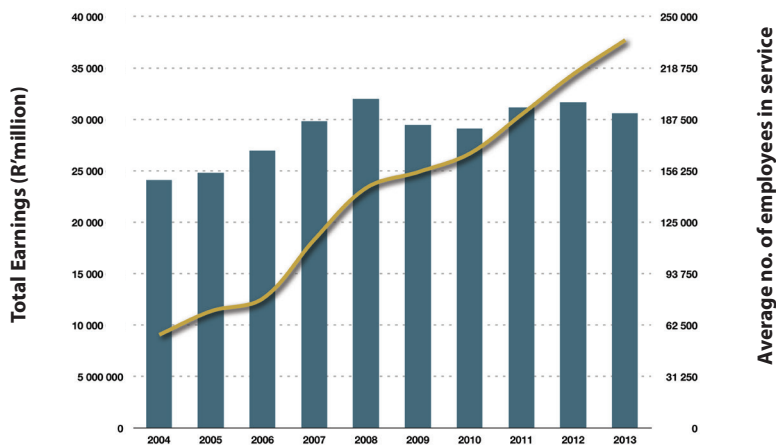
**Figure 34: SA share of world PGM production**



Source: Johnson Matthey

The PGM sector employed 191 216 people in 2013, a decrease of 3.3% from 197 847 in 2012, with employees earning R37.7 billion in salaries and wages, a 10% increase from R34.4 billion in 2012 (Fig. 35).

**Figure 35: Employment & earnings – SA PGM mines**



Source: Department of Mineral Resources, as at June 2014

**G**lobal platinum supply recovered marginally in 2013, increasing by 1.6% to 178.5 tonnes after falling by 13% to 175.4 tonnes in 2012 - the lowest level in 12 years. The increase in platinum supply was on the back of a recovery in mine production following major disruptive strike action in South Africa in 2012. Recycling increased from 63 tonnes in 2012 to 64.6 tonnes in 2013.

Industrial demand in 2013 increased by 11.4% to 54.9 tonnes from 49 tonnes in 2012, mostly due to a recovery in the demand for glass, chemicals and electronics, whilst investment demand rose by a staggering 67.6% from 14.2 tonnes in 2012 to 23.8 tonnes (Table 24). The launch of Absa's new Platinum ETF in South Africa attracted strong investment, leading to investment demand via exchange traded funds (ETFs) reaching record highs. In 2004 demand for platinum in autocatalysts was 45% of gross platinum demand. In 2013, and despite the growing demand for motor vehicles, autocatalysts only accounted for 34% of the gross platinum demand. The decline can be explained by thrifting (i.e., using smaller platinum loads in the final product) and an active search by autocatalyst makers for less-costly alternative catalytic metals. Catalysts are becoming more efficient and less-demanding of platinum.

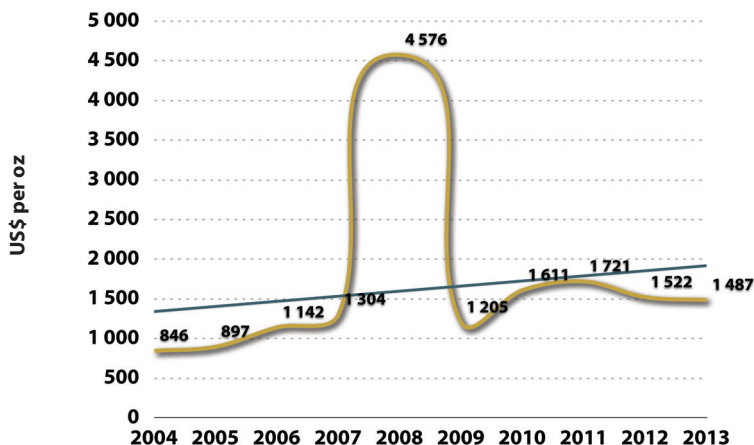
Jewellery demand (gross) fell slightly by 1.5% to 85.2 tonnes from 86.5 in 2012 (Table 24), driven by demand from China. Demand by Chinese manufacturers who supply the growing number of retail outlets in cities, as well as manufacturers taking advantage of the lower platinum price, continued to push platinum jewellery demand up. Furthermore, there was a wider distribution of platinum jewellery in India's retail network.

**Table 24: Annual platinum demand, by application (metric tons)**

	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
<b>Autocatalyst: gross</b>	108.6	118.0	121.5	128.9	113.7	68.0	95.6	99.1	99.2	97.2
<b>recycling</b>	-21.5	-23.9	-26.7	-29.1	-35.1	-25.8	-33.7	-38.6	-35.1	-39.7
<b>Chemical</b>	10.1	10.1	12.3	13.1	12.4	9.0	13.7	14.6	14.0	16.8
<b>Electrical</b>	9.3	11.2	11.2	7.9	7.2	5.9	7.2	7.2	5.1	6.4
<b>gross</b>	0.0	0.0	0.0	0.0	-0.2	-0.3	-0.3	-0.3	-0.6	-0.8
<b>recycling</b>	9.0	11.2	12.6	14.6	9.8	0.3	12.0	16.0	5.0	7.3
<b>Glass</b>	1.4	0.5	-1.2	5.3	17.3	20.5	20.4	14.3	14.2	23.8
<b>Investment:</b>	67.2	76.7	68.3	65.6	64.1	87.4	75.3	77.0	86.5	85.2
<b>Jewellery</b>	0.0	-15.6	-17.3	-20.4	-21.6	-17.6	-22.9	-25.2	-27.7	-24.1
<b>gross</b>	0.0	7.8	7.8	7.2	7.6	7.8	7.2	7.2	7.3	7.3
<b>recycling</b>	0.0	7.8	7.8	7.2	7.6	7.8	7.2	7.2	7.3	7.3
<b>Medical &amp; biomedical</b>	4.7	5.3	5.6	6.4	7.5	6.5	5.3	6.5	6.4	4.8
<b>Petroleum</b>	14.6	7.0	7.5	8.2	9.0	5.9	9.3	10.0	12.1	13.1
<b>Other</b>										
<b>Total net demand</b>	<b>203.4</b>	<b>208.2</b>	<b>201.4</b>	<b>207.8</b>	<b>191.6</b>	<b>167.6</b>	<b>189.0</b>	<b>187.7</b>	<b>186.3</b>	<b>197.4</b>
<b>Movements in stocks</b>	<b>-1.6</b>	<b>-1.7</b>	<b>11.0</b>	<b>-2.5</b>	<b>-6.8</b>	<b>19.8</b>	<b>-0.8</b>	<b>14.0</b>	<b>-10.6</b>	<b>-18.8</b>

Source: Johnson Matthey Website

Totals may not add due to rounding

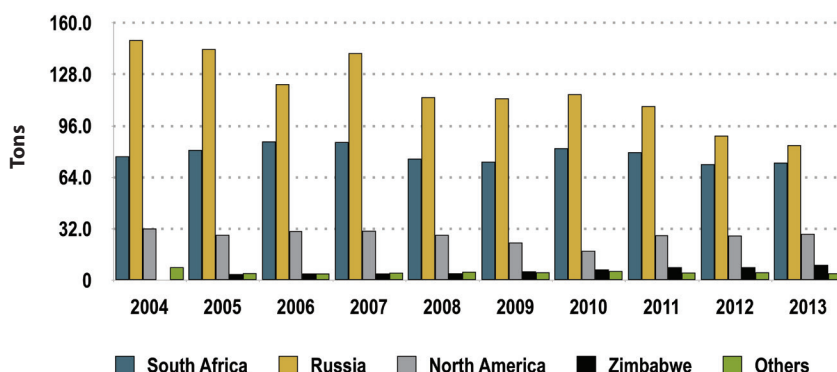
**Figure 36: Platinum price (annual avg), US\$/oz**

Source: StatsSA, SARB

The platinum price in 2013 averaged US\$1,487 per ounce, trading 2.3% lower than the 2012 average of US\$1,522 per ounce (Figure 36). This is largely due to the slowdown in European demand, slower demand growth in China due to the economy's "slow landing", and the surge in scrap supply. After starting 2013 on a strong note with prices reaching \$1,742/ounce in February, platinum prices started to trend lower as a lack of follow through strike action in South Africa, and continuing poor auto sales in Europe. The sell-off in gold prices in April and again in June carried platinum prices with them, with platinum reaching a low of \$1,294/ounce in late-June 2013.

The global supply of palladium dropped 1.5% from 203.5 tonne in 2012 to 200 tonnes. Russian mine supplies fell by 6.6% from 89.9 tonnes to 84 tonnes, while North American supplies rose by 3.9% to 28.9 tonnes (2012: 27.8 tonnes)(Figure 37). Palladium being a platinum by-product, also recovered in line with platinum supply recovery in South Africa in 2013, having been affected by the strike action. Palladium production from South Africa increased by 1.3% to 73.1 tonnes in 2013 from 72.2 tonnes in 2012.

**Figure 37: Annual palladium supply by country**



Source: Johnson Matthey, Platinum 2013

Global palladium demand saw a marginal increase in 2013, largely driven by healthy gains in autocatalysts and chemicals, which outweighed losses in other industrial sectors. Net demand for palladium in the automotive sector, increased by 2.3 tons to 158.9 tonnes from 156.6 tonnes in 2012, countering the contraction of palladium demand in the electrical and jewellery sectors (net), which contracted to 19.8 tonnes and 6.5 tonnes respectively (Table 25, page 39). The decline in palladium jewellery demand was led by a sizeable fall in China, where its share in global demand dropped to 44% from over 70% a decade ago. Palladium has struggled to penetrate the wider market in an environment where gold jewellery has dominated retail sales. The recycling of palladium jewellery also contracted to 5.6 tonnes in 2013, from levels of 5.9 tonnes in 2012.

**Table 25: Annual palladium demand, by application (metric tons)**

		2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
<b>Autocatalyst</b>	<b>gross</b>	117.9	120.2	124.9	141.4	138.9	126.0	173.6	191.4	208.5	216.8
	<b>recycling</b>	-16.5	-19.4	-25.0	-31.6	-35.5	-30.0	-40.7	-52.7	-51.9	-57.9
<b>Chemical</b>		9.6	12.9	13.7	11.7	10.9	10.1	11.5	13.7	16.5	16.5
<b>Dental</b>		26.4	25.3	19.3	19.6	19.4	19.8	18.5	16.8	16.5	15.9
<b>Electrical</b>	<b>gross</b>	28.6	39.7	46.5	48.2	42.6	42.6	43.9	42.8	37.0	32.8
	<b>recycling</b>	6.2	-9.5	-9.0	-9.8	-10.7	-12.3	-13.7	-14.9	-13.4	-13.1
<b>Investment</b>		28.9	6.8	1.6	8.1	13.1	19.4	34.1	-17.6	14.6	2.3
<b>Jewellery</b>	<b>gross</b>	2.8	46.3	35.5	29.5	30.6	24.1	18.5	15.7	13.8	12.1
	<b>recycling</b>	220.5	-1.9	-4.2	-7.3	-4.0	-2.2	-3.1	-6.5	-5.9	-5.6
<b>Other</b>		0.0	0.0	8.2	2.6	2.6	2.3	2.2	2.8	3.4	3.3
<b>Total net demand</b>		<b>425</b>	<b>229</b>	<b>206</b>	<b>212</b>	<b>208</b>	<b>200</b>	<b>245</b>	<b>192</b>	<b>239</b>	<b>223</b>

**Movements in stocks**

62.8	32.7	41.5	54.4	19.8	21.2	-16.5	36.9	-35.8	-23.0
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Source: Johnson Matthey, Platinum 2013

Totals may not add due to rounding

"Before 2005" sales from Russian state stocks are incorporated in total Russian supply

"Before 2005" Zimbabwe supply is incorporated in "Other"

"Before 2005" jewellery and electrical demand is net of recycling.

The palladium price averaged US\$724 per ounce in 2013, a 13% increase from the 2012 price of US\$643 per ounce. The price oscillated sideways throughout 2013, albeit within a wide range between US\$787 per ounce and US\$630 per ounce. With the market in a supply deficit, prices have managed to hold up at relatively high levels, but being a precious metal palladium prices have been dragged lower at times by the weakness in gold.

## Rhodium supply & demand, 2004 - 2013

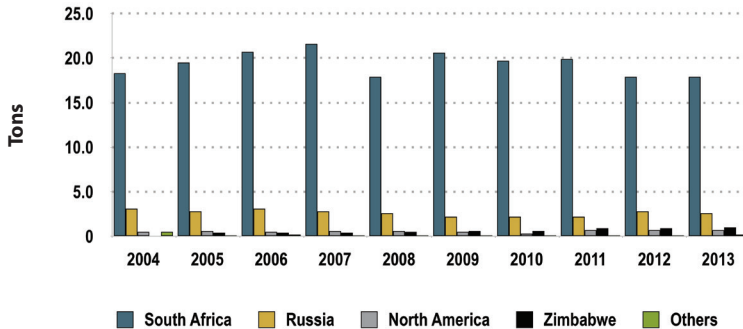
Similar to 2012, the supply and demand for rhodium in 2013 came close to balance. Rhodium supply from South Africa, Russia, North America and Zimbabwe remained largely unchanged from 2012 to 2013, and so was the demand for the metal for its largest applications (autocatalyst, chemical, electronics and glass). Total supply was maintained at 22.4 tonnes in 2013, same as 2012 levels.

Gross autocatalyst demand increased by 1.2% to 24.9 tonnes in 2013, while demand for rhodium for use in chemicals and electronics remained flat at 2.5 and 0.2 tonnes respectively. This resulted in an overall effect of a 1.8% increase in net demand to 22.9 tonnes from 22.5 tonnes in 2012 (Table 26).

The 33% increase in "Other" demand from 2.1 to 2.8 tonnes, was largely due to the increased demand for the physically-backed rhodium ETF (Table 26).

The rhodium price averaged US\$1,102 per ounce in 2013, trading 17% below the 2012 average of US\$1,276 per ounce, and 45.5% lower than the average price in 2011 (US\$2,022 per ounce). The observed increase in the demand for rhodium is also attributable to the lower prices.

**Figure 38: Annual rhodium supply by country**



Source: Johnson Matthey, Platinum 2013

**Table 26: Annual rhodium demand, by application (metric tons)**

	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
<b>Autocatalyst: gross</b>	23.6	25.8	26.8	27.6	23.9	19.3	22.6	22.2	24.6	24.9
<b>recycling</b>	-4.4	-4.3	-5.3	-6.0	-7.1	-5.8	-7.5	-8.6	-7.8	-8.7
<b>Chemical</b>	1.3	1.5	1.5	2.0	2.1	1.7	2.1	2.2	2.5	2.5
<b>Electrical</b>	0.2	0.3	0.3	0.1	0.1	0.1	0.1	0.2	0.2	0.2
<b>Glass</b>	1.4	1.8	2.0	1.8	1.1	0.6	2.1	2.4	1.0	1.2
<b>Other</b>	0.4	0.6	0.7	0.7	0.7	0.7	0.7	1.2	2.1	2.8
<b>Total net demand</b>	<b>22.7</b>	<b>25.7</b>	<b>26.1</b>	<b>26.3</b>	<b>20.8</b>	<b>16.5</b>	<b>20.1</b>	<b>19.6</b>	<b>22.5</b>	<b>22.9</b>

**Movements in stocks**

-0.3	-2.3	-1.1	-0.6	0.8	7.5	2.7	4.2	0.0	-0.4
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Source: Johnson Matthey Website



# TABLE 27: SILVER: ANNUAL SA OUTPUT & SALES, 1911-2013

Chamber of Mines of South Africa

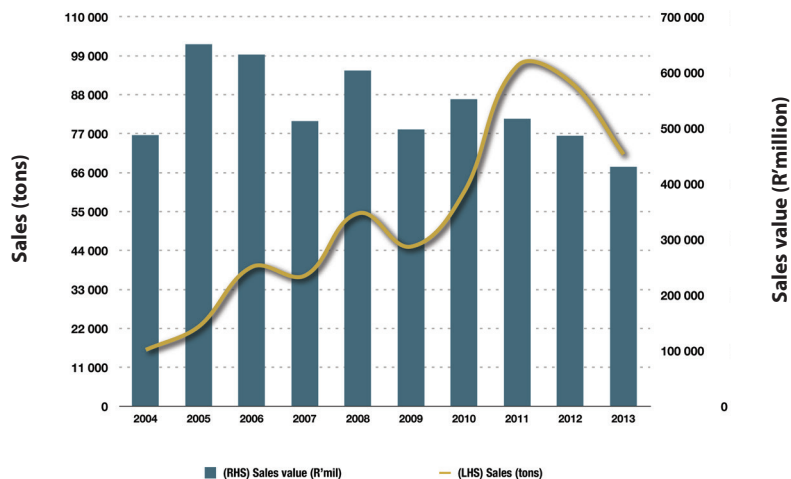
Facts & Figures 2013/2014

YEAR	Production (kgs, fine)	Sales Value (R)	YEAR	Production (kgs, fine)	Sales Value (R)	Production (kgs, fine)	Sales Value (R)	YEAR	Production (kgs, fine)	Sales Value (R)	Sales (kgs, fine)	Sales Value (R)
1911	27 888	197 014	1937	34 233	198 926	85 126	2 511 941	1989	179 829	69 628 311		
1912	31 695	248 748	1938	35 314	199 348	90 718	2 720 349	1990	161 003	57 314 758		
1913	29 629	231 644	1939	36 780	217 000	97 403	2 902 564	1991	170 832	38 329 339		
1914	27 706	204 942	1940	40 195	259 108	97 480	2 936 887	1992	190 462	55 816 450		
1915	30 051	212 490	1941	45 123	313 128	95 286	3 536 449	1993	182 513	67 922 850		
1916	30 137	212 622	1942	45 957	312 810	103 794	3 546 137	1994	195 794	78 913 490		
1917	29 180	345 994	1943	41 493	282 432	103 718	4 114 099	1995	163 048	68 640 332		
1918	27 294	375 216	1944	37 730	256 818	109 701	4 392 365	1996	155 529	83 012 940		
1919	27 723	457 608	1945	38 675	315 144	105 071	4 566 873	1997	187 402	102 261 000		
1920	27 763	491 742	1946	37 554	489 072	102 443	5 239 165	1998	160 828	122 821 438		
1921	25 826	274 882	1947	35 697	436 124	113 591	7 331 163	1999	160 807	153 509 773		
1922	34 701	342 854	1948	36 421	439 526	83 940	8 207 660	2000	168 617	169 937 577		
1923	42 734	395 776	1949	36 061	475 536	95 923	10 012 472	2001	126 482	141 723 487		
1924	43 450	424 940	1950	34 809	604 230	87 736	10 617 725	2002	118 256	168 674 333		
1925	36 126	333 796	1951	36 161	754 214	97 364	12 607 089	2003	108 326	119 214 911		
1926	30 523	253 160	1952	36 591	728 796	96 559	14 695 091	2004	76 590	101 478 200		
1927	31 469	237 062	1953	37 111	735 226	100 664	29 872 517	2005	102 264	143 503 595		
1928	32 079	248 128	1954	38 426	756 526	222 188	82 520 689	2006	99 343	250 621 132		
1929	32 092	227 006	1955	45 876	958 074	228 834	55 822 121	2007	80 549	235 040 623		
1930	32 660	166 828	1956	49 712	1 054 066	242 748	53 171 269	2008	94 830	346 844 987		
1931	33 065	139 520	1957	54 975	1 135 762	201 752	71 139 799	2009	78 198	287 103 382		
1932	34 857	131 678	1958	55 843	1 163 186	217 068	66 186 353	2010	86 735	386 078 880		
1933	33 126	173 708	1959	62 853	1 325 562	208 384	75 010 169	2011	81 221	611 933 219		
1934	31 172	191 374	1960	69 243	1 471 882	222 241	73 975 331	2012	76 413	582 823 745		
1935	32 416	271 806	1961	71 173	1 576 355	208 150	74 187 998	2013	67 649	452 850 761		
1936	33 456	194 102	1962	79 289	1 952 200	199 746	79 469 224					

Source: Department of Mineral Resources

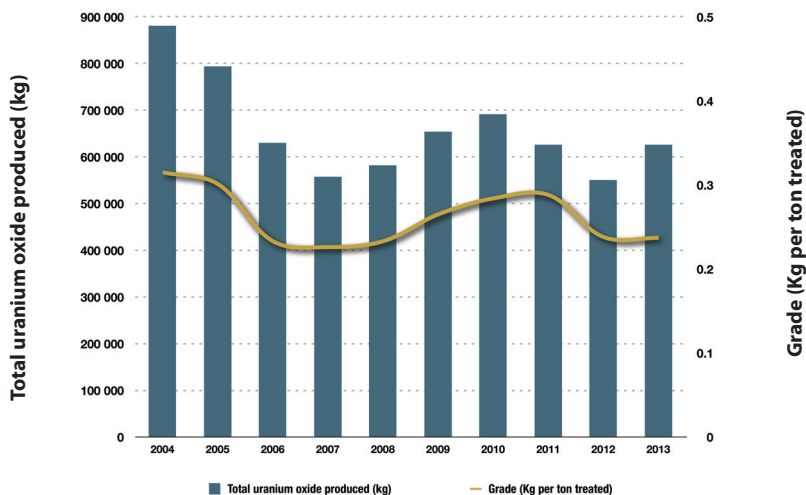
+ From 1981 the figures represent sales of silver

**Figure 39: Silver sales (tons & value)**



Source: Department of Mineral Resources, as at September 2014

**Figure 40: Uranium production (Kg produced & grade)**



**TABLE 28: URANIUM OUTPUT AND PRODUCTION, 1971 – 2013**

YEAR	Metric tons treated (1000)	Total uranium oxide produced (kg)	Grade (Kg per ton treated)	Total SA uranium production (metric tons)
1971	14 253	3 800 007	0.267	3 800
1972	14 609	3 629 265	0.248	3 778
1973	12 828	3 093 982	0.241	3 230
1974	14 654	3 074 418	0.210	3 177
1975	14 873	2 809 490	0.189	2 902
1976	17 267	3 111 366	0.180	3 288
1977	19 855	3 873 795	0.179	3 972
1978	21 976	4 531 157	0.171	4 687
1979	26 096	5 539 081	0.168	5 637
1980	30 841	6 086 442	0.166	7 295
1981	31 362	6 030 171	0.157	7 234
1982	30 415	5 733 188	0.160	6 863
1983	32 010	6 138 282	0.169	7 128
1984	29 490	5 896 062	0.180	6 762
1985	25 856	5 114 008	0.175	5 751
1986	24 836	4 799 301	0.172	5 460
1987	21 805	3 920 002	0.159	4 735
1988	20 174	3 783 364	0.163	4 583
1989	15 326	3 185 428	0.179	3 456
1990	14 213	2 697 125	0.178	2 913
1991	10 145	1 885 257	0.186	2 034
1992	9 768	1 854 946	0.190	1 971
1993	9 675	1 912 921	0.198	2 008
1994	9 250	1 818 717	0.197	1 906
1995	8 345	1 554 210	0.186	1 701
1996	8 661	1 594 506	0.184	1 706
1997	6 536	1 198 742	0.183	1 324
1998	4 810	1 061 492	0.221	1 138
1999	4 021	997 297	0.248	1 093
2000	3 098	894 109	0.289	1 015
2001	2 824	1 024 838	0.363	1 065
2002	2 789	979 865	0.351	998
2003	2 836	915 861	0.323	894
2004	2 799	880 943	0.315	887
2005	2 638	793 943	0.301	795
2006	2 705	630 103	0.233	639
2007	2 462	557 525	0.226	619
2008	2 502	582 001	0.233	654
2009	2 471	654 086	0.265	629
2010	2 437	691 359	0.284	682
2011	2 174	626 117	0.288	656
2012	2 312	550 458	0.238	551
2013	2 643	626 055	0.237	626

Source: Department of Mineral Resources, as at September 2014

TABLE 29: CUMULATIVE URANIUM OUTPUT – CHAMBER MEMBERS

NAME OF COMPANY		Date commenced production	Cummulative metric tons treated (1000)	Cummulative uranium produced (kg)	Grade (kg per ton treated)
<b>Anglogold Ashanti</b>	(i)	May 1956	216 331	50 787 248	0.235
<b>Blyvooruitzicht</b>		April 1953	37 947	6 551 267	0.173
<b>Buffelsfontein (Buffels)</b>		July 1957	83 820	18 237 778	0.218
<b>Daggafontein</b>		April 1953	11 183	2 160 591	0.193
<b>Dominion Reefs</b>		June 1955	3 578	1 822 873	0.510
<b>Doornfontein</b>		Oct. 1956	1 835	266 238	0.145
<b>Driefontein Cons.</b>		Oct. 1956	20 529	3 915 762	0.191
<b>(West Driefontein)</b>					
<b>East Champ d'Or</b>		Feb. 1954	1 371	552 993	0.396
<b>Ellaton</b>		Oct. 1954	2 153	329 585	0.153
<b>Freddies Cons.</b>	(g)	Feb. 1955	4 555	580 667	0.127
<b>Free State Saaiplaas</b>	(h)	Feb. 1955	350	45 545	0.130
<b>Harmony</b>	(a)	July 1955	103 261	12 490 823	0.121
<b>Hartebeestfontein</b>		Nov. 1956	103 426	16 456 207	0.159
<b>Loraine</b>		Nov. 1956	2 807	330 969	0.118
<b>Luipaardsvlei</b>		Jan. 1955	4 518	3 518 258	0.779
<b>Merriespruit</b>	(b), (c)	Mar. 1956	518	14 249	0.028
<b>President Brand</b>	(h)	Feb. 1955	4 521	566 693	0.125
<b>President Steyn</b>	(h)	Feb. 1955	5 566	736 015	0.132
<b>Randfontein</b>		Feb. 1954	45 248	12 060 225	0.266
<b>St. Helena</b>		Jan. 1982	2 298	1 061 698	0.462
<b>(Beisa section)</b>					
<b>Stilfontein</b>		Oct. 1953	7 328	987 707	0.135
<b>Virginia</b>	(c)	Sept. 1955	22 067	5 279 693	0.239
<b>Vogelstruisbult</b>		April 1955	3 480	844 797	0.242
<b>Welkom</b>	(h)	May 1957	3 453	491 898	0.142
<b>West Rand Cons.</b>	(d)	Sept. 1952	22 332	13 035 712	0.584
<b>Western Areas</b>		Jan. 1982	9 408	4 037 235	0.429
<b>Western Deep Levels</b>		Feb. 1970	17 136	2 553 326	0.149
<b>Western Reefs</b>	(e)	Oct. 1953	34 933	8 475 181	0.243
<b>Zandpan</b>	(f)	Mar. 1966	4 205	1 419 095	0.337
<b>Free State Cons. Joint Metallurgical Scheme</b>		1977	-	8 583 087	-
<b>Miscellaneous Producers – Chamber members</b>		1978	-	598 240	-

Source: Chamber of Mines

## NOTES:

(a) Consolidated operations of the company and its wholly owned subsidiaries.

(b) Ceased production in October 1956, due to flooding and subsequently became a wholly owned subsidiary of Harmony.

(c) Became a wholly owned subsidiary of Harmony.

(d) Ceased uranium production at the end of 1974 - resumed production 1976 and ceased uranium production in 1981.

(e) Includes Joint Production Scheme with Vaal Reefs. As from 20 September 1971, merged with Vaal Reefs.

(f) As from 1 July 1972, merged with Hartebeestfontein.

(g) As from 1977, merged with Free State Geduld - see note (h).

(h) These mines together with Free State Geduld; Free State Saaiplaas; and Western Holdings - as from 1977, are participants in the Anglo American O.F.S. Joint Metallurgical Production Scheme, which has merged with Free State Cons. (South Region).

(i) As from 1999, Vaal Reefs renamed Vaal River Operations and reports under the name Anglogold.