

## GOLD

*By Gold Fields Mineral Services Ltd, London, UK*

**G**old regained some of its lost lustre in 2002. Certainly in terms of the dollar price performance - a rise of 14% year-on-year and no less than 25% intra-year - the metal's supporters have had much to celebrate. Viewed in isolation it may seem extraordinary that these gains occurred in spite of fabrication demand slumping by 10% to an eight-year low.

Table 1, however, provides an explanation for the rise in the price last year. This boils down to growth in demand from producer de-hedging and investor buying more than offsetting the weakness in fabrication. The reduction in miners' hedge books undoubtedly provided key support for the price, though the extent to which this actually drove the price higher is questionable. Periodic bursts higher in the price (December and the first two months of 2003 being the best examples) have owed more to the other benign demand-side development, namely growth in investment.

GFMS expect a similar dynamic – with de-hedging and investment demand compensating for weak fabrication – to be at work in 2003. Given the continued resilience of the gold price and, just as importantly, weak economic conditions across much of the world, it is difficult to see demand for jewellery coming back strongly. However, there are grounds for expecting that gold will continue to be supported above the US\$300/oz level by further producer de-hedging. First, the collapse of the rally in the first quarter and gold's subsequent retracement has not led to a corresponding reversal in sentiment among mining companies and their shareholders. Second, external conditions will continue to encourage an erosion in the global hedge book during 2003. Most importantly, interest rates should remain low and so, therefore, the gold price contango will not provide an incentive to hedge.

This brings us to investment demand, where we suspect that what will matter most is the level of buy-side interest from funds and private individuals in North America, Europe and Japan. Here, there are grounds for cautious optimism that last year's progress – modest as it turned out to be in terms of physical offtake – could be built upon. GFMS expects that the external environment will remain very supportive of gold investment. The end of the war in Iraq is unlikely to be enough to transform the economic outlook, which will remain negative for stocks and the dollar - gold's traditional rivals. The weak economy will also, as mentioned above, mean that interest rates stay low.

Investors could, therefore, be on the hunt for better performing, alternative assets. But greed may be less important a motive than fear for many potential buyers. Not only do investors face the prospect of poor or negative returns in many mainstream markets but also some of them may fear that America's 'war on terror' will not end with victory over Iraq.

## Prices

Whatever measure is used to review prices, last year saw some impressive gains. In fact, one has to go back to 1987 to see a larger percentage rise in the annual average price whilst, to see a greater rise during one year, one has to go all the way back to 1979 when a stupendous jump of 126% was recorded. December of that year saw the Soviet invasion of Afghanistan, which provides us with a salutary example of the impact a war can have on prices.

In most other currencies, prices also saw sizeable gains though these tended not to be as great as those in US dollar terms. One of the most significant variations last year was the far smaller rise that euro prices saw due to that currency's 16% intra-year appreciation against the dollar. The yen price also saw a smaller intra-year rise, and this divergence was important for investment. Since yen prices were flatter across the year, Japanese investment levels were less affected by price movements alone. Another difference between dollar and non-dollar prices was that the former's rise was more progressive; dollar prices saw four consecutive quarter-on-quarter rises whilst almost all non-dollar prices saw quarterly falls at some point during the year.

Nevertheless, it would be a misconception to believe the dollar price rally was relentless - it is perhaps too easy to forget that prices from early May to mid-December were largely confined to a less than inspiring US\$310-US\$325/oz range. Equally, gold began to look soft over July/August with some fearing that the US\$300/oz barrier could be under threat.

The explanation of why gold prices rallied last year and initially in 2003 is a quite straight forward process; the dominant reasons being a further reduction in the producer hedge book, a rise in investor interest and a general improvement in market sentiment.

Whilst the relative importance of the first two factors varied greatly during 2002, there seems little difference for the full year in tonnage terms; de-hedging's year-on-year gain was greater than Net World Investments but the absolute level of the latter was slightly higher than for de-hedging. A second question to ask in assessing their relative importance is whether one quite clearly led the other. On balance, there seems clear interdependence; the price rise that each helped foster in turn boosted the other in a mutually reinforcing cycle. If there is a difference, de-hedging was more 'useful' in that it was often important in sustaining prices in times of weakness whilst investment tended more to just follow and intensify rallies already begun.

Looking in detail at de-hedging first, this has been running at higher levels for longer than once thought. As such, not only have prices been supported by this absolute contribution to demand but, basis the theory that a market's price is a reflection of all the news available to it, then the realisation that de-hedging was to be with us at higher levels for a lengthy period must also have boosted prices.

Investment's impact tended to be more concentrated chronologically than many other fundamentals. This was most obvious in the sharp rally in December of last year and into January of this year. The sag last year in prices in June-July and again in October was also partly caused by investor interest flagging, whilst the February-March retreat this year was very much a function of heavy investor profit taking.

Investor interest last year and early on in 2003 was obviously linked to heightened political tensions, not only the Iraqi crisis but also the Bali bombing and North Korea's nuclear plans. Indeed, the market quite frequently tracked the perceived likelihood of a Middle Eastern war, rising on aggressive words emanating from Washington and easing back on announcements by the weapons inspectors of no 'smoking guns' being found.

A more stable issue behind growing investor activity was a macro-economic environment favouring gold. Poor prospects for global economic growth, plus the various fraud scandals last year, fed through to slumping stock markets, under-mining the attractiveness of equities. Similarly, the fall in the US dollar also cast into doubt its safe-haven role. Low interest rates also minimised one of the main disadvantages to holding (non-lent) gold. Not everything, however, was pro-gold; high inflation has often proved a good friend to gold yet many of the world's key economies saw low inflation or deflation in 2002.

## **Supply in 2002 (Table 2)**

### **South Africa**

The world's biggest gold producer recorded a modest increase in gold output last year. Although the rise was slim, it was noteworthy because it was the first time since 1993 that mine production in the country grew. The reported increase of some 1.5 t took the total for 2002 to 395 t. Contrast this with the annual production losses recorded over the previous eight years, which on average saw the country lose close to 30 t of gold a year, and the significance of last year's rise becomes clear.

Last year, most operations maintained or even marginally improved output from the previous year. A further boost came from the country's first new underground mine in 20 years. Avgold's Target mine was officially opened on March 8, last year, and contributed around 6 t of gold to the country's total.

In addition there was higher production at the South Deep mine where the expansion plans are progressing well. The first gold from the mine's new 7,350 t/day mill was poured in mid-June, which took the annual total to over 12 t, an increase of over a tonne from the previous year. Meanwhile, at AngloGold's Mponeng mine, production was up by just over 3 t to reach roughly 15 t, a 28% rise year-on-year. The higher output was attributed to increased production flexibility, following the commission of four additional raise lines in the second half of 2001. Higher grades at Gold Field's Beatrix and Driefontein mines also contributed to the country's increase, with output at the latter up by just over a tonne.

## **North America**

Combined production from the US and Canada in 2002 stood at 447 t, representing a close to 45 t or 9% drop year-on-year.

In the **US** alone, gold output fell by over 35 t, leaving the country's total last year just short of 300 t, the lowest recorded production for more than a decade. Barrick's and Newmont's Nevada operations accounted for close to 40% (around 14 t) of the total measured decline.

At Goldstrike, Barrick reported a 9% drop in gold output year-on-year, in part the result of a 20% decline in ore grade. Meanwhile, production at Newmont's mining units fell by an estimated 7 t. (This excludes the additional output from Midas, formerly Ken Snyder, which was acquired through the three-way merger with Franco-Nevada and Normandy Mining in February 2002.)

There was little to report in the way of production gains at any of the mines in the US. Indeed, even at Cortez, (which had benefited from the start-up of the South Pipeline deposit in 2001), production was some 9% lower. The drop in output reflected lower grades and lower carbonaceous ore sales, which ceased in July 2002.

The decline in **Canadian** mine production was less marked than that measured in the US, but nevertheless, the 6% or nine tonne fall was by no means trivial. In fact, the fall took output down to levels last recorded in 1994.

## **Latin America**

**Peru** recorded an impressive 17% production increase from the previous year, with output at just over 157 t. In the past decade, production from the country has demonstrated remarkable growth, with an average annual increase of 22% over the ten-year period (compared with the 2% growth in global production).

A part of Peru's success has been down to Yanacocha (the world's second - biggest gold mine) which last year yielded over 71 t of gold. The 20% increase in output was primarily the result of higher grades and mining rates at the mine, and also the extra output from the first full year contribution from La Quinoa (Yanacocha's fifth open pit deposit).

A further boost came from Buenaventura's new Antapite mine, which started operations in July last year, and reported full year gold production at over 2 t, a 109% increase year-on-year. Meanwhile, a new mine in Puno, operated by Aruntani, added over 1.5 t to the country's total.

In **Brazil** output has been in decline since reaching a peak of over 100 t in 1988. Last year gold mine production was down 9% to 46 t, the lowest recorded level since 1982. The bulk of the fall was measured in the formal mining sector and primarily reflected lower output at CVRD's Igarape Bahia operation. The mine closed in June and reported a drop of around 5 t year-on-year.

Conversely, the informal (largely alluvial) mining sector saw a moderate gain in output.

However, the potential for a significant increase from this sector is limited by two main factors. First, the best resources have been depleted and secondly many of the *garimpeiros* (as they are known locally) have found more formal employment as the Brazilian economy has matured and the rural population has increasingly migrated towards the cities.

**Chile** recorded losses for the second consecutive year with measured production at 35 t, an 11% decline from 2001, and a significant 15 t drop from the level recorded in 2000. A number of mine closures in the primary sector, including the cessation of mining at El Indio in the middle of last year and the suspension of activities at Refugio in 2001, contributed to the fall. In addition, there was lower by-product output at state-owned Codelco's mining units.

### **Australia**

For the fifth consecutive year, gold output in **Australia** has declined. In 2002, it was measured at 264 t, its lowest level since 1995. Much of the loss in production can be accounted for by the closure of a handful of some the biggest and longest-running mines in the country. Amongst others, reported closures in 2001 included, Kidston, Mt Leyshon, Boddington, Mt Charlotte and Bounty. Last year, residual leaching and clean up operations at these mines added just over 1 t of gold to the country's total - a net decrease year-on-year of around 21 t.

Some of the decline was offset by higher production at a number of the established producers, including Granny Smith. At the mine, output was up 5 t to just over 15 t, due mainly to the commencement of production from the higher grade Wallaby deposit (the Sunrise and Jubilee deposits were depleted in the March quarter).

### **China**

GFMS has revised its **China** mine production series. Field trips over the past two years have pointed to the series being too low, although as with all revisions, changes to the data sets were postponed until such time that the company's analysts could be confident in the new estimates.

There are a number of difficulties associated with estimating *genuine* (as opposed to *announced*) mine production in China. First, the industry is highly fragmented and there are a huge number of small mines, both official and unofficial. Second, the 'official' data that are widely reported only covers the main mines, and even here, there is no independent checking of the figures that are reported. Third, Chinese mine output has always been a mixture of: a) official production; b) what GFMS terms 'independently marketed' gold (this is metal mined in official mines but not sold to the PBOC); and c) genuinely unofficial production, mainly alluvial, which has leaked directly into the market. Based on GFMS' latest estimates, total production rose by around 4.7% last year, breaching the 200 t level for the first time.

## **CIS**

Mined output in **Russia** increased for a fourth consecutive year in 2002 to reach 181 t, an extra 16 t of gold from the previous year. Much of the rise can be attributed to the increasing levels of financing that the commercial banks have made available to the industry (both seasonal, and more recently, longer term loans). In 2002, 48 commercial banks concluded contracts with producers to purchase 178 t of gold (which was some 50 t higher than the purchases made in the previous year). Of course, gold-price considerations also played a role in decisions taken by the banks to increase available financing. The combined effects of a weaker rouble and a higher US dollar gold price, left the average domestic gold price some 23% higher year-on-year (compared with the 14% rise in the dollar gold price).

In its 35th year of operation, the giant open-pit Muruntau mine in the Kyzyl Kum Desert in central **Uzbekistan** is reported to have produced close to 58 t of gold, a modest gain of around 2% year-on-year. Operators of the mine, state-owned Navoi Mining and Smelting Combine, produced around 79 t of gold during 2002, accounting for 90% of the country's total, which last year stood at almost 87 t, or an increase from 2001 of roughly 1 t. Newmont's joint venture operation, which recovers gold from tailings at Muruntau, also reported a rise in output with the operation benefiting from a higher-than-expected heap-leach ore grade.

Meanwhile, production in **Kyrgyzstan** was down year-on-year by a staggering 27% at 18 t. The measured decline can be fully attributed to problems at the country's largest mine, Kumtor, where a pit-wall failure in July prevented access to richer ore areas. Mining was restricted to lower-grade sections, with averages down from 5.1 g/t in 2001 to 3.7 g/t last year. The removal of the collapsed pit wall has continued into the current year and remains on schedule toward a mid-2003 completion.

## **Indonesia**

Indonesia slipped down the ranks of the world's top producing countries last year as output fell 25 t or 14% to reach 158 t. Lower grades at the world's largest gold-producing mine, Grasberg, impacted on full year results. Meanwhile, a decline from a handful of mines in the last stages of production further contributed to the fall. At Grasberg, the losses were all recorded in the first half. In the six months to June for example, average grades were 48% lower year-on-year. So, despite a stronger second half, full year output at the mine was 17 t lower at just over 91 t.

## **Production costs**

Following on from five consecutive declines in weighted average cash costs, unit operating charges increased by US\$4.00/oz last year to reach US\$180/oz. There were higher costs in all but one of the major producer regions. The US reported the greatest increase year-on-year with costs up US\$17/oz, to US\$206, and consequently is now the highest-cost producer. Conversely, South Africa saw costs decline by US\$17/oz, with the result that last year the country held the position of the world's lowest-cost gold producer.



Despite the increase in rand cash costs measured at almost every operation in **South Africa** last year, costs in US dollar terms actually decreased significantly. In fact, last year it was the world's lowest-cost producing country, an impressive result considering that it has traditionally been the most expensive place in which to mine gold. Of course, the decline in US dollar-denominated terms can primarily be explained by currency effects. The rand depreciated 22% against the greenback last year, so the 9% fall in dollar costs was, if anything, fairly modest. Indeed, there was considerable pressure on costs in South Africa last year as producers reported operational difficulties, implemented a pay rise and faced increased costs associated with the HIV/AIDS pandemic.

Currency effects also played a key role in determining the average costs measured in **Australia**. The local currency appreciated against the US dollar by almost 5% year-on-year, and this contributed to the 7% rise reported in US dollar cash costs for the period. Equally important was cost inflation reported at a number of operations in the country. At Paddington, costs were up 26% in local currency terms when compared with the previous year. Meanwhile, at Sons of Gwalia's underground Gwalia mine, a crown pillar failure in a primary extraction stope caused a shortfall in production and an increase in costs of around 27% or roughly A\$87/oz.

Cash costs rose sharply in the **US** with the average up a staggering US\$17 to US\$206/oz. This left the country in the unenviable position as the world's most expensive producer. At the Nevada operations, higher power charges (electricity and diesel) added between US\$5 and US\$10/oz to operational costs. Moreover, lower grades and operational difficulties further impacted on unit mining costs. At Barrick's Goldstrike for example, costs were up by US\$25/oz, or 13% from the previous year at US\$218/oz. Meikle alone reported costs some US\$51/oz higher. The higher unit mining costs were due to a combination of factors. First, the mine reported a 24% drop in averaged processed grade for the year, in part, due to a delay in access to higher grade ore. Second, poor ground conditions resulted in higher ground support and backfill charges.

Average costs in **Canada** increased by 2% to US\$180/oz. There was little to report in the way of currency effects – the local dollar softened by just over 1% against the greenback. However, at the country's largest and lowest cost mine, Red Lake, costs were up US\$6 to US\$65/oz. The increase was largely the result of higher (third-party) treatment charges from gold produced by a secondary extraction process. Last year the mine produced just less than 1 t of (secondary) gold from stockpiled concentrate.

### **Producer hedging**

The sizeable reduction in the global hedge book last year contributed an important volume of gold to overall demand and was undoubtedly one of the key factors that supported the price above US\$300/oz. Sentiment towards the gold price has shifted dramatically since early 2001, when prices had been drifting lower after a disappointing 2000, and appeared to be heading towards the psychologically important US\$250/oz barrier.

The turning point came in April 2001, as prices began to build steadily from the 19-month low to end last year at US\$347, an increase from the trough on 2nd April of some US\$91/oz. Price expectations are key in determining producer hedging strategies and the marked shift in sentiment over the past 18 months has resulted in an equally dramatic change in miners' hedging practices. Miners typically hedge future gold output for one of two reasons.

First, producers can secure a forward premium on advanced sales in the form of the gold price contango. Second, and for more defensive purposes, hedging is done to protect revenues against falling gold prices. In the 1990s, when the gold price was following a declining trend, producers added significant volumes to both their committed and protected positions. By the third quarter of 1999, the total accelerated supply to the physical market stood at an estimated 3,296 t (equivalent to 15 months of gold mine production), and represented more than a four-fold increase in the global book from the start of the decade.

The reversal in the trend of the gold price has resulted in many producers unwinding some of the hedges that were put in place during this protracted period of price weakness. As miners became more upbeat about the future prospects for gold, the speed of the delivery into contracts, restructuring of books and straightforward buying back of hedge positions increased. Indeed, the 423 t net decline in the outstanding global hedge book in 2002 was more than double the fall measured in the previous year. The reduction in outstanding producer position's measured by GFMS was therefore, in part, simply a response to the new price environment, although the erosion of the contango, shareholder pressure and industry consolidation also played their part.

Of course, just as any net increase in total outstanding hedge positions during a given period implies a flow of physical gold onto the market (what GFMS terms 'accelerated supply'), so a net reduction in outstanding positions would imply gold being withdrawn from the market (or accelerated demand). To put the scale of last year's de-hedging into perspective, it is noteworthy that the demand created by producers was close to 94% of total world gold investment (coin sales, bar hoarding and implied net investment). Taken in combination with the decline in mine production, the total supply from the mining industry was considerably lower than in 2001. Last year, producers generated a net 2,164 t of supply to the physical market, a 12%, or 308 t decline year-on-year and a 413 t drop from 2000.

As intimated above, sentiment was not the only driver behind last year's significant decline in the producer hedge book. The erosion of the contango was an equally persuasive argument against committing unmined gold to future dated deliveries. The gold price contango, or the forward premium, represents the difference between the interest that can be earned on money deposits on the one hand (libor) and the interest that has to be paid on physical gold on the other (gold lease rates). The successive cuts in US interest rates, seen as a move to shore up the ailing economy, has sharply eroded the contango. Based on the price at December 31, 2001, a miner



selling forward one year would have only secured a premium of less than US\$3.00/oz. At two years, the contango was closer to US\$6.00/oz while selling a position five years out only secured just over US\$20/oz above spot.

### **Scrap**

Scrap gold rose to contribute 835 t (or 21%) to total supply last year. This was both the highest absolute number and share of total supply since 1998, a year when the Asian financial crisis led to a huge spike in scrap supplies, most obviously from South Korea and Indonesia. In contrast, last year scrap volumes increased in all regions with the exception of East Asia, with the largest rises occurring in the Middle East and India.

### **Official sector**

Net official sector sales are estimated by GFMS to have come to 556 t in 2002. This was the highest annual total recorded since 1992. GFMS' data shows that the absolute level of net sales has crept up over the last three years (net sales were 529 t in 2001 and 479 t in 2000). The contribution made by official sales to total gold supply has also increased over the same period to 14% last year, compared with 13% and 12% in 2001 and 2000 respectively. There is some evidence that last year this gently rising trend in supply from official bullion stocks may have partly been induced by higher gold prices. A quarterly analysis of net sales indicates that around 36% of the total in 2002 occurred during the fourth quarter when the price was at its highs for the year.

However, the annual data suggests that the price impact of the gently rising trend in official sector sales in recent years has probably been fairly limited. This is because, in broad measure, supply from this source has been relatively stable over the past four years. The scale of the increase from, for example, 1999 to 2002, at 79 t, has not been sufficient to impact adversely on sentiment or, it would seem, on the market balance. This conclusion does not mean that official sales have not been a factor in price determination. Indeed, the variability in quarterly net official sector sales mentioned above would suggest that in the short term they can have a sizeable impact on the supply/demand balance for gold – in the fourth quarter of last year, net official sector sales probably accounted for close to 18% of total supply compared to less than 10% in the third. Returning to the annual picture, however, the main reason why sales have remained within certain bounds and have not overly bothered the market is the 1999 Central Bank Gold Agreement (CBGA) that limits its signatories' sales to a maximum of 400 t per "agreement year", which runs from end-September to end-September.

The existing five-year CBGA is set to expire in September 2004. It is widely, and correctly in GFMS' view, thought to have brought some much needed stability to the gold market after a period during which fear of a flood of official sector sales was becoming something of an obsession. Until very recently, it seemed as if a renewal of the CBGA was close to certain. However, on March 26, this year, Bundesbank governor Ernst Welteke stated that it was an open question whether there would be another gold agreement. Furthermore, he claimed that, unless the Bundesbank had the opportunity to invest the

proceeds (at present, it must transfer all profits to the government), the central bank would be unlikely to go along with sales of its reserves.

### **Demand in 2002**

The high gold price alongside economic and political uncertainty resulted in world jewellery fabrication in 2002 falling by 11% to 2,689 t, with marked reductions taking place in all major regions.

European jewellery fabrication in 2002 slumped by almost 12%, chiefly as a result of a 13% fall in **Italy**, where the decline seen in recent years accelerated. This cut output to 417.5 t, its lowest level since 1991. Nor does there seem to have been much stabilisation in the early part of this year. Once again, the main reason for last year's fall was lower exports, itself the result of both growing competition from other producers and falling global consumption. The local market also continued to contract though the scale of its decline was less than a third that of the drop in exports.

Jewellery fabrication in the **US** fell for the second consecutive year. The 2.5% decline took output to its lowest point since 1996. As the industry emerged from 2001, with manufacturing having posted a double digit decline, the early signs pointed towards a healthier year for fabricators. Excess retail inventory, which had such an adverse impact on manufacturers in 2000, had largely been worked out of the system the following year (in no small measure due to better than expected Christmas 2001 sales). As a result, re-ordering was unexpectedly buoyant in the first quarter of 2002. Moreover, in contrast to the previous year, domestic manufacturers took back some market share from importers. However, in retrospect, the first quarter represented the high point for the year. Over subsequent months, jewellery fabrication first slowed and then declined quite sharply, especially towards the end of the year as reordering from the retail trade remained subdued.

**Indian** jewellery fabrication fell by over 19% in 2002, the most dramatic fall in offtake since the early 1980s. Significantly, this left demand in 2002 all of 25% down on the peak levels seen in 1998. The primary factor underpinning the collapse in demand was the price, although it would be wrong to assume that other forces were not at work too, including a weaker agricultural sector, shifts in savings patterns and a secular move away from 22 carat plain gold jewellery. Average rupee prices in 2002 rose by 15% year-on-year and by a not insubstantial 20% intra-year. In the context of the price sensitive Indian market, it will come as no surprise that offtake was adversely affected.

Gold jewellery fabrication demand across the Middle East was affected, to varying degrees, by the common factors of high dollar gold prices, economic weakness and the uncertain geopolitical environment that characterised 2002. Fabrication demand in **Saudi Arabia** registered a fairly substantial decline of 17% in 2002, while **Egyptian** fabrication continued the weak trend set in the latter half of 2001. For 2002, **Turkey** held the position as the star market of the Middle East. However, this is something of a dubious accolade given that much of the 8% year-on-year increase in fabrication demand was the result of the dismal performance of 2001.

Given the confluence of economic and socio-political events that befell **Indonesia** last year, it comes as no surprise that its jewellery fabrication demand fell by 6% year-on-year. The higher gold price was also an important factor, particularly in terms of volatility and timing, more so than the absolute change in value.

### **Other fabrication demand**

Electronics demand for gold in 2002, at 210 t, was up 3% year-on-year. Whilst this highlights that the slump in electronics demand was confined to 2001, it hardly provides much comfort that all is well in the industry. For instance, it should be noted that a fabrication level of 210 t was last seen in 1996, which broadly coincided with the start of the information technology boom.

This is consistent with the data prepared by the Semiconductor Industry Association (SIA) that shows, on an indexed basis, semiconductor shipments in 2002 were marginally below those in 1995. The SIA is forecasting demand for integrated circuits to grow by more than 20% over the next two years, although this is heavily dependent upon a pick-up in economic growth rates in the major economies, an assumption that is looking increasingly shaky.

Higher dental offtake in Japan (where the lower palladium price contributed to a 5% increase in dental demand in 2002) more than compensated for lower dental demand in many European countries.

Medals and imitation coin fabrication rose in 2002 as an increase in Turkey compensated for a 9% fall in India. Turkish coin fabrication last year regained the ground lost in 2001, with fabrication increasing by a sound 14% to exceed even the strong performance of 2000. The Turkish economy improved in 2002, with real GNP growth reaching 5.5%, against a 9.4% contraction in 2001.

Official coin fabrication increased for the second year in a row due to higher offtake in Austria and Canada. Coin disinvestment via the secondary market was markedly higher in France, and Germany saw a return to net investment during the second half of the year.

### **Investment and bar hoarding**

Growth in investment demand was a key factor behind the rise in the gold price last year. Net World Investment (a definition which includes implied net investment, bullion coin sales and bar hoarding) almost doubled from its 2001 level.

However, it is worth putting the 449 t of net demand in 2002 into a wider perspective. For instance, converting volume into dollar value (using the annual average price) generates a figure of US\$4.5 billion (compared with around US\$2.1 billion in 2001). Although significant by the standards of the gold market, this still represents only a tiny percentage of global investor flows last year. The fairly modest commitment seen so far, from what has been only a small subset of the investor community, can be seen as a 'reality check' on

much superficial talk of gold having emerged as an investment 'safe haven' last year.

The largest gain in demand came from the swing to implied net investment of 128 t. (The implied net investment is derived from combining all the other independently calculated elements of supply and demand. This residual calculation, with some important caveats, provides a statistical insight into investors' collective stance in gold.) One important factor behind this was changes in global macro-economic conditions favouring gold. These included dollar weakness, falling stock markets and low interest rates. A second factor was rising geopolitical tensions, most obviously the Iraqi crisis. The investor-led rally also to a fair degree became self-fuelling as the higher price attracted fresh buying from funds and private investors.

Bar hoarding increased by a relatively modest 2%, as a hefty increase in Japan was partially offset by a decline in India.

Hoarding in India was down sharply year-on-year, by around 20%, primarily due to the higher gold price. The fall in hoarding was very much in line with the decline seen in jewellery fabrication.

Hoarding in Japan soared in the first quarter of 2002, reaching levels not seen since 1995. The confluence of a number of positive events contributed to the surge in offtake. The most widely publicised of these was the plan by the Japanese Government to reduce, from April 1, 2002, the government bank deposit guarantee scheme on time deposits to ¥10 million.

Demand for investment gold was further boosted by plans to extend the deposit cap to all bank accounts from April 2003. (The Japanese private sector holds around 50% of its assets in bank accounts, which at the time amounted to over ¥600 trillion, so it was not surprising that households were concerned.) Further impetus to the investment surge was provided by the still weak domestic economy, the collapse of the large supermarket chain, Mycal, and news from overseas of the unfolding accounting scandal at Enron. Although Japanese hoarding interest waned in the second half of 2002, almost halving in volume compared to the first, total offtake for the year was still up sharply, by 44% (exceeding 86 t). Moving into the first quarter of 2003, despite the spike in the gold price up to the US\$380/oz level, Japanese bar hoarding remained at more normal levels and was therefore sharply down on a year-on-year basis.

**Table 1**  
**World Gold Supply and Demand (t)**

	2001	2002
<b>Supply</b>		
Mine production	2,623	2,587
Official sector sales	529	556
Old gold scrap	708	835
Net producer hedging	-	-
Implied net disinvestment	61	
<b>Total Supply</b>	<b>3,920</b>	<b>3,978</b>
<b>Demand</b>		
Fabrication		
Jewellery	3,038	2,689
Other	483	486
<b>Total Fabrication</b>	<b>3,522</b>	<b>3,175</b>
Bar hoarding	248	252
Net producer hedging	151	423
Implied net investment	-	128
<b>Total Demand</b>	<b>3,920</b>	<b>3,978</b>

Totals may not add due to rounding.

Net hedging incorporates producer forward sales, options and loans.



**Table 2**  
**Top 20 Producing Countries (t)**

	<b>2001</b>	<b>2002</b>
South Africa	394	395
US	335	299
Australia	285	264
China	193	202
Russia	165	181
Indonesia	183	158
Peru	134	157
Canada	157	148
Uzbekistan	85	87
Ghana	72	70
PNG	68	65
Mali	45	56
Brazil	51	46
Tanzania	34	39
Chile	40	35
Philippines	32	33
Argentina	31	33
Mexico	26	23
Colombia	20	20
Zimbabwe	22	20
Rest of World	253	258
<b>TOTAL</b>	<b>2,623</b>	<b>2,587</b>

© Copyright Gold Fields Mineral Services Ltd

This extract is taken from Gold Survey 2003

Contact GFMS for further information. Tel: +44 (0)20 7478 1777.  
Fax: +44 (0)20 7478 1779. E-mail: [gold@gfms.co.uk](mailto:gold@gfms.co.uk) Website: [www.gfms.co.uk](http://www.gfms.co.uk)



**Independent - Informed - International**  
Precious Metals Research



**Consultancy**

Focused, tailor-made research on a wide range of subjects



**Publications**

Gold Survey - Updates - World Silver Survey - Precious Metals Quarterly



**Seminars**

London 17 September 2003 - New York 4-5 November 2003

**[www.gfms.co.uk](http://www.gfms.co.uk)**

For further information, please contact Ms Laurette Perrard, GFMS.  
Tel: +44 (0)20 7539 7820, Fax: +44 (0)20 7539 7818,  
e-mail: [info@gfms.co.uk](mailto:info@gfms.co.uk)

