

TRADE, ECONOMICS & MARKET OF ASM GOLD

Global Forum on Artisanal and Small Scale Gold Mining
MANILA 7-9 DECEMBER 2010

Patrick SCHEIN - President S&P TRADING - ARM Exec. Board member

TOPICS

1. SYMBOLISM, HISTORY, PROPERTIES & USES
2. SUPPLY - DEMAND - MARKET STRUCTURE
3. PRICE - PRICING MECHANISMS - MINING COSTS

***** **QUESTIONS** *****

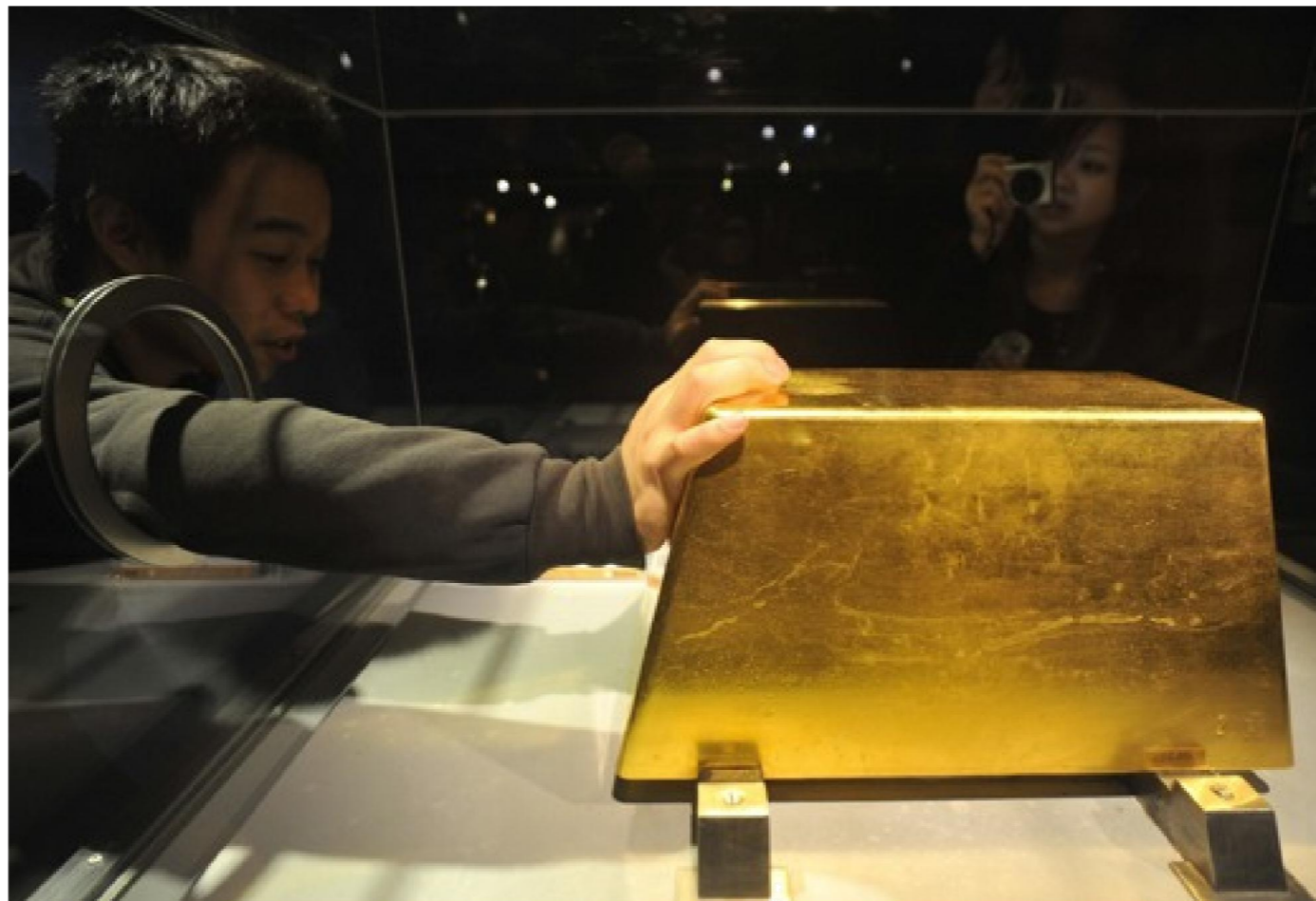
4. MINING SUPPLY CHAINS & FINANCING
5. GOLD TAXATION
6. THE CONSUMER POINT OF VIEW
7. ASM GOLD: ASM'S FLAGSHIP : FAIRTRADE & FAIRMINED GOLD

***** **QUESTIONS** *****



4 Horas - Peru - © famali

1- GOLD: SYMBOLISM, HISTORY, PROPERTIES & USES



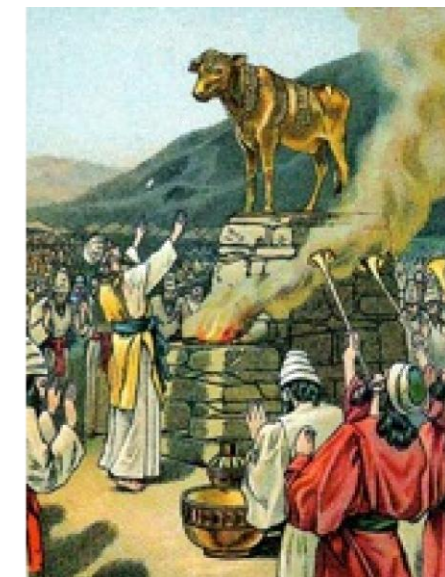
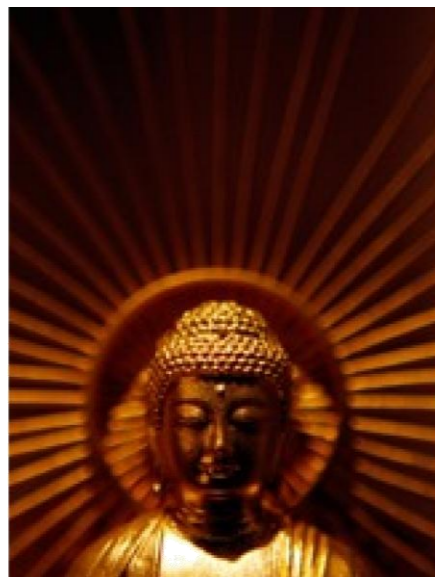
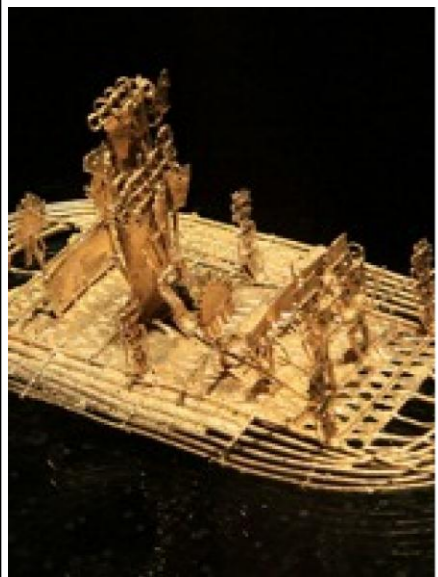
"I was with God and I was with the devil"



Mario Sepulveda - 2nd rescued miner - Gold mine - San Jose - Atacama Desert - Chile - oct 2010

Gold: a pure metal

Divine symbol due to its stability (immortality) and brightness (sun)



Inca:
Solar metal
(Inty Raymi)

Buddhism:
Symbol of
Sun, fire

Egyptians:
divine and
indestructible
metal
associated
with the sun.
Gods' flesh

Hinduism:
goddess
Lakshmi
symbol of
prosperity
Diwali:
lights feast

Christianism:
God's light
(San
Fernando
Bahia)

Old
testament:
Golden calf
(idolatry)
Solomon
temple

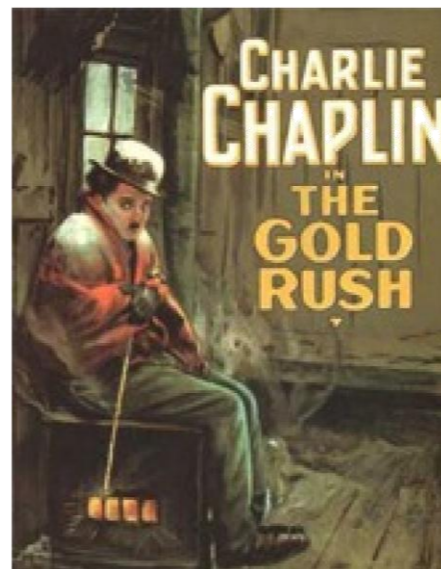


Islam / Orthodox

Gold: an impure metal

«Gold is a treasure, and he who possesses it does all he wishes to in this world, and succeeds in helping souls into paradise.» Columbus

Gold is a refuge but can become a curse



- the hellish mining life
- proslavery - massacres
- dirty gold
- environmental damages

Gold: Properties



- Rare : earth crust 5 ppb (Iron 5,8% X 10M)
- Dense : 1 liter = 20 kilograms
- malleable and ductile : Gold leaf
- Best electrical and thermal conductivity

Gold : Properties (II)



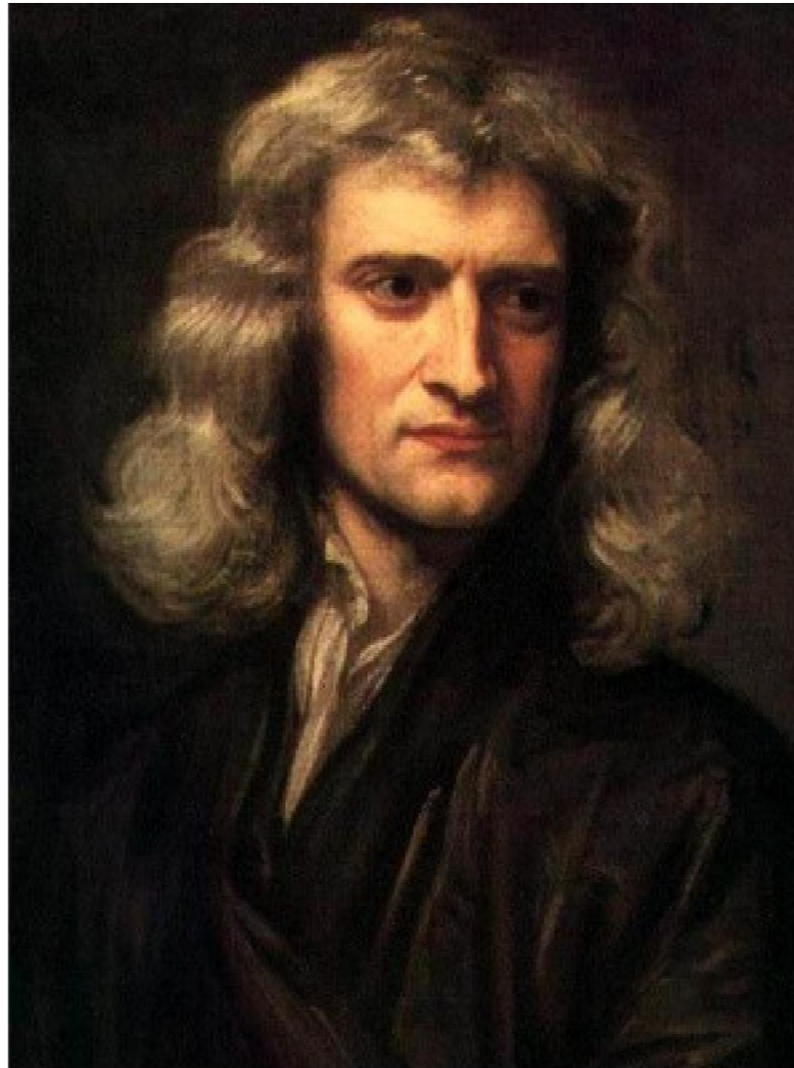
- stable (best corrosion resistance)
- blazing
- **INDESTRUCTIBLE**

Gold: History

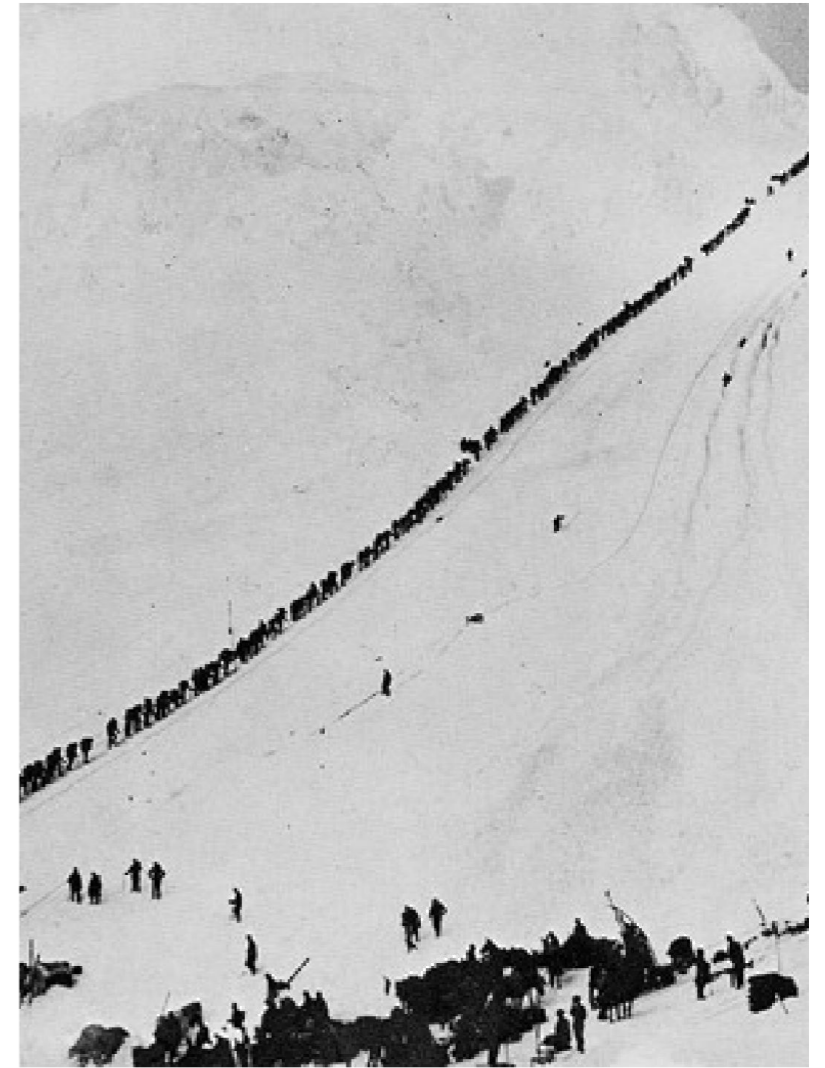


- discovered **4000 BC** in Nubia & Thrace
- gold is used in jewelry around **3000 BC** in southern Iraq
- first coin in electrum minted in Lydia by King Croesus approx. **640 BC**
- first «mechanized» mines in Spain & Dacia operated by the **Roman Empire**

Gold: History (II)



I. Newtown



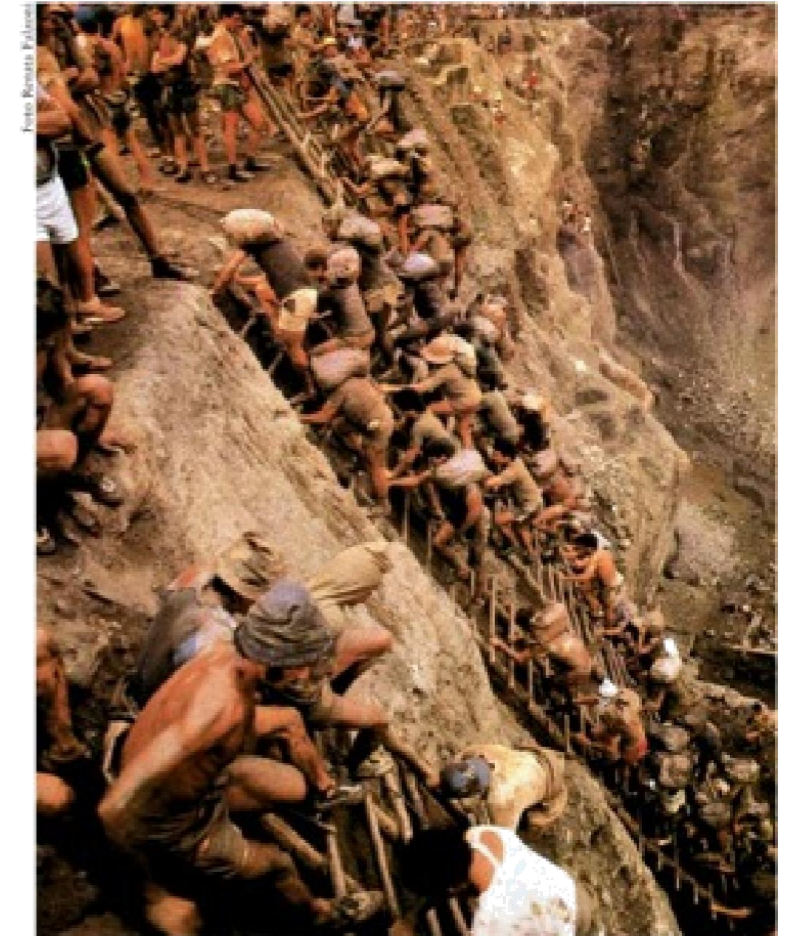
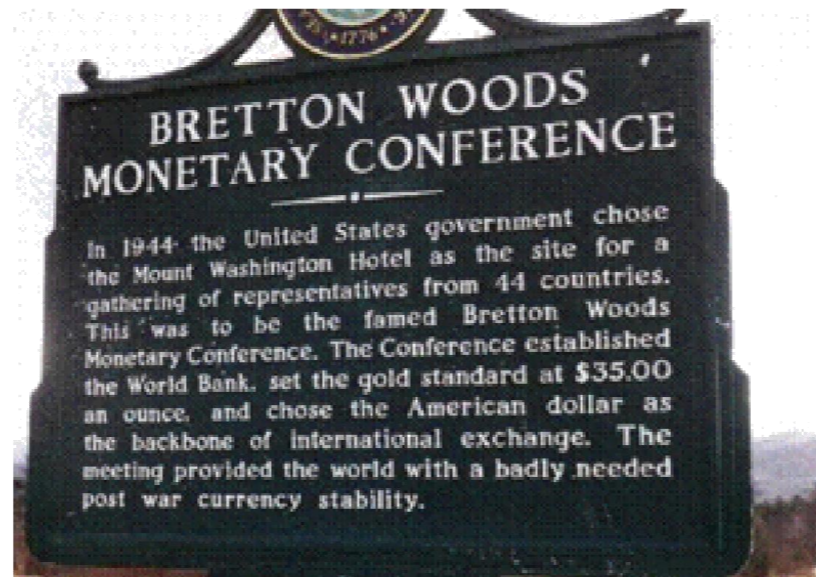
Chilkoot pass - Alaska

- South American Gold rush: King Ferdinand of Spain says to explorers, “Get gold, humanely if you can, but all hazards, get gold” (**1511 AD**)
- Isaac Newton, as Master of the Mint, sets the Gold Standard in **1711**
- **XIX century** Gold rushes: USA, Canada, Australia, South Africa

Gold: History (III)



This is the \$20 Gold Certificate of 1928. It's the only year they made small size \$20 Gold Certificates. Look at the picture of the White House (below) and compare it to the picture on a modern \$20 bill. You'll see that in the old picture, the bushes around the building are a lot smaller. This is because the back of the \$20 bill was redesigned for the next series they were printed: 1934. They have kept the design ever since, up until the recent introduction of that new oddball \$20 bill with the big portrait and none of the bills.



Trabalhadores na mina de ouro de Serra Pelada, Pará.

Serra Pelada - Brazil

- First bullion transaction in London in **1684** by Moses Mocatta. 1st fixing in **1919**
- In **1900**, United States enters officially on the gold standard.
- **1944-45** : Bretton Woods agreement establishes a gold exchange standard. The new standard involves setting par values for currencies in terms of gold and the obligation of member countries to convert foreign official holdings of their currencies into gold at these par values.
- Americans are forbidden to own gold in **1961 - 1973** marks the ends of Bretton-Woods
- The last gold rush of the XX th century : Serra Pelada (50,000 miners in **1983**: 13,9 tons)

Gold Uses: Financial



As **Monetary** exchange instrument: the ultimate currency

As an **investment**



Gold: Uses. Adornment and decorative



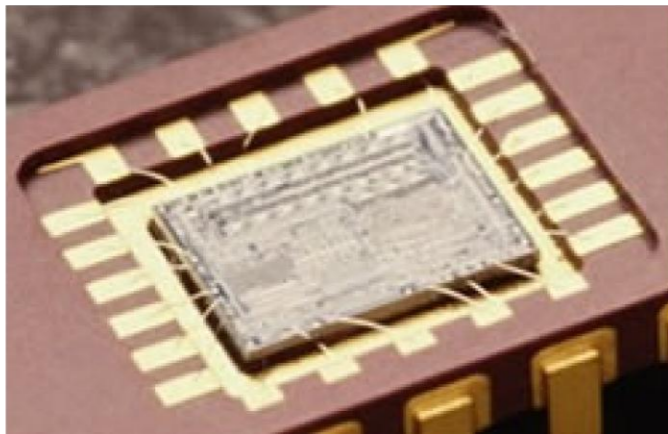
Jewellery



Plating salts, Gold leaf, liquid gold



Gold Uses : Industrial

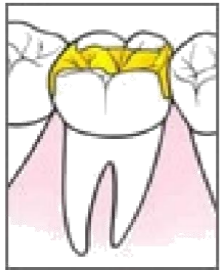


Electronics



Thermal shield

Gold Uses : Medical



Chris Johnson of the Tennessee Titans

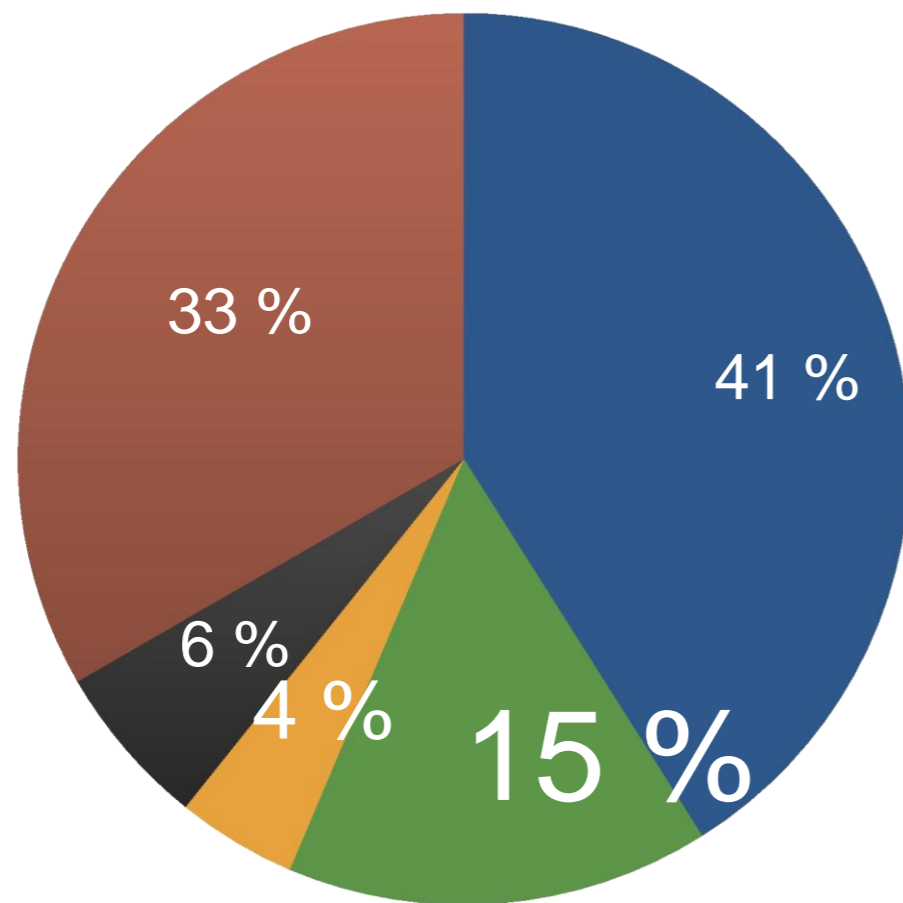
Dental



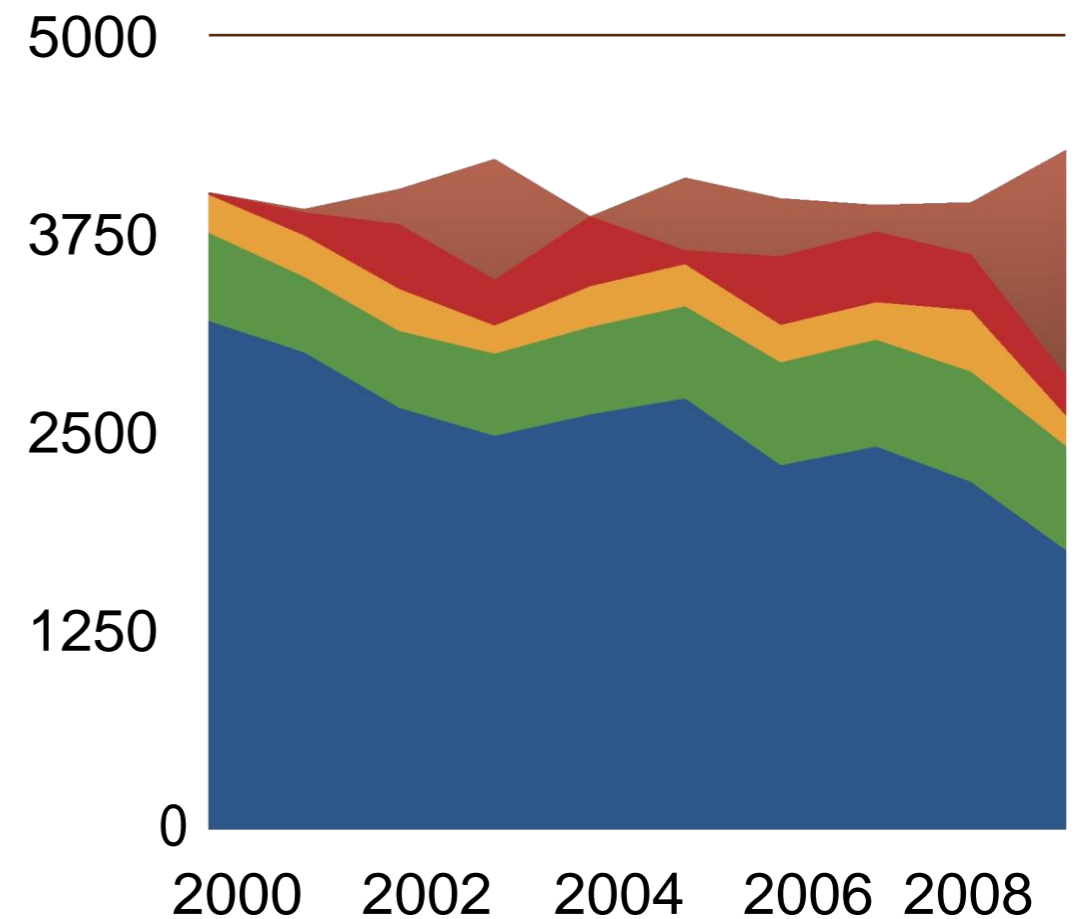
Ear Gold implant

Gold Uses (demand) : Volumes

Gold demand in 2009 (tons)



Gold Demand: 2000-2009



- Implied Net Investment
- Net Producer Dehedging
- Bar Hoarding
- Other Fabrications
- Jewellery

- Jewellery - 1759 t.
- Other fabrications - 658 t. (Elect. 246 t. - Coins & M 285 t. - dental 53 t. - other 74 t.)
- Bar Hoarding - 187 t.
- Net Producer Dehedging - 254 t.
- Implied Net Investment - 1429 t.

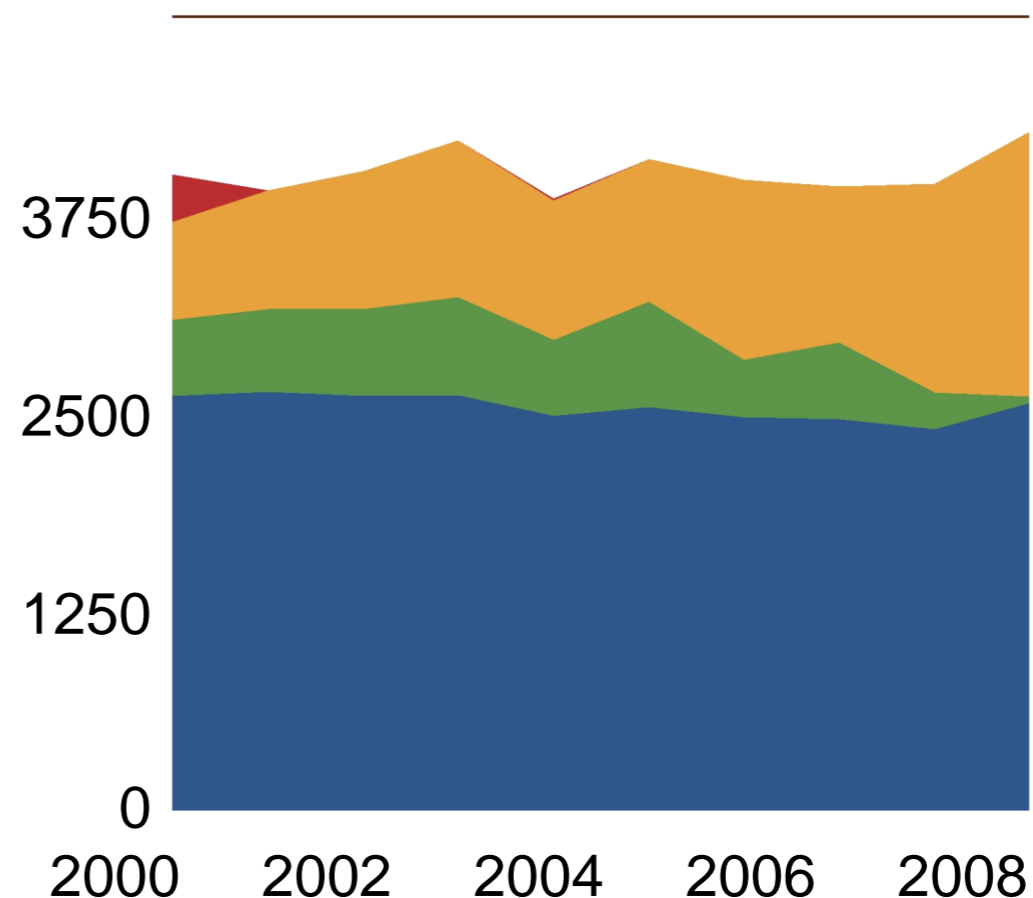
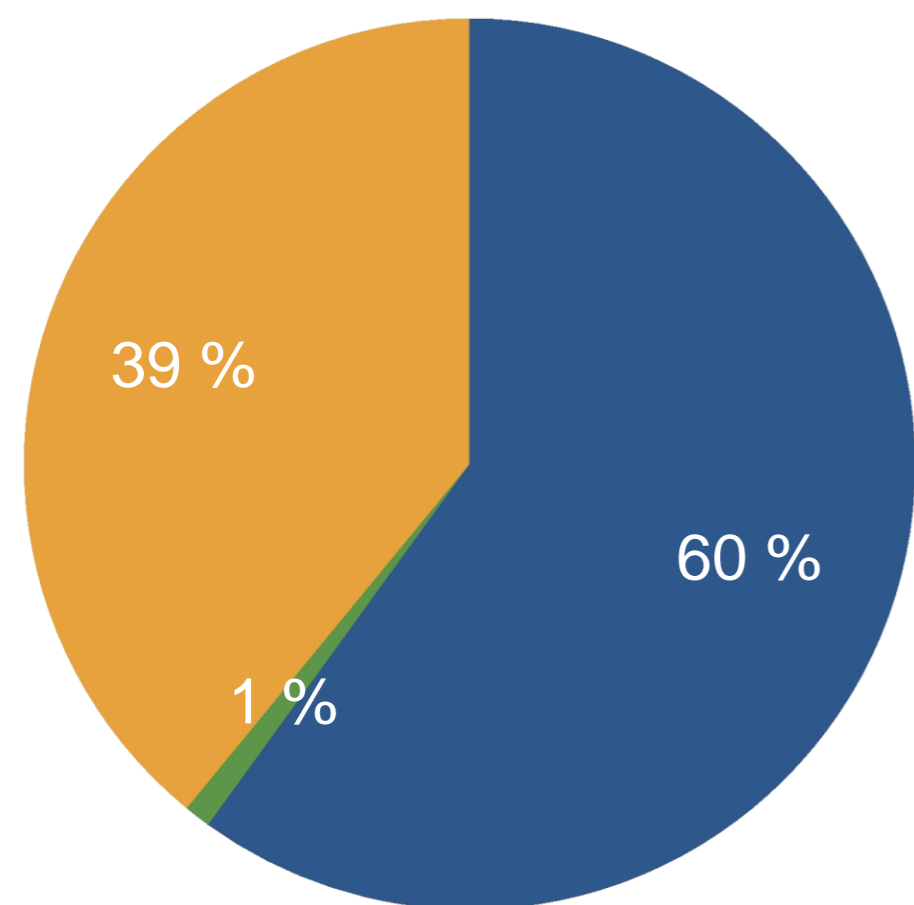
2- GOLD: SUPPLY - DEMAND - MARKET STRUCTURE



Gold Supply

- World gold offer in 2009: 4,287 tonnes - Highest in the last 10 years - +8% vs. 2008
- SUPPLY = NEW GOLD + ABOVE THE GROUND GOLD

Gold supply in 2009 (tons) Gold Supply: 2000-2009 5000



- Mining - 2,572 tons
- Official sector sales - 41 tons
- Old gold scrap - 1,674 tons

- Mining
- Old gold scrap
- Official sector sales
- Disinvestment

Gold Supply: Mine production

- In 2009: 60% of the offer 2,572 tons
- Exists in all continents except Antarctica
- China became the 1st mining producer in 2007 after more than 100 years of South Africa domination. China produced in 2009: 324 tons
- The period for an industrial mine between first exploration and production is around 10 years and is increasing => non elastic supply
- Largest gold producing mine in the world is in Indonesia and is a Copper Mine (Grassberg) nearing 100 ton production

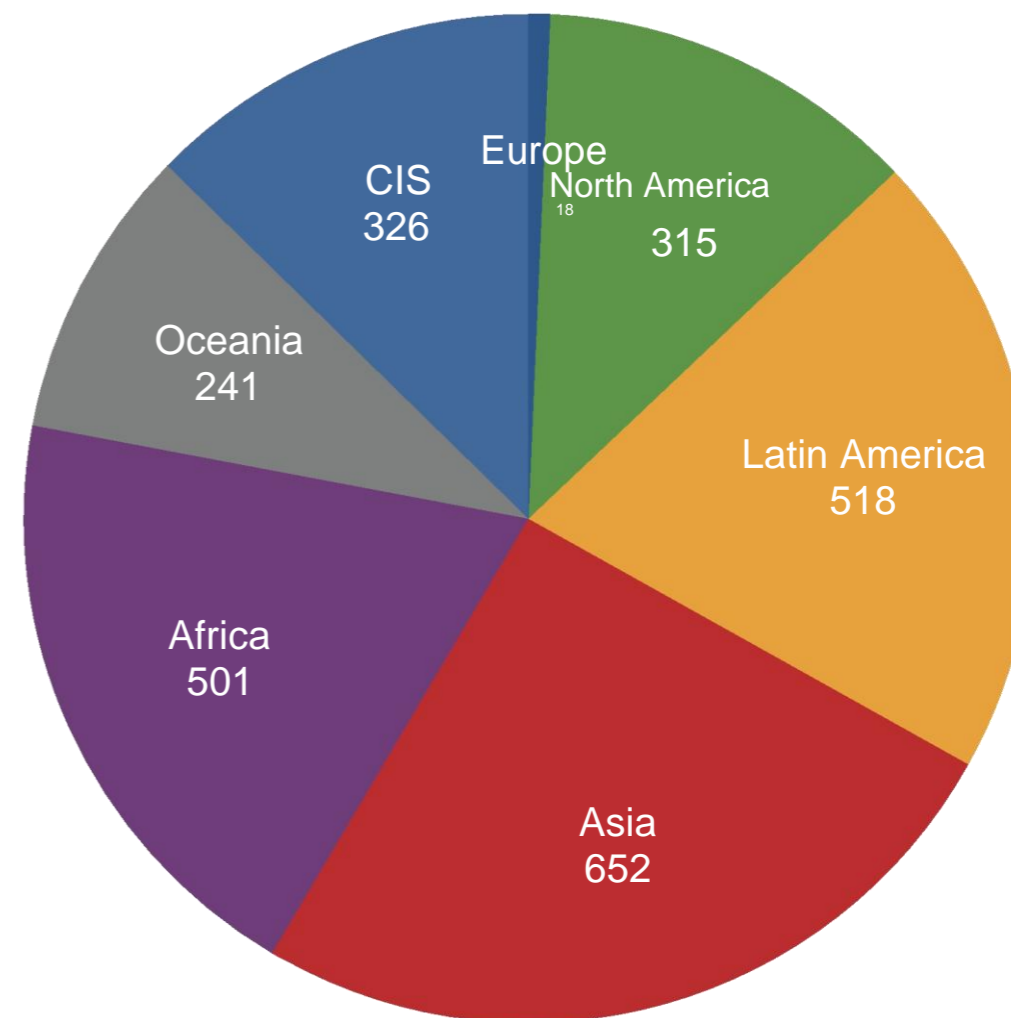
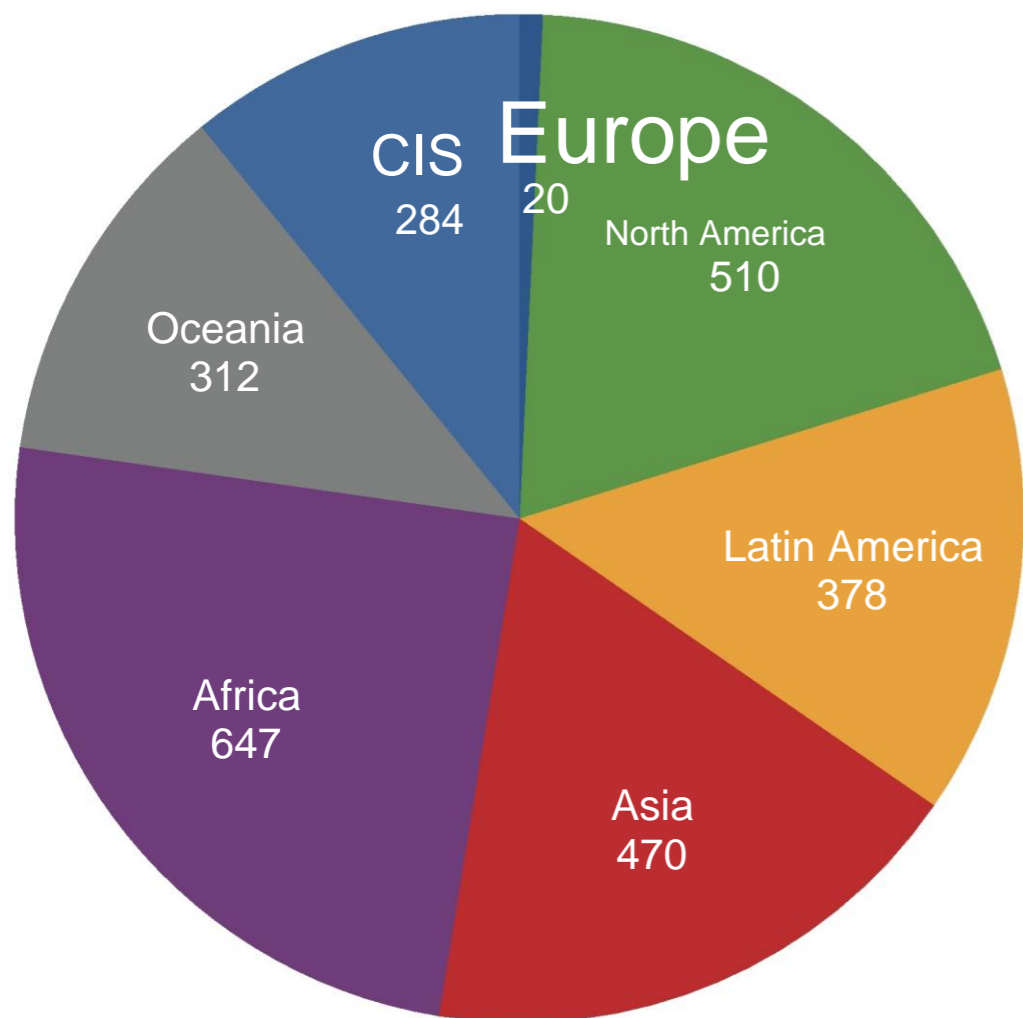


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Gold Supply: Mining: WHERE?

2000: 2,620 tons

2010: 2,571 tons



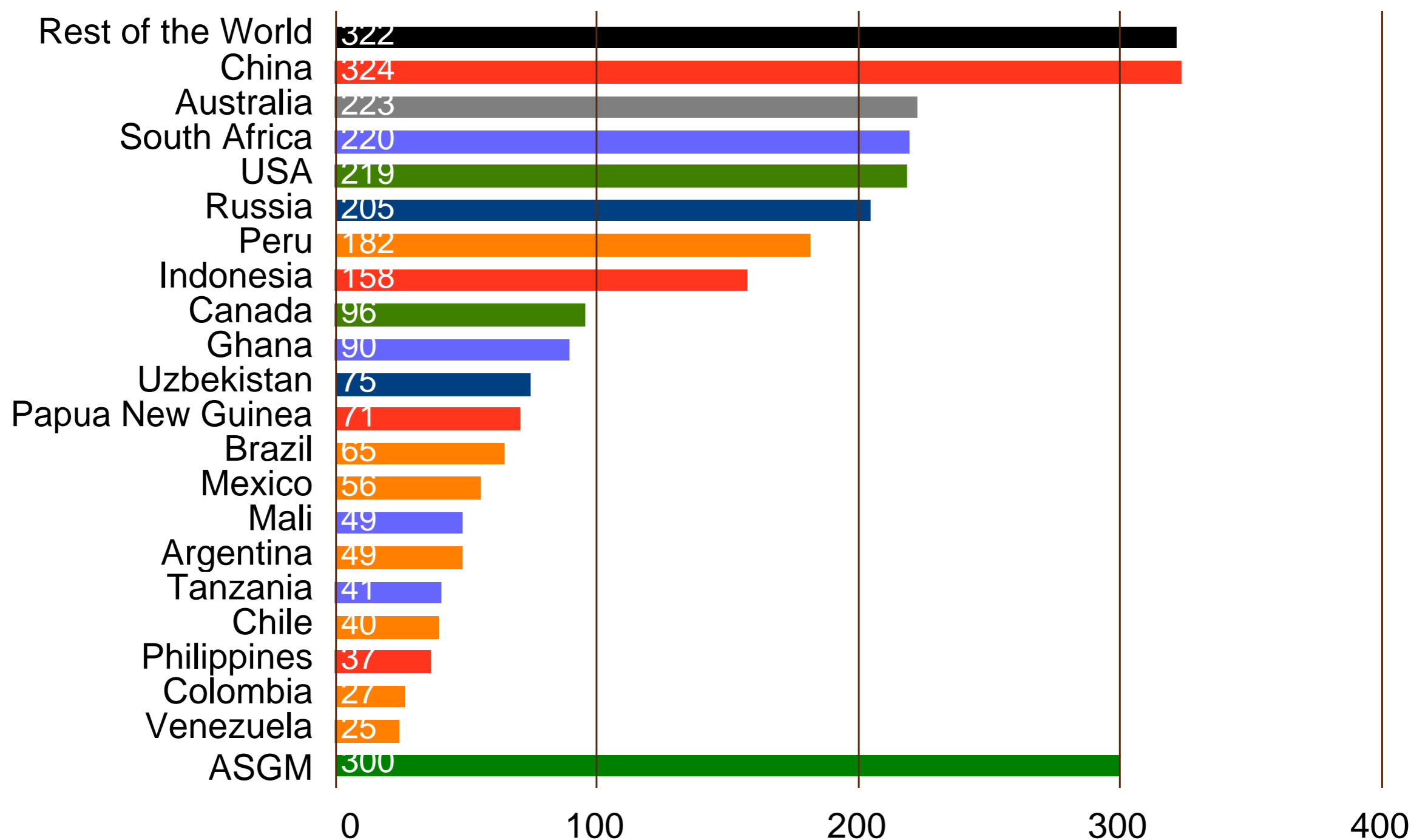
● Europe
 ● North America
 ● Latin America
 ● Asia
 ● Africa
 ● Oceania
 ● CIS

- The winners: LATAM + ASIA + AFRICA (excl. SAR)
- The losers: AFRICA (due to SAR)+ NORTH AMERICA

Gold Supply:

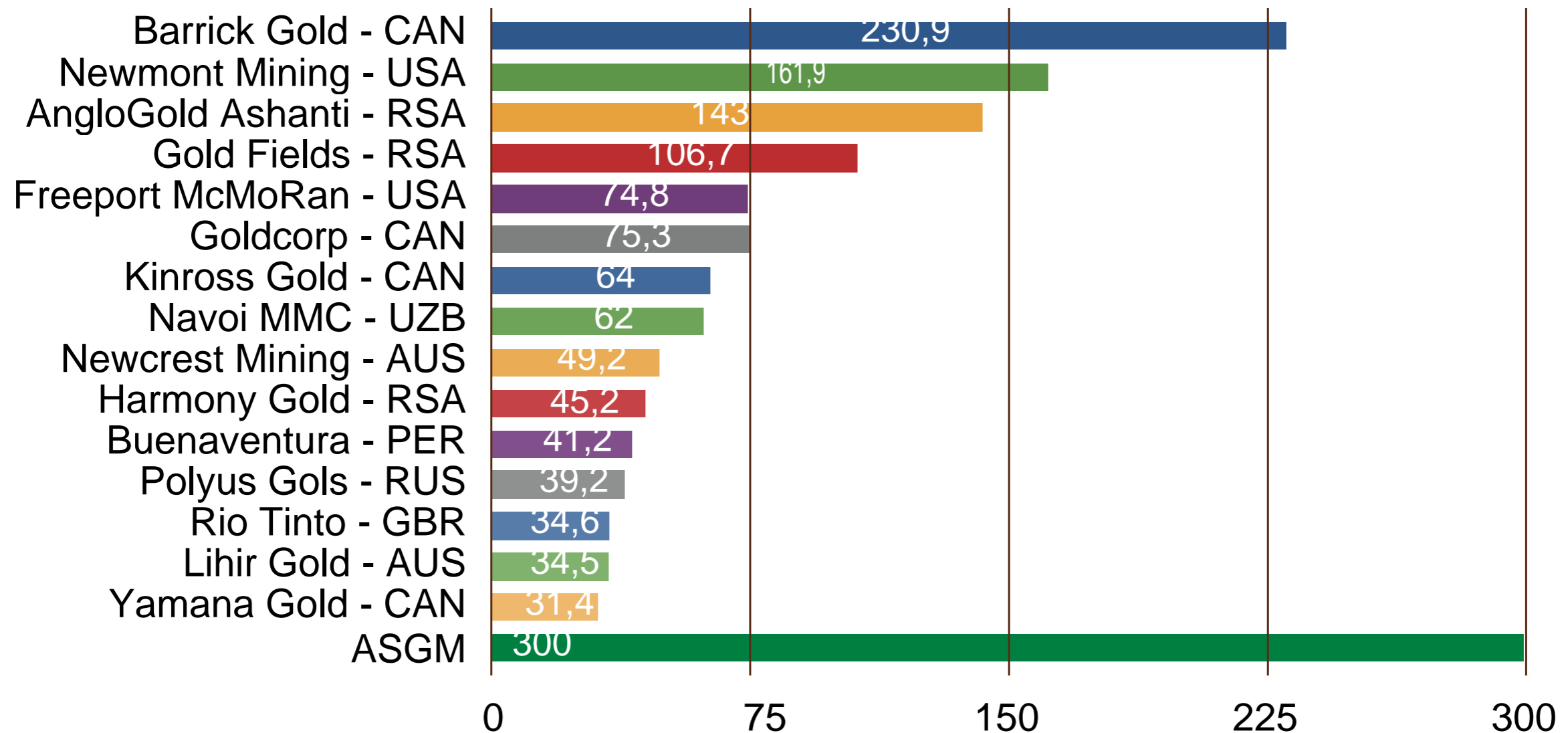
Mining: the world leaders (TOP 20 = 87% w.o.)

2009 mine production in tons



Gold Supply: Mining: Who? LSM

15 largest mining companies in 2009 (output in tons)



- VERY CONCENTRATED: 15 first corporations = 46% world output (1,194 t.)

Gold Supply: Mining: Who ? ASM



Kouroussa - Guinea - © schein

- 1015Mminers=>+60Mpeopleindirectly
 - 90/10ratio(volumetoworkforce)
 - Generang200300MTofGold(913BN\$)(8to12%worldminesupply)
 - LowMechanizaon=>VeryHigh **locale**economicvalueindexcomparedwithLSM=> Guinea example:
 - 1mineproduces11,5MTwith2.973directworkers(1/2contractors)andhightechnology
 - 200000ASMminerspopulaonproduces7MTofGoldwithnomechanizaon
- “HANDMADEGOLD”
- Offersanopportunityforgrowthandanescapefrompoverty
 - fixesworkforceandfamilyinthecountryside

ASM GOLD as a Job provider



Ramos family - Sta Filomena - Peru - © arnal

Luis Ramos: "Gold is a wealth providing us a job and allowing us to make a living, but I never gave a gold jewel to my wife"

