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Appendix

Appendix 1: Platinum

Industrial applications for platinum:

Chemical catalysts

Platinum is used in a wide range of chemical catalysts for the production of chemical compounds. These compounds include silicones and other polymers.

Electronics

Platinum is used extensively in the manufacturing of hard disks for computers and other recording devices. A potential future use of platinum is in fuel-cell technology where electricity is generated by means of electrochemical reactions.

Medical

Platinum is used in the production of drugs for the treatment of cancer. Some of these drugs include carboplatin and oxaliplatin. These drugs are popular due to the fact that it has less harmful effects on healthy cells but are still highly effective against cancer cells.

Automotive

Besides the use of platinum in auto catalysts it is also being used in the manufacturing of spark plugs and oxygen sensors. Platinum tipped spark plugs, which are very common in modern cars, have an effective lifetime of 100 000 miles due to its high resistance to chemical and electrical erosion.

Appendix 2: Platinum Companies

Overview

The basic overview of the identified companies can be found in Table A2.1 below.

Table A2.1: Basic overview of identified companies

Anglo	Anglo Platinum is the world's largest producer of PGM's. It is a subsidiary of the mining giant Anglo American (79.6% shareholding) and produces roughly 40% of the world's newly mined platinum. The company focuses on the mining and refining of PGM minerals and metals. The company's main operations are confined to the
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	South African Bushveld complex, as well as some operations in the Great Dyke area in Zimbabwe.
Aquarius	Aquarius is the fourth largest platinum producer in the world. It focuses on highly mechanised and low cost operations. The company is positioned for future growth and to ensure maximum value for shareholders. The company's main focus is the mining of high grade PGM ore, whilst refining is mainly done by an external refining company. Aquarius has listing on the ASX, LSE and JSE.
Impala	Impala Platinum is the world's second largest platinum producer. Its main focus is the mining, refining and marketing of PGM's, as well as secondary metal recovery of nickel, copper and cobalt. It claims to be one of the most efficient and lowest cost producers of platinum. Impala Platinum, together with Northam Platinum, is one of only two companies under review that has more than 50% South African ownership with its listing on the JSE.
Lonmin	Lonmin is the world's third largest platinum producer with operations mainly confined to the Bushveld complex in South Africa. The company focuses on the mining and refining of minerals and metals. Its primary listing is on the LSE with secondary listing on the JSE.
Northam	Northam Platinum is a black owned integrated PGM producer. Its operations are focused on the mining and refining of PGM minerals and metals. Together with Impala Platinum, it is the only two companies with more than 50% South African ownership. Anglo Platinum has a 22.5% stake in Northam Platinum. It has listing on the JSE.

Source: Researcher's own compilation. Information from individual company annual reports and websites

Operations

A brief description of the identified companies' operations in South Africa and Zimbabwe are provided in Table A2.2 below:

Table A2.2: Operations of the identified companies

Anglo	<p>Group operations (Rustenburg area): Bathopele, Khomanani, Thembelani, Khuseleka, Siphumelele , Tumela Dishaba, Union Mine, Mogalakwena Mine and Twickenham Mine</p> <p>Zimbabwe: Unki Platinum mine</p> <p>Joint Ventures: Lebowa Platinum mine (Anooraq), Modikwa Platinum mine (ARM), Bafokeng-Rasimone Platinum Mine (RBS), Pandora JV (Mvelaphanda Resources & Lonmin)</p>
Aquarius	<p>Group operations: Kroondal, Marikana, Everest mines</p> <p>Zimbabwe: Mimosa JV (Impala)</p> <p>Joint Ventures: Chromitite Tailings Retreatment plant CRTP (GB mining&Sylvania resources), Tailings re-treatment facility (Platinum mile resources&Mvelaphanda resources), Blue ridge mine (Platinum ridge Mining)</p>
Impala	<p>Group operations: Leeuwkop mine, Marula mine, Two Rivers mine as well as Impala refining services</p> <p>Zimbabwe: ZImpala, Mimosa JV (Aquarius)</p>
Lonmin	<p>Group operations: Marikana mine, Limpopo mine, process division and precious metals refinery at Marikana</p>
Northam	<p>Group Operations: Northam mine and metallurgical complex, Booyseendal development</p>

Source: Researcher's own compilation. Information from individual company annual reports and websites

Strategic objectives

Missions, visions, values and other strategic objectives are an important factor in the efficient and sustainable running of any business. Table A2.3 gives a brief overview of the identified companies' values, missions and strategic objectives.

Table A2.3: Strategic objectives: Missions, visions and values

Anglo	<p>Strategy: Our strategy is to create maximum value through understanding and developing the market for PGM's, to grow the company to expand into those opportunities and to conduct our business safely, cost effectively and competitively.</p> <p>Objective: Our objective is to be the number one company in finding, mining, processing and marketing PGM's for the maximum benefit of all our stakeholders.</p> <p>Values: We put safety first, we deliver on our promises, we value and care about each other, we act with honesty and integrity, we are one team, we are passionate and take pride in everything we do.</p>
Aquarius	-Limited info on website, needs more investigation-
Imapala	<p>Strategic performance areas: Safety and health of people and care for environment; Employing Exceptional Skills and talent; Meeting production targets; effective and efficient utilisation of resources; Sustaining growth to align with market demand; Developing projects on time and within budget; Managing finances for optimum profits; retaining licenses to operate mining and refining operations.</p> <p>Vision: To be the world's best platinum producing company, delivering superior returns to shareholder relative to peers.</p> <p>Values: Safeguarding the health and safety of employees; caring for environment, acting with integrity and openness; promoting and rewarding teamwork, innovation, continuous improvement and best practices by being a responsible employer, developing people to the best of their abilities; being accountable and responsible for our actions as a company and as individuals; being a good corporate citizen to the communities in which we live and work.</p>

Lonmin	<p>Mission: To grow and build our portfolio of high quality assets, To deliver to the requirements of the South African mining charter, To build a value-based culture that is focused on safe work, continuous improvement, common standards and procedures, community involvement and one that rewards employees for high performance.</p> <p>Goals: Employees to work safely and experience a personal satisfaction that comes with high performance and recognition, Superior total return for shareholders, Local communities value its relationship with the company, meeting its commitment to all business partners.</p> <p>Values: Zero harm to people and the environment, Integrity, honesty & trust; Transparency; respect for each other; High performance of individuals and teams; Employee self-worth to enhance quality of life</p>
Northam	<p>Values: Defending the right of employees to work in a safe and healthy work environment; operating its business in such a way that the environment will receive priority; Applying high ethical standards; improving quality of life; creating a climate free of conflict; engaging constructively with government bodies, labour organizations and NGO's; providing a channel through which grievances or breaches of policy can be dealt with without fear of victimisation.</p>

Source: Researcher's own compilation. Information from individual company annual reports and websites

Appendix 3: Risk

A3.1 South African Mine Health and Safety Act of 1996 (Ammended 2008),

Source: <http://www.acts.co.za/mhs/index.htm>

Section 54:

- 1) If an inspector has reason to believe that any occurrence, practice or condition at a mine endangers or may endanger the health or safety of any person at the mine, the inspector may give any instruction necessary to protect the health or safety of persons at the mine, including but not limited to an instruction that--
 - a) operations at the mine or a part of the mine be halted;
 - b) the performance of any act or practice at the mine or a part of the mine be suspended or halted, and may place conditions on the performance of that act or practice;
 - c) the employer must take the steps set out in the instruction, within the specified period, to rectify the occurrence, practice or condition; or
 - d) all affected persons, other than those who are required to assist in taking steps referred to in paragraph (c), be moved to safety.

(It is an offence to fail to comply with an inspector's instruction. See section 91.)
- 2) An instruction under subsection (1) must be given to the employer or a person designated by the employer or, in their absence, the most senior employee available at the mine to whom the instruction can be issued.
- 3) An inspector may issue an instruction under subsection (1) either orally or in writing. If it is issued orally, the inspector must confirm it in writing and give it to the person concerned at the earliest opportunity.

- 4) If an instruction issued under subsection (1) is not issued to the employer, the inspector must give a copy of the instruction to the employer at the earliest opportunity.
- 5) Any instruction issued under subsection (1)(a) must either be confirmed, varied or set aside by the Chief Inspector of Mines as soon as practicable.
- 5) Any instruction issued under subsection (1)(a) is effective from the time fixed by the inspector and remains in force until set aside by the Chief Inspector of Mines or until the inspector's instructions have been complied with

Appendix 4: Company Questionnaires

Fig. A1: Example of company questionnaires completed by CEO of Impala Platinum David Brown

David Brown

From: Jasper Raats [raats@telkomsa.net]
Sent: 04 October 2010 07:49 PM
To: David Brown
Subject: Impala info
Attachments: Impala Questionnaire.pdf; J Raats.doc; NWU.pdf

Mr. Brown

I am a 3rd year MBA student at the North West University. My final year dissertation is titled "*Optimising shareholder value during recessionary times in the platinum industry*". My main objectives are:

- To provide an overview of the different strategies implemented by senior management teams of platinum companies during the period 2008 – 2010
- Determine best practices by evaluating company specific data and other information sources

In order to get a proper understanding of some strategies followed by your company during the recessionary period it would be of great value if you could complete the attached questionnaire which should take no longer than 20 minutes of your time. This information is critical for completion of my dissertation and would really help to understand some intricacies of your industry.

All information would remain the property of the North West University and will not be divulged to third parties.

Yours sincerely

Jasper Raats

Completed questionnaires can be scanned and mailed back to this mail address

JASPER RAATS

2 Sneeuveld Street, Vaalpark, 1947 | South Africa
Mobile: +27 83 468 1344 | Fax: +27 16 971 2216

Optimising shareholder value during recessionary times in the platinum industry

Impala Platinum

Correspondent

Designation

Please mark with the relevant number or X where applicable

1) Risk management

1a) How important would you rate risk management as a tool to optimise shareholder value?

No importance	Slight importance	Important	X Quite important	Of paramount importance				
1	2	3	4	5				

1b) Please rate the following risks in order of importance to your business (1 being most important and 9 least important)

Health & Safety	1	Relationship with labour unions	4
Environment (legislation, fines, plant closure, public relations, legacy)	2	Electricity supply	7
Operational upsets (Furnace shutdowns, flooding etc.)	8	Decline in product demand due to substitute development	6
Asset risks (mine slides, fires, explosions etc.)	9	Political risks (mining rights, nationalisation, political stability)	5
Human resources and skills	3		

2) Safety

Safety incidents causes bad moral under employees and Section 54 stoppages cause unforeseen production delays. Please rate your companies performance over the past 2 years, compared to previous years and industry standard

Poor	Moderate	Average	X Good	Excellent	
1	2	3	4	5	

3) Cash

Impala Platinum's CEO has stated that the key to survival in the recession period is cash flow. How well did your company do in optimising cash flow during the recession?

Poor	Moderate	Average	X Good	Excellent	
1	2	3	4	5	

4) Costs

Because the selling price of platinum is determined by market supply and demand, companies' profits are mainly differentiated by the total cost of production.
How well did your company do in reducing cost during the recessionary period?

Poor	Moderate	Average	Good	Excellent
1	2	3	X 4	5

5) Human Resources

Most companies reduced its total workforce in order to cut costs. How successful do you rate your current HR structure in terms of:

5a) Current profits

Poor	Moderate	Average	Good	Excellent
1	2	3	X 4	5

5b) Future profits

Poor	Moderate	Average	Good	Excellent
1	2	X 3	4	5

6) Human Resources

Impala made a lot of changes to its management team and board of directors as well as recalling experienced individuals from retirement. Do you think your company have the correct talent mix to successfully steer the company to optimised profits during the next five years?

No we have to acquire more talent	We will survive with what we have	We are in a perfect position with our talent mix
1	2	X 3

Did not make a lot of changes in the management team.
Turnover was less than 5% across all 6 levels

7) Corporate Governance

Some companies have been in the news on the subject of Corporate Governance. To what extent is your Corporate Governance contributing to profitability and most importantly, sustainability?

We have to rethink our strategy	Moderately	Very well
1	2	X 3

8) Flexibility and adaptability of organisation/employees

The recession has a major impact on how individuals in a company go about their daily responsibilities. How flexible is your workforce and how well did the company as a whole adapt to the changes associated with the recession?

Poor	Moderate	Average	Good	Excellent
1	2	3	X 4	5

9) Profits					
Profits did take a major knock during the past 2 years. How would you rate your performance given the circumstances?					
Poor	Moderate	Average	Good	Excellent	Price takers
1	2	3	X 4	5	
10) Technology					
Impala have received recognition for its technological improvements. How would you rate your company's competitive advantage when comparing mining and processing technologies with other major players in the South African Platinum market?					
Poor	Moderate	Average	Good	Excellent	
1	2	3	X 4	5	
11) Mergers and takeovers					
Impala platinum was involved with some acquisitions and mergers in the past. Are mergers or takeovers part of your company's immediate strategy to ensure mid and long term shareholder value growth?					
No its not part of our strategy	Depending on the opportunity	Definitely, opportunities are there for the taking	Must be a value.		
1	2 X	3			
12) Working capital management (Stocks)					
Stock level management is an important factor in preserving cash during recessionary periods. How well did your company do in this regard?					
Poor	Moderate	Average	Good	Excellent	
1	2	3 X	4	5	
13) BBBEE					
BBBEE as well as ownership targets from the mining ministry, poses unique challenges for the South African mines. How well has your company performed by improving employment equity and forming strategic alliances with black partners, whilst ensuring optimum shareholder value?					
Poor	Moderate	Average	Good	Excellent	
1	2	3	X 4	5	
14) Dividends					
How well do you think did your company's dividend policy over the past 2 years contributed to shareholder value?					
14a) Short term					
Poor	Moderate	Average	Good	Excellent	we continued to pay through the downturn.
1	2	3	4	X 5	
14b) Long term					
Poor	Moderate	Average	Good	Excellent	
1	2	3	4	X 5	

15) Diversification of mines and grades

15a) Impala Platinum has diverse geographical and geological mining assets. Do you think it is important to have diversified mining assets (grades, depths, locations, by products) in order to have manoeuvring capabilities to optimise profits during different market cycles and varying PGM price?

No, not applicable 1	Moderately important <input checked="" type="checkbox"/> 2	Extremely important 3	It is more of a long term flexibility rather than short term profit optimisation	
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15b) How well is your company's mining assets diversified?

Very limited 1	Somewhat 2	Average 3	Good <input checked="" type="checkbox"/> 4	Excellent 5
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16) By products

How well equipped (facilities, mining rights, expertise, technology) is your company to obtain maximum profits from by products (nickel, copper, gold etc.)?

No capabilities 1	Somewhat 2	Average 3	Good 4	Excellent <input checked="" type="checkbox"/> 5
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17) Debt

How well did your company manage its total debt over the past 3 years? Answer with the view to shareholder value growth.

Poor 1	Moderate 2	Average 3	Good 4	Excellent <input checked="" type="checkbox"/> 5
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18) Zimbabwe

Impala has the biggest interest in Zimbabwe of all the top platinum players. Are you satisfied with your company's involvement in Zimbabwe? (View this in terms of shareholder value growth)

Its not part of our strategy 1	Not sufficient 2	Moderately sufficient 3	Sufficient for now but future investment required <input checked="" type="checkbox"/> 4	Sufficient investment to optimise shareholder value 5
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Appendix 5: Company Financial and other information

All financial values are given in Rand values. A constant Rand/Dollar exchange rate of R8/\$ was used for companies who reports financial results in \$ terms. All values are provided in millions unless otherwise stated. Financial ratios calculation was adapted from Kew *et al* (2007:503 – 535).

Table A5.1: Anglo Platinum

Data	Dec 2007 FY	Dec 2008 FY	Dec 2009 FY	June 2010 FYF
Pt ounces produced '000	2471	2465	2464	2391
Revenue	46616	50765	36687	41566
Profits after taxes	12667	14659	3128	6724
Profits attributable to Shareholders	12273	14243	3012	6544
Headline earnings	12325	13459	710	5118
EPS c/s	5241	6011	1234	2628
Headline EPS c/s	5238	5608	291	2055
Cost R/oz produced	11135	13664	14089	14065
Interest expenses	182	159	424	570
Cash	4079	2870	3532	2423
Current liabilities	14012	15328	8358	8760
Long term debt	10108	23098	34830	23630
Total liabilities	24120	38426	43188	32390
Net Debt	4086	13459	19261	8245
COGS	27519	33682	34715	33634
CAPEX	10653	14388	11301	6608
Current Assets	14832	18715	18043	20525
Total Assets	54050	68668	75821	80623
Dividend payments c/s	5200	3500	0	0
Total employees	44668	50152	58320	56246
Fatalities	25	17	14	10
LTI frequency (per million man hrs)	10.15	8.70	6.85	6.00
4E Grade achieved	3.63	3.36	3.31	3.07
Total Shares			236.80	261.40
Wt. Ave of ordinary shares			243.70	249.00
Market price per share average for year	105054	71734	67404	74914
Market price at end of year	101005	51760	79250	72900
Profitability ratios				
Cash Profit Margin	0.41	0.34	0.05	0.19
ROA	0.24	0.22	0.05	0.09
ROE	0.42	0.48	0.10	0.14
EPS (c)	5241.00	6011.00	1234.00	2628.00

Liquidity				
Current ratio	1.06	1.22	2.16	2.34
Working capital	820.00	3387.00	9685.00	11765.00
Leverage ratios				
Debt-Assets ratio	0.45	0.56	0.57	0.40
Other				
Dividend yield	4.95	4.88	0.00	0.00
P/E ratio	20.04	11.93	54.62	28.51
Dividend payout ratio	0.99	0.58	0.00	0.00
Total annualized growth in SH value		-45%	53%	-8%

Table A5.2: Aquarius Platinum

Data	June 2007 FY	June 2008 FY	June 2009 FY	June 2010 FY
Pt ounces produced '000	531	500	456	423
Revenue	5688	7352	2488	3776
Profits after taxes	2349	2909	-653	222
Profits attributable to Shareholders	1498	1888	-366	222
Headline earnings				
EPS c	582	736	-106	49
Headline EPS				
Operating cost R/oz refined				
Total cost R/oz refined	4522	5757	5120	5868
Interest expenses	122	226	288	206
Cash	2301	1368	1229	3054
Current liabilities	405	2140	603	818
Long term debt	2096	1239	1861	3519
Total liabilities	2501	3379	2464	4338
Net Debt				
COGS	2400	2878	2333	2480
CAPEX	344	533	472	349
Current Assets	3313	3150	2537	4414
Total Assets	7633	7735	7336	11034
Dividend payments c/s	112	160	0	48
Total employees				
Fatalities				
LTI frequency (per million man hrs)	3.20	3.00	2.20	2.80
4E Grade achieved				
Total Shares '000000				
Wt. Ave of ordinary shares				
Market price per share average for year	7392	11280	2986	4568
Market price at end of year	7392	12750	2900	4099

Profitability ratios				
Cash Profit Margin	0.58	0.61	0.06	0.34
ROA	0.32	0.41	-0.05	0.04
ROE	0.46	0.67	-0.13	0.03
EPS (c)	582.40	736.00	-106.40	48.72
Liquidity				
Current ratio	8.18	1.47	4.21	5.39
Working capital	2908.20	1009.60	1933.68	3595.20
Leverage ratios				
Debt-Assets ratio	0.33	0.44	0.34	0.39
Other				
Dividend yield	1.52	1.42	0.00	1.05
P/E ratio	12.69	15.33	-28.07	93.76
Dividend payout ratio	0.19	0.22	0.00	0.99
Total annualized growth in SH value		75%	-77%	43%

Table A5.3: Impala Platinum

Data	June 2007 FY	June 2008 FY	June 2009 FY	June 2010 FY
Pt ounces produced '000	2026	1907	1704	1741
Revenue	31842	37619	26121	25446
Profits after taxes	7325	17705	6004	4794
Profits attributable to Shareholders	7232	17596	6020	4691
Headline earnings	7232	16719	6020	4718
EPS c	1312	2910	1001	786
Headline EPS	1312	2065	1001	786
Operating cost R/oz refined	6370	6930	9129	10089
Interest expenses	60	135	169	319
Cash	3218	10393	3348	3858
Current liabilities	8636	8547	5092	5766
Long term debt	6623	8259	9785	11072
Total liabilities	15259	16806	14877	16838
Net Debt				
COGS	17009	19888	16359	17294
CAPEX	2890	5368	6923	4554
Current Assets	12757	22504	11500	12828
Total Assets	49958	62109	57680	62571
Dividend payments c/s	700	1475	320	390
Total employees		34650	37585	
Fatalities	13.00	12.00	11.00	15.00
LTI frequency (per million man hrs)	3.48	2.92	2.92	4.61
4E Grade achieved	3.84			
5E +Au	4.71	4.64		

Market price per share average for year	22100	30725	15278	19904
Market price at end of year	22100	30900	17045	18000
Profitability ratios				
Cash Profit Margin	0.47	0.47	0.37	0.32
ROA	0.15	0.29	0.11	0.08
ROE	0.21	0.39	0.14	0.10
EPS (c)	1312.00	2910.00	1001.00	786.00
Liquidity				
Current ratio	1.48	2.63	2.26	2.22
Working capital	4121.30	13957.00	6408.00	7062.00
Leverage ratios				
Debt-Assets ratio	0.31	0.27	0.26	0.27
Other				
Dividend yield	3.17	4.80	2.09	1.96
P/E ratio	16.84	10.56	15.26	25.32
Dividend payout ratio	0.53	0.51	0.32	0.50
Total annualized growth in SH value		46%	-44%	8%

Table A5.4: Lonmin

Data	Sep 2007 FY	Sep 2008 FY	Sep 2009 FY	Mar 2010 FYF
Pt ounces sold '000	793	727	683	582
Revenue	15528	17848	8496	10576
Profits after taxes	3264	4528	-2584	560
Profits attributable to Shareholders	2512		-2280	480
Headline earnings				
EPS c	1641	2329	-1310	248
Headline EPS				
Operating cost R/oz refined	10260	12336	12744	15120
Interest expenses	856	48	784	48
Cash	1768	1808	2256	
Current liabilities	4512	3208	3240	2712
Long term debt	8112	9120	8048	8024
Total liabilities	12624	12328	11288	10736
Net Debt	4680			2000
COGS	8136	8968	8704	8800
CAPEX	2976	3400	2064	1696
Current Assets	6112	7216	6784	1330
Total Assets	31504	33080	33704	33512
Dividend payments c/s	480	472	0	0
Total employees	24122	25362	21623	
Fatalities	3	3	3	4

LTI frequency (per million man hrs)	11	6	6	6
4E Grade achieved				5
5E +Au				
Total Shares				
Wt. Ave of ordinary shares				
Market price per share average for year	51160	46144	17861	21760
Market price at end of year	50450	31300	20001	22625
Profitability ratios				
Cash Profit Margin	0.48	0.50	-0.02	0.17
ROA	0.13	0.14	-0.05	0.02
ROE	0.17	0.22	-0.12	0.02
EPS (c)	1640.80	2328.80	-1309.60	248.00
Liquidity				
Current ratio	1.35	2.25	2.09	0.49
Working capital	1600.00	4008.00	3544.00	-1382.00
Leverage ratios				
Debt-Assets ratio	0.40	0.37	0.33	0.32
Other				
Dividend yield	1.88	2.05	0.00	0.00
P/E ratio	31.18	19.81	-13.64	87.74
Dividend payout ratio	0.29	0.20	0.00	0.00
Total annualized growth in SH value		-37%	-36%	13%

Table A5.5: Northam Platinum

Data	June 2007 FY	June 2008 FY	June 2009 FY	June 2010 FY
Pt ounces sold '000	212	170	202	243
Revenue	3740	3886	3186	3945
Profits after taxes	1326	1493	630	641
Profits attributable to Shareholders	1326	1493	630	641
Headline earnings	1326	1493	590	641
EPS c	560	627	184	178
Headline EPS	560	627	172	178
Cost R/oz refined	8151	9481	11723	13004
Interest expenses	0	0	0	0
Cash	1210	1500	920	1186
Current liabilities	554	771	487	674
Long term debt	398	455	529	581
Total liabilities	952	1226	1016	1255
Net Debt				
COGS	1728	1608	2368	3160

CAPEX	188	265	330	368
Current Assets	1733	2364	1616	2117
Total Assets	3334	4120	9348	10089
Dividend payments c/s	525	330	78	40
Total employees				
Fatalities	3.00	4.00	4.00	1.00
LTI frequency per (million man hrs)	11.55	11.00	5.10	4.00
4E Grade achieved	5.10	5.00	5.10	5.20
5E +Au				
Market price per share average for year	5620	6325	2647	4824
Market price at end of year	5620	6760	3000	4550
Profitability ratios				
Cash Profit Margin	0.54	0.59	0.26	0.20
ROA	0.40	0.36	0.07	0.06
ROE	0.56	0.52	0.08	0.07
EPS (c)	560	627	184	178
Liquidity				
Current ratio	3.13	3.07	3.32	3.14
Working capital	1179	1593	1129	1443
Leverage ratios				
Debt-Assets ratio	0.29	0.30	0.11	0.12
Other				
Dividend yield	18.68	10.43	5.89	1.66
P/E ratio	10.04	10.09	14.39	27.10
Dividend payout ratio	0.94	0.53	0.42	0.22
Total annualized growth in SH value		26%	-54%	53%

A5.6 Company comparison of selected results and ratios

Table A5.6: Company comparison on selected financial and other performances

	Anglo	Aquarius	Impala	Lonmin	Northam
Operating cost R/oz refined	13238	5317	8130	12615	10590
Increase in operating cost 07 - 10	26%	30%	58%	47%	60%
Increase in cash 07 - 10	-41%	33%	20%	-58%	-2%
Increase in total debt 07 - 10	34%	73%	10%	-15%	32%
LTI frequency	7.9	2.8	3.5	7.2	7.9
LTI frequency reduction 07 - 10	-41%	-13%	32%	-45%	-65%
Cash Profit Margin	25%	40%	41%	28%	39%
ROA	15%	18%	16%	6%	22%
ROE	29%	26%	21%	8%	31%
EPS (c)	3778.5	315.2	1502.3	727.0	387.3
Current ratio	1.7	4.8	2.1	1.5	3.2
Working capital	6414	2362	7887	1943	1336
Debt-Assets ratio	0.49	0.37	0.28	0.36	0.20
Dividend yield	2.46	1.00	3.01	0.49	4.58
P/E ratio	28.78	23.43	17.00	31.27	15.40
Dividend payout ratio	0.39	0.35	0.46	0.12	0.53

Appendix 6: Share holder value evaluation

Assumptions for shareholder value growth calculations and comparisons:

- For baseline period Jul-Dec 2007 the assumption was made that shares were purchased during the period Jul-Dec 2007 at the average market price during the period.
- For the baseline period it is assumed that dividend payments at end of Dec 2007 was received by investor.
- For trough period Nov/Dec it is assumed that shares were purchased during the period Nov/Dec 2008 at the average price for the period, and that dividend payments were received on these purchased shares at end of Dec 2008.
- For end period June 2010 the average closing price for June 2010 were used as end value for comparison and calculations. Assume dividend payments at June 2010 were also received.
- Dividends re-invested are done at the closing price at each end of period.
- Data used for Lonmin is in all cases (except trough period Nov/Dec 2008) moved forward by 3 months due to financial period being Oct-Sept

Appendix 7: A statistical evaluation of performance ratings

The following rating data was used to try and find the correlation between company performance (four different criteria discussed in section 3.3.6 and provided in table 3.8). The statistical program Minitab 15.1 was used to calculate correlation statistics for the following data (Table A 7.1):

Table A 7.1: Data table used for statistical correlation

Company name	SHVG	CP	FP	DP	RM
Northam	1	2	1	2	3
Impala	2	1	2	1	1
Anglo	3	3	3	4	2
Aquarius	4	4	4	3	4
Lonmin	5	5	5	5	5

SHVG – Shareholder value growth

CP – Current profits

FP – Future profits

DP – Dividend payouts

RM – Risk management

The following correlation with the four independent variables (CP, FP, DP RM) with shareholder value were calculated.

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Correlations: SHVG, CP

Pearson correlation of SHVG and CP = 0.900
P-Value = 0.037

Correlations: SHVG, FP

Pearson correlation of SHVG and FP = 1.000
P-Value = *

Correlations: SHVG, DP

Pearson correlation of SHVG and DP = 0.800
P-Value = 0.104

Correlations: SHVG, RM

Pearson correlation of SHVG and RM = 0.700
P-Value = 0.188