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The Yellow Book April 2006

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Introduction

Jessica Cross, CEO

Virtual Metals Research & Consulting Ltd
London, April 2006

This second edition of The Yellow Book revises and updates historical data on all aspects of the international gold market between the years 2001 and 2005. It then presents Virtual Metals' estimates of what the supply/demand balance for 2006 might look like based on the opening months of the year.

Furthermore, it takes into account the fact that a number of sectors such as jewellery, scrap recycling and coin demand are particularly price sensitive and it was therefore appropriate to look more closely at these sectors in this edition, especially with regard to how they have responded to the sharp rise in the gold price since September 2005.

Our 2006 figures are based on the first quarter of the year and the particularly buoyant prices that prevailed during that period. They demonstrate sharply reduced jewellery demand and higher recycling, resulting in a market in surplus at current prices. In annualising the first quarter figures, we assumed that these higher prices would continue to influence these sectors in a similar way for the course of the year. Any correction in the price going forward will ameliorate these trends; our next edition of The Yellow Book in six months' time will attempt to take price developments in the next few months into account.

The layout of this report continues to allow the reader a quick read in the form of the lead and feature articles. In this edition we look, respectively, at the possibly misguided hopes for Chinese gold demand, and the impact of higher prices on what we call the 'continuum' of investment demand. The data series then follow as a reference.

That the Yellow Book is made available to the market on a complimentary basis is due to Fortis Bank SA/NV and Virtual Metals would like to thank our colleagues at Fortis for their continued support and recognition of the value of this research to the industry.

We remind readers that our data is available electronically in Microsoft Excel format – drop us an email with specific data requests at: info@virtualmetals.co.uk.

Housekeeping

- All volumes are in metric tonnes or troy ounces unless stated.
- All references to dollars are US dollars unless stated.
- For space saving in the data tables (production, scrap, and jewellery), countries registering small amounts of gold are grouped into "other". Contact us if you need a detailed breakdown.
- Numbers in the tables have been independently rounded and accordingly may not add exactly to indicated totals and subtotals.

This time 5 years ago

April 2nd 2001

Morning fix: \$257.55/oz

Afternoon fix: \$255.95/oz

Dollar to Sterling: 1.42

Yen to Dollar: 126.3

Rand to Dollar: 8.13

1 month lease rate: 1.60%

Economic Times 23rd March 2001: The Reserve Bank of India was probing the working of a cooperative bank, which specialises in bullion trading, after its cheques to four commercial banks bounced ... **24 March:** The Reserve Bank of India has pegged the losses of nationalised banks due to default in the bullion market at Rs 69.60 crore [\$15m].

Reuters, 23rd March 2001: The Swiss National Bank said it plans to sell another 100 tonnes of gold by the end of September as it continues regular disposals of excess reserves, reconfirming its existing plans.

Times of India, 28th March 2001: India's first gold refinery went on stream Tuesday with plans to meet a quarter of domestic demand in what is the world's largest consumer (of gold).

Reuters, 4th April 2001: The Reserve Bank of India asked commercial banks dealing in bullion to tighten their risk management rules after four banks said they faced potential losses from their exposure to a troubled cooperative bank that specialises in the gold trade. ... "Classic Cooperative Bank, based in the western city of Ahmedabad is facing a cash crunch after it lent money to a gold trader who has defaulted and is presently not traceable," said a (Reserve Bank of India) official.

Reuters, 5th April 2001: The Austrian National Bank said it had recently sold 30 tonnes of gold, ending speculation about who was behind the sales that came to light in European Central Bank figures.

Platts April 16th 2001: Thai officials Tuesday cast doubt on a senior official's claim that a 2,500 tonne stockpile of gold left behind by retreating Japanese troops after World War II is hidden in a cave near the Myanmar border.

(Not) The China Syndrome

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There's been a lot of talk in the gold world recently about China. To some extent this mirrors the generalised commodity-related chat focusing on the supposedly exponential growth in China's demand for raw materials; gold has been clinging to this set of coat-tails for much of the past year. A few years ago the Chinese whispers fixated on mind-boggling forecasts for China's future physical gold demand, usually projected on the basis of a (demographically and sociologically shaky) comparison with Indian demand. The more recent rumour-mongering has put it about that China intends to diversify some of its foreign exchange reserves, now far above \$820bn, into gold. So far the alleged pent-up demand from wealthier Chinese for substantially bigger amounts of physical gold has failed to transpire; and we don't put much store by the 'China will buy more gold for its reserves' argument, either. These hopes are vain not because of any sinister reason, but because the world is much bigger, more complex, and less linear than these positions assume. The 1979 movie *The China Syndrome*, which featured Jane Fonda and Jack Lemmon in a nail-biting drama over the possibility that a nuclear plant's core meltdown would see the radioactive leak burn through the Earth 'all the way to China', so far has not happened. Gold's China Syndrome – an unstoppable vast melting-through by gold into the hearts and minds of a new, untapped market of 1.3bn would-be buyers – looks just as improbable.

That's not to say that China's citizens are uninterested in gold. The Shandong Gold Group Corporation and its partner, the Shandong Jinzhou Mine Industry Corporation, are spending some \$25m on building a 3.6 square kilometre gold theme park near the city of Rushan, in the eastern Shandong Province. Tourists visiting the park will be able to watch some gold production, drop into a gold museum, and even have a go at being gold miners for a day¹. And China's own gold production is gathering pace; 224 tonnes in 2005, up 5.51% year-on-year, according to the China Gold Association. This compares with South Africa's plummeting gold production, down to 296.3 tonnes in 2005, 13% lower year-on-year, according to SA's Chamber of Mines. Yet China's gold demand growth in 2005 was hardly sensational, at 3.5% year-on-year to some 274 tonnes, according to our calculations.

Will this change? Not in a hurry, is the probable answer. If China continues to grow its gold production by 5% a year its output will be more than 272 tonnes/year by the turn of the current decade, while annual growth in demand of (say) 8% between now and the end of 2010 would see demand at around 350 tonnes, implying a 78 tonne deficit.

That might seem strongly price-supportive, but only if we neglect other, non-gold related indicators, such as how rich the Chinese *feel*. There are straws in the wind suggesting that, while the rural-urban divide in China is as big as it ever was, those with aspirations to improve the future earning-power of their children are feeling more burdened than ever before. A recent survey conducted by the China Youth Daily and Sina.com (which polled 7,625 people), concluded that more than 85% felt a heavier burden compared to 10 years ago, although 78.8% said that their personal incomes have risen in the same period. The report questioned the accuracy of China's official inflation rate, the consumer price index (CPI), which suggests prices haven't risen much between 1996-2005. Yet the current CPI basket of goods was made 20 years ago; it does not for example include accommodation expenses and makes little room for education, medicine and telecoms costs. Thus, while food expenses account for one-third of the official CPI and people spend proportionately far less than that today, they pay much more for accommodation (10 to 20 times a family's annual income) and education, where tuition expenses for a four-year university or college course are

¹ A bit like Gold Reef City in Johannesburg which has been open for years, but a lot bigger.

25 times more than they were 20 years ago. Another Chinese consultancy, the Horizon Consultancy Group, suggested in March this year that educational expenses account for more than 32% of rural household income and almost 26% of urban. And although the disposable income of urban households averaged 10,493 yuan (about \$1,300) in 2005, 3.22 times more than that of rural households, China's current Five-Year Plan anticipates that these per capita average disposable income levels will grow by just 5% annually until the end of 2010.

Certainly China's citizens will buy more gold in the years to come – but they will also be under pressure to spend just as much (if not increasingly more) of their hard-won and not vastly-growing incomes on essential items such as homes, education, and rising domestic expenses.

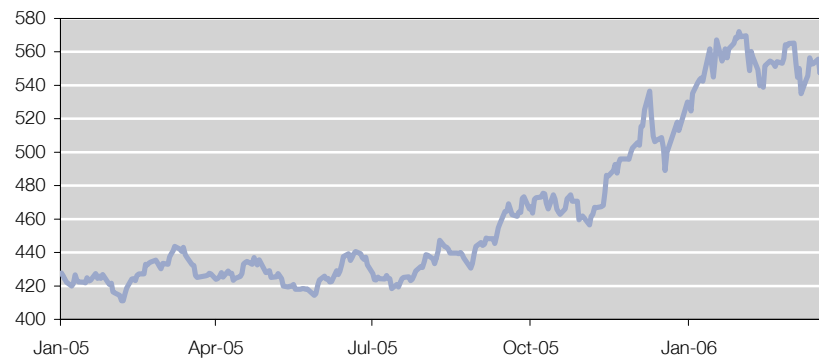
Feature: the continuum of gold investment

Jessica Cross, CEO

Virtual Metals Research & Consulting Ltd
London, April 2006

In the debut edition of The Yellow Book, in the words of Donald Rumsfeld, we signified our belief that the gold market has a number of grey areas, in terms of what is knowable and what is not. In this second edition, while the background remains a tonal picture of shades of grey, we detect some stark black-and-white breaking through to the surface. The way the price in Q3 2005 appreciated off its narrow January to September trading range of \$415/oz to \$450/oz, to hit a 25 year high of \$572.15 on the 2nd February 2006, is an example of one firm factor which has, for the time being, altered the gold market's perspective.

Gold price since 2005 (\$/oz)



Source: Reuters Ecowin

We have long argued that gold jewellery and investment in gold are not stand-alone separable entities. While it would be very convenient to be able to mentally store each sector in a clearly definable box, the reality of it is that the issues are more complex. There is, in fact, a continuum of products, customers and buying rationale, and in many cases it is difficult to define exactly where one begins and another ends.

At one far extreme of the continuum is jewellery buying in the Western sense, which is wholly to do with adornment. In relatively low purity (9, 14 and 18 carat), this jewellery is often bought on a 'special occasion' basis, marking significant moments in the life of a family or individual. As a result the owner of the jewellery becomes emotionally attached to it, enabling the retailer to attach a much higher price tag than would be warranted solely by the intrinsic value of the contained metal. The jewellery retailer is able to capitalise on the supposed value-added design features of the item and promote the jewellery as a 'luxury', with associated advertising that implicitly or explicitly suggests the purchase is a lifelong attachment. The upshot is that such jewellery commands a very high retail price mark up (350-400% over the gold price) but generally this is gold that is usually permanently taken off the market, virtually irrespective of any subsequent price appreciation in gold.

Moving along the continuum towards investment, we encounter a second demographic slice of jewellery buyers and products. Dubbed 'investment jewellery', the prime rationale behind this sector is the financial protection of many millions of women whose cultures and societies make little provision for them in a way that Western women have come to expect as the norm. This includes Indian women, still subject to the illegal but widely practiced dowry system and for whom the inheritance of fixed property is still not often an available option. It also includes Middle Eastern women for whom financial and legal recourse is, to all intents and purposes, nonexistent in the event of widowhood or a failed marriage. The jewellery, while worn daily for decorative purposes, is also bought for a combination of insurance, pension and ready cash subsidiary reasons; the personal adornment component and the financial security

components are inextricably related in this sector. The jewellery therefore tends to be high 22 to 24 carat²; it also commands a low mark-up (10-20% over the price of gold). Little or no emotional attachment is afforded to such jewellery items, as the owner perceives it (at least in part) as money, internationally fungible and highly tradable. It is therefore highly price sensitive and, ultimately, the collective response to market developments on the part of these jewellery owners is governed largely by what happens to the price.

The next stage in the continuum takes us into an intermediary product – kilobars and, until recently tola bars, but also tael bars, bought in many countries around the world and which are often considered investment products. We argue on the evidence of our research that they are almost always pieces of investment jewellery waiting to happen, in that the average life of these bars in most instances is less than 3 weeks. They get bought at a miniscule mark-up (30-40 US cents on a kilobar) and then usually are melted down and converted into investment jewellery.

On this same spectrum of physical buying are investment products in the proper sense of the phrase, such as bullion coins that in the main are unrelated to jewellery. These are, usually, legal tender and command around a 6% premium over the gold price³. The owner's intention is to take their coins home with them. The Kruggerrand, Maple Leaf, Eagle and Nugget are household names among coin investors and, irrespective of the fact that they incur storage and insurance costs before resale (at which they achieve only the value of the contained metal), there is a small but hardcore sector of the population that believes in them as investment assets.

The next stage in the continuum is now occupied by the new Exchange Traded Funds (ETFs). Listed on stock exchanges they are a stage further removed from the previous investment products, being more like a stock or a debenture rather than a traditional gold product. However, since the ETFs are backed by physical metal, the golden umbilical cord is not yet quite severed.

Beyond the ETFs is the realm of non-physical, 'pure' investment – the exchange traded futures and options, the over-the-counter derivative markets, commodity indexes and the equities of the companies that produce gold - with investors who have no intention of ever taking physical delivery of metal.

How do these various components respond to price? Unlike other sectors of the gold market, such as mining, official sector transactions and industrial end-uses such as electronics, each component of the investment continuum is sensitive to short term price movements, as has been clearly demonstrated in the last nine months.

² Although in India under-carating is so rife that 19-21 carat is considered the unofficial norm.

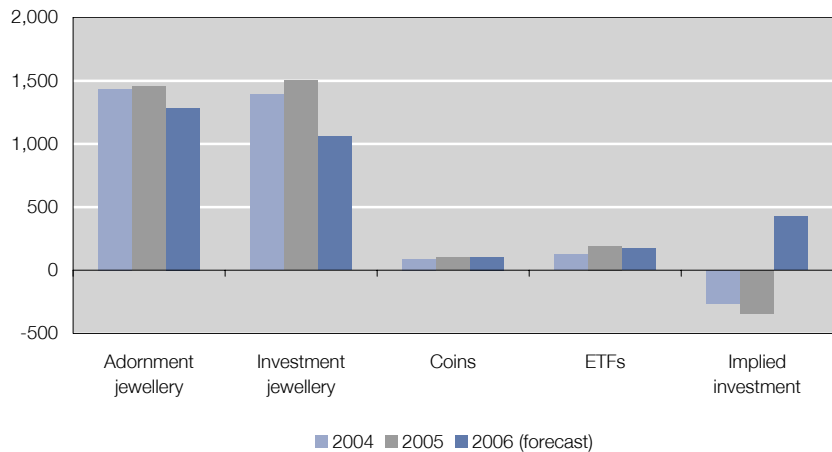
³ The premium is higher if the coin is a proof.

World total (tonnes)

| | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006e |
|--------------------------------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|
| Supply | | | | | | | |
| Mine Supply | 2,507 | 2,514 | 2,491 | 2,513 | 2,366 | 2,385 | 2,364 |
| Scrap Recycling | 660 | 620 | 860 | 900 | 1,100 | 836 | 998 |
| Hedging | na | 17 | 186 | 178 | 68 | 73 | 64 |
| Central Bank Sales | 579 | 519 | 448 | 571 | 464 | 626 | 547 |
| Total Supply | 3,746 | 3,670 | 3,985 | 4,163 | 3,998 | 3,920 | 3,973 |
| Demand | | | | | | | |
| Jewellery of which: | 3,103 | 2,944 | 2,784 | 2,763 | 2,822 | 2,954 | 2,341 |
| - Adornment jewellery | 1,612 | 1,542 | 1,478 | 1,441 | 1,430 | 1,452 | 1,283 |
| - Investment jewellery | 1,490 | 1,402 | 1,306 | 1,322 | 1,392 | 1,502 | 1,058 |
| Legal Tender Coins | 59 | 55 | 69 | 85 | 91 | 101 | 104 |
| Electronics | 257 | 273 | 291 | 310 | 332 | 357 | 372 |
| Other end Uses | 209 | 228 | 251 | 279 | 312 | 352 | 281 |
| ETFs | 0 | 0 | 0 | 33 | 125 | 192 | 173 |
| Central Bank Purchases | 117 | 89 | 29 | 39 | 61 | 43 | 0 |
| Dehedging | na | 125 | 625 | 541 | 518 | 232 | 280 |
| Total Demand | 3,744 | 3,713 | 4,048 | 4,050 | 4,261 | 4,230 | 3,551 |
| Residual (Supply less Demand) | 2 | (43) | (64) | 113 | (263) | (310) | 422 |

Source: Virtual Metals Research & Consulting, Raw Materials Group, Mitsui, Haliburton Mineral Services

The continuum of gold investment (tonnes)

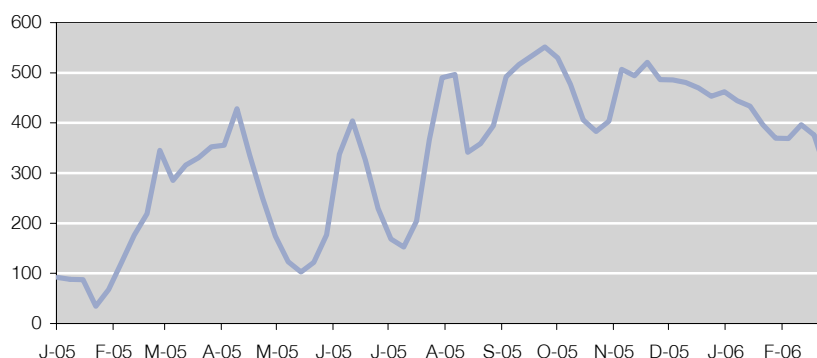


Source: Virtual Metals

What we have observed in the market, since the first edition of the Yellow Book, is confirmation of that old adage, ‘nothing in life is free’. The price appreciation in recent months has come at its own cost, in that it has brought to market considerably more recycled metal in the form of investment jewellery and bars. While the rising price of gold has delighted the market, there has been a distinct rise in levels of secondary gold being returned to lock-in profit, and this has coincided with a sharp decline in investment jewellery demand and, to a lesser extent, adornment jewellery (see above chart).

The disruption of the jewellery end of the continuum, itself a consequence of the price rise, must be seen in the context of what is happening further along the investment spectrum, which has been rising demand from ETFs and continued (although reduced) record long positions held on Comex (see following chart).

Comex large speculators net long position (tonnes)



Source: Comex

Thus in one sense we are dealing not so much with a continuum but with a scale, the extremes of the continuum acting as balancing weights. At a price of \$400/oz (last seen in August 2004), jewellery demand was strong and scrap generation relatively slow. In the absence of strong investment demand in the form of ETFs and Comex longs, the gold scales tipped up, supporting price recovery.

Now this has reversed: the deteriorating jewellery side of the continuum is weighing heavily down, the price being supported at the moment by the sheer wall of investment money moving into commodities, tipping up that side of the gold scales and supporting lofty prices. But what happens if/when the new money stops flowing into commodities and, even worse, if that flow of money begins to reverse? The scales will tip again and the loss of demand in the physical markets on the jewellery side of the continuum will continue to weigh down until such time as jewellery demand recovers; but in the absence of buoyant investment demand the scales will have to find their balance at another price range.

Over time, the market will eventually find a new point of equilibrium – jewellery buying (both investment and adornment) will re-establish itself, and the flows of scrapped metal will slow to a trickle. The imponderable of course is – when and at what price? More importantly, what will precipitate a flow of investment money out of commodities and what will trigger that decision?

Our 2006 forecasts in this document are based on estimated first quarter data annualised on the basis of high prices, revealing the extent of the market response to those prices. The next Yellow Book will re-iteratively review these figures in the light of data for the second and third quarters of the year and show how the price-sensitive sectors along the jewellery/investment continuum respond to changing market circumstances.

The data

The methodology

General comments: In an industry characterised by large and permanent above-ground stocks, a gold supply/demand balance only attempts to record the additions made to those stocks in a calendar year, the destination of that new supply, the mobilisation of the existing stocks through recycling and official sector sales and lending. Furthermore, it has to be recognised that there are large swathes of the gold market which are clandestine and unofficial, and therefore movements of metal within these sectors are largely unmeasurable and unverifiable. Virtual Metals attempts to avoid spurious accuracy – measuring something visible to the last two decimal places is a waste of resources considering the global picture for this commodity. In the context of large tonnages of gold being smuggled across borders, the claim that it is possible to measure to fine accuracy the relatively small end-uses such as dental alloys and medallions adds little to the understanding of the big picture.

These supply/demand balances are designed therefore to give overall general flows of metal between regions and sectors.

The derivation of the data series

- Mine supply – data collated from Raw Materials Group, company reports, the Chamber of Mines of South Africa, ABARE, USBM, China Gold Association and newswires.
- Scrap recycling – Data from refineries and industry participants. Virtual Metals estimates based on gold price movements, political developments.
- Producer hedging – Data from the Mitsui Hedge Report produced by Virtual Metals and Haliburton Mineral Services.
- Central Bank transactions – Data from IFS statistics, ECB statistics and newswires. Interpretation from discussions with Central Banking sector.
- Jewellery fabrication: Data derived from data series published by Consolidated Gold Fields, London until 1988. Individual country data series estimated by Virtual Metals from our understanding of the individual markets, discussions with the bullion banks active in various physical markets, jewellery wholesalers, hallmarking figures where available, and trade data, which is subject to interpretation but gives direction of physical flows.
- Jewellery consumption – Data series generated by Virtual Metals based on our analysis of exports and imports of gold jewellery to and from countries and gross retail sales as reported by a number of countries. The fabrication data was re-allocated on a country-by-country and percentage basis to derive consumption. The calculation of gold jewellery as a percentage of total jewellery retail sales is formula-based and has been verified in the countries concerned. All jewellery figures include old jewellery scrap but exclude process scrap generated during jewellery manufacturing. The generation of process scrap has been assessed depending on the manufacturing process, eg machine-made, stamping, casting or hand made. In mature markets, close scrutiny of jewellery fabrication and consumption is not necessary. We know that these have not been growth industries and that jewellery's share of disposable income expenditure has been falling. Thus, in these markets, demographic trends and rising disposable incomes have been offset by life-style preferences which favour other goods over jewellery.

The countries of most interest are those consuming large tonnages of gold jewellery, specifically the USA, India, Turkey, China and countries in the

Middle East. For these countries, trade data, retail sales, commodity exchange-related figures or data contributed by industry is sufficient to generate the needed data series.

- Legal tender coins – Data made available by the Mints and refineries concerned, for example, the US Mint, the SA Mint and Rand Refinery. There are some smaller mintings for which Virtual Metals does not have data, and therefore this data series probably understates the sector. Virtual Metals makes allowance for this in the “other industrial” data series.
- Electronics – Data series derived by Virtual Metals based on work relating to the electronics industry when studying the pgm industry and the recycling of electronic scrap.
- Exchange traded funds – Data series from published data.
- The “other category” of gold end-uses is an estimate of all other applications of gold including medallions (not legal tender coinage), industrial and decorative uses (excluding electronics), as well as medical and dental demand. With the exception of dental alloys, this combined sector is believed to have shown robust growth over the years and for the purposes of this supply/demand balance, an average growth rate of around 10% between 2000 and 2005 has been applied, but seeing a decline in 2006.

The residual

The overall supply/demand balance does not balance. The difference between supply and demand (negative is demand exceeding supply), we term the residual. The residual is an acknowledgement that a) omniscience about this market is impossible, and to pretend otherwise is misleading b) there are gold flows of considerable magnitude associated with the unofficial market, such as smuggled or stolen gold which cannot be verified and c) there are sectors which cannot be measured and therefore we do not pretend otherwise; these include “bar hoarding”, which is the purchase of gold in bar form, the vast majority of which is in any case rapidly turned into jewellery.

The residual also does not reflect the net long or short positions held by the hedge funds or the speculators over year-end. While CFTC data gives an indication of outstanding positions on COMEX, it is not possible to put a number on the net longs or shorts in the OTC market.

Physical supply and demand, world total and by region, 2001-2006e

World total and regional supply/demand imbalances (tonnes)

| | World total | | | | | | North America | | | | | |
|--------------------------------------|-----------------------------|--------------|--------------|--------------|--------------|--------------|--------------------|--------------|--------------|--------------|--------------|--------------|
| | 2001 | 2002 | 2003 | 2004 | 2005 | 2006e | 2001 | 2002 | 2003 | 2004 | 2005 | 2006e |
| Supply | | | | | | | | | | | | |
| Mine supply | 2,514 | 2,491 | 2,513 | 2,366 | 2,385 | 2,364 | 495 | 452 | 421 | 389 | 379 | 380 |
| Scrap recycling | 620 | 860 | 900 | 1,100 | 836 | 998 | 65 | 75 | 75 | 81 | 70 | 81 |
| Hedging | 17 | 186 | 178 | 68 | 73 | 64 | 17 | 186 | 41 | 19 | 25 | 20 |
| Central Bank sales | 519 | 448 | 571 | 464 | 626 | 547 | 2 | 14 | 15 | 0 | 0 | 0 |
| Total supply | 3,670 | 3,985 | 4,163 | 3,998 | 3,920 | 3,973 | 580 | 727 | 552 | 489 | 474 | 480 |
| Demand | | | | | | | | | | | | |
| Jewellery fabrication | 2,944 | 2,784 | 2,763 | 2,822 | 2,954 | 2,341 | 187 | 187 | 192 | 192 | 197 | 169 |
| Jewellery consumption | 2,944 | 2,784 | 2,763 | 2,822 | 2,954 | 2,341 | 447 | 417 | 394 | 379 | 373 | 338 |
| Legal tender coins | 55 | 69 | 85 | 91 | 101 | 104 | 16 | 22 | 23 | 26 | 24 | 31 |
| Electronics | 273 | 291 | 310 | 332 | 357 | 372 | 67 | 69 | 71 | 73 | 75 | 78 |
| Other end uses | 228 | 251 | 279 | 312 | 352 | 281 | 32 | 31 | 31 | 31 | 31 | 29 |
| ETFs | 0 | 0 | 33 | 125 | 192 | 173 | 0 | 0 | 0 | 95 | 178 | 150 |
| Central Bank purchases | 89 | 29 | 39 | 61 | 43 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Dehedging | 125 | 625 | 541 | 518 | 232 | 280 | 0 | 0 | 298 | 195 | 150 | 130 |
| Total Demand | 3,713 | 4,048 | 4,050 | 4,261 | 4,230 | 3,551 | 561 | 539 | 816 | 799 | 831 | 756 |
| Residual (supply less demand) | (43) | (64) | 113 | (263) | (310) | 422 | 18 | 188 | (265) | (310) | (358) | (276) |
| | Europe | | | | | | Asia | | | | | |
| | 2001 | 2002 | 2003 | 2004 | 2005 | 2006e | 2001 | 2002 | 2003 | 2004 | 2005 | 2006e |
| Supply | | | | | | | | | | | | |
| Mine supply | 20 | 24 | 22 | 18 | 12 | 12 | 380 | 370 | 408 | 370 | 422 | 417 |
| Scrap recycling | 99 | 130 | 135 | 163 | 102 | 119 | 155 | 222 | 222 | 261 | 237 | 283 |
| Hedging | 0 | 0 | 40 | 0 | 10 | 4 | 0 | 0 | 0 | 0 | 0 | 0 |
| Central Bank sales | 392 | 381 | 454 | 410 | 539 | 487 | 0 | 0 | 20 | 34 | 67 | 40 |
| Total supply | 511 | 535 | 650 | 590 | 662 | 621 | 534 | 592 | 650 | 665 | 726 | 740 |
| Demand | | | | | | | | | | | | |
| Jewellery fabrication | 750 | 716 | 752 | 753 | 759 | 655 | 717 | 703 | 683 | 696 | 716 | 612 |
| Jewellery consumption | 509 | 494 | 516 | 518 | 527 | 466 | 636 | 620 | 602 | 614 | 633 | 527 |
| Legal tender coins | 34 | 42 | 57 | 57 | 68 | 63 | 0 | 0 | 0 | 0 | 0 | 0 |
| Electronics | 39 | 39 | 40 | 41 | 43 | 44 | 151 | 165 | 181 | 200 | 221 | 230 |
| Other end uses | 96 | 105 | 116 | 128 | 143 | 114 | 29 | 30 | 31 | 32 | 34 | 30 |
| ETFs | 0 | 0 | 25 | 28 | 9 | 15 | 0 | 0 | 0 | 0 | 0 | 0 |
| Central Bank purchases | 0 | 0 | 0 | 0 | 0 | 0 | 26 | 23 | 7 | 3 | 4 | 0 |
| Dehedging | 22 | 4 | 0 | 22 | 12 | 10 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Demand | 699 | 685 | 753 | 794 | 801 | 713 | 842 | 838 | 821 | 849 | 891 | 787 |
| Residual (supply less demand) | (188) | (150) | (103) | (203) | (140) | (91) | (307) | (245) | (172) | (185) | (165) | (47) |
| | Indian sub-continent | | | | | | Middle East | | | | | |
| | 2001 | 2002 | 2003 | 2004 | 2005 | 2006e | 2001 | 2002 | 2003 | 2004 | 2005 | 2006e |
| Supply | | | | | | | | | | | | |
| Mine supply | 1 | 1 | 3 | 5 | 3 | 3 | 5 | 5 | 10 | 9 | 8 | 8 |
| Scrap recycling | 96 | 139 | 149 | 186 | 142 | 170 | 126 | 175 | 195 | 270 | 188 | 225 |
| Hedging | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Central Bank sales | 0 | 0 | 0 | 0 | 0 | 0 | 25 | 30 | 20 | 20 | 20 | 20 |
| Total supply | 97 | 140 | 152 | 191 | 145 | 174 | 156 | 210 | 225 | 299 | 216 | 253 |
| Demand | | | | | | | | | | | | |
| Jewellery fabrication | 740 | 610 | 575 | 607 | 661 | 444 | 407 | 424 | 416 | 426 | 466 | 335 |
| Jewellery consumption | 774 | 648 | 617 | 651 | 710 | 481 | 446 | 473 | 503 | 527 | 571 | 415 |
| Legal tender coins | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Electronics | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Other end uses | 48 | 58 | 70 | 86 | 105 | 79 | 16 | 18 | 21 | 24 | 28 | 19 |
| ETFs | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Central Bank purchases | 0 | 0 | 0 | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 30 | 0 |
| Dehedging | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Demand | 822 | 706 | 688 | 737 | 818 | 560 | 463 | 492 | 524 | 552 | 630 | 434 |
| Residual (supply less demand) | (725) | (566) | (535) | (546) | (673) | (386) | (307) | (281) | (299) | (253) | (414) | (181) |

Source: Virtual Metals

Note: Regional totals include jewellery consumption but not jewellery fabrication.
Totals might not add due to rounding

World total and regional supply/demand imbalances (tonnes)

| | Latin America | | | | | | Africa | | | | | |
|--------------------------------------|---------------|--------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|
| | 2001 | 2002 | 2003 | 2004 | 2005 | 2006e | 2001 | 2002 | 2003 | 2004 | 2005 | 2006e |
| Supply | | | | | | | | | | | | |
| Mine supply | 362 | 376 | 391 | 374 | 426 | 422 | 597 | 614 | 600 | 553 | 512 | 494 |
| Scrap recycling | 41 | 61 | 61 | 69 | 40 | 48 | 17 | 20 | 20 | 22 | 15 | 17 |
| Hedging | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 16 | 6 | 0 |
| Central Bank sales | 80 | 23 | 0 | 0 | 0 | 0 | 6 | 0 | 58 | 0 | 0 | 0 |
| Total supply | 483 | 460 | 452 | 443 | 466 | 470 | 620 | 635 | 678 | 591 | 532 | 511 |
| Demand | | | | | | | | | | | | |
| Jewellery fabrication | 77 | 77 | 77 | 78 | 80 | 68 | 27 | 28 | 29 | 31 | 31 | 22 |
| Jewellery consumption | 64 | 65 | 65 | 65 | 66 | 56 | 28 | 28 | 28 | 28 | 29 | 20 |
| Legal tender coins | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 1 | 2 | 3 | 3 | 3 |
| Electronics | 1 | 1 | 1 | 2 | 2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 |
| Other end uses | 8 | 8 | 9 | 10 | 11 | 10 | 0 | 0 | 0 | 0 | 0 | 0 |
| ETFs | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 4 | 5 |
| Central Bank purchases | 22 | 0 | 28 | 55 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Dehedging | 0 | 0 | 0 | 0 | 0 | 0 | 21 | 163 | 99 | 170 | 0 | 40 |
| Total Demand | 95 | 74 | 104 | 131 | 79 | 68 | 50 | 192 | 129 | 204 | 36 | 68 |
| Residual (supply less demand) | 389 | 385 | 348 | 312 | 387 | 402 | 570 | 442 | 549 | 386 | 496 | 443 |
| Australasia | | | | | | | | | | | | |
| Eastern Europe | | | | | | | | | | | | |
| Supply | | | | | | | | | | | | |
| Mine supply | 362 | 340 | 364 | 339 | 339 | 342 | 291 | 307 | 296 | 302 | 285 | 287 |
| Scrap recycling | 3 | 3 | 3 | 4 | 3 | 3 | 20 | 35 | 40 | 45 | 40 | 52 |
| Hedging | 0 | 0 | 97 | 33 | 33 | 40 | 0 | 0 | 0 | 0 | 0 | 0 |
| Central Bank sales | 0 | 0 | 0 | 0 | 0 | 0 | 13 | 0 | 5 | 0 | 0 | 0 |
| Total supply | 365 | 343 | 463 | 376 | 375 | 385 | 324 | 342 | 342 | 347 | 325 | 339 |
| Demand | | | | | | | | | | | | |
| Jewellery fabrication | 6 | 5 | 5 | 5 | 6 | 5 | 34 | 34 | 34 | 34 | 39 | 33 |
| Jewellery consumption | 6 | 5 | 5 | 5 | 6 | 5 | 34 | 34 | 34 | 34 | 39 | 33 |
| Legal tender coins | 3 | 3 | 3 | 5 | 6 | 6 | 0 | 0 | 0 | 0 | 0 | 0 |
| Electronics | 1 | 1 | 1 | 1 | 1 | 1 | 15 | 15 | 16 | 16 | 17 | 17 |
| Other end uses | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| ETFs | 0 | 0 | 8 | -1 | 1 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| Central Bank purchases | 0 | 0 | 0 | 0 | 0 | 0 | 41 | 6 | 4 | 3 | 5 | 0 |
| Dehedging | 82 | 458 | 144 | 131 | 70 | 100 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Demand | 92 | 467 | 162 | 141 | 83 | 115 | 89 | 55 | 53 | 54 | 61 | 51 |
| Residual (supply less demand) | 273 | (124) | 302 | 235 | 291 | 271 | 235 | 287 | 288 | 293 | 264 | 288 |

Source: Virtual Metals

Note: Regional totals include jewellery consumption but not jewellery fabrication.
Totals might not add due to rounding

Primary mine supply, 2001-2006e (tonnes)

| | 2001 | 2002 | 2003 | 2004 | 2005 | 2006e |
|-----------------------------------|----------------|----------------|----------------|----------------|----------------|----------------|
| South Africa | 393.5 | 395.2 | 375.8 | 343.0 | 296.3 | 281.0 |
| Ghana | 72.9 | 69.0 | 70.0 | 60.0 | 65.0 | 62.0 |
| Tanzania | 35.0 | 40.0 | 45.0 | 48.0 | 49.0 | 49.0 |
| Mali | 41.3 | 56.0 | 48.0 | 40.0 | 46.0 | 46.0 |
| Zimbabwe | 18.0 | 18.0 | 12.6 | 20.0 | 14.0 | 14.0 |
| Guinea | 17.0 | 17.0 | 16.5 | 13.0 | 13.0 | 13.0 |
| Ethiopia | 5.0 | 5.0 | 6.0 | 6.0 | 6.0 | 6.0 |
| Congo (Dem Rep) | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 |
| Sudan | 5.5 | 5.5 | 5.1 | 5.0 | 5.0 | 5.0 |
| Other Africa | 3.5 | 3.5 | 15.8 | 13.0 | 12.8 | 12.8 |
| Total Africa | 596.7 | 614.2 | 599.8 | 553.0 | 512.1 | 493.8 |
| China | 165.0 | 190.0 | 213.0 | 220.0 | 224.0 | 224.0 |
| Indonesia | 175.0 | 145.0 | 147.0 | 100.0 | 142.0 | 137.1 |
| Mongolia | 9.0 | 9.0 | 12.0 | 16.0 | 18.0 | 18.0 |
| Japan | 7.9 | 8.0 | 8.2 | 8.0 | 7.5 | 7.5 |
| Philippines | 11.2 | 7.9 | 5.8 | 5.0 | 6.2 | 6.2 |
| North Korea | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 |
| Other Asia | 6.7 | 5.6 | 16.7 | 15.6 | 19.4 | 19.4 |
| Total Asia | 379.8 | 370.5 | 407.7 | 369.6 | 422.1 | 417.3 |
| Australia | 280.0 | 263.0 | 284.0 | 253.0 | 260.0 | 264.1 |
| Papua New Guinea | 67.1 | 63.2 | 66.0 | 71.0 | 65.0 | 65.0 |
| New Zealand | 10.0 | 10.0 | 10.0 | 11.0 | 11.0 | 10.0 |
| Fiji | 4.9 | 3.8 | 3.6 | 4.0 | 2.8 | 2.8 |
| Total Australasia | 362.0 | 340.0 | 363.6 | 339.0 | 338.8 | 341.9 |
| Russia | 155.0 | 170.0 | 158.0 | 159.0 | 152.0 | 151.9 |
| Uzbekistan | 85.0 | 88.0 | 86.0 | 90.0 | 86.0 | 88.1 |
| Kazakhstan | 18.0 | 20.0 | 20.0 | 22.0 | 22.0 | 22.0 |
| Kyrgyzstan | 24.7 | 18.0 | 22.5 | 22.0 | 17.0 | 17.0 |
| Other Eastern Europe | 8.3 | 11.3 | 10.0 | 9.0 | 7.7 | 7.7 |
| Total Eastern Europe | 291.0 | 307.3 | 296.5 | 302.0 | 284.7 | 286.7 |
| Sweden | 5.0 | 5.8 | 5.7 | 6.0 | 5.2 | 5.2 |
| Spain | 5.9 | 7.0 | 7.0 | 5.0 | 3.0 | 3.0 |
| Other Western Europe | 9.2 | 11.2 | 8.9 | 6.5 | 3.3 | 3.3 |
| Total Western Europe | 20.1 | 24.0 | 21.6 | 17.5 | 11.5 | 11.5 |
| India | 1.4 | 1.4 | 3.3 | 5.0 | 3.4 | 3.4 |
| Total Indian sub-continent | 1.4 | 1.4 | 3.3 | 5.0 | 3.4 | 3.4 |
| Peru | 138.7 | 157.3 | 172.6 | 173.0 | 207.8 | 184.6 |
| Chile | 40.9 | 36.5 | 38.9 | 39.0 | 39.6 | 46.2 |
| Colombia | 14.0 | 35.0 | 46.5 | 30.0 | 37.0 | 37.0 |
| Brazil | 54.0 | 37.0 | 34.0 | 34.0 | 35.0 | 35.0 |
| Mexico | 25.7 | 23.3 | 22.2 | 24.0 | 31.0 | 31.8 |
| Argentina | 30.6 | 32.5 | 28.6 | 27.0 | 25.0 | 26.8 |
| Venezuela | 16.0 | 16.0 | 15.0 | 15.0 | 14.0 | 14.0 |
| Bolivia | 12.0 | 10.0 | 7.0 | 4.0 | 7.0 | 7.4 |
| Guyana | 14.2 | 13.0 | 12.0 | 12.0 | 6.0 | 6.0 |
| Other Latin America | 16.0 | 15.1 | 14.1 | 24.0 | 23.1 | 33.0 |
| Total Latin America | 362.2 | 375.7 | 390.9 | 382.0 | 425.5 | 421.8 |
| Saudi Arabia | 4.0 | 4.0 | 8.8 | 8.0 | 8.0 | 8.0 |
| Other Middle East | 1.4 | 1.4 | 0.8 | 1.0 | - | - |
| Total Middle East | 5.4 | 5.4 | 9.6 | 9.0 | 8.0 | 8.0 |
| USA | 335.0 | 300.0 | 280.0 | 260.0 | 260.0 | 264.1 |
| Canada | 160.2 | 152.2 | 140.6 | 129.0 | 118.5 | 115.4 |
| Total North America | 495.2 | 452.2 | 420.6 | 389.0 | 378.5 | 379.6 |
| World Total | 2,513.8 | 2,490.6 | 2,513.5 | 2,366.1 | 2,384.7 | 2,364.0 |

Source: Raw Materials Group, Chamber of Mines, South Africa, News Wires

Scrap recycling (excluding process scrap), 2001-2006e (tonnes)

| | 2001 | 2002 | 2003 | 2004 | 2005 | 2006e |
|-----------------------------------|--------------|--------------|--------------|----------------|--------------|--------------|
| Algeria | 4.0 | 5.2 | 5.2 | 5.4 | 4.0 | 4.8 |
| Morocco | 4.0 | 5.1 | 5.1 | 5.5 | 4.0 | 4.8 |
| Tunisia | 4.0 | 5.1 | 5.1 | 5.2 | 3.5 | 4.2 |
| Other Africa | 5.0 | 5.0 | 5.0 | 5.5 | 3.0 | 3.6 |
| Total Africa | 17.0 | 20.4 | 20.4 | 21.6 | 14.5 | 17.4 |
| Thailand | 25.0 | 35.0 | 35.0 | 45.0 | 45.0 | 54.0 |
| Indonesia | 18.0 | 30.0 | 30.0 | 33.0 | 40.0 | 48.0 |
| Malaysia | 12.5 | 18.0 | 18.0 | 18.0 | 30.0 | 36.0 |
| Japan | 28.0 | 35.0 | 35.0 | 42.0 | 30.0 | 34.5 |
| China | 25.0 | 35.0 | 35.0 | 37.0 | 25.0 | 30.0 |
| Philippines | 7.5 | 12.0 | 12.0 | 15.0 | 18.0 | 21.6 |
| South Korea | 15.0 | 18.0 | 18.0 | 20.0 | 15.0 | 18.0 |
| Taiwan | 7.5 | 12.0 | 12.0 | 16.0 | 12.0 | 14.4 |
| Hong Kong | 7.5 | 12.0 | 12.0 | 17.0 | 10.0 | 12.0 |
| Singapore | 7.5 | 12.0 | 12.0 | 15.0 | 10.0 | 12.0 |
| Myanmar | 1.0 | 3.0 | 3.0 | 3.0 | 2.0 | 2.4 |
| Total Asia | 154.5 | 222.0 | 222.0 | 261.0 | 237.0 | 282.9 |
| Australia | 3.0 | 3.0 | 3.0 | 4.0 | 3.0 | 3.5 |
| Total Australasia | 3.0 | 3.0 | 3.0 | 4.0 | 3.0 | 3.5 |
| Russia | 20.0 | 35.0 | 40.0 | 45.0 | 40.0 | 52.0 |
| Total Eastern Europe | 20.0 | 35.0 | 40.0 | 45.0 | 40.0 | 52.0 |
| Turkey | 45.0 | 60.0 | 65.0 | 80.0 | 40.0 | 48.0 |
| Italy | 22.0 | 30.0 | 30.0 | 34.0 | 26.0 | 29.9 |
| France | 5.0 | 5.2 | 5.2 | 7.0 | 6.0 | 6.9 |
| Germany | 5.0 | 6.0 | 6.0 | 7.0 | 5.0 | 5.8 |
| Switzerland | 5.0 | 6.0 | 6.0 | 6.8 | 5.0 | 5.8 |
| UK & Ireland | 5.0 | 6.0 | 6.0 | 7.0 | 5.0 | 5.8 |
| Other Western Europe | 11.5 | 16.4 | 16.4 | 21.1 | 14.5 | 16.7 |
| Total Western Europe | 98.5 | 129.6 | 134.6 | 162.9 | 101.5 | 118.7 |
| India | 80.0 | 110.0 | 120.0 | 145.0 | 115.0 | 138.0 |
| Pakistan | 13.0 | 22.0 | 22.0 | 30.0 | 20.0 | 24.0 |
| Bangladesh | 1.5 | 4.0 | 4.0 | 7.0 | 4.0 | 4.8 |
| Sri Lanka | 1.0 | 3.0 | 3.0 | 4.0 | 3.0 | 3.6 |
| Total Indian sub-continent | 95.5 | 139.0 | 149.0 | 186.0 | 142.0 | 170.4 |
| Argentina | 5.0 | 7.0 | 7.0 | 8.0 | 6.0 | 7.2 |
| Brazil | 5.0 | 7.0 | 7.0 | 10.0 | 6.0 | 7.2 |
| Chile | 5.0 | 7.0 | 7.0 | 8.0 | 5.0 | 6.0 |
| Colombia | 5.0 | 8.0 | 8.0 | 8.0 | 5.0 | 6.0 |
| Mexico | 5.0 | 8.0 | 8.0 | 8.0 | 5.0 | 6.0 |
| Peru | 5.0 | 8.0 | 8.0 | 8.0 | 4.0 | 4.8 |
| Venezuela | 5.0 | 8.0 | 8.0 | 9.0 | 4.0 | 4.8 |
| Other Latin America | 6.0 | 8.0 | 8.0 | 10.0 | 5.0 | 6.0 |
| Total Latin America | 41.0 | 61.0 | 61.0 | 69.0 | 40.0 | 48.0 |
| Saudi Arabia | 57.0 | 70.0 | 70.0 | 90.0 | 70.0 | 84.0 |
| Iraq | 12.5 | 20.0 | 40.0 | 65.0 | 40.0 | 48.0 |
| Egypt | 20.0 | 30.0 | 30.0 | 33.0 | 20.0 | 24.0 |
| Kuwait | 13.0 | 20.0 | 20.0 | 25.0 | 20.0 | 24.0 |
| Iran | 10.0 | 15.0 | 15.0 | 28.0 | 20.0 | 23.0 |
| Arab Emirates | 5.0 | 10.0 | 10.0 | 15.0 | 10.0 | 12.0 |
| Lebanon | 5.0 | 6.0 | 6.0 | 9.0 | 5.0 | 6.0 |
| Israel | 3.0 | 4.0 | 4.0 | 4.5 | 3.0 | 3.6 |
| Total Middle East | 125.5 | 175.0 | 195.0 | 269.5 | 188.0 | 224.6 |
| USA | 60.0 | 70.0 | 70.0 | 75.0 | 65.0 | 74.8 |
| Canada | 5.0 | 5.0 | 5.0 | 6.0 | 5.0 | 5.8 |
| Total North America | 65.0 | 75.0 | 75.0 | 81.0 | 70.0 | 80.5 |
| World Total | 620.0 | 860.0 | 900.0 | 1,100.0 | 836.0 | 998.0 |

Source: Virtual Metals

Jewellery fabrication, 2001-2006e (tonnes)

| | 2001 | 2002 | 2003 | 2004 | 2005 | 2006e |
|-----------------------------------|----------------|----------------|----------------|----------------|----------------|----------------|
| South Africa | 6.0 | 7.0 | 8.0 | 9.6 | 9.6 | 8.2 |
| Morocco | 10.0 | 10.0 | 10.0 | 10.0 | 10.0 | 6.5 |
| Algeria | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 3.4 |
| Libya | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 3.4 |
| Tunisia | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 0.7 |
| Total Africa | 27.0 | 28.0 | 29.0 | 30.6 | 30.6 | 22.1 |
| China | 210.0 | 220.0 | 230.0 | 240.0 | 250.0 | 260.0 |
| Indonesia | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 68.0 |
| Taiwan | 85.0 | 80.0 | 75.0 | 70.0 | 70.0 | 59.5 |
| Thailand | 75.0 | 75.0 | 75.0 | 75.0 | 70.0 | 59.5 |
| South Korea | 70.0 | 50.0 | 50.0 | 50.0 | 52.0 | 39.0 |
| Malaysia | 75.0 | 75.0 | 50.0 | 50.0 | 55.0 | 33.0 |
| Japan | 25.0 | 25.0 | 25.0 | 25.0 | 25.0 | 24.8 |
| Vietnam | 20.0 | 25.0 | 25.0 | 30.0 | 34.5 | 23.1 |
| Hong Kong | 15.0 | 10.0 | 15.0 | 17.3 | 20.0 | 17.0 |
| Singapore | 15.0 | 15.0 | 10.0 | 10.0 | 10.0 | 8.5 |
| Cambodia | 10.0 | 10.0 | 10.0 | 10.0 | 10.0 | 7.0 |
| Afghanistan | 10.0 | 10.0 | 10.0 | 10.0 | 10.0 | 6.5 |
| Other Asia | 7.0 | 7.5 | 8.0 | 9.0 | 9.0 | 6.1 |
| Total Asia | 717.0 | 702.5 | 683.0 | 696.3 | 715.5 | 612.0 |
| Australia | 6.0 | 5.0 | 5.0 | 5.0 | 5.5 | 4.7 |
| Total Australasia | 6.0 | 5.0 | 5.0 | 5.0 | 5.5 | 4.7 |
| Russia | 30.0 | 30.0 | 30.0 | 30.0 | 35.0 | 29.8 |
| Uzbekistan | 2.7 | 3.0 | 3.0 | 3.0 | 3.0 | 2.6 |
| Croatia | 0.5 | 0.6 | 0.6 | 0.7 | 0.7 | 0.6 |
| Bulgaria | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 |
| Estonia | 0.1 | 0.1 | 0.1 | 0.2 | 0.2 | 0.2 |
| Total Eastern Europe | 33.6 | 34.0 | 34.0 | 34.2 | 39.2 | 33.4 |
| Italy | 450.0 | 400.0 | 350.0 | 320.0 | 300.0 | 285.0 |
| Turkey | 109.2 | 136.5 | 225.7 | 263.6 | 283.5 | 201.3 |
| Spain | 35.0 | 30.0 | 30.0 | 30.0 | 30.0 | 28.5 |
| Switzerland | 25.0 | 27.5 | 30.0 | 30.0 | 30.0 | 28.5 |
| UK & Ireland | 27.0 | 26.0 | 25.0 | 25.0 | 26.0 | 26.1 |
| Germany | 35.0 | 30.0 | 25.0 | 20.0 | 22.5 | 21.4 |
| France | 25.0 | 23.0 | 22.0 | 20.0 | 22.0 | 20.9 |
| Greece | 9.0 | 8.0 | 9.0 | 10.0 | 10.0 | 9.5 |
| Portugal | 10.0 | 10.0 | 10.0 | 10.0 | 10.0 | 9.5 |
| Poland | 4.0 | 4.5 | 5.2 | 5.5 | 5.5 | 5.2 |
| Other Europe | 20.5 | 20.4 | 19.9 | 19.1 | 19.6 | 18.6 |
| Total Western Europe | 749.7 | 715.9 | 751.8 | 753.2 | 759.1 | 654.5 |
| India | 650.0 | 525.0 | 500.0 | 532.0 | 592.5 | 396.9 |
| Pakistan | 50.0 | 50.0 | 50.0 | 50.0 | 50.0 | 34.5 |
| Bangladesh | 30.0 | 25.0 | 20.0 | 20.0 | 14.0 | 8.8 |
| Sri Lanka | 10.0 | 10.0 | 5.0 | 5.0 | 5.0 | 3.3 |
| Total Indian sub-continent | 740.0 | 610.0 | 575.0 | 607.0 | 661.5 | 443.5 |
| Mexico | 30.0 | 30.0 | 30.0 | 30.0 | 30.0 | 25.5 |
| Brazil | 20.0 | 20.0 | 20.0 | 20.0 | 22.0 | 18.7 |
| Other Latin America | 26.7 | 27.3 | 27.4 | 27.5 | 27.5 | 23.4 |
| Total Latin America | 76.7 | 77.3 | 77.4 | 77.5 | 79.5 | 67.6 |
| Saudi Arabia | 155.0 | 160.0 | 170.0 | 180.0 | 190.0 | 138.7 |
| Egypt | 100.0 | 100.0 | 75.0 | 75.0 | 85.0 | 57.8 |
| Arab Emirates | 42.5 | 45.0 | 47.5 | 50.0 | 55.0 | 38.5 |
| Iran | 35.0 | 35.0 | 35.0 | 35.0 | 40.0 | 30.0 |
| Iraq | 20.0 | 30.0 | 35.0 | 30.0 | 35.0 | 26.3 |
| Israel | 17.0 | 15.0 | 14.0 | 15.0 | 15.0 | 12.8 |
| Kuwait | 15.0 | 15.0 | 15.0 | 15.0 | 17.5 | 12.6 |
| Lebanon | 6.0 | 8.0 | 9.0 | 10.0 | 12.0 | 7.8 |
| Yemen | 7.4 | 7.6 | 7.8 | 8.0 | 8.3 | 5.8 |
| Other Middle East | 9.0 | 8.3 | 7.8 | 8.0 | 8.0 | 4.9 |
| Total Middle East | 406.9 | 423.9 | 416.1 | 426.0 | 465.8 | 335.1 |
| USA | 175.0 | 175.0 | 180.0 | 180.0 | 185.0 | 157.3 |
| Canada | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 | 11.4 |
| Total North America | 187.0 | 187.0 | 192.0 | 192.0 | 197.0 | 168.7 |
| World Total | 2,943.8 | 2,783.6 | 2,763.3 | 2,821.7 | 2,953.6 | 2,341.5 |

Source: Virtual Metals

Jewellery consumption, 2001-2006e (tonnes)

| | 2001 | 2002 | 2003 | 2004 | 2005 | 2006e |
|-----------------------------------|----------------|----------------|----------------|----------------|----------------|----------------|
| Morocco | 9.1 | 9.1 | 8.8 | 8.8 | 8.9 | 5.8 |
| South Africa | 4.7 | 5.0 | 5.2 | 5.9 | 5.8 | 5.1 |
| Other Africa | 13.8 | 14.2 | 13.9 | 13.7 | 14.1 | 9.6 |
| Total Africa | 27.5 | 28.2 | 27.9 | 28.4 | 28.8 | 20.5 |
| China | 261.0 | 257.3 | 258.2 | 265.0 | 274.2 | 258.5 |
| Indonesia | 81.1 | 81.8 | 81.3 | 82.0 | 82.8 | 62.6 |
| South Korea | 52.5 | 37.5 | 37.5 | 37.5 | 39.0 | 29.3 |
| Japan | 30.7 | 30.0 | 29.4 | 28.6 | 28.8 | 26.3 |
| Taiwan | 32.9 | 31.1 | 29.3 | 27.5 | 27.3 | 23.2 |
| Thailand | 30.0 | 30.0 | 29.9 | 29.9 | 28.3 | 23.1 |
| Vietnam | 20.0 | 25.0 | 25.0 | 30.0 | 34.5 | 23.1 |
| Afghanistan | 26.5 | 25.8 | 26.1 | 27.0 | 28.5 | 19.9 |
| Malaysia | 36.9 | 36.8 | 27.7 | 27.6 | 29.1 | 19.1 |
| Singapore | 24.0 | 24.0 | 18.9 | 18.9 | 19.4 | 13.6 |
| Myanmar | 12.1 | 12.5 | 11.7 | 12.7 | 12.6 | 8.8 |
| Philippines | 12.9 | 12.9 | 11.7 | 11.7 | 11.8 | 8.1 |
| Cambodia | 10.0 | 10.0 | 10.0 | 10.0 | 10.0 | 7.0 |
| Other Asia | 5.8 | 5.0 | 5.8 | 6.1 | 6.5 | 4.9 |
| Total Asia | 636.3 | 619.6 | 602.2 | 614.3 | 632.9 | 527.5 |
| Australia | 6.0 | 5.0 | 5.0 | 5.0 | 5.5 | 4.7 |
| Total Australasia | 6.0 | 5.0 | 5.0 | 5.0 | 5.5 | 4.7 |
| Russia | 30.0 | 30.0 | 30.0 | 30.0 | 35.0 | 29.8 |
| Other Eastern Europe | 3.6 | 4.0 | 4.0 | 4.2 | 4.2 | 3.6 |
| Total Eastern Europe | 33.6 | 34.0 | 34.0 | 34.2 | 39.2 | 33.4 |
| Turkey | 62.4 | 73.9 | 112.1 | 128.1 | 137.6 | 102.5 |
| Italy | 117.9 | 105.2 | 92.5 | 84.8 | 80.1 | 76.3 |
| Switzerland | 64.8 | 65.9 | 68.3 | 68.0 | 69.3 | 61.7 |
| Germany | 55.3 | 54.2 | 54.4 | 53.4 | 55.0 | 48.1 |
| UK & Ireland | 56.3 | 52.1 | 49.0 | 47.3 | 46.5 | 44.3 |
| Spain | 43.3 | 38.0 | 37.7 | 37.6 | 37.6 | 35.9 |
| France | 24.7 | 23.0 | 22.0 | 20.4 | 21.7 | 20.8 |
| Portugal | 14.6 | 14.7 | 14.7 | 14.8 | 14.9 | 14.3 |
| Greece | 10.5 | 9.9 | 10.3 | 10.7 | 10.7 | 10.2 |
| Austria | 11.0 | 10.3 | 9.7 | 8.9 | 9.2 | 8.9 |
| Belgium | 9.2 | 8.9 | 8.5 | 8.4 | 8.6 | 8.4 |
| Netherlands | 9.2 | 8.7 | 8.1 | 7.7 | 7.6 | 7.2 |
| Poland | 5.9 | 6.2 | 6.7 | 6.9 | 7.0 | 6.7 |
| Other Europe | 24.2 | 23.3 | 22.1 | 20.9 | 21.6 | 20.7 |
| Total Western Europe | 509.3 | 494.1 | 516.0 | 517.6 | 527.3 | 466.2 |
| India | 614.7 | 508.0 | 487.4 | 516.4 | 571.5 | 387.7 |
| Pakistan | 100.5 | 89.2 | 89.2 | 93.2 | 100.2 | 68.2 |
| Bangladesh | 49.0 | 40.8 | 35.5 | 36.5 | 32.9 | 21.6 |
| Sri Lanka | 10.0 | 10.0 | 5.0 | 5.0 | 5.0 | 3.3 |
| Total Indian sub-continent | 774.1 | 648.0 | 617.1 | 651.1 | 709.7 | 480.7 |
| Mexico | 27.4 | 27.4 | 27.4 | 27.4 | 27.4 | 23.3 |
| Brazil | 11.0 | 11.0 | 11.0 | 11.0 | 12.0 | 10.2 |
| Other Latin America | 25.7 | 26.3 | 26.3 | 26.5 | 26.6 | 22.6 |
| Total Latin America | 64.0 | 64.6 | 64.7 | 64.8 | 66.0 | 56.1 |
| Saudi Arabia | 130.3 | 133.2 | 143.9 | 151.7 | 158.8 | 119.5 |
| Egypt | 84.4 | 86.4 | 74.0 | 76.7 | 85.8 | 59.0 |
| Iraq | 37.1 | 47.0 | 55.5 | 54.1 | 60.3 | 44.1 |
| Iran | 48.1 | 48.9 | 49.1 | 49.7 | 55.6 | 41.2 |
| Arab Emirates | 25.4 | 28.5 | 36.2 | 40.4 | 43.1 | 32.3 |
| Lebanon | 25.3 | 28.6 | 31.9 | 34.3 | 38.1 | 26.6 |
| Syria | 24.1 | 25.5 | 29.6 | 32.2 | 34.4 | 24.4 |
| Yemen | 25.6 | 26.9 | 29.4 | 31.3 | 33.3 | 23.8 |
| Kuwait | 21.2 | 22.6 | 25.8 | 27.7 | 30.8 | 22.1 |
| Jordan | 23.0 | 23.8 | 25.6 | 27.3 | 29.0 | 20.3 |
| Israel | 1.8 | 1.7 | 1.7 | 1.8 | 1.8 | 1.6 |
| Total Middle East | 446.4 | 473.0 | 502.6 | 527.1 | 571.1 | 414.8 |
| USA | 427.7 | 398.6 | 375.9 | 361.7 | 355.6 | 321.0 |
| Canada | 18.9 | 18.4 | 17.9 | 17.6 | 17.5 | 16.7 |
| Total North America | 446.6 | 417.1 | 393.8 | 379.3 | 373.2 | 337.7 |
| World Total | 2,943.8 | 2,783.6 | 2,763.3 | 2,821.7 | 2,953.6 | 2,341.5 |

Source: Virtual Metals

Gold usage in electronics, 2001-2006e (tonnes)

| | 2001 | 2002 | 2003 | 2004 | 2005 | 2006e |
|-----------------------------------|--------------|--------------|--------------|--------------|--------------|--------------|
| Japan | 106.0 | 112.1 | 118.5 | 125.0 | 131.6 | 135.5 |
| South Korea | 32.1 | 38.5 | 46.2 | 55.5 | 66.6 | 69.2 |
| Singapore | 9.1 | 10.4 | 11.9 | 13.5 | 15.4 | 15.6 |
| Taiwan | 2.8 | 3.0 | 3.1 | 3.3 | 3.4 | 3.6 |
| Other Asia | 0.8 | 1.1 | 1.7 | 2.5 | 3.8 | 5.7 |
| Total Asia | 150.8 | 165.1 | 181.4 | 199.8 | 220.8 | 229.6 |
| Australia | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.6 |
| Total Australasia | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.6 |
| Russia | 14.7 | 15.1 | 15.6 | 16.0 | 16.5 | 17.2 |
| Total Eastern Europe | 14.7 | 15.1 | 15.6 | 16.0 | 16.5 | 17.2 |
| Germany | 10.7 | 10.7 | 10.8 | 10.8 | 10.9 | 11.3 |
| France | 7.2 | 7.7 | 8.3 | 8.9 | 9.5 | 9.9 |
| Switzerland | 7.5 | 7.9 | 8.4 | 8.9 | 9.4 | 9.8 |
| UK & Ireland | 6.1 | 5.9 | 5.7 | 5.5 | 5.4 | 5.6 |
| Other Western Europe | 7.1 | 7.2 | 7.3 | 7.4 | 7.5 | 7.8 |
| Total Western Europe | 38.5 | 39.4 | 40.4 | 41.5 | 42.6 | 44.3 |
| India | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 |
| Total Indian sub-continent | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 |
| Brazil | 1.3 | 1.3 | 1.3 | 1.4 | 1.4 | 1.5 |
| Mexico | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 |
| Total Latin America | 1.4 | 1.5 | 1.5 | 1.5 | 1.5 | 1.6 |
| Israel | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 |
| Total Middle East | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 |
| USA | 66.1 | 68.1 | 70.1 | 72.2 | 74.4 | 77.4 |
| Canada | 0.6 | 0.7 | 0.7 | 0.7 | 0.7 | 0.7 |
| Total North America | 66.7 | 68.7 | 70.8 | 72.9 | 75.1 | 78.1 |
| World Total | 272.9 | 290.6 | 310.4 | 332.5 | 357.3 | 371.6 |

Source: Virtual Metals

Other end uses, 2001-2006e (tonnes)

| | 2001 | 2002 | 2003 | 2004 | 2005 | 2006e |
|-----------------------------------|--------------|--------------|--------------|--------------|--------------|--------------|
| Japan | 15.3 | 15.4 | 15.5 | 15.6 | 15.8 | 13.5 |
| South Korea | 10.7 | 11.6 | 12.5 | 13.6 | 14.7 | 13.5 |
| Other Asia | 2.5 | 2.7 | 2.8 | 2.9 | 3.1 | 2.8 |
| Total Asia | 28.6 | 29.6 | 30.8 | 32.1 | 33.5 | 29.8 |
| Australia | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.4 |
| Total Australasia | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.4 |
| Turkey | 35.1 | 42.1 | 50.6 | 60.7 | 72.8 | 48.9 |
| Germany | 22.4 | 22.8 | 23.2 | 23.7 | 24.1 | 22.6 |
| Switzerland | 13.7 | 14.6 | 15.5 | 16.6 | 17.7 | 16.2 |
| Italy | 8.1 | 8.0 | 7.9 | 7.9 | 7.8 | 7.2 |
| Netherlands | 4.1 | 4.6 | 5.2 | 5.9 | 6.7 | 6.4 |
| France | 6.1 | 6.2 | 6.4 | 6.5 | 6.7 | 6.0 |
| Other Europe | 6.5 | 6.7 | 6.9 | 7.2 | 7.4 | 6.8 |
| Total Western Europe | 96.0 | 105.1 | 115.8 | 128.4 | 143.2 | 114.1 |
| India | 45.7 | 55.9 | 68.4 | 83.7 | 102.5 | 76.9 |
| Pakistan | 1.9 | 2.0 | 2.1 | 2.2 | 2.3 | 2.2 |
| Total Indian sub-continent | 47.6 | 57.9 | 70.5 | 85.9 | 104.8 | 79.0 |
| Brazil | 6.6 | 7.3 | 8.2 | 9.1 | 10.1 | 9.2 |
| Other Latin America | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 0.9 |
| Total Latin America | 7.6 | 8.3 | 9.1 | 10.1 | 11.1 | 10.1 |
| Arab Emirates | 10.7 | 12.8 | 15.4 | 18.5 | 22.2 | 13.3 |
| Other Middle East | 5.5 | 5.6 | 5.8 | 5.9 | 6.1 | 5.8 |
| Total Middle East | 16.2 | 18.4 | 21.2 | 24.4 | 28.3 | 19.1 |
| USA | 31.6 | 31.4 | 31.1 | 30.8 | 30.6 | 28.3 |
| Canada | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 |
| Total North America | 31.9 | 31.7 | 31.4 | 31.1 | 30.9 | 28.5 |
| World Total | 228.3 | 251.5 | 279.3 | 312.5 | 352.4 | 281.1 |

Source: Virtual Metals

Includes Dental Alloys, Non-Legal Tender Coins and Other Industrial Uses

Financials: prices, volatilities and lease rates

Gold prices in various currencies, average, 1994-2006

| | \$/oz | Euro/oz | Rand/kg | Yen/gr | A\$/oz |
|--------|--------|---------|---------|--------|--------|
| 1994 | 384.02 | 324.26 | 42,409 | 1,261 | 527.24 |
| 1995 | 384.18 | 296.91 | 43,343 | 1,162 | 517.53 |
| 1996 | 387.71 | 309.91 | 52,205 | 1,356 | 493.66 |
| 1997 | 331.37 | 293.10 | 47,377 | 1,287 | 444.82 |
| 1998 | 294.17 | 262.39 | 50,729 | 1,238 | 469.37 |
| 1999 | 278.73 | 261.45 | 53,006 | 1,018 | 432.90 |
| 2000 | 279.14 | 302.78 | 60,106 | 967 | 480.54 |
| 2001 | 271.10 | 302.82 | 74,496 | 1,056 | 524.66 |
| 2002 | 307.20 | 328.03 | 101,011 | 1,243 | 569.83 |
| 2003 | 363.32 | 321.06 | 85,026 | 1,346 | 558.89 |
| 2004 | 409.17 | 329.10 | 84,361 | 1,422 | 556.18 |
| 2005 | 444.45 | 358.38 | 90,829 | 1,577 | 583.52 |
| Jan-05 | 423.72 | 323.19 | 79,037 | 1,408 | 554.77 |
| Feb-05 | 423.35 | 325.21 | 79,211 | 1,427 | 541.88 |
| Mar-05 | 434.32 | 328.80 | 84,001 | 1,468 | 554.93 |
| Apr-05 | 429.00 | 331.66 | 84,866 | 1,480 | 555.00 |
| May-05 | 423.05 | 332.20 | 85,296 | 1,447 | 551.58 |
| Jun-05 | 428.60 | 352.51 | 93,076 | 1,498 | 561.30 |
| Jul-05 | 424.33 | 352.09 | 91,235 | 1,526 | 563.53 |
| Aug-05 | 437.93 | 356.48 | 91,108 | 1,558 | 575.20 |
| Sep-05 | 456.52 | 373.33 | 93,375 | 1,631 | 596.15 |
| Oct-05 | 469.90 | 391.00 | 99,157 | 1,735 | 623.38 |
| Nov-05 | 476.67 | 404.63 | 101,787 | 1,815 | 648.47 |
| Dec-05 | 510.10 | 430.22 | 104,138 | 1,948 | 685.41 |
| Jan-06 | 549.86 | 453.61 | 107,284 | 2,040 | 733.13 |
| Feb-06 | 555.00 | 464.86 | 108,872 | 2,103 | 748.58 |
| Mar-06 | 557.09 | 463.39 | 111,832 | 2,101 | 767.33 |

Source: Virtual Metals

Inflation-adjusted gold price (in 2005 dollars)

| | Nominal gold price (\$/oz) | US CPI (2005=100) | Real gold price (2005 dollars) |
|------|----------------------------|----------------------|-----------------------------------|
| 1980 | 612.6 | 42.4 | 1,440.08 |
| 1981 | 459.9 | 46.8 | 982.04 |
| 1982 | 375.8 | 49.6 | 753.20 |
| 1983 | 424.1 | 51.2 | 825.02 |
| 1984 | 360.3 | 53.4 | 671.84 |
| 1985 | 317.2 | 55.3 | 570.71 |
| 1986 | 367.7 | 56.4 | 649.10 |
| 1987 | 446.5 | 58.4 | 760.14 |
| 1988 | 437.0 | 60.8 | 715.70 |
| 1989 | 381.4 | 63.8 | 595.67 |
| 1990 | 383.5 | 67.2 | 568.45 |
| 1991 | 362.2 | 70.0 | 514.80 |
| 1992 | 343.7 | 72.2 | 474.18 |
| 1993 | 359.8 | 74.3 | 481.91 |
| 1994 | 384.1 | 76.2 | 501.58 |
| 1995 | 384.2 | 78.4 | 490.18 |
| 1996 | 387.7 | 80.7 | 480.59 |
| 1997 | 331.2 | 82.6 | 401.21 |
| 1998 | 294.2 | 83.8 | 350.87 |
| 1999 | 278.6 | 85.7 | 325.24 |
| 2000 | 279.1 | 88.6 | 315.18 |
| 2001 | 271.1 | 91.1 | 297.68 |
| 2002 | 307.2 | 92.5 | 332.07 |
| 2003 | 363.3 | 94.6 | 384.01 |
| 2004 | 409.2 | 97.1 | 421.19 |
| 2005 | 444.4 | 100.0 | 444.45 |

Source: Virtual Metals

Price volatility, 1994-2006 (%)

| | Daily | 1M | 3M | 6M | 12M |
|--------|-------|-------|-------|-------|-------|
| 1994 | 6.47 | 8.12 | 8.35 | 9.19 | 9.89 |
| 1995 | 4.22 | 5.70 | 5.74 | 5.91 | 6.05 |
| 1996 | 4.44 | 5.45 | 5.52 | 5.66 | 5.80 |
| 1997 | 7.52 | 9.80 | 9.78 | 9.23 | 8.81 |
| 1998 | 9.29 | 12.32 | 12.80 | 12.95 | 12.86 |
| 1999 | 9.44 | 13.41 | 13.87 | 13.10 | 12.64 |
| 2000 | 8.57 | 12.37 | 13.40 | 15.94 | 17.13 |
| 2001 | 8.17 | 11.41 | 11.83 | 11.89 | 11.75 |
| 2002 | 10.42 | 12.72 | 12.78 | 13.00 | 13.04 |
| 2003 | 11.53 | 15.69 | 16.13 | 15.79 | 15.31 |
| 2004 | 11.32 | 14.05 | 14.03 | 14.37 | 14.77 |
| 2005 | 9.31 | 11.60 | 11.39 | 11.27 | 12.29 |
| Jan-05 | 8.93 | 12.22 | 12.37 | 12.48 | 14.34 |
| Feb-05 | 7.62 | 10.56 | 11.84 | 12.04 | 14.13 |
| Mar-05 | 7.35 | 9.33 | 11.06 | 11.74 | 13.68 |
| Apr-05 | 8.52 | 9.42 | 9.87 | 11.24 | 13.18 |
| May-05 | 7.39 | 10.64 | 9.92 | 10.88 | 12.48 |
| Jun-05 | 8.01 | 9.54 | 9.92 | 10.60 | 11.86 |
| Jul-05 | 7.14 | 10.33 | 10.24 | 10.05 | 11.31 |
| Aug-05 | 6.81 | 9.66 | 9.94 | 9.91 | 11.00 |
| Sep-05 | 9.42 | 11.58 | 10.65 | 10.29 | 11.03 |
| Oct-05 | 12.07 | 14.36 | 11.98 | 11.17 | 11.16 |
| Nov-05 | 10.87 | 15.06 | 13.71 | 11.93 | 11.46 |
| Dec-05 | 18.82 | 17.33 | 15.88 | 13.45 | 12.15 |
| Jan-06 | 19.03 | 27.56 | 20.71 | 16.71 | 13.93 |
| Feb-06 | 13.08 | 20.20 | 22.01 | 18.11 | 14.72 |
| Mar-06 | 18.92 | 19.28 | 22.61 | 19.19 | 15.47 |

Source: Virtual Metals

Lease Rates, 1993-2006 (% p.a.)

| | 1-month | 3-month | 6-month | 12-month |
|--------|---------|---------|---------|----------|
| 1993 | 0.74 | 0.86 | 0.94 | 1.15 |
| 1994 | 0.54 | 0.66 | 0.75 | 0.91 |
| 1995 | 1.74 | 1.69 | 1.59 | 1.59 |
| 1996 | 1.52 | 1.71 | 1.90 | 2.17 |
| 1997 | 1.84 | 1.90 | 1.97 | 2.12 |
| 1998 | 2.60 | 2.69 | 2.94 | 3.27 |
| 1999 | 1.71 | 1.90 | 2.05 | 2.27 |
| 2000 | 0.60 | 0.82 | 1.04 | 1.50 |
| 2001 | 1.29 | 1.33 | 1.42 | 1.68 |
| 2002 | 0.26 | 0.40 | 0.58 | 0.94 |
| 2003 | 0.09 | 0.14 | 0.23 | 0.41 |
| 2004 | 0.08 | 0.11 | 0.15 | 0.25 |
| 2005 | 0.11 | 0.11 | 0.13 | 0.18 |
| Jan-05 | 0.09 | 0.10 | 0.13 | 0.18 |
| Feb-05 | 0.10 | 0.12 | 0.13 | 0.18 |
| Mar-05 | 0.08 | 0.10 | 0.14 | 0.20 |
| Apr-05 | 0.08 | 0.09 | 0.11 | 0.17 |
| May-05 | 0.12 | 0.13 | 0.15 | 0.19 |
| Jun-05 | 0.14 | 0.15 | 0.18 | 0.23 |
| Jul-05 | 0.11 | 0.13 | 0.15 | 0.22 |
| Aug-05 | 0.10 | 0.09 | 0.12 | 0.18 |
| Sep-05 | 0.12 | 0.11 | 0.14 | 0.19 |
| Oct-05 | 0.11 | 0.12 | 0.14 | 0.18 |
| Nov-05 | 0.10 | 0.10 | 0.11 | 0.12 |
| Dec-05 | 0.11 | 0.11 | 0.12 | 0.13 |
| Jan-06 | 0.11 | 0.11 | 0.12 | 0.15 |
| Feb-06 | 0.09 | 0.12 | 0.15 | 0.18 |
| Mar-06 | 0.13 | 0.11 | 0.13 | 0.15 |

Source: Virtual Metals

Official sector by region, 2001-2006

Official sector holdings, 2001-2006 (tonnes)

| | 2001 | 2002 | 2003 | 2004 | 2005 | 2006e |
|----------------------|---------------|---------------|---------------|---------------|---------------|---------------|
| Africa | 477 | 477 | 420 | 420 | 420 | 420 |
| Asia | 2,350 | 2,373 | 2,356 | 2,326 | 2,360 | 2,320 |
| Australasia | 80 | 80 | 80 | 80 | 80 | 80 |
| Eastern Europe | 922 | 928 | 926 | 930 | 926 | 926 |
| Europe | 15,296 | 14,915 | 14,461 | 14,051 | 13,597 | 13,110 |
| Indian sub-continent | 432 | 432 | 432 | 432 | 432 | 432 |
| Latin America | 510 | 487 | 516 | 571 | 599 | 599 |
| Middle East | 1,142 | 1,112 | 1,092 | 1,072 | 1,052 | 1,032 |
| North America | 8,169 | 8,155 | 8,140 | 8,140 | 8,124 | 8,124 |
| Institutions | 3,426 | 3,426 | 3,426 | 3,426 | 3,409 | 3,409 |
| Total | 32,803 | 32,384 | 31,848 | 31,445 | 30,999 | 30,452 |

Source: IMF, national central banks websites, Virtual Metals

Official sector purchases, 2001-2006 (tonnes)

| | 2001 | 2002 | 2003 | 2004 | 2005 | 2006e |
|----------------------|-------------|-------------|-------------|-------------|-------------|----------|
| Africa | - | - | - | - | - | - |
| Asia | 26.0 | 23.3 | 7.0 | 3.1 | 3.7 | - |
| Australasia | - | - | - | - | - | - |
| Eastern Europe | 41.1 | 6.1 | 3.5 | 3.4 | 5.4 | - |
| Europe | - | - | - | - | - | - |
| Indian sub-continent | - | - | - | - | 3.7 | - |
| Latin America | 21.5 | - | 28.3 | 54.8 | - | - |
| Middle East | - | - | - | - | 30.0 | - |
| North America | - | - | - | - | - | - |
| Total | 88.6 | 29.4 | 38.8 | 61.3 | 42.8 | - |

Source: IMF, national central banks websites, Virtual Metals

Official sector sales, 2001-2006 (tonnes)

| | 2001 | 2002 | 2003 | 2004 | 2005 | 2006e |
|----------------------|------------|--------------|--------------|------------|--------------|------------|
| Africa | 6 | 0 | 57.5 | 0 | 0 | 0 |
| Asia | 0 | 0 | 19.8 | 34 | 66.9 | 40 |
| Australasia | 0 | 0 | 0 | 0 | 0 | 0 |
| Eastern Europe | 13.1 | 0 | 5.1 | 0 | 0 | 0 |
| Europe | 392.4 | 381.1 | 453.7 | 410 | 539 | 487 |
| Indian sub-continent | 0 | 0 | 0 | 0 | 0 | 0 |
| Latin America | 80.1 | 23 | 0 | 0 | 0 | 0 |
| Middle East | 25 | 30 | 20 | 20 | 20 | 20 |
| North America | 2.4 | 14 | 15.2 | 0 | 0 | 0 |
| Total | 519 | 448.1 | 571.3 | 464 | 625.9 | 547 |

Source: IMF, national central banks websites, Virtual Metals

Gold lending, 2001-2006 (tonnes)*

| | 2001 | 2002 | 2003 | 2004 | 2005 | 2006e |
|----------------------|--------------|--------------|--------------|--------------|--------------|--------------|
| Africa | 689 | 664 | 648 | 648 | 639 | 626 |
| Asia | 76 | 76 | 76 | 76 | 76 | 74 |
| Australasia | 436 | 439 | 375 | 405 | 382 | 356 |
| Eastern Europe | 3,140 | 2,862 | 2,580 | 2,139 | 1,980 | 1,897 |
| Europe | 195 | 100 | 100 | 100 | 95 | 91 |
| Indian sub-continent | 326 | 299 | 299 | 299 | 277 | 248 |
| Latin America | 489 | 466 | 476 | 444 | 356 | 344 |
| Middle East | 17 | 8 | 2 | 2 | 2 | 1 |
| North America | - | - | - | - | - | - |
| Total | 5,367 | 4,913 | 4,555 | 4,113 | 3,806 | 3,636 |

Source: IMF, national central banks websites, Virtual Metal. * Includes estimates of private lending.

Other

Hedging, hedge impact, end-period, 2001-2005 (tonnes)

| | 2001 | 2002 | 2003 | 2004 | 2005 |
|---------------------------|-------------|-------------|-------------|-------------|-------------|
| Global | | | | | |
| Net Forwards | 2328 | 2050 | 1717 | 1477 | 1295 |
| Net Calls | 232 | 270 | 290 | 252 | 283 |
| Other Products | 217 | 145 | 123 | 44 | 52 |
| Net Puts | 244 | 137 | 120 | 22 | 7 |
| Total Hedge Impact | 3020 | 2602 | 2251 | 1795 | 1636 |
| Change | | (418) | (351) | (456) | (158) |
| Americas | | | | | |
| Net Forwards | 1098 | 1245 | 976 | 849 | 762 |
| Net Calls | 69 | 56 | 90 | 62 | 48 |
| Other Products | 18 | 41 | 33 | 29 | 25 |
| Net Puts | 26 | 55 | 41 | 22 | 5 |
| Total Hedge Impact | 1211 | 1397 | 1140 | 963 | 838 |
| Change | | 186 | (257) | (176) | (125) |
| Africa | | | | | |
| Net Forwards | 589 | 455 | 381 | 235 | 183 |
| Net Calls | 116 | 171 | 159 | 162 | 214 |
| Other Products | 42 | 0 | 0 | 0 | 0 |
| Net Puts | 59 | 19 | 5 | -6 | 0 |
| Total Hedge Impact | 807 | 644 | 546 | 392 | 397 |
| Change | | (163) | (99) | (154) | 6 |
| Australasia | | | | | |
| Net Forwards | 625 | 335 | 309 | 357 | 316 |
| Net Calls | 44 | 43 | 40 | 27 | 21 |
| Other Products | 157 | 104 | 87 | 15 | 27 |
| Net Puts | 154 | 62 | 73 | 6 | 3 |
| Total Hedge Impact | 981 | 543 | 508 | 404 | 367 |
| Change | | (438) | (35) | (104) | (37) |
| Europe | | | | | |
| Net Forwards | 15 | 15 | 51 | 35 | 34 |
| Net Calls | 2 | 1 | 1 | 0 | 0 |
| Other Products | 0 | 0 | 3 | 0 | 0 |
| Net Puts | 4 | 2 | 2 | 0 | 0 |
| Total Hedge Impact | 21 | 17 | 57 | 35 | 34 |
| Change | | (4) | 40 | (22) | (2) |

Source: "The Hedge Book", by Mitsu Global Precious Metals, Haliburton Mineral Services, Virtual Metals

Hedging, committed, end-period, 2001-2005 (tonnes)

| | 2001 | 2002 | 2003 | 2004 | 2005 |
|------------------------|--------------|--------------|--------------|--------------|--------------|
| Global | | | | | |
| Net Forwards | 2,472 | 2,167 | 1,781 | 1,501 | 1,313 |
| Calls sold | 757 | 503 | 456 | 391 | 387 |
| Calls bought | 208 | 112 | 71 | 64 | 57 |
| Other Products | 390 | 212 | 149 | 49 | 53 |
| Total Committed | 3,323 | 2,795 | 2,315 | 1,877 | 1,697 |
| <i>Change</i> | | (528) | (480) | (438) | (180) |
| Puts bought | 722 | 557 | 525 | 646 | 221 |
| Puts sold | 32 | 60 | 65 | 40 | 23 |
| Americas | | | | | |
| Net Forwards | 1,175 | 1,309 | 1,011 | 866 | 774 |
| Calls sold | 277 | 94 | 109 | 76 | 58 |
| Calls bought | 33 | 12 | 0 | 3 | 1 |
| Other Products | 21 | 81 | 40 | 35 | 26 |
| Total Committed | 1,428 | 1,497 | 1,160 | 973 | 857 |
| <i>Change</i> | | 69 | (337) | (187) | (116) |
| Puts bought | 103 | 212 | 237 | 151 | 86 |
| Puts sold | 23 | 40 | 17 | 5 | 2 |
| Africa | | | | | |
| Net Forwards | 621 | 474 | 394 | 239 | 186 |
| Calls sold | 406 | 345 | 280 | 271 | 301 |
| Calls bought | 170 | 94 | 71 | 61 | 56 |
| Other Products | 63 | 0 | 0 | 0 | 0 |
| Total Committed | 920 | 725 | 603 | 448 | 432 |
| <i>Change</i> | | (195) | (122) | (154) | (17) |
| Puts bought | 187 | 117 | 91 | 75 | 84 |
| Puts sold | 8 | 20 | 49 | 35 | 21 |
| Australasia | | | | | |
| Net Forwards | 676 | 369 | 324 | 361 | 319 |
| Calls sold | 74 | 61 | 64 | 44 | 28 |
| Calls bought | 5 | 6 | 0 | 0 | 0 |
| Other Products | 306 | 131 | 106 | 15 | 28 |
| Total Committed | 949 | 554 | 494 | 420 | 374 |
| <i>Change</i> | | (395) | (60) | (74) | (46) |
| Puts bought | 432 | 217 | 187 | 420 | 48 |
| Puts sold | 0 | 0 | 0 | 0 | 0 |
| Europe | | | | | |
| Net Forwards | 16 | 15 | 52 | 36 | 34 |
| Calls sold | 10 | 4 | 4 | 0 | 0 |
| Calls bought | 0 | 0 | 0 | 0 | 0 |
| Other Products | 0 | 0 | 3 | 0 | 0 |
| Total Committed | 26 | 19 | 58 | 36 | 34 |
| <i>Change</i> | | (7) | 39 | (23) | (2) |
| Puts bought | 0 | 11 | 9 | 0 | 3 |
| Puts sold | 0 | 0 | 0 | 0 | 0 |

Source: "The Hedge Book", by Mitsui Global Precious Metals, Haliburton Mineral Services, Virtual Metals

Exchange traded funds, annual offtake, 2001-2006e (tonnes)

| | 2001 | 2002 | 2003 | 2004 | 2005 | 2006e |
|----------------------|------------|------------|-------------|--------------|--------------|--------------|
| Africa | 0 | 0 | 0 | 3 | 4 | 5 |
| Asia | 0 | 0 | 0 | 0 | 0 | 0 |
| Australasia | 0 | 0 | 8 | (1) | 1 | 3 |
| Eastern Europe | 0 | 0 | 0 | 0 | 0 | 0 |
| Europe | 0 | 0 | 25 | 28 | 9 | 15 |
| Indian sub-continent | 0 | 0 | 0 | 0 | 0 | 0 |
| Latin America | 0 | 0 | 0 | 0 | 0 | 0 |
| Middle East | 0 | 0 | 0 | 0 | 0 | 0 |
| North America | 0 | 0 | 0 | 95 | 178 | 150 |
| Total | 0.0 | 0.0 | 32.9 | 124.5 | 191.9 | 173.0 |

Source: Commodity Futures Trading Commission

COMEX speculation, end-period, 1994-2005 (tonnes)

| | Open interest | Large speculators net long | Small speculators net long | Total net long |
|----------------------------|---------------|----------------------------|----------------------------|----------------|
| 1994 | 559 | (125) | 5 | (120) |
| 1995 | 439 | 7 | 45 | 52 |
| 1996 | 590 | (130) | (5) | (135) |
| 1997 | 553 | (159) | 21 | (138) |
| 1998 | 506 | (108) | (8) | (116) |
| 1999 | 487 | (90) | 34 | (56) |
| 2000 | 357 | (44) | 25 | (20) |
| 2001 | 345 | (9) | 46 | 37 |
| 2002 | 644 | 185 | 140 | 325 |
| 2003 | 867 | 350 | 147 | 497 |
| 2004 | 1,029 | 307 | 121 | 428 |
| 2005 | 996 | 481 | 108 | 589 |
| Jan-05 | 850 | 88 | 97 | 185 |
| Feb-05 | 833 | 121 | 108 | 229 |
| Mar-05 | 876 | 316 | 101 | 416 |
| Apr-05 | 940 | 429 | 98 | 527 |
| May-05 | 796 | 103 | 62 | 165 |
| Jun-05 | 944 | 404 | 111 | 515 |
| Jul-05 | 799 | 152 | 105 | 258 |
| Aug-05 | 908 | 342 | 93 | 434 |
| Sep-05 | 1,141 | 517 | 87 | 604 |
| Oct-05 | 1,056 | 477 | 85 | 562 |
| Nov-05 | 1,089 | 494 | 67 | 561 |
| Dec-05 | 996 | 481 | 108 | 589 |
| Jan-06 | 1,056 | 433 | 87 | 520 |
| Feb-06 | 1,057 | 396 | 92 | 488 |
| Mar-06 (21 st) | 994 | 324 | 98 | 422 |

Source: Commodity Futures Trading Commission

Weights and measures

Weights and measures

Chemical properties

| | |
|------------------------------|---------|
| Atomic weight | 196.967 |
| Atomic number | 79 |
| Chemical symbol | Au |
| Melting point deg C | 1,063 |
| Hardness (mohs) | 2.5-3.0 |
| Boiling point deg C | 2,966 |
| Specific gravity gr/cubic cm | 19.32 |
| Hardness | 25 |
| Tensile strength km/Sq mm | 11.9 |

Purity (caratage)

In parts per 1,000

| | | |
|----------|-------|---|
| 24 carat | 1,000 | |
| | 999.9 | Termed four nines |
| | 995 | London good delivery |
| 22 carat | 916 | Common caratage for jewellery in Middle East & Asia |
| 18 carat | 750 | Common caratage for jewellery throughout Europe |
| 14 carat | 583 | Common caratage for jewellery in the USA |
| 10 carat | 417 | Lowest acceptable for jewellery in USA |
| 9 carat | 375 | Common caratage for jewellery in the UK |
| 8 carat | 333 | Lowest acceptable caratage in parts of Europe |
| 1 carat | 41.7 | |

Measures

| | |
|------------------|------------------------|
| 1 troy ounce | = 31.103 grammes |
| | = 408.6 grains |
| | = 1.097 oz avoirdupois |
| | = 20 pennyweights |
| 1 metric tonne | = 32.151 troy ounces |
| | = 1.102 short tons |
| 1 short ton | = 0.893 long tonnes |
| | = 2,000 Pounds |
| 1 pound | = 14.58 troy ounces |
| 1 grain | = 0.0648 grammes |
| | = 0.002083 troy ounces |
| 1 gramme | = 14.43 grains |
| 1 pennyweight | = 24 grains |
| 1 kilogramme | = 32.1507 troy ounces |
| 1 oz avoirdupois | = 0.9115 troy ounces |

Source: *Virtual Metals*

Glossary

A

- **Accelerated supply:** Gold reaching the market through lending and leasing before it is physically produced.
- **American style:** (option) that can be exercised at any stage during its life, in other words at or before expiration date. Contrast **European style**.
- **Asian options:** A **history-dependent** option where the outcome is reliant not only on whether or not the option is **in-the-money** at expiry but also depends on the average price of the underlying throughout the option life. These options are used mostly (in the base metal markets) to reduce exposure or incentives to manipulate the underlying price at expiry. Asian options are also used by market participants who are obliged to have frequent exposure to the underlying asset over time. The options are then useful in capping the overall cost of the physical exposure and are ideal for producers.
- **At-the-money option:** An option with a strike price equal to that of the current price.

B

- **Backwardation:** A market situation where the spot price trades at a premium to the forward price. Opposite of **contango**.
- **Barrier options:** Unlike standard **European options** where the income depends only on the price of the underlying at expiration, barrier options are **history-dependent**. In other words, their outcome depends on the performance of the price of the underlying during the life of the option and whether that price breaches some predetermined barrier or level. See ‘in’ barrier and ‘out’ barrier options.
- **Binary options:** Unlike standard options which have a constant income, binary options have variable (usually all or nothing) pay backs depending on whether or not the price of the underlying meets some pre-agreed condition. Binary options can be either **history-dependent** or **history-independent**.
- **BIS:** Bank for International Settlements.
- **Bonds:** Means of raising debt through the capital markets. See also Gold-backed bonds.

C

- **Call option:** Option giving the purchaser the right but not the obligation to buy gold at a predetermined (strike) price.
- **CBOT:** The Chicago Board of Trade.
- **CCA:** Comex Clearing Association.
- **CFTC:** Commodity Futures Trading Commission (the futures and options watch-dog).
- **CIS:** Commonwealth of Independent States (former Soviet Union).
- **Collars:** Options which have the same pay-out as the standard call except that the upside is not unlimited. It is subject to a maximum. The option buyer forgoes any further income above this maximum.
- **COMEX:** The Commodity Exchange in New York.
- **Compound options:** These are options on options. The underlying asset is an option rather than a tangible commodity or security. Valuation of the option is complicated by the fact that two expiry dates must be accounted for: the time to expiration of the compound and the time to expiration of the underlying option.
- **Contango:** A market situation where the spot price is lower than the forward quotation; the differential representing the carrying (financing) costs and prevailing interest rates. Opposite of backwardation.
- **Cost curve:** Graphical representation of the costs of producing a metal for an entire primary industry. Usually cumulative output expressed in percent plotted against unit operating costs.
- **Coupon:** Annual interest rate associated with capital market bond issues.

E

- **EGA:** European Gold Agreement.
- **EMCF:** European Monetary Co-operation Fund.
- **ETF:** Exchange Traded Fund.
- **European style:** An option that can only be exercised on the date of expiry.
- **Exercising: (An Option)** Whereby the option purchaser holds the writer (seller) of an option to the agreed contract.
- **Exotic options:** Generic term for the more sophisticated option strategy which has features over and above the basic contracts.

G

- **GOFO:** Reuters screen code for the daily gold lease rates.
- **Gold backed bonds:** Debt raised through the capital markets issued with a gold options alternative to enhance the value/attraction of the investment.
- **Gold loan:** A means of raising capital for project financing which involves monetising gold.

I

- **IFS:** International Financial Statistics.
- **IMF:** International Monetary Fund.
- **IMM:** International Monetary Market.
- **'In' barrier options:** Options which are paid for at the time of the initial transaction but are not received until a specified price level (the barrier or the knock-in boundary) is broken. If the barrier is broken at some stage during the option's life, then the buyer receives a standard **European** option with a **strike** price and time to expiration. If the barrier is not broken, then at expiry, the holder receives a cash rebate.
- **In-the-money option:** An option which has a positive **intrinsic value** is said to be in the money. In the case of a **call**, it is in the money when the **strike** price is lower than the current price. A **put** option is in the money when the **strike** price is higher than the current price.
- **Intrinsic value** (of an option): The difference between the strike price and current price of the underlying commodity.

K

- **Knock-out options: Exotic option** whereby the contract is cancelled if the spot price breaks through an agreed price. See up-and-out puts and down-and-out calls. The knock-out option is priced differently since it can explode or be cancelled while theoretically it still has **time value**.

L

- **Limit down:** Arbitrary price level below which trading on a Futures and Options Exchange ceases during that trading day. Imposed to prevent very sharp price declines in futures prices and are adjusted from time to time at the discretion of the Exchange. See Limits.
- **Limits:** Arbitrary price barriers imposed by Futures and Options Exchanges to limit severe price movements during a trading day. There are no limits in the spot market. See Limit Up and Limit Down.
- **Limit up:** Arbitrary price level above which trading on a Futures and Options Exchange ceases during that trading day. Imposed to prevent very sharp price increases in futures prices and are adjusted from time-to-time at the discretion of the Exchange.
- **Liquidity:** The volume of business or turnover on an exchange or any market forum; can be applied to either the paper market or the physical.
- **Loco:** Physical location of metal. Unless otherwise stated, price quotations imply delivery loco London.
- **Long:** To be long of a commodity or associated futures or options contract is to have been a buyer. Contrast **short**.

M

- **Maturity date:** Date on which option matures; when it is either exercised or it expires worthless. Also known as expiration date.
- **Margin:** The cash deposit against a paper contract payable as a guarantee. An initial payment is usually made and thereafter further margin requirements may have to be met depending on the performance of the contract throughout its life.

N

- **Naked options:** Option granted and left unhedged or exposed to potential exercising.

O

- **Open outcry:** Method of trading any commodity where dealers face each other in a dealing ring or pit and there is direct communication. Contrast: **Screen Trading**.
- **Out-of-the-money (option):** An option that has no **intrinsic value** is said to be out-of-the-money. A **call** is out-of-the-money when the **strike** price is higher than the current price. A **put** is when the **strike** price is lower than the current price.
- **OTC:** Over-the-counter; term used to describe an option that is written and traded through principals rather than an exchange.
- **'Out' Barrier:** Options which are paid for immediately and exist until, during the option life, a predetermined barrier is broken after which the options are rendered null and void – they cease to exist. If the barrier is not breached, the holder receives standard **European** options. If the barrier is broken and the options are extinguished, the holder is then paid a rebate.

P

- **Principal-to-principal:** Bullion transactions executed directly between the client and the market makers without being channelled through an exchange. Used primarily by market participants who have actual physical transactions to complete rather than the speculators. Speculative business tends to be channelled via the exchanges.
- **Premium:** The cost which the buyer of an option pays to the writer or seller of the option; normally only a very small fraction of the value of the underlying commodity.
- **Put option:** Option giving the purchaser the right but not the obligation to sell gold at a particular **strike** price.

R

- **Reuters:** International screen-based news agency widely used by all metal and foreign exchange market participants.

S

- **Screen trading:** Method of trading via computer screens and telephones in which there is no direct contact between dealers. Contrast: **open outcry**.
- **SDR:** Special Drawing Right.
- **Short:** To be short of a commodity or associated futures or options contract is to have been a seller. Contrast **long**.
- **Spot deferred:** Hybrid forward contract offering floating interest rates and no fixed delivery. More flexible than a conventional forward but without the cost of an option.
- **Spot market:** The immediate market where delivery obligations usually occur no more than 2 days after the transaction.
- **Strike price:** The agreed price at which the option can be exercised which will be equal to, higher or lower than the current price of the underlying.
- **Swap:** A spot sale with a simultaneous equal forward purchase of equal tonnage. This is the definition of a gold or bullion swap which may differ from the term used by the foreign exchange markets.

- **Synthetic gold loan:** A means of raising finance using the gold forward market but which does not result in the monetising of physical metal.

T

- **Time value:** Option value associated with the time left to maturity since during its life an option can move in- and out-of-the-money.

U

- **Underlying:** Shortened term for the underlying commodity upon which futures and options are traded.

V

- **Volatility:** The rate of change in the price of the underlying commodity.

W

- **Writing options:** Selling someone else the right to buy or sell gold at a particular price.
- **10K report:** Set of audited annual accounts published and issued to shareholders. Differs from an annual report only in detail.

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Virtual Metals is a small but dynamic team of highly experienced analysts dedicated to understanding and explaining the current and future state of commodity markets – focusing on the precious and base metals markets but also covering energy and plastics. The team combines a range of skills with a collective 60 years' experience in the precious metals markets and all that this implies – a plethora of market contacts and personal networks of long-standing trust and wisdom.

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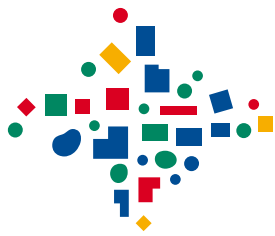
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