

# Gold Market Fundamentals

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**The anticipated trading range for gold over the next few months is US\$750/oz to US\$850/oz.**

**The gold price is down 21% since it peaked at US\$1,011.25/oz March '08**

**The gold price performance in the last three months is reinforcing its safe haven status.**

**Investment demand is countering hedge fund selling.**

**Any US dollar weakness in early 2009 could see another gold price breakout.**

## Gold price outlook

The near term outlook for the gold price remains closely tied to expectations of the direction of the U.S. dollar and, behind this, the performance of the U.S. economy relative to the rest of the world. The spot price of gold is currently US\$791.80/oz (November 22).

RCR annual price forecasts are: 2009 US\$750/oz and long term price US\$850/oz.

Eight months ago gold was viewed as the preferred safe haven investment given volatile equity markets, declining US economic fundamentals, reflationary central bank policies and deteriorating outlook for reserve currencies. The resulting demand drove the price of gold to a high of US\$1,011.25/oz (March 17, 2008).

Since July, perceptions of safe haven status of the U.S. dollar and a flight to liquidity have returned, providing strong support for the US currency and taking some of the heat out of the gold market. Market sentiment has increasingly been linked to fears of a severe global deflationary recession, which, with a continuing strong US dollar, has left gold somewhat out of the picture. Since the March peak the gold price has retreated 21%, leaving perceptions of gold as a 'safe haven' in uncertain times open to question.

However, we consider that the performance of the gold price in the last three months, when global equity markets, commodity prices and the oil price have experienced dramatic collapses, is reinforcing the status of gold as a 'safe haven' investment. In the three months since August 22, gold has fallen only 3.8%, and in the past month (since October 22) the gold price is up 8.4%, in the face of liquidation selling by hedge funds. The liquidation selling has been countered by strong investment demand (up 156% 3Q08 versus 3Q07) and strong jewellery demand (up 8% 3Q08 versus previous year). Overall gold investment demand (mainly EFT's) in 3Q08 was up by 18% or 170 tonnes year on year.

It is hard to find any asset class that has held its value to that degree in this recent period of dramatic wealth reduction. Clearly a retreat to cash and treasury bonds has been the primary focus in a period of aggressive investment liquidation, but shrinking cash and bond yields and the recent uplift in the gold price may only serve to support further investment interest in gold.

The increasing safe haven status of gold is evident despite a US dollar that has been the currency of choice in a flight to liquidity. We believe that with the deteriorating outlook for the U.S. economy, concerns over on going debt levels, and the costs of banking sector and industrial sector bailouts, there is a possibility that the U.S. dollar could peak in the first half of 2009, and then fall heavily as U.S. productivity growth slows. This scenario increases the flight back to gold as a safe haven – possibly taking gold back over US\$900/oz.

The gold price has seen a steady increase over the past 3 years from US\$494/oz to its 2008 peak of US\$1,011.25/oz (up 105%) in March

2008. This drove solid performance in gold equities, though virtually all of the gains of the past 12 months have been given back recently. Further, producer margins have been adversely affected by structural trends in the sector, including:

**Rising industry costs have been significant in the last three years.**

- Rising industry cost pressures due to a number of factors including falling mill head grades, deeper ore bodies, higher energy costs and increased demand for materials and labour.
- Strengthening producer currencies (eg, Canada, Australia, South Africa) compressing operating margins and cashflow.
- Discovery of fewer and smaller deposits impacting asset quality.
- ETF cannibalisation.

However, in the last three months, two of these key structural trends in the gold sector have reversed quite dramatically.

**Current evidence that cost pressures are rapidly easing**

Firstly, there is clear evidence that cost pressures due to energy costs and demand for materials and labour are rapidly easing.

Secondly, and of most significance, is the major falls seen in producer currencies against the US dollar. These rapid currency shifts away from commodity-based currencies have buffered the falls of most commodities, such as base metals, coal and iron ore. However, in the case of gold, the US dollar gold price has not suffered the same fate as commodity prices, therefore, the price of gold in key producer currencies has appreciated strongly, as shown in the table below.

### Gold price in national currency units

Country		Current*	1 month	3 month	6 month	1 year	10 year
USA	USD	792	730	823	922	754	297
Australian	AUD	1257	1085	950	965	851	465
Canadian	CAD	1027	916	980	908	738	459
South Africa	ZAR	8413	8448	8767	7039	5163	1689

**Gold prices in major producer currencies have appreciated strongly in the last twelve months.**

### Gold price movements in national currency units

Country		Current*	1 month	3 month	6 month	1 year	10 year
USA	USD	na	8.4%	-3.8%	-14.1%	5.0%	167.1%
Australian	AUD	na	15.8%	32.4%	30.3%	47.7%	170.1%
Canadian	CAD	na	12.1%	4.7%	13.1%	39.1%	123.5%
South Africa	SAR	na	-0.4%	-4.0%	19.5%	62.9%	398.2%

\*Current prices as at 22 November 2008

**Gold project economics enhanced by improved prices and easing cost pressures.**

Despite a 12 month increase in US dollar gold of only 5%, the gold price in the three producer currencies shown has increased by 40% for Canadian producers, 48% for Australian producers and 63% for South African producers. In the last three months during the freefall in equity markets, the Australian dollar gold price has appreciated by 32%.

### Gold supply and demand balance

The gold sector supply and demand balance in recent years has been characterised by:

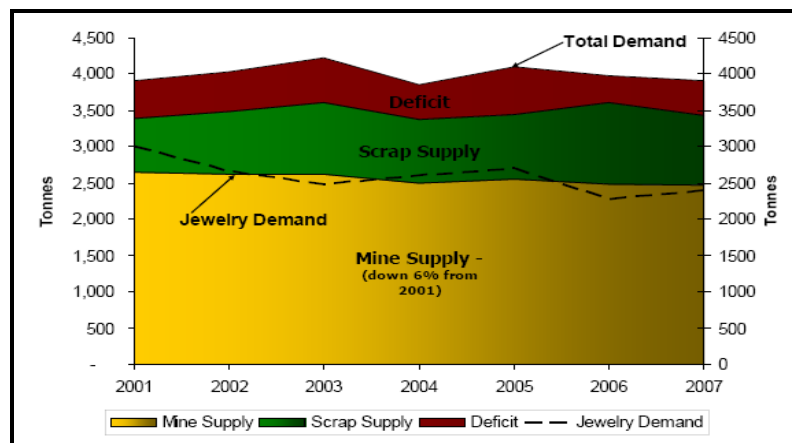
- A broader base of gold investment.
- Demand increases in China and India.
- Net global production declines and declines in traditional high producer countries, eg Australia, US, South Africa, Canada.
- Production increases from developing countries, which traditionally have been considered higher sovereign risk and under-explored.
- Net closeout of producer hedge positions.
- Declining net sales by central banks.

**ETF's have created a large new market segment for gold investment demand.**

**Mine supply is down 6% from 2001.**

**Jewellery demand has fallen from ~3kt in 2001 to ~2.5kt in 2007, but was up 8% (yoy) in 3Q08.**

### Gold market supply and demand (2001 to 2007)



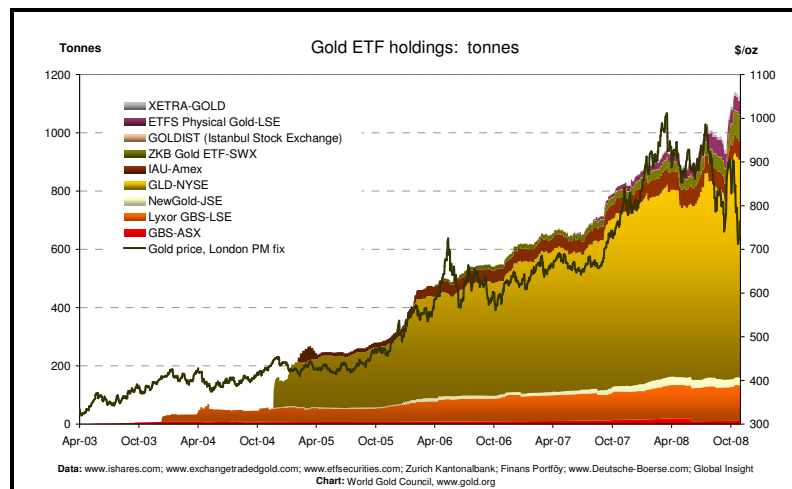
Source: Newmont, GFMS

**Gold ETFs held 1,129t gold (31 Oct '08) up from 989t Aug '08 (140t, +14%) – record quarterly inflow to date (Oct-Nov).**

The supply/demand balance for gold is largely impacted by investment demand which has been running around 12%pa. In recent years there has been large growth in demand for exchange traded funds (ETF). Aggregate ETF gold holdings experienced record inflows in 3Q08, up from 1,009t gold at the end of July 2008 to 1,129t.

### Gold exchange traded funds (ETF) – increasing investment demand (Oct '08)

**ETF holdings are greater than the 6th largest Central Bank holding (Switzerland at 1064t).**



Source: World Gold Council

## Gold supply and demand (WGC) 3Q08

	2005	2006	2007	% ch 2007 vs 2006	Q1'06	Q2'06	Q3'06	Q4'06	Q1'07	Q2'07	Q3'07	Q4'07	Q1'08	Q2'08	Q3'08	% ch Q3'08 vs Q2'08	% ch (yoy) Q3'08 Q3'07
<b>Supply</b>																	
Mine production	2,548	2,485	2,475	0	598	648	667	667	591	609	640	631	547	590	655	11	5
Net producer hedging	-92	-410	-447	...	-161	-68	-38	-38	-94	-197	-82	-74	-128	-140	-63	-55	-23
Total mine supply	2,456	2,075	2,028	-2	437	579	629	629	496	416	558	558	418	450	592	32	6
Official sector sales <sup>1</sup>	663	370	501	36	130	78	58	58	72	154	178	97	81	88	23	-74	-87
Old gold scrap	898	1,129	967	-14	337	241	243	243	243	227	216	281	318	256	244	-5	13
Total Supply	4,017	3,573	3,496	-2	904	899	930	930	811	797	951	936	817	793	858	8	-10
<b>Demand</b>																	
<b>Fabrication</b>																	
Jewellery	1,708	2,284	2,400	5	532	605	605	625	586	697	629	488	462	512	669	31	6
Industrial & dental	432	459	461	0	115	116	116	116	116	118	117	110	111	112	104	-7	-11
Sub-total above fabrication	3,140	2,743	2,861	4	648	721	721	741	702	816	746	598	573	623	773	24	4
Bar & coin retail investment	411	424	445	5	100	112	112	119	125	144	116	60	72	118	183	55	58
Other retail investment	-26	-22	-42	...	-7	-4	-4	-9	-14	-17	-11	-1	-11	-2	49	na	na
ETFs & similar	208	260	253	-3	49	19	19	79	36	-3	139	80	73	4	150	3650	8
Total Demand	3,733	3,405	3,518	3	790	849	849	931	849	940	991	738	707	743	1,155	55	17
<b>"Inferred investment"<sup>2</sup></b>	284	168	-22	...	114	50	50	-1	-38	-143	-40	199	110	50	-297	na	-643
London PM fix (US\$/oz)	444.45	603.77	695.39	15	627.71	621.67	621.67	613.21	649.82	666.84	680.13	786.25	924.83	896.29	871.6	-3	28

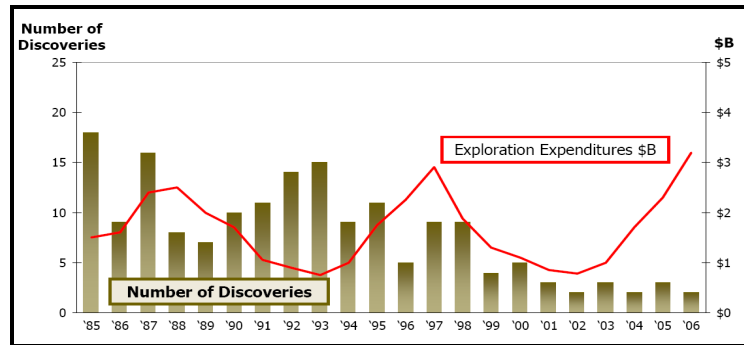
Source: GFMS Ltd. Data in this table are consistent with those published by GFMS but adapted to the WGC's presentation and take account of the additional demand data now available. The "inferred investment" figure differs from the "implied net (dis)investment" figure in GFMS' supply and demand table as it excludes "ETFs and similar" and "other retail investment". 1. Excluding any delta hedging of central bank options. 2. This is the residual from combining all the other data in the table. It includes institutional investment other than ETFs & similar, stock movements and other elements as well as any residual error.

### Industry trends

#### Number of gold discoveries found per year greater than 1moz

The gold industry faces exploration challenges.

There are fewer discoveries and deposits are harder and more expensive to find.



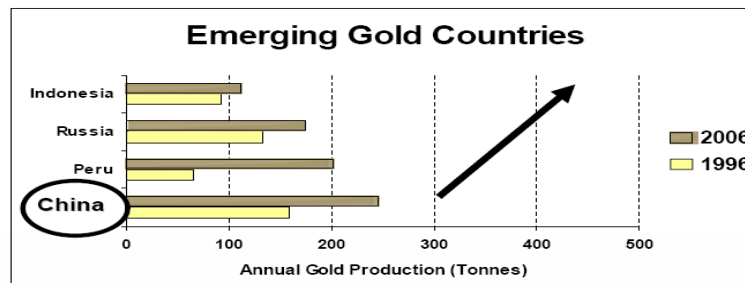
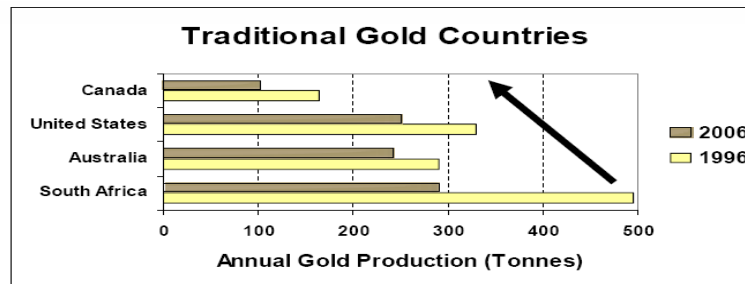
Source: Andean Resources, WGC

#### Gold mine production is shifting from traditional to non traditional producers (tonnes, 1999 vs 2006)

South African production at lowest level in 85 years.

Australian production at lowest level in 15 years.

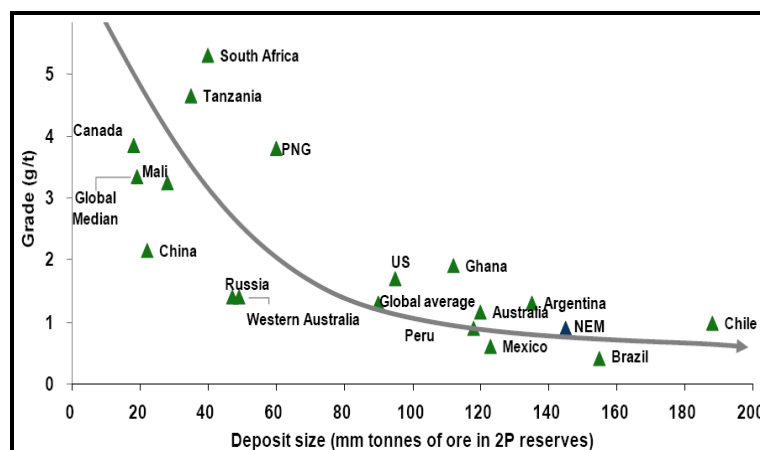
China became world's largest gold producing country 2007.



Source: Sino Gold, August '07, GFMS

#### Geographic distribution of current gold reserves

Deposits are aging, grades are lower, and reserves more difficult to replace.

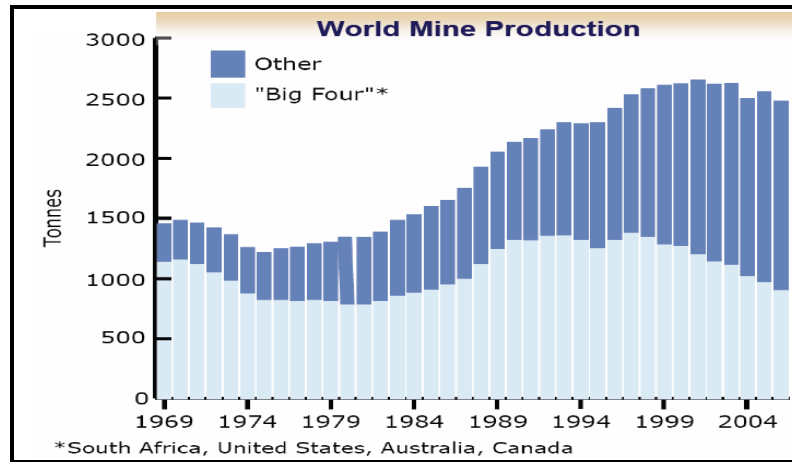


Source: Newmont Gold, September '07, Wall Street Research

### Primary gold supply

#### World mine production – constrained supply (t)

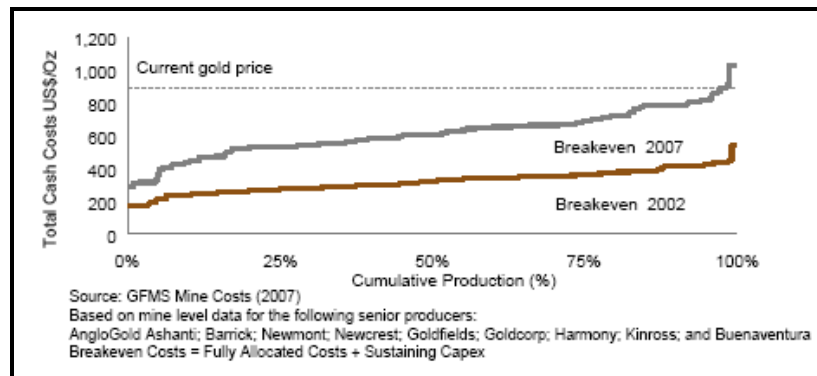
The top 4 gold producers account for ~29% of global production (710t).



Source: Sino Gold, August '07, GFMS

### Cost trends (senior producers)

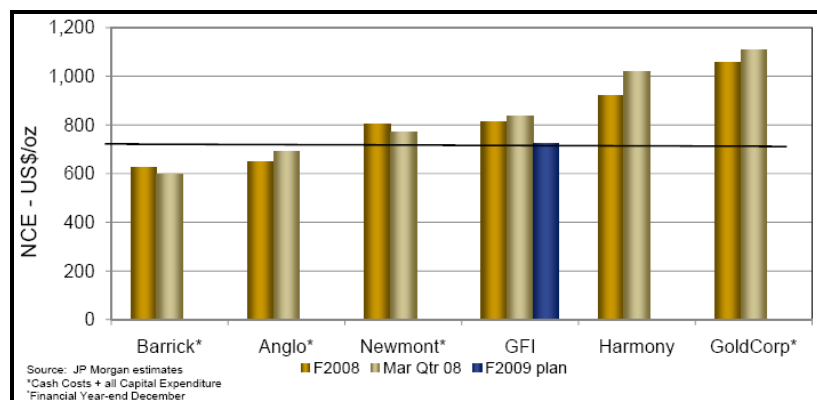
Production costs are rising with aging deposits, lower grades, and higher energy, labour and material costs.



Source GFMS, AngloGold

### Notional cash expenditure\*: March Q 2008, 2008F and 2009F

South African producers are at the high end of the cost curve.



Source: JP Morgan, Gold Fields

## Challenges faced by Exploration and Development Companies

The gold exploration and development sector faces particular challenges arising from the 2008 credit crisis and resultant effects on equity markets and availability of debt capital. The improved gold price in producer currencies and opportunity for enhanced project economics through lower costs are being outweighed by these factors.

**Share prices are down ~60-80% from year highs.**

Many gold juniors have share prices that have typically fallen by 60-80% from their 12 month highs. This relative underperformance compared to other equity sectors is a reflection of the challenges faced by explorers and emerging producers in sourcing capital, more than it is a reflection of the outlook for the local currency gold price.

**Many share prices near or below cash backing.**

We are seeing companies with advanced gold projects at the pre-feasibility or bankable feasibility stage with share prices that are close to or below cash backing. (For example, RED 5 with its BFS stage Siana gold project in the Philippines and with cash of A\$27m, is trading at well below cash backing). The market is taking the view that an un-funded future gold project is more of a liability than an asset in the current environment, where debt financing opportunities have seemingly evaporated and the collapse of confidence in equity markets means a major equity raising is out of the question.

**Un-funded projects seen as a liability.**

The broad view that gold projects held by junior exploration companies have become un-financeable, is likely to be challenged in coming months. Our view, supported by discussions with some companies, is that project finance has not dried up, but the required conditions to be met are likely to be more stringent, and in effect the effective cost of finance will increase.

**De-risking of projects will be required to achieve financing.**

The increasing emphasis will be on "de-risking" gold projects in order to have a chance to achieve a favourable financing outcome. This de-risking process will involve:

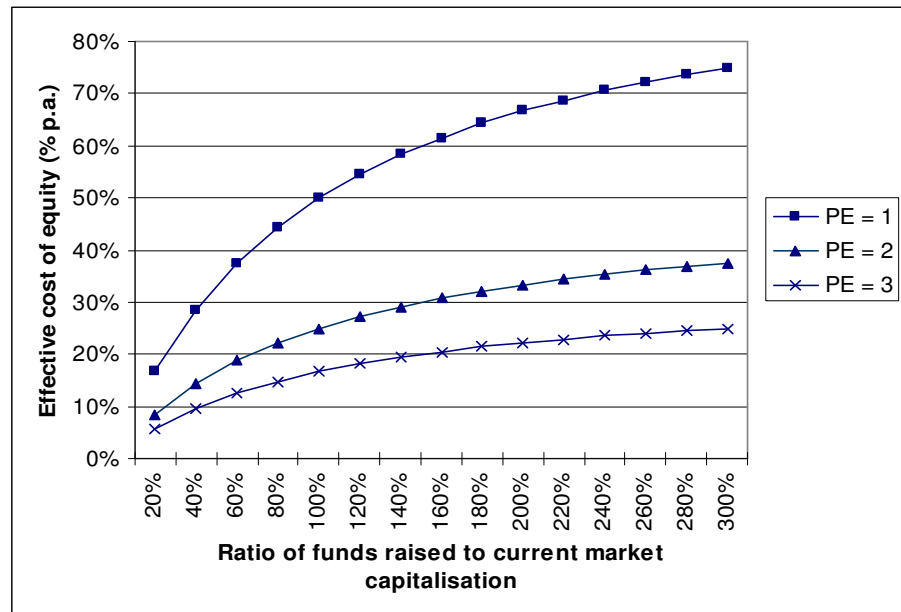
- Increasing emphasis on reserves rather than resources.
- More rigorous feasibility studies.
- Locking in future margins with a requirement for forward sales and downside protection for a significant component of gold output.
- Increased focus on country risk.
- Increased equity component of financing

Generally, gold project economics are improving significantly with strong producer currency gold prices and easing of capital and operating cost pressures.

The outlook for junior gold companies to raise equity capital is challenging. The effective cost of achieving an equity raising in current markets will be high.

**Effective cost of equity versus funds raised and future price-earnings multiple**

**Cost of equity financing for juniors financing start-up projects is likely to be very high.**



Source: RCR

The graph above shows the nominal cost of equity capital in relation to projected earnings yields (P/E ratio) and market capitalisation. Cost of equity is based on future earnings foregone through share dilution, assuming existing shareholders do not participate in a capital raising. For example, an explorer with market cap of \$10m, raising \$10m (100% increase in market cap), for a project with potential annual earnings of \$3.3m (PE 3x before raising) has an effective cost of new equity to the current shareholders of 18% p.a. if the current shareholders have their holdings diluted.

**At current share prices, capital raisings result in high levels of dilution for existing shareholders.**

Many juniors with feasibility study stage gold projects would find that currently their share price is at a level where they are required to raise an equity component of project funding capital that is similar or greater than their market capitalisation. Similarly, at current share prices and with strong local currency gold prices, projected price/earning multiples if the project proceeds are likely to be very low. This means effective cost of equity capital (in terms of earnings dilution to existing shareholders) can be very high.

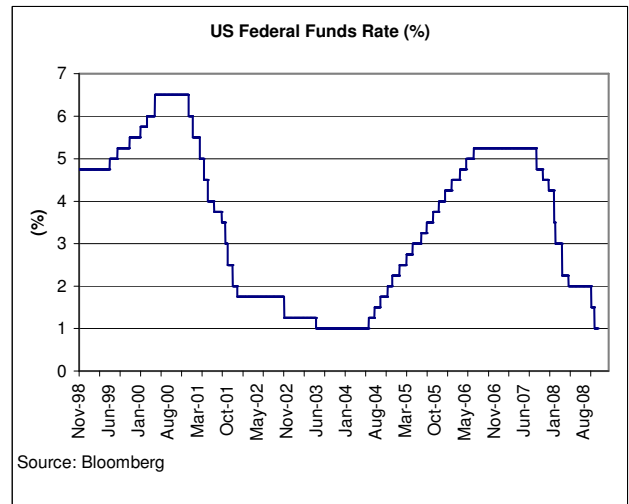
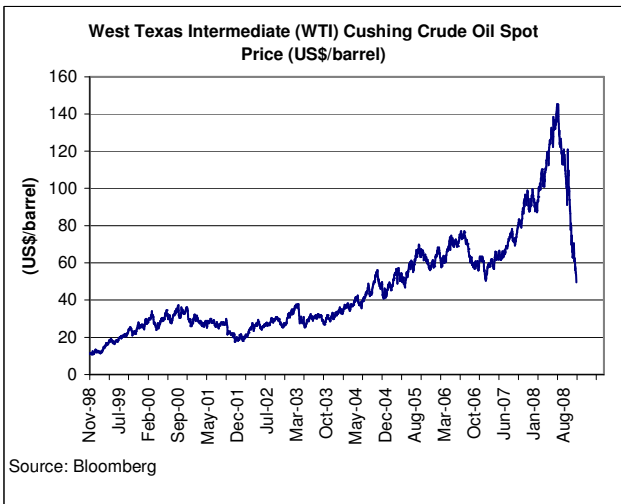
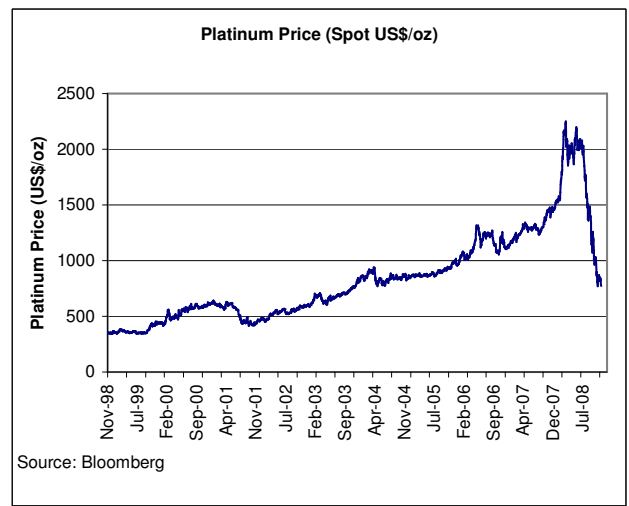
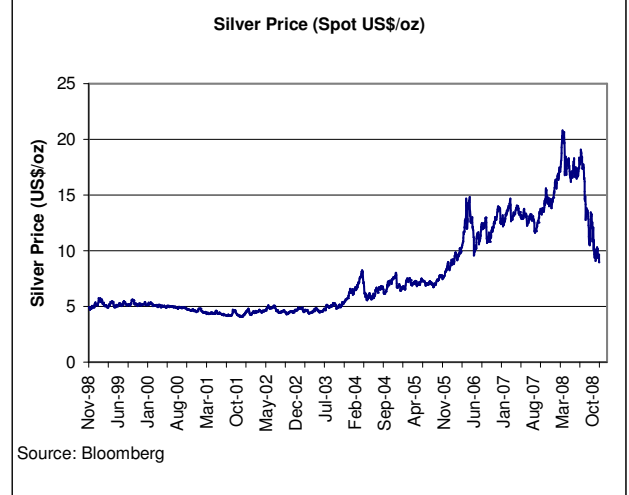
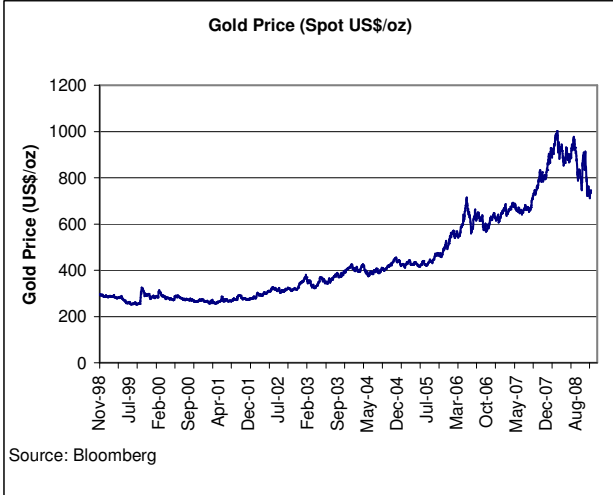
**High local currency gold prices will ensure companies with low risk advanced projects instigate capital raisings, albeit at a high cost to shareholders.....**

Many junior companies will need to choose between the cost of equity capital and the cost of doing nothing (i.e. batten down the hatches and wait for an improvement in debt and equity markets). With strong gold prices in local currency terms, companies with advanced projects are likely to wear the high cost of equity in order to achieve the ultimate goal of production.

**.....cost of inactivity is seen as greater.**

# Select Charts and Gold Sector Statistics

Precious metal prices, interest rates, and oil price charts.



**Gold production by country (calendar year 2007).**

**China emerged as the world's largest gold producer in 2007 – production 280.5t.**

<b>Gold Mine Supply 2007</b>			
<b>Country</b>	<b>t</b>	<b>moz</b>	<b>%</b>
China	280.5	9.0	11.3
South Africa	269.9	8.7	10.9
Australia	246.3	7.9	9.9
United States	239.5	7.7	9.7
Peru	169.6	5.5	6.9
Russia	169.2	5.4	6.8
Indonesia	146.7	4.7	5.9
Canada	101.2	3.3	4.1
<b>Top 8</b>	<b>1,622.9</b>	<b>52.2</b>	<b>65.5</b>
Rest of World	853.0	27.4	34.5
<b>Total</b>	<b>2,475.9</b>	<b>79.6</b>	<b>100.0</b>

Source: Newcrest, GFMS

**Gold production by producer (2007).**

**The world's 4 largest gold producers account for 29% of global production.**


<b>Gold Production 2007</b>			
<b>Producer</b>	<b>t</b>	<b>moz</b>	<b>%</b>
Barrick Gold	250.7	8.1	10
AngloGold Ashanti	170.4	5.5	7
Newmont Mining	165.6	5.3	7
Gold Fields	122.9	4.0	5
<b>Top 4</b>	<b>709.6</b>	<b>22.8</b>	<b>29</b>
Rest of World	1,766.3	56.8	71
<b>Total</b>	<b>2,475.9</b>	<b>79.6</b>	<b>100</b>

Source: RCR

### Top 10 Australian gold companies by market cap (as at November 6, 2008)

**Newcrest and Lihir are the largest gold companies by market cap listed in Australia.**

Company Name	Mkt cap (A\$m)	Equity		Equity production
		resources Au (moz)	Equity production Au CY07 (moz)	Au CY08 to date* (moz)
Newcrest Mining Limited	9352	69	1693	1304
Lihir Gold Limited	4147	44	819	605
OZ Minerals Limited	3215	20	172	115
Sino Gold Mining Limited	1021	7	79	86
Centamin Egypt Limited	580	12	0	0
PanAust Limited	338	3	28	27
Straits Resources Limited	333	2	46	39
St Barbara Limited	318	13	165	111
Andean Resources Limited	277	1	0	0
Kingsgate Consolidated Limited	272	3	77	40

Data source: Intierra – Resource Intelligence  ; RCR.

### Gold production – top 20 global projects (listed companies, calendar year 2007)

Property Name	Owner	Country	CY07 production Au (moz)	CY07 total cost (US\$/oz)
Nevada Gold Operations	Newmont	United States	2.34	556
Grasberg Gold/Copper Operation	Freeport-McMoRan	Indonesia	2.17	na
Goldstrike Gold Operation	Barrick	United States	1.63	452
Yanacocha Gold Operation	Newmont	Peru	1.56	462
Lagunas Norte Gold Mine	Barrick	Peru	1.09	145
Driefontein Gold Mine	Gold Fields	South Africa	1.01	468
Kloof Gold Mine	Gold Fields	South Africa	0.92	497
Olimpiada Gold Operation	OJSC Polyus	Russia	0.86	na
Harmony Quality Gold Operations	Harmony	South Africa	0.78	na
Red Lake Gold Operation	Goldcorp	Canada	0.70	na
Lihir Gold Mine	Lihir	Papua New Guinea	0.70	365
Tarkwa Gold Mine	Gold Fields	Ghana	0.66	452
Telfer Gold/Copper Mine	Newcrest	Australia	0.62	664
Alumbrera Copper/Gold Operation	Xstrata	Argentina	0.61	na
Super Pit Gold Operation	KCGM	Australia	0.61	542
Sunrise Dam Gold Mine	AngloGold Ashanti	Australia	0.60	387
Mponeng Gold Mine	AngloGold Ashanti	South Africa	0.59	359
Round Mountain Gold Operation	Kinross	United States	0.58	409
Batu Hijau Copper/Gold Mine	Newmont	Indonesia	0.55	293
Cortez Gold Operation	Barrick	United States	0.54	550

Data source: Intierra – Resource Intelligence  ; RCR