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United States of America

Basic Industries

Metals &amp; Mining

## Metals & Mining

Industry Update

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### Gold - Another False Dawn?

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#### Investment conclusion

- Gold prices have been strong over the past month. Nonetheless, we continue to believe rallies above \$300 per ounce will prove unsustainable due to price sensitive jewellery demand and continued disinvestment of above ground inventories.

#### Summary

- Several large gold producers have announced intentions to significantly reduce their hedge books. In the short term, reducing hedge books is clearly positive for the gold price. However, we remain concerned that too much of gold's recent strength is attributable to what is obviously an unsustainable source of "demand" from gold mining companies. Mine production has not decreased. Central banks remain large net sellers. And, jewellery demand is sluggish and has consistently proven to be price sensitive.
- We believe gold equities have already discounted a significant and sustainable rise in the gold price. Therefore, in our opinion, the risk/return is unfavorable.

#### Gold's Problem – A Huge Inventory

According to Gold Fields Mineral Services, annual mine production of gold was 2,595 tonnes in 2001, up modestly from 2000. As can be seen in Figure 1, central banks own over 32,000 tonnes of gold bullion. In addition, it is estimated that private investors own about 25,000 tonnes of gold bullion. In our opinion, gold has an obvious but often overlooked problem. That is, almost every ounce that has ever been produced is still potentially available to the market.

Without question, gold used to play a special role as a monetary asset and investment. Unfortunately, over the past twenty years, gold has increasingly become "commoditized" - a process we refer to as reverse alchemy. Because gold used to have these special roles, it is a commodity with a very serious inventory problem. Interestingly, silver went through a period of demonetization and central bank disinvestments that had a negative impact on the commodity price for decades. We'd like to believe recent strength in the gold price represents a new dawn for gold investors. However, with central bank inventories equal to 13 years of global mine production, we're doubtful.

Figure 1: Central Bank Gold Holdings Priced at \$280 per Ounce (Dec., 2001)

	Gold, Millions of Ounces	Gold, tonnes	Value @ \$280/oz in \$Billions
United States	262	8,149	\$73.4
Germany	111	3,457	\$31.1
France	97	3,025	\$27.2
Italy	79	2,452	\$22.1
Switzerland	71	2,224	\$20.0
Netherlands	28	885	\$8.0
Japan	25	765	\$6.9
Portugal	20	607	\$5.5
Spain	17	523	\$4.7
Taiwan	14	422	\$3.8
Russia	13	413	\$3.7
China	13	395	\$3.6
India	12	358	\$3.2
United Kingdom	11	356	\$3.2
Austria	11	346	\$3.1
Venezuela	11	340	\$3.1
Lebanon	9	287	\$2.6
Belgium	8	258	\$2.3
Phillipines	8	241	\$2.2
Sweden	6	185	\$1.7
South Africa	6	180	\$1.6
Algeria	6	174	\$1.6
Libya	5	144	\$1.3
Saudi Arabia	5	143	\$1.3
Singapore	4	127	\$1.1
Greece	4	123	\$1.1
Turkey	4	116	\$1.0
Romania	3	105	\$0.9
Poland	3	103	\$0.9
Indonesia	3	97	\$0.9
Institutions (IMF, ECB, etc.)	135	4,185	\$37.7
Other	52	1,610	\$14.5
<b>World Total</b>	<b>1,054</b>	<b>32,793</b>	<b>\$295.2</b>

Source: *International Monetary Fund*

## Bundesbank Comment Confirms Our Long Term Fears

Our view has been that central banks will consistently and steadily elect to sell their reserves and invest the proceeds in interest-bearing securities. In late 1999, 15 European banks agreed to "restrict" their selling of gold to 400 tonnes per year. Since these central banks had been selling about 180 tonnes per year, the Washington Agreement always seemed in our opinion to be an organized acceleration of selling rather than a restriction. The five year agreement ends in September 2004. Under the agreement, 2000 tonnes are to be sold over the 1999 to 2004 period as follows: 1,243 by the Swiss, 445 by the UK, 299 by the Netherlands, 90 by Austria and 23 by Germany (to be done through the

minting of a commemorative coin). The UK will complete its final auction of 20 tonnes on March 5. Some have interpreted this to mean that central bank selling is beginning to abate. That interpretation is simply wrong. The pace of Swiss selling will accelerate as UK selling declines under the Washington Agreement and total selling will equal about 400 tonnes per year from Europe. In our opinion, by its own existence, the Washington Agreement exposes the fallacy of gold as a functional monetary reserve asset.

For years, Germany has been one of gold's staunch supporters. Germany holds about 3,400 tonnes and is the second largest holder after the U.S. Other than small sales of gold for the minting of coins, the Bundesbank has steadfastly resisted domestic pressures to monetize its gold holdings. For that reason, recent comments by the head of the Bundesbank are noteworthy. On February 19, Ernst Welteke, who may become next head of the European Central Bank, made the following comments.

*"We have significant gold reserves in the Bundesbank, and of course we are happy if the gold price rises. That shows that you shouldn't sell your gold at the wrong time."*

*"At the moment, there is an agreement between the central banks limiting the sale of gold. That is sensible since if we all sold central bank gold we send the gold price plummeting. That wouldn't be sensible. But I could imagine that we slowly sell some of this gold and reinvest the revenue in assets that pay an interest."*

*"We should in no case sell the gold reserves to pay off federal debt or finance new spending. At best, we should use the interest to reduce the debt."*

We believe the implication of these comments is significant as it lays the foundation for another multi-year organized program of large European disposals. It should be remembered that the United States is not a signatory to the Washington Agreement. The U.S. holds 8,149 tonnes of gold at Fort Knox and West Point. This is equal to over 3 years of global mine production. The authority to sell gold rests entirely with the Executive Branch. Contrary to popular perception, neither the approval of the Federal Reserve nor Congress is necessary to proceed with a sale. We are not projecting a significant sale of U.S. gold reserves in the near future. Our point, simply, is that investors should not assume such a sale cannot occur - particularly in a robust gold price environment. The United States sold a significant amount of gold in 1979 when gold prices were strong.

### **Don't Forget the IMF**

The IMF holds over 3,000 tonnes of gold. For quite some time, the IMF had been pursuing a proposal to sell 300 tonnes of its gold and invest the proceeds in interest-bearing securities. It was proposed that the interest income would be used to fund debt relief in poor countries. However, in 1999, the gold industry successfully lobbied the U.S. Congress to use its veto power and block the sale of IMF gold. Throughout testimony against the sale, essentially no one was successful in arguing that gold was a worthwhile reserve asset. Instead, the main argument against the sale was that it would crush the already weak gold price and cost thousands of jobs.

While the lobbying effort was successful, we'd argue that gold lobbying groups won the battle but lost the war. For years, these groups have argued that official institutions should hold gold because it is the ultimate store of value. Now, these same groups are on record arguing that gold, the alleged ultimate store of value, cannot be sold because the price will collapse. In our opinion, that seems inconsistent.

More importantly, the "save our jobs" argument worked when gold prices were near \$250 per ounce. However, like most commodities, the cost of producing gold has declined in the past two years. At prices above \$290 per ounce, the "save our jobs" argument simply has no merit. Gold prices this high will not only prolong existing production but encourage production increases in our opinion. We do not believe this de facto subsidy to the gold industry is likely to be maintained at a time of high gold prices. This is another key reason we believe a significant and sustainable gold price increase is unlikely. Like the United States, the IMF sold a significant amount of gold in the 1970's when gold prices were strong.

## Producer Buybacks – A Temporary Source of Price Support

For years, many gold bulls argued that forward selling by producers was the main source of gold price weakness. We have never agreed with that viewpoint. In our view, forward selling changes the timing of gold mine supply, it does not change the amount. Over time, the amount of gold supplied by gold mines is ultimately determined by what is mined.

That said, increasing/decreasing the size of hedge books can be temporarily negative/positive for the gold price respectively. We attribute much of gold's recent strength to producer buybacks. In our opinion, the fact that producer buybacks are occurring and the gold price is still well below \$400 per ounce refutes the argument that hedging has been the main cause of gold's demise in recent years.

In recent weeks, AngloGold has reportedly indicated an intention to reduce its hedge book by several million ounces. In addition, Newmont will soon be acquiring Normandy, an Australian producer with an 8 million ounce hedge book. Newmont management has committed to running down the hedge book by delivering production against the commitments. This effectively reduces mine production by roughly 1 million ounces (about 31 tonnes) per year for the next eight years.

Unfortunately, producer buybacks have historically proven to be market tops. In 1996, Barrick reduced its hedge book by 3 million ounces at prices above \$400 per ounce. In 2000, Placer Dome committed to reducing its hedge book by 2 million ounces when gold was near \$300 per ounce. To a certain extent we can appreciate why gold producers would be inclined to reduce their hedge books this time. The attractiveness of hedging is determined by the spot price and the contango. Gold's contango is the difference between interest rates and gold lease rates. With interest rates so low at this time, the 1-year contango is just 1% while the 3 year contango is 2%. Over the past decade, the 1-year contango has averaged about 4%. In other words, forward selling at this time is not as attractive as it usually is. Therefore, we expect a decline in hedge positions to be modestly supportive of the gold price in 2002. Accordingly, we are raising our average gold price forecast to \$280/ounce for 2002 and using a gold price forecast of \$265 per ounce for 2003 and beyond. The current price is approximately \$297 per ounce.

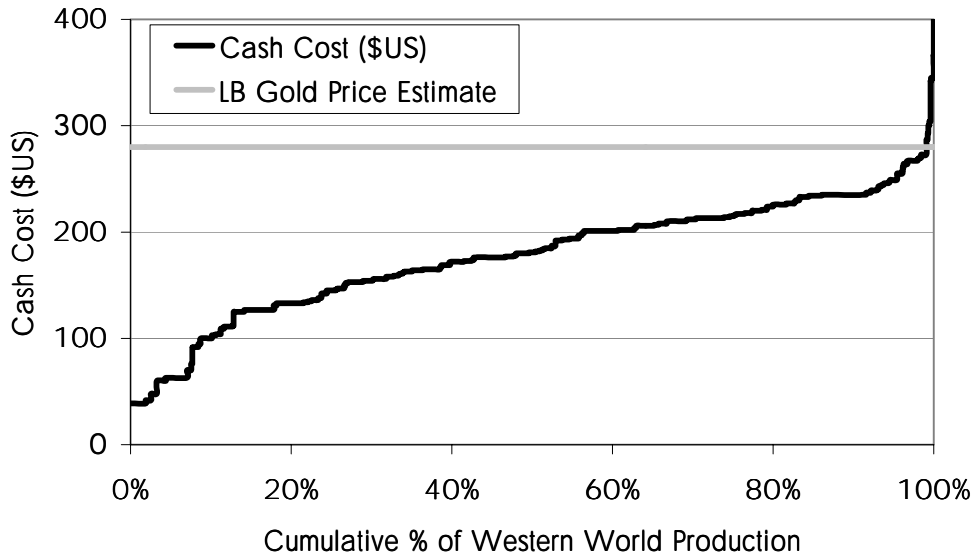
What's ironic is that many investors perceive gold as being positively correlated to inflation. However, because producer forward selling has become so prevalent, we'd argue that there may actually be an inverse correlation between the price of gold and inflation. As the economy rebounds and inflation fears return, presumably interest rates will rise. As interest rates rise, the contango will likely increase and forward selling would become more attractive. Producers would likely start adding to their hedge books which would be negative for the gold price.

## Conclusion

Producer buybacks will likely be supportive of the gold price this year. Nonetheless, we view this as a temporary source of "demand". In our opinion, rallies above \$300 per ounce will be met with a decline in price sensitive jewellery demand, an increase in scrap supply and disinvestments from stale longs. Furthermore, needed production curtailments will not likely happen if the gold price remains strong.

We believe gold equities are already discounting a significant and sustainable rise in gold prices. Therefore, we believe the risk/return is unfavorable.

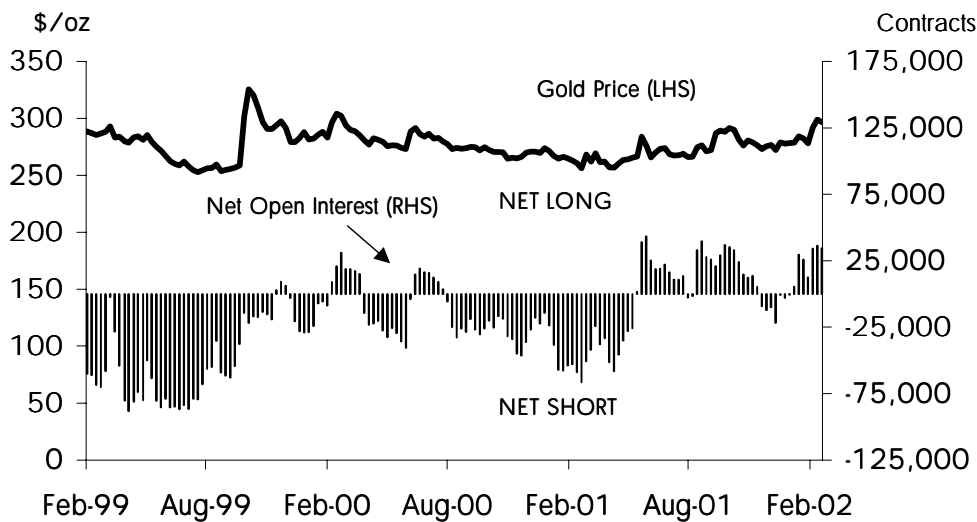
Figure 2: Gold Mining Cash Cost Curve, 1H 2001 (\$ per troy ounce)



*At current gold prices, expectations for material declines in mine production are too optimistic in our opinion.*

Source: Gold Fields Mineral Services

Figure 3: COMEX Noncommercial Positions



*COMEX speculators are currently net long. We do not believe this will prove positive for the gold price.*

Source: CRU, CFTC net non-commercial open interest, futures only

**Figure 4: World Gold Supply/Demand Balance (in metric tonnes)**

	<u>1993</u>	<u>1994</u>	<u>1995</u>	<u>1996</u>	<u>1997</u>	<u>1998</u>	<u>1999</u>	<u>2000</u>	<u>2001</u>	<u>2002e</u>	<u>2003e</u>
<b>Supply</b>											
Mine Production	2,289	2,278	2,269	2,346	2,464	2,545	2,570	2,568	2,595	2,600	2,600
Old Gold Scrap	574	615	625	644	611	1,093	616	602	695	680	675
<b>Total</b>	<b>2,863</b>	<b>2,893</b>	<b>2,894</b>	<b>2,990</b>	<b>3,075</b>	<b>3,638</b>	<b>3,186</b>	<b>3,170</b>	<b>3,290</b>	<b>3,280</b>	<b>3,275</b>
<b>Demand</b>											
<b>Fabrication</b>											
Jewelry	2,551	2,610	2,767	2,807	3,328	3,156	3,155	3,191	2,995	3,030	3,200
Electronics	179	190	205	207	237	240	243	275	277	285	290
Other	187	194	210	213	226	220	216	229	210	220	240
<b>Total Fabrication</b>	<b>2,917</b>	<b>2,994</b>	<b>3,182</b>	<b>3,227</b>	<b>3,791</b>	<b>3,616</b>	<b>3,614</b>	<b>3,695</b>	<b>3,482</b>	<b>3,535</b>	<b>3,730</b>
<b>Mine &amp; Scrap Supply/Fabrication Demand *Gap*</b>	<b>-54</b>	<b>-101</b>	<b>-288</b>	<b>-237</b>	<b>-716</b>	<b>22</b>	<b>-428</b>	<b>-525</b>	<b>-192</b>	<b>-255</b>	<b>-455</b>
<b>Investment Demand</b>											
Official Coins	117	80	84	63	99	124	136	48	61	50	50
Bar Hoarding	162	231	306	182	337	112	252	187	220	220	220
Implied Investment	264	-155	33	-163	-260	292	115	-282	-46	-100	-100
<b>Total Investment Demand</b>	<b>543</b>	<b>156</b>	<b>423</b>	<b>82</b>	<b>176</b>	<b>528</b>	<b>503</b>	<b>-47</b>	<b>235</b>	<b>170</b>	<b>170</b>
<b>Total Demand</b>	<b>3,460</b>	<b>3,150</b>	<b>3,605</b>	<b>3,309</b>	<b>3,967</b>	<b>4,144</b>	<b>4,117</b>	<b>3,648</b>	<b>3,717</b>	<b>3,705</b>	<b>3,900</b>
<b>Total Balance *Gap*</b>	<b>-597</b>	<b>-257</b>	<b>-711</b>	<b>-319</b>	<b>-892</b>	<b>-506</b>	<b>-931</b>	<b>-478</b>	<b>-427</b>	<b>-425</b>	<b>-625</b>
<b>Creating the Total *Gap*</b>											
Net Official Sector Sales	482	94	182	239	406	398	420	491	468	495	480
Net Forward Sales	215	158	466	-14	329	60	405	-44	-69	-100	100
Gold Loans/Option Hedging	-100	5	64	94	157	48	106	30	28	30	45
check	597	257	712	319	892	506	931	478	427	425	625

Source: GFMS and Lehman Brothers estimates

**Figure 5: Lehman Brothers Metals and Mining Universe**
**Metals & Mining Universe**
**February 28, 2002**

<b>Company</b>	<b>Ticker</b>	<b>Rating</b>	<b>Last Price</b>	<b>Market Cap.<sup>1</sup></b>	<b>Debt/Cap</b>	<b>EPS</b>		<b>2002 P/E</b>	<b>2003 P/E</b>	<b>2002 Divd. Yield</b>	<b>2002 Net Ent. Val. / EBITDA</b>	<b>2003 Net Ent. Val. / EBITDA</b>
						<b>02e</b>	<b>03e</b>					
<b>Aluminum</b>												
Alcan	AL	2	\$40.51	13.0	32%	1.75	2.45	23.2x	16.5x	1.5%	8.7x	7.3x
Alcoa	AA	1	\$37.85	32.4	38%	1.75	2.40	21.7x	15.8x	1.6%	10.0x	8.0x
<b>Coal Mining</b>												
Alliance Resource Partners	ARLP	1	\$23.50	0.4	N/A	1.72	1.63	13.7x	14.4x	8.5%	6.5x	6.6x
Arch Coal	ACI	1	\$18.10	0.9	57%	1.85	2.60	9.8x	7.0x	1.3%	3.9x	3.3x
CONSOL Energy (Calendar Year)	CNX	3	\$23.00	1.8	69%	2.22	2.65	10.4x	8.7x	4.9%	4.6x	4.1x
Massey Energy	MEE	2	\$14.00	1.0	39%	1.05	1.50	13.4x	9.4x	1.1%	4.2x	3.6x
Penn Virginia Resource Partners	PVR	1	\$22.75	0.4	0%	1.75	1.95	13.0x	11.6x	8.8%	10.7x	9.3x
<b>Copper</b>												
Freeport McMoRan Copper & Gold "A"	FCXA	2	\$14.25	2.1	95%	0.62	1.22	22.9x	11.6x	0.0%	6.1x	4.5x
Freeport McMoRan Copper & Gold "B"	FCX	2	\$14.70	2.1	95%	0.62	1.22	23.6x	12.0x	0.0%	6.1x	4.5x
Phelps Dodge	PD	3	\$38.06	3.0	51%	(0.30)	2.20	NM	17.3x	0.0%	8.4x	5.4x
<b>Diversified Mining</b>												
Rio Tinto <sup>2</sup>	RTP	2	\$82.41	28.3	47%	5.10	5.90	16.2x	14.0x	3.0%	8.4x	7.5x
<b>Gold</b>												
Barrick Gold	ABX	3	\$18.07	9.7	20%	0.48	0.40	37.4x	45.2x	0.9%	12.0x	13.6x
Newmont Mining <sup>3</sup>	NEM	4	\$24.02	9.4	46%	0.48	0.40	50.2x	59.4x	0.5%	10.5x	10.8x
Placer Dome	PDG	3	\$11.75	3.9	39%	0.35	0.30	33.7x	39.7x	0.9%	9.5x	10.2x
<b>Steel</b>												
Nucor	NUE	3	\$60.35	4.7	17%	2.35	3.70	25.7x	16.3x	1.2%	7.7x	5.7x
U.S. Steel	X	3	\$18.49	1.6	37%	(1.00)	1.76	NM	10.5x	1.1%	10.8x	4.5x

**Notes:**

1. In billions of US dollars.

2. Valuation based on ADR pricing and ADR equivalents outstanding.

3. Newmont's valuation ratios proportionally include the Batu Hijau operations.

Source: Company data and Lehman Brothers estimates.

Disclosures: AA: G ACI: A, G ARLP: A, C, G MEE: G PVR: A, G RTP: B X: A

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**Related stocks**

<b>Company Name</b>	<b>Ticker</b>	<b>Price(02/28/02)</b>	<b>Rating</b>
Barrick Gold	ABX	(18.07)	3 - Market Perform
Newmont Mining	NEM	(24.02)	4 - Market Underperform
Placer Dome	PDG	(11.75)	3 - Market Perform
Freeport-McMoRan C&G	FCX	(14.70)	2 - Buy
Freeport-McMoRan C&G	FCXA	(14.25)	2 - Buy



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