Gold Supply: above the ground stocks

- Since the first gold mined 6,000 years ago in Varna (actual Bulgaria), 165,600 tons exists representing almost 65 years of 2009 mine production!! 2 % were lost. 20 meters cube
- Half of it is in Jewellery and 2/3 fabricated; 1/3 for investment
- 2/3 are in direct possession of population
- Value of existing stocks: 7,2 trillions USD or 1000USD/hab. (24 grams)
- 40% of 2009 supply came from scrap (39%-1,674 t.) and Disinvestment (official and private 41 t. - 1%)
Gold Supply:
Above the Ground Stocks & Transfers

- Private Investment: 29,600 t.
- Official Holdings: 28,900 t.
- Jeweller: 83,700 t.
- Fabrication: 19,800 t.
to Stocks

OldScrap

Official sector Sales
Gold Supply: Scrap or «Recycled»

<table>
<thead>
<tr>
<th>Year</th>
<th>Scrap (tonnes)</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>1990</td>
<td>1,000</td>
<td>40%</td>
</tr>
<tr>
<td>1994</td>
<td>750</td>
<td>30%</td>
</tr>
<tr>
<td>1998</td>
<td>500</td>
<td>20%</td>
</tr>
<tr>
<td>2002</td>
<td>250</td>
<td>10%</td>
</tr>
<tr>
<td>2006</td>
<td>0</td>
<td>0%</td>
</tr>
</tbody>
</table>

- Gold is eternally recycled if its price allows it.
- Oldest material recycled and 2nd best after Platinum.
- In some countries jewellery = investment.
- Scrap supply soared 27% in 2009 to a new all time high of 1,674 tonnes, led by stronger price and weak environment crisis.
- The scrap equals the jewellery demand. Jewellery could be decoupled from mining. Cover rate World 95%. In Europe 270 tons were recycled vs. 200 tons consumption => 135% cover rate.
- But Recycled gold is not conveying any progress nor development. It is a fallback solution to Dirty Gold.
Gold Supply (soon a demand ?) 
Official sector (Central Banks)

• Net official sector sales declined by 82% to 41 t. almost nothing.

• Central banks are net seller for almost 20 years. 2009 is the first year tending to Zero.

• Important 2009 Sellers: IMF: 200 t., France 57 t. (2% of its holdings), ECB 37 t., Sweden 11 t. Germany 6 t.


• Total Holdings: 29,000 t. = 18% stocks and 11 years of mining. Same level than 60 years ago!

• USA+France+Germany+Italy+IMF: more than 65% of reserve in Gold

• China+Japan+Russia: less than 5% (China 2%)

• Why Gold: - Independant from the governments, depends on supply/offer; - Inflation protected (not a paper money); - Indestructible; - Emergency use (gold is universal); - It is secure against all kind of crisis (war, economic...)

• THE ULTIMATE CURRENCY
Investment demand - ETF phenomenon

- In 4 years, Investment demand X 2 and X 5 in value to record 1.901 tons
- ETF most widely used vehicle for investment in western world. Used for Wealth preservation.
- Represented 1/3 of total 2009 investment demand (1901 tons)
- Easy to get in but easy to get out...
- In value, the ETF investment in Gold soared 500% in 4 years to 58 Bn$ (end 2009)
3- GOLD: PRICE - PRICING MECHANISMS - COSTS
Price: Historical & determination

- Current
- 2009 USD Constant


Prices: 0, 1500, 2250, 3000

Graph shows the price trends from 1976 to 2009, comparing current and 2009 USD constant values.
Price: Mining Cost (2010 Q2 LSM)

- Total Cost of production 10.Q2: 697 usd/oz
- Characterization LSM: low national impact (royalties 2009 26$/oz 2.7%), low workforce intensity, High investments
- Characterization ASM: high national impact, high workforce intensity, low investments
Price: Local Impact is of essence

- What is the real local impact of Gold mining?
- Net sales: export - imports - dividends
- ASM revenues are injected deeply inside the economy. Spent locally
- Like the west american gold rush, if ASM mining benefits to the local economy, development can emerge
- To whom benefits gold extraction?

**Mali**: In 2009, 3rd continent producer, 14th worldwide, 178th/182 at the UNDP Human Development Index (HDI)
Price: Mining Cost LSM - what about env. costs?

According to 2nd Gold producer environmental report (member of the DJ sustainability Index), aprox. 30,000 employees (direct+indirect), 1 kilogram of gold implies:

- **3,900** tons. rock moved
- **675** gr. Hg produced (more than 4 Kg of Hg per direct job provided), 38 gr Hg air emitted - Total Hg production **131** tons for 195 t. gold

- **10 M ASM miners** => 300 tons gold => **30** gr Au /job
  => how many Hg emitted per job?
- Air emissions 2009: **7,3** tons of Hg **4,7** tons As
- **4 Million** liters of water used and **3 Million** withdrawn
- **2,000** tons of waste rock generated
- **220** kg of Cn used and **2,7** tons of lime
- **206** Gj of energy used (0,2% renewable) => **50 t. TNT**
- **21** tons of CO2 emitted <= 210.000 km in compact car

Gross Rosebel mine - Surinam © schein

mercredi 8 décembre 2010
4- GOLD: MINING SUPPLY CHAINS & FINANCE
ASM SUPPLY CHAIN

Producing Country

- ASM Miner
- On site buyer
- Regional buyer
- Exporter
- Intern’l Trader
- Refiner

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LSM SUPPLY CHAIN

Producing Country

Mine

Refiner

LBMA
Mining Finance : LSM

• Industrial mining is capital intensive.

• amortization represents 1/4 of total production costs for LSM

• A LSM mine development from greenfield is long (10 years) and tends to be longer because of community and environmental integration

• Legal base of financement is the mining title and the economic one, the reserves. **VISIBILITY** is crucial

• Capital markets are mature and specialized (TSX - Toronto; AIM London; ASX Australia)
Mining Finance: ASM

- The absence of mining titles is a barrier to formal financing

- Throwing the sector in the hands of traders

- Who require high returns because of the non-formalization of the sector

- Traders often provide finance in a non-monetary media: mechanical diggers, generators, mercury, etc.

- The absence of reserves (exploration) is a barrier to MT & LT financement

- The miner often sells his daily production onsite and concentrates on what maximizes his revenue: MINING
ASM Mining Finance: Hg is a financing tool

- Working capital = daily production × production cycle

- Hg: 1 day: productivity: 50 to 80%

- Cn: 21 days: productivity: 80 to 98%

- Ore buyers do not contemplate coarse gold and pay approx. 50% of the gold content obliging ASM miners to use mercury. **TRANSPARENCY IS NEEDED**

- Alternate technique can be a solution to Hg only if similar productivity is obtained at the same cost.
5- GOLD TAXATION
Gold and Tax : basics

• One of the reasons gold is used as a monetary media resides in its ANONYMITY. Gold is not traced.

• Making it a perfect tax avoidance tool

• Due to this status it is very difficult to assess the private gold assets in a country even in the industrialized world

• Gold taxation is a global issue because of its universality and value: weight ratio

• It is not innocent that Switzerland is the biggest refining hub in the world (3rd client of Peru in 2009)

• 3 out of the 4 major gold refineries are based in Chiasso at the Italian border second world jewelry producer after India ->2005 with a high percentage of unformalized production
Gold & Tax: the fiscal competition

- Gold in its monetary role. Colombian/Equator border example
- Colombia and Peru are draining a lot of foreign gold giving it a «birth certificate»
- It is a global issue. In Europe, competition between nation is a reality
Gold Taxation: the ASM miner’s view

• Why pay tax if there is poor public services? We have to produce our own electricity and built our own schools.

• Why pay tax if the mining title barrier is high because of the regulations and title concentration distribution?

• We are seen anyway like «illegals» and polluters. We are Demonized

• We are contributing more than LSM because 90% of our production has a local, regional and national impact and providing a job in an difficult employment market.

• ASM = 100% royalty because its proceeds are deeply injected in the national economy and spent locally.
Gold Taxation: the way forward

• **Lower** the royalties on ASM Gold to a competitive rate

• **Facilitate** formalization because if ASM is not formalized, fiscalization is very difficult

• **Provide** public services in the mining zones

• **Raise awareness of benefits of formalization for ASM miners:**
  • mining rights give security and vision
  • and access to financement and differentiated markets
  • VAT cash backs and import duty exemption (same as LSM)
  • better voicing, representation & image
6- THE CONSUMER POINT OF VIEW
Where is the gold of my ring coming from?

• Consumer has the power to influence because jewellery is the first use of gold. He/she has a direct link to the mineral.

• The consumer is unaware of the gold origin. He is ignorant.

• But awareness is raising thanks to the «noise» NGO, media and pioneer jewellers are making raising the pressure on the industry.
Raising awareness of the consumers

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Consumer trends

• The consumer is becoming more aware

• The consumer is becoming more responsible. As an example, 30 to 40% of the US consumers are sensitive to responsible & respectful products.

• «Love Earth» jewelry line from Walmart (first jeweller in the World) => Gross in 2009

• Consumers require a traced product, socially and environmentally responsible produced and manufactured by good governance organizations

• Accountability & traceability will be of essence especially in «dirty» industries.

THIS IS AN OPPORTUNITY FOR ASGM
7- ASM GOLD: A FLAGSHIP EXAMPLE
FAIRTRADE & FAIRMINED GOLD
• Born from Oro Verde in 2004
• As an international and multi-institutional organisation operating from the South
• With a supply chain approach and multiple players
• To take advantage of emerging green and fair trade markets as incentives for improved social and environmental performance of ASM and contribute to poverty reduction
• ARM has led a process through which key stakeholders have reached agreements on universal standards and criteria for the certification of responsible and environmentally friendly artisanal and small scale mining practices, later medium scale operations.
OUR MISSION
…to work towards the transformation of artisanal and small scale mining into a socially and environmentally responsible activity, facilitate an economically just supply chain and educate the consumers as to their power to directly improve the quality of life of artisanal miners by purchasing fair trade jewellery and minerals.

OUR STRATEGY
To create an international certification system for responsible sourced minerals coming from artisanal and small scale mining and to develop differentiated markets for these products.

STRATEGIC OBJECTIVES
• Standard Setting
• Producer support
• Advocacy for improved public policy and consumer awareness
Why Fair Trade Model?

- It directly raises awareness of consumers and campaigns for changes in the rules and practices of conventional international trade.
- Economic incentive for positive transformation: TRADE NOT AID – It’s a Business Model
- Allows access to differentiated markets
- Recognizes change is a process: minimum and progressive requirements
- Long term vision
- Pays a fair price
- Pays a FT premium to producers
- Ensures traceability
- Ensures community development & environmental sustainability
- Bottom up, democratic & transparent processes
Certified Gold

Fairtrade and Fairmined Gold

- Fairtrade/Fairmined Gold is exclusively available from ASM
- Miners must be formalised and organised (Legal mineral rights are a must)
- Requires consultation and consent of local community authorities, and grievance mechanisms to be in place
- Payment of all taxes and royalties
- Management of toxic substances (no whole ore amalgamation – obligatory use of retorts)
- No support to illegal activities or armed conflict
- Strict health and safety requirements
- NO child labor
- Rights for women miners
- Traceable gold