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Bull Market Fundamentals of Copper, Gold, and Uranium

Vancouver, B.C. February 2012



Copper Supply & Demand Fundamentals

- 2011 Mine Supply 16.5 M Tonnes
- 2011 Total Production 19.7 M Tonnes
- 2011 World Usage 22.9 M Tonnes
- Supply / Demand Balance 2007 – 2011
- Small Surplus / Deficit = Strong Prices

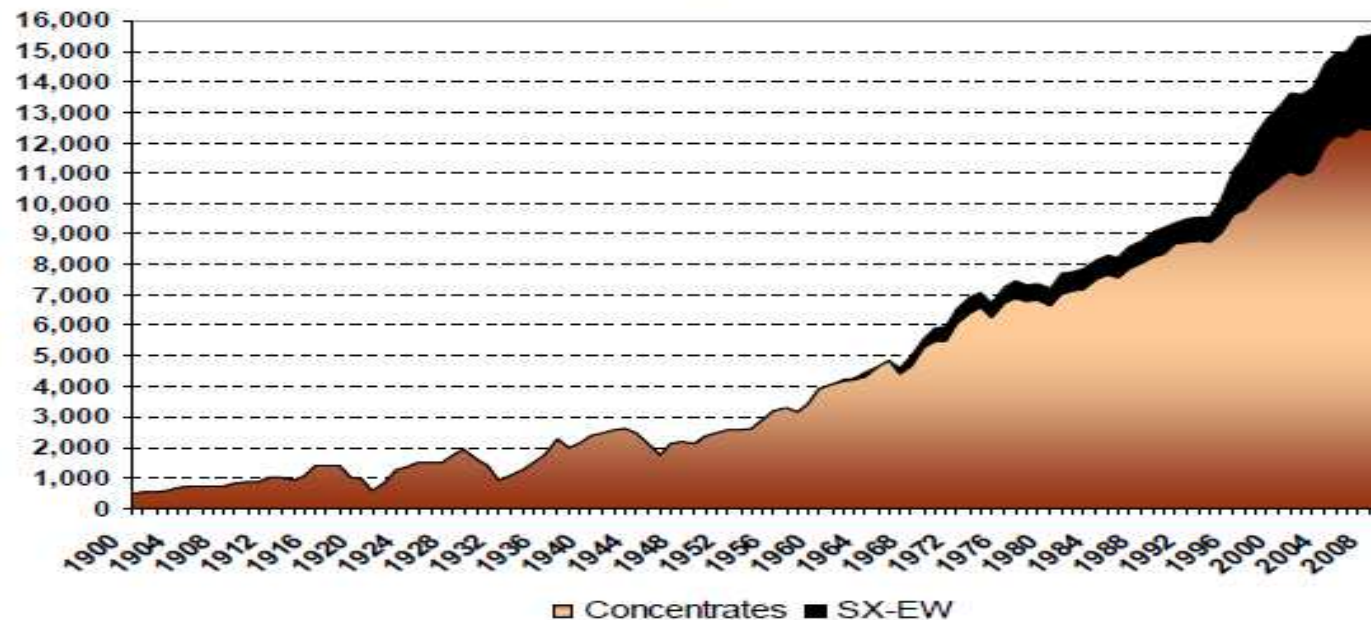


World Copper Production 1900 - 2010

World Copper Mine Production, 1900-2009

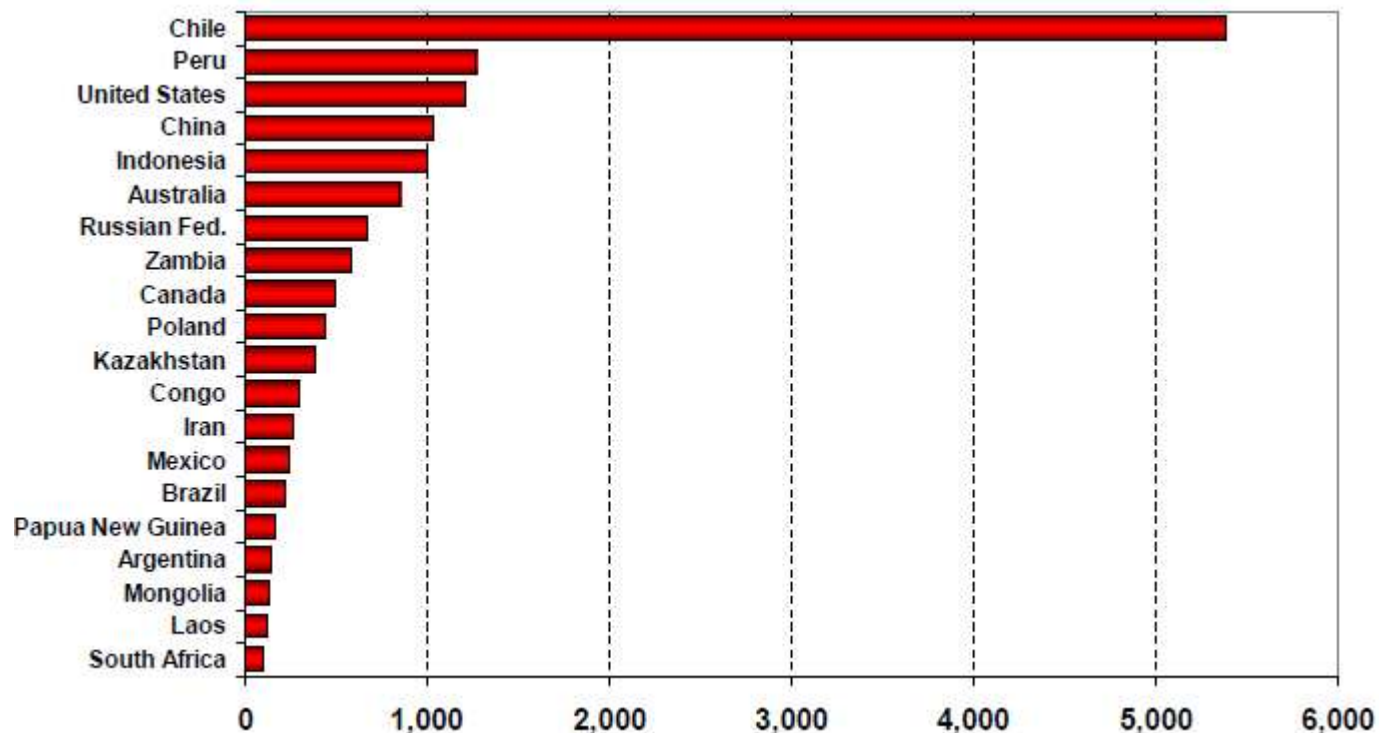
(thousand metric tonnes)

Source: ICSG



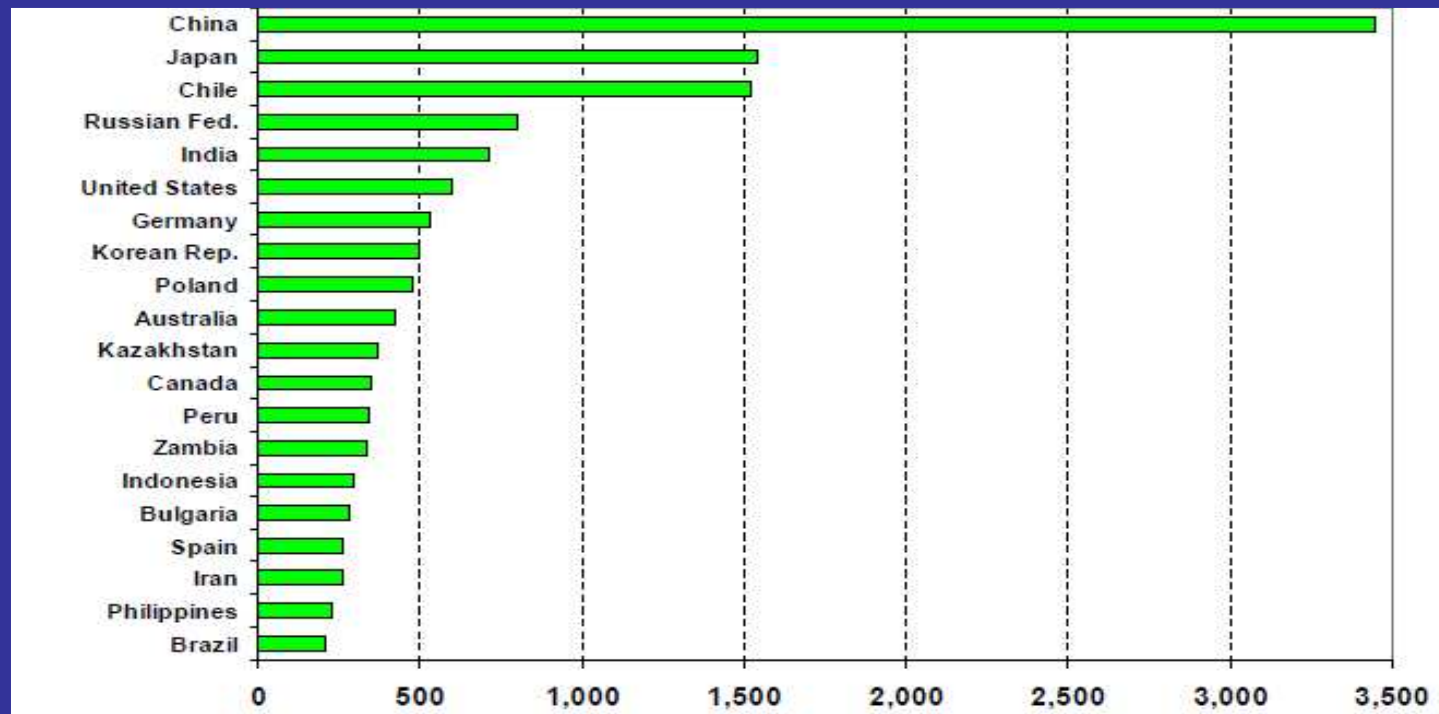


Copper Production 2009



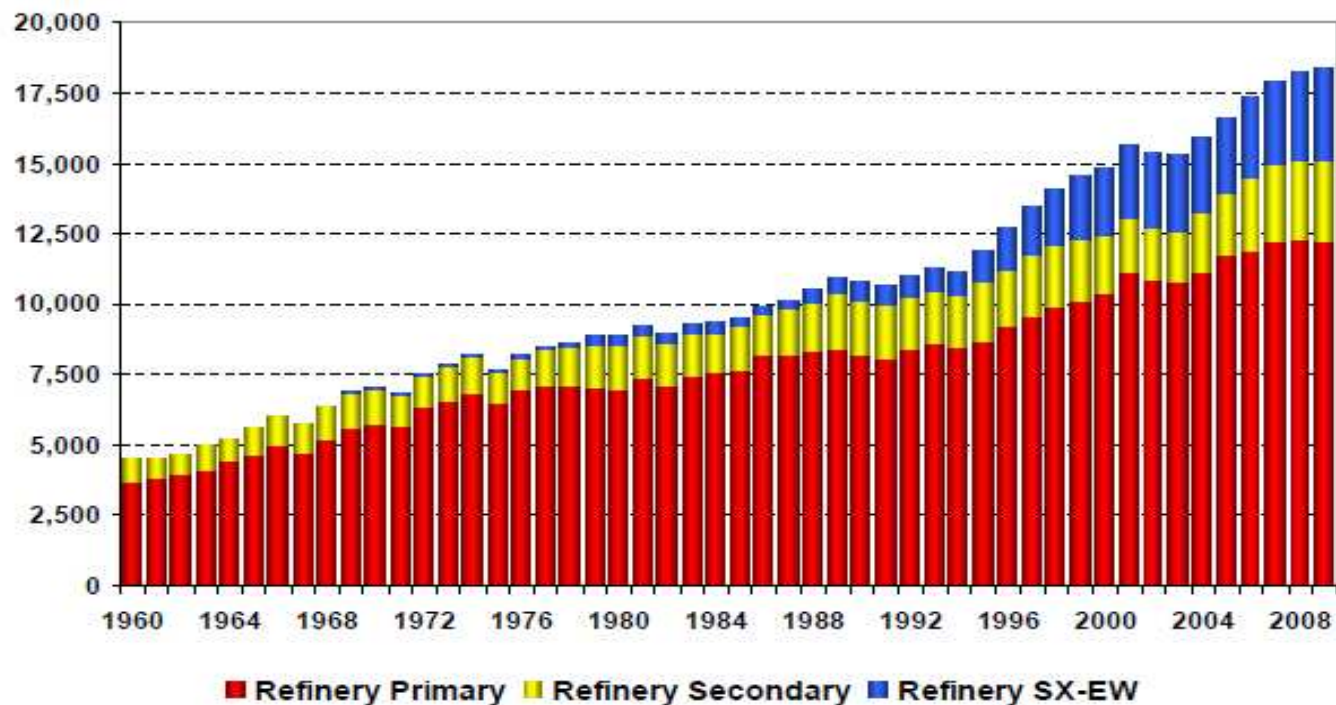


Copper Smelter Production 2009



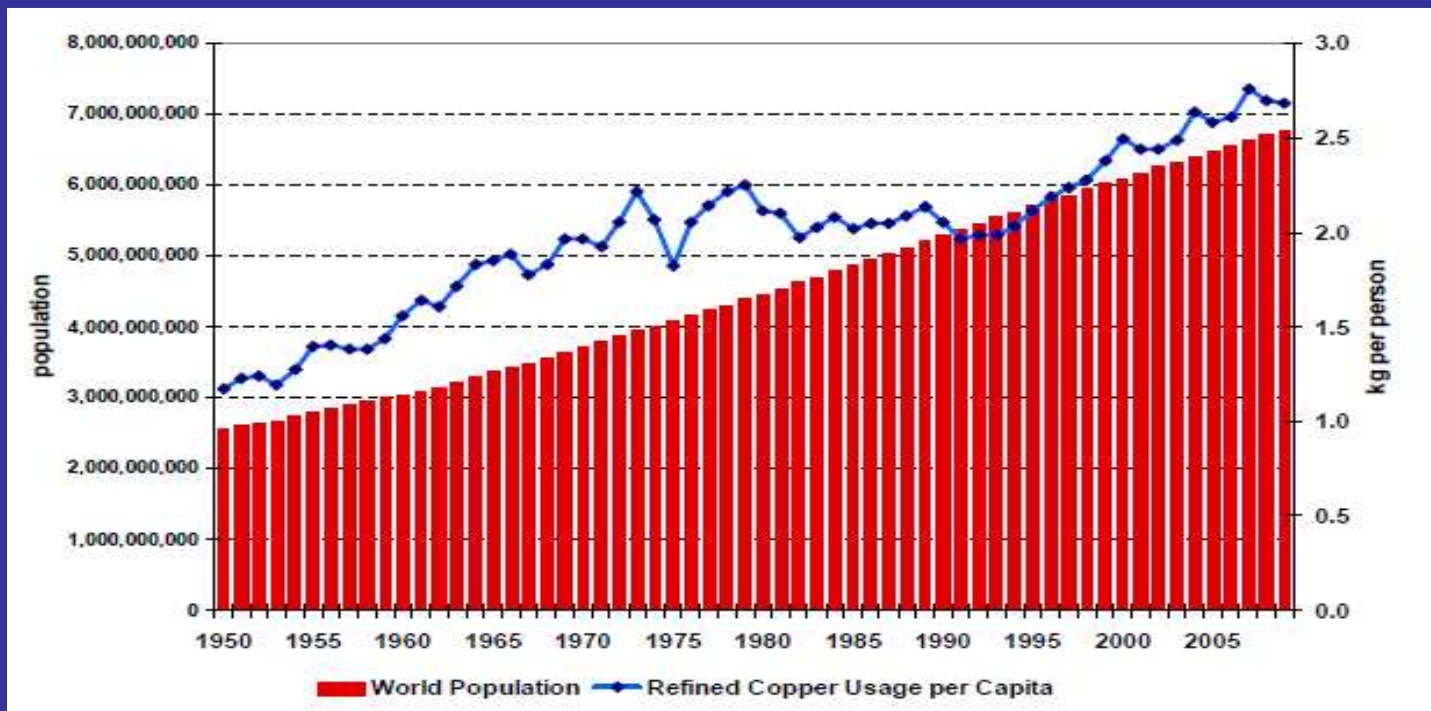


World Refined Cu Production 1960 - 2009



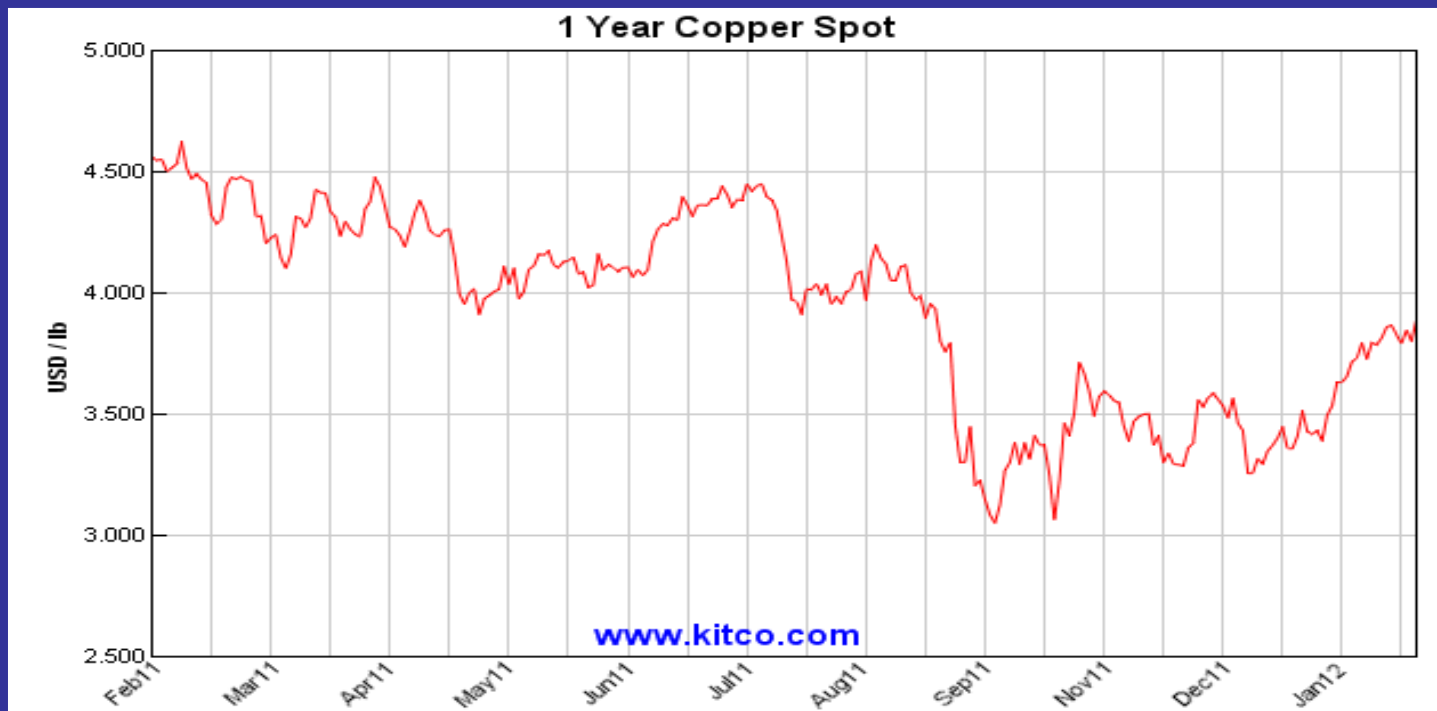


World Population & Copper Consumption



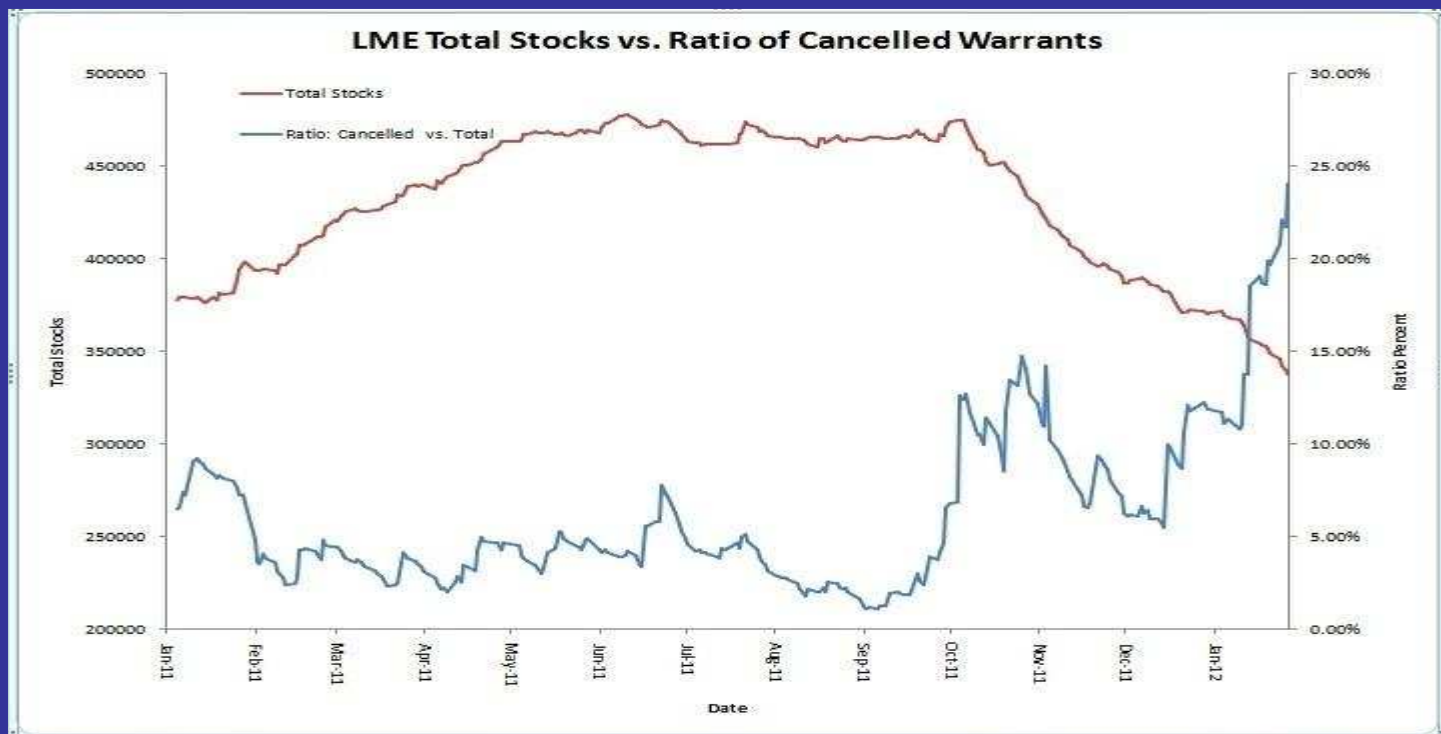


Copper Spot Price





Total Stocks & Cancelled Warrants





World Copper Usage 2009

| | |
|--------------------------------------|---------------|
| China | 7,873 |
| Japan | 1,222 |
| South Korea | 766 |
| India | 920 |
| ASEAN | 863 |
| Taiwan | 435 |
| North America | 2,468 |
| Latin America | 1,194 |
| Western Europe | 3,133 |
| Eastern Europe (excluding Russia) | 751 |
| Africa | 534 |
| Rest of World | 1,477 |
| World | 22,099 |



New Copper Required Per Year





Gold Supply & Demand Fundamentals

- 2011 Mine Supply 2700 tonnes
- Gold Price Increased for 11th Year
- Physical Demand Increased
- Scrap Supply Increased
- Paper Gold Demand High

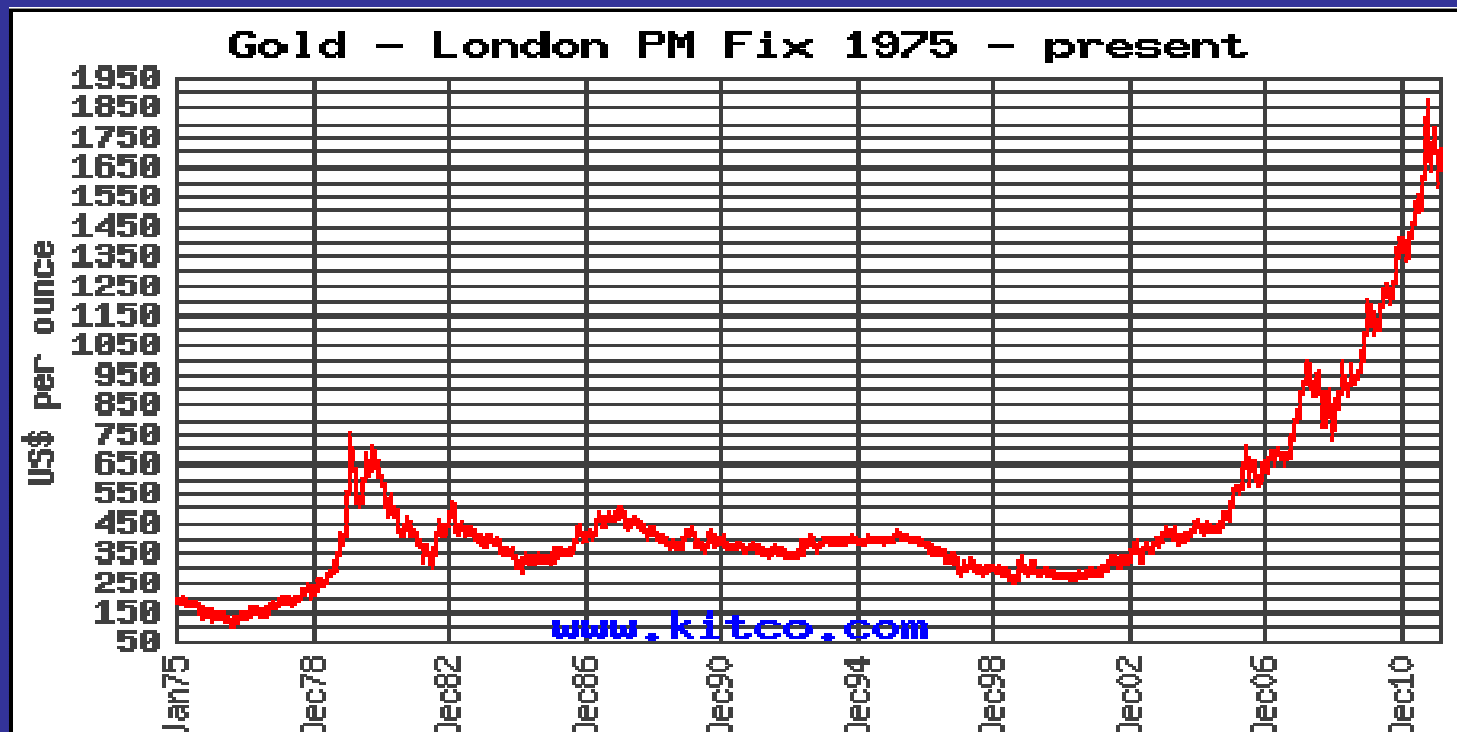


Supply & Demand of Gold in Tonnes

| | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 |
|----------------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| Supply | 3988 | 4143 | 4205 | 3701 | 3763 | 3625 | 3937 | 3412 | 4016 | 3572 | 3471 | 3513 | 4034 | 4108 |
| Production | 2527 | 2574 | 2602 | 2618 | 2645 | 2618 | 2621 | 2493 | 2548 | 2486 | 2476 | 2409 | 2584 | 2659 |
| Producer hedging | 504 | 97 | 506 | -15 | -151 | -412 | -289 | -438 | -92 | -410 | -444 | -346 | -252 | -116 |
| Sales by Cent. Banks | 326 | 363 | 477 | 479 | 520 | 547 | 620 | 479 | 663 | 370 | 484 | 236 | 30 | 87 |
| Recycling | 631 | 1108 | 620 | 619 | 749 | 872 | 985 | 878 | 897 | 1126 | 956 | 1217 | 1672 | 1653 |
| Demand | 4165 | 3824 | 3911 | 3821 | 3727 | 3360 | 3194 | 3498 | 3733 | 3405 | 3552 | 3806 | 3493 | 3812 |
| Jewelry | 3294 | 3169 | 3139 | 3204 | 3008 | 2660 | 2482 | 2613 | 2708 | 2284 | 2405 | 2187 | 1760 | 2060 |
| Electronics | 234 | 226 | 247 | 283 | 197 | 206 | 233 | 262 | 281 | 308 | 311 | 293 | 246 | 287 |
| Other Industries | 115 | 103 | 99 | 99 | 97 | 83 | 81 | 84 | 88 | 91 | 93 | 87 | 74 | 83 |
| Dentistry | 70 | 64 | 66 | 69 | 69 | 69 | 67 | 68 | 62 | 61 | 58 | 56 | 53 | 50 |
| Coins & Bars | 452 | 261 | 359 | 166 | 357 | 339 | 292 | 339 | 386 | 401 | 432 | 862 | 743 | 995 |
| ETFs and sim. | 0 | 0 | 0 | 0 | 0 | 3 | 39 | 133 | 208 | 260 | 253 | 321 | 617 | 338 |
| Sum | -177 | 319 | 294 | -120 | 36 | 265 | 743 | -86 | 283 | 167 | -81 | -293 | 541 | 296 |

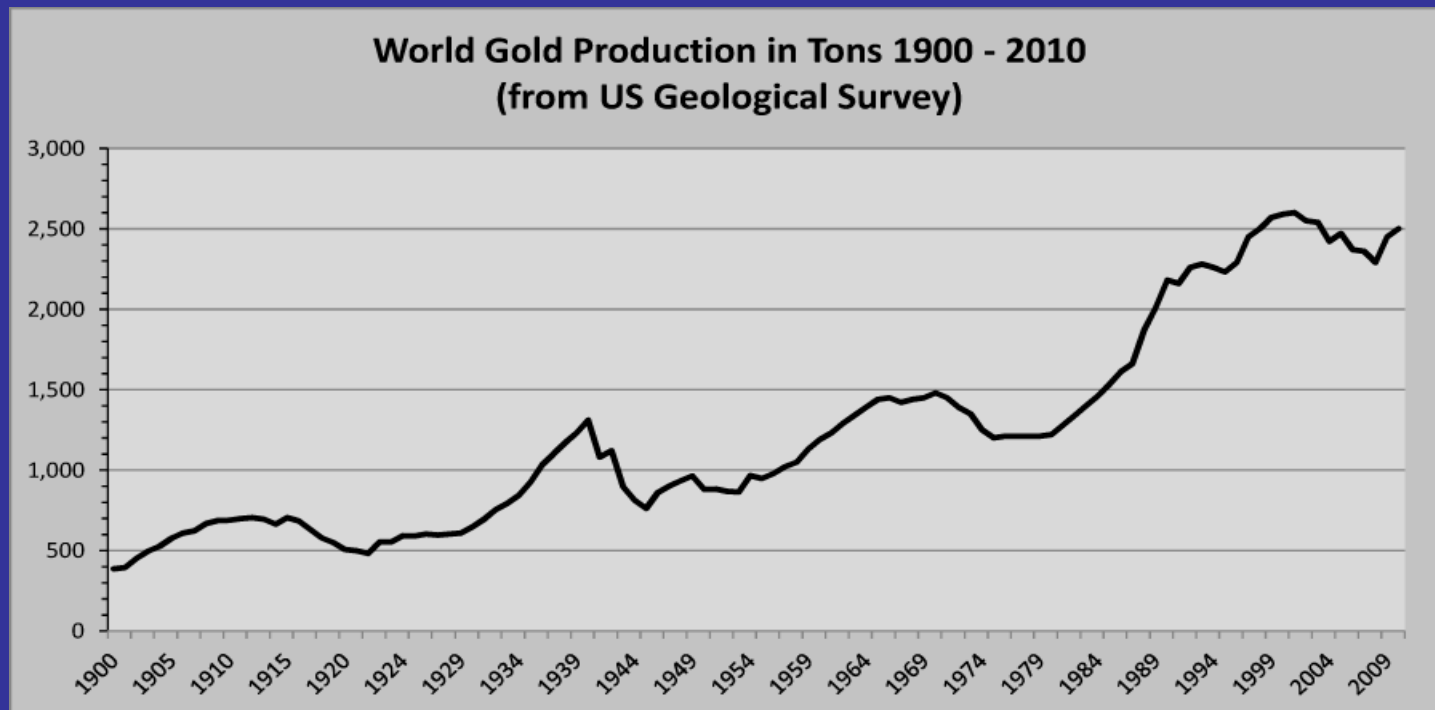


Gold Price in US Dollars



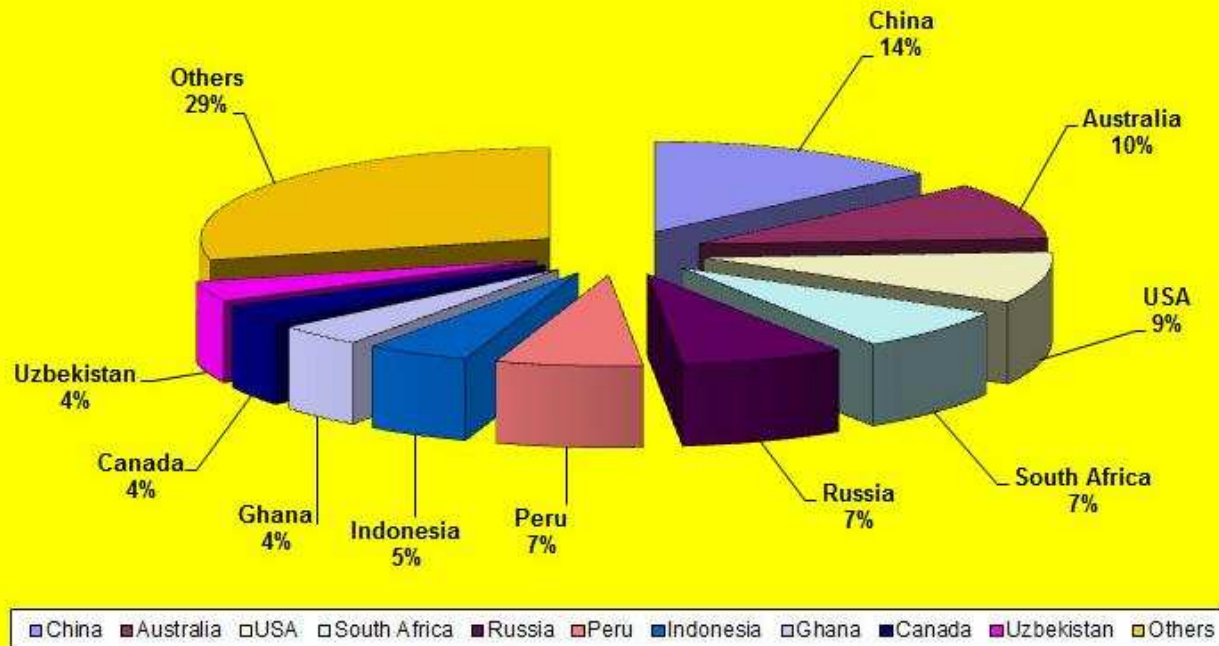


World Gold Production 1900 - 2010





2010 Gold Production by Country





Large and Mid-Tier Gold Companies

Gold Companies in the Forbes Global 2000

| # | Name | Forbes Rank | Base | Rev. (bil. US\$) | Assets (bil. US\$) | Forbes Market Val. (mil. US\$) |
|----|--------------------|-------------|---------------|------------------|--------------------|--------------------------------|
| 1 | Newmont Mining | 398 | United States | 7.71 | 22.3 | 24,690 |
| 2 | Barrick Gold | 704 | Canada | 8.14 | 27.08 | 37,610 |
| 3 | Goldcorp | 872 | Canada | 2.72 | 20.95 | 28,020 |
| 4 | Kinross Gold | 1150 | Canada | 2.41 | 8.01 | 12,840 |
| 5 | AngloGold Ashanti | 1263 | South Africa | 4.15 | 9.82 | 12,960 |
| 6 | Gold Fields | 1329 | South Africa | 3.77 | 8.45 | 8,160 |
| 7 | Yamana Gold | 1416 | Canada | 1.18 | 9.71 | 7,840 |
| 8 | Newcrest Mining | 1473 | Australia | 2.04 | 4.21 | 13,960 |
| 9 | Buenaventura | 1886 | Peru | 0.74 | 1.99 | 5,370 |
| 10 | Polyus Gold | 1951 | Russia | 1.09 | 3.08 | 9,300 |
| 11 | Eldorado Gold | 1965 | Canada | 0.28 | 1.36 | 6,820 |
| 12 | Agnico-Eagle Mines | 1970 | Canada | 0.64 | 4.25 | 9,170 |



U_3O_8 Supply and Demand

- 2010 Demand: 178 million lbs
- 2010 Mined: 139 million lbs
- 39 million lb Deficit
- Megatons to Megawatts: 23 million lbs
- Stockpiles: 16 million lbs



Uranium Supply and Demand

- 443 Operable Plants Before Japan Disaster
- 433 Operable Plants After Japan Disaster
- 51 of 54 Japanese Plants Off - Line
- Sovereign & Utility Stockpiles Dwindling
- New Russia / USA LEU Agreement Thru 2022



Ux U₃O₈ Prices





Uranium Spot Price Increases

- Buyers > Sellers
- Traders & Speculators
- China (Q4 2010; Q1 2011?)
- Producers (Rio Tinto, Cameco)
- Kazakhstan & Ranger Shortfalls
- Japan Restart



Uranium: Story Remains the Same

- Nuclear Energy = 14% of Electricity
- 433 Nuclear Power Plants Operable
- 62 Under Construction / 156 Planned
- Increased Demand for Yellowcake
- 4% Growth Projected Year over Year



New Production

- Conventional Underground = High Cost Mines
- Higher Prices Required (\$65-80 per pound)
- Low Cost Mines
- ISR (41%) & Open-Pit Heap Leach Mines
- Profitable at Current Prices



Palangana ISR “Mine”





Hobson ISR Plant, South Texas





Why I Remain a Uranium Bull

- Supply and Demand Fundamentals
- 22 % Yearly Mine Supply Deficit
- 62 Reactors in Construction
- 156 Planned & 343 Proposed



Where is the U Going to Come From ?

- Stockpiles Dwindling
- Russians 2013-2022 @ 50% of 1999-2013
- New Mines Must Come On Stream



New Uranium Mines

Kazakhstan ISR

Athabasca Basin Conventional UG

Niger Conventional UG

Namibia Open-Pit

Western United States ISR

Australia Open-Pit



Wild Cards in the Uranium Game

- USA Department of Energy
- Bomb Dismantling
- Recycling & Reprocessing
- Thorium



Metals Market Fundamentals

- BIIC (Brazil, India, Indonesia, China)
- Supply Shortfalls
- Deposits Harder to Find
- Geopolitics: Corrupt & Unstable Governments
- Environmental Opposition Worldwide
- Exploration, Production, Development ± 10 Yrs

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Monday Morning Musings from Mickey the Mercenary Geologist



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