The Yellow Book

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The Yellow Book is produced as part of a joint venture between ABN AMRO Bank N.V. and VM Group

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Contents

Introduction

The Yellow Book is made available to the market on a complimentary basis thanks to ABN AMRO N.V. VM Group would like to thank our colleagues at ABN AMRO 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.

Central Bank Gold: Entering the Fourth Era

In spite of their best efforts to maintain a dignified, low profile in local and international financial markets, official sector activities or transactions nevertheless make ripples in the international gold market. What they do – or don't do – makes headlines because of its potential influence on the price of the metal.

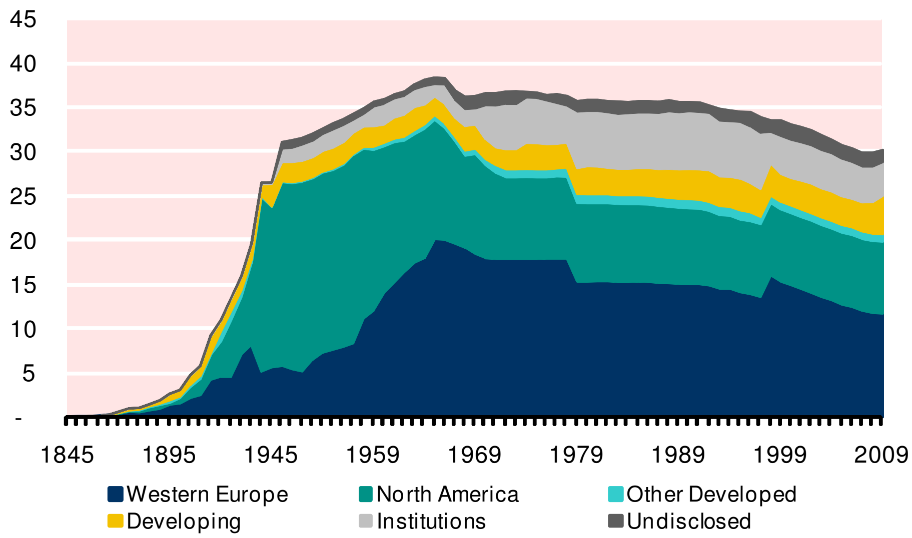
In no other commodity do official institutions hold such large reserves. Even today, after 30 years of fairly relentless gold sales, central banks own 30,520t of gold (as of end-July 2010), equivalent to 12 years' mine supply at current levels. The reclusive official sector thus remains a constant presence in the market but every four or five years or so its activities take centre stage. Such was the case in July 2010, when the BIS noted in its annual report that it had completed a 346-tonne gold swap. More questions were raised about this transaction than answers have been supplied; until such time as the market is satisfied with the answers it has given about the swap, the BIS transaction will remain the subject of much debate and speculation. But to place the specific BIS transaction in its appropriate context, it would be useful to step back for a moment and consider the historic presence of the official sector in the international gold market, together with how its perception of gold has evolved. Looking over the last five decades, we can identify four distinct phases of central banking attitudes towards gold: the era of reserve guarantees; the era of reserve mobilisation and portfolio management; the era of gold sales; and now, we would argue, we have entered into a fourth era – that of reserve sobriety.

The era of reserve guarantees

The reason why central banks progressively held gold as part of their official reserves dates from early human history, when gold first gained its use as currency and a means of exchange, due largely to its scarcity. However, it was only from about 1850 onwards, with the discovery of gold fields in Australia, the US and later South Africa, that gold became available in sufficient quantities to allow the functioning of an international gold standard (until then a silver standard had been more common except in the UK), with the value of different nation's currencies becoming interconnected through their individual links with gold, which acted as the international yardstick. Over the years much of this newly mined gold found its way into central bank and treasury vaults as backing for currencies, culminating by 1945 with reserves amounting to nearly 60% of the 50,000 tonnes of gold mined in history up to that point. Yet (in terms of percentage, if not absolute amounts) this was the high-water mark for official gold holdings, since by the end of the Second World War gold had almost everywhere ceased to be used for actual currency in payments and transactions. Nevertheless gold's role as a store of value and as a reserve asset has lingered on, partly as a legacy of less complicated times but also thanks to the activities of international financial institutions and central banks since the end of that war.

The Bretton Woods Agreement of 1944 created the framework for more cooperative financial relations between nations in the post-war world era. This international agreement established par values for currencies in terms of gold, or in terms of the US dollar, which itself was expressed in gold at a fixed rate of $35/oz. Almost immediately following Bretton Woods, the International Monetary Fund (IMF) was established, the original rules of which required member countries to lodge a quarter of their subscription quota – which formed the basis of the Fund's financial reserves – in the form of gold. Thus from its outset the IMF acquired a large quantity of bullion, and also thereby appeared to endorse gold's status as a reserve asset and means of international exchange.

Central bank gold holdings, thousand tonnes



Source: IMF Stats, VM Group

Yet this appearance was illusory; in practice, under Bretton Woods all countries other than the US focused their efforts on maintaining exchange rate parity with the US dollar, while only the US bought and sold bullion freely to maintain a stable exchange rate between gold and the dollar. Therefore, gold's role in this period as an official sector asset was as much to do with maintaining currency parity with the US dollar as anything else.

Stresses, strains and the Gold Pool

In years following the Second World War, international political stresses and strains, the restoration of currency convertibility for major European currencies, the outflow of capital from the US into overseas investments, and the vast expansion of foreign holdings of US dollars, meant that there began to develop heightened demand for gold relative to dollars. This surge in gold demand in the mid to late 1950s finally saw the price in 1960 break above the official $35/oz level, reaching an unprecedented $40/oz in London. This triggered heavy US Treasury sales of gold. The determination of the US federal authorities to maintain the parity of the dollar resulted in, among other things, the introduction of legislation in 1961 to outlaw overseas gold holdings by US citizens. To help further stabilise the interlocked relations between currencies and gold, the US requested the formation of an international 'gold pool' in October 1961, the aim of which was to enable leading international central banks to co-ordinate intervention in the gold market. This pool had eight members: the US, UK, Belgium, France, Germany, Italy, the Netherlands and Switzerland. The main purpose of this pool was to intervene in the international gold market – to buy and sell gold – in order to maintain the price at $35/oz.

But although it worked well initially, the gold pool was short-lived. It fell apart in 1968 largely due to the attempt by the US government to fund both the war in Vietnam and the Great Society programmes without raising taxation. But the catalyst for its collapse was French resentment at this method of financing US deficit spending. In January 1965, the French authorities announced that they intended to convert their US dollar holdings into gold. President Charles de Gaulle called for an end to the gold exchange standard and its use of dollars and sterling as reserve currencies, and a return to the classical gold standard. This paradoxically facilitated the demonetisation of gold, as in response a huge speculative run on gold took place which saw the gold pool sell almost 1,000 tonnes of gold in one week in March 1968 in order to defend the $35/oz level. The US abruptly capitulated to market pressure and removed all requirements for gold backing for the Federal Reserve's note issue. Formally, this move stated clearly that, for the US Federal Reserve, gold was no longer a currency.

The era of reserve mobilisation and portfolio management

On 2 January 1975, US citizens were legally permitted to buy and own gold for the first time in more than 40 years. An auspicious day indeed, since this was also the date that COMEX launched its gold futures contract. Far from boosting the currency status of gold, this action was a further indication of official US disinterest in gold as a reserve asset. By this action, the US financial and political authorities gave notice that the possession and exchange of gold was henceforth to be regarded as entirely a personal matter and no longer a concern of the state. Such had been the global strength of the US economy that the previous 36 years had seen the progressive use of the US dollar as the international reserve currency, to the detriment of gold.

By 1978, under proposals adopted in the Second Amendment of the IMF's Articles of Agreement, member states of the IMF were no longer obliged to use gold in transactions with the Fund, and the Fund was not allowed to take gold in exchange for currency. IMF member states were obliged to avoid any actions that amounted to a management of the gold price (which, it may be inferred, is partly why the 1999 European Gold Agreement terms make no mention of the gold price being part of its aim). Sales of gold by the IMF from its stock amounted to 1,500 tonnes between 1976 and 1980; the US also auctioned gold from its reserves during 1975-77 and again during 1978-79.

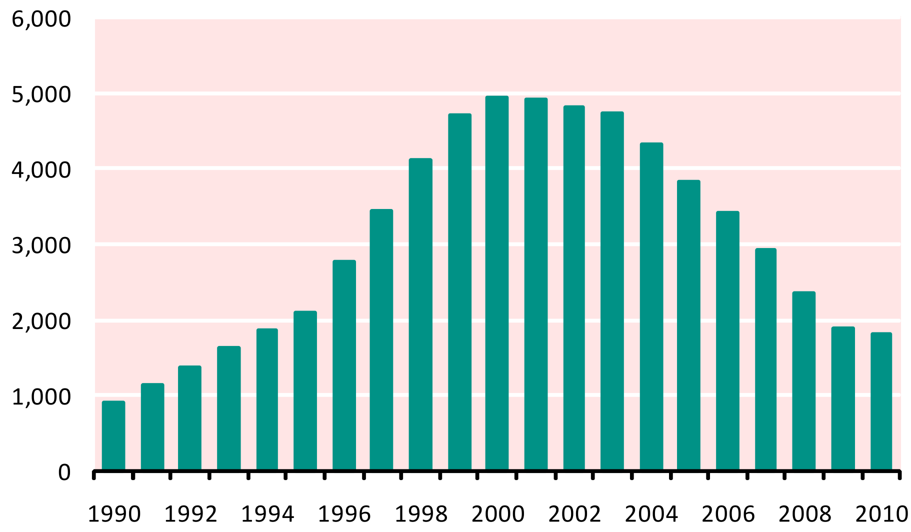
But despite these sales the gold price soared, reaching a high (then) of $850/oz on 21 January 1980, which put a lid on official sector sales for a while. Throughout the 1980s central banks were net buyers of gold, albeit on a small scale; by far the largest was Taiwan's 1984 purchase of 422 tonnes. Gold sales really took off in the 1990s, as during this decade floating currencies became established; inflation fell, a new generation of central bankers concentrated on monetary policy and the fight against inflation, and 'active portfolio management' became the new central banker's mantra. The central banks became large net sellers of their gold reserves, continuing the process of the demonetisation of gold. The most active sellers were the major holders in Europe, first Belgium and then the Netherlands, culminating in 1999 with the start of two programmes of sales that really shocked the gold market, initially by the Swiss National Bank, which began selling 1,300 tonnes and then by the Bank of England, which started to sell 400 tonnes.

The lending market takes off

A further key development in the 1980s was the development of the gold lending market, another way in which gold was mobilised out of central bank vaults. The high gold price of the early 1980s prompted an exploration boom, stimulating the development of dozens of new gold mines. This necessitated large financing requirements, while high interest rates meant that traditional methods of raising capital for the mining industry were unattractive. The differential between the cost of borrowing gold and that of conventional financing meant a new use for gold developed – that of funding mine development. Gold loans on the scale required for mine finance were impossible for bullion banks to fund from their own gold liquidity (as they had done with lending to jewellers), so the obvious answer was to turn to the official sector. The official sector not only had the means but also the motive to become a large-scale gold lender, as the ending of the Bretton Woods monetary system had left it with large gold reserves but less rationale to hold them. Thus the prospect of earning a return by lending previously inert gold holdings had great appeal for eager young central bankers keen to show their masters that they knew how to turn a profit.

The growth in this official sector gold lending was relatively modest at first, but it accelerated towards the end of the 1980s and, by 1990, the official sector had some 900 tonnes on deposit with the gold market. As the 1990s progressed the downward course of the gold price encouraged more mining companies to lock-in the best possible price by hedging forward their output, while the bullion banks often insisted upon hedging as a condition of supplying mining finance. By 1999 the amount of gold lent by the central banks was approaching 5,000 tonnes. This level of gold on deposit from the official sector has now declined very sharply – a classic function of supply reacting to demand for lent gold or, in this instance, a lack of demand. As the producers actively unwound their hedge positions, lent gold was returned to the central banks and there was little appetite on the part of the mining sector to renew liquidity.

Central bank lending outstanding, tonnes



Source: VM Group estimates, 1990: J.H.Cross

So by 1999 gold was flowing out of central bank vaults in two ways – permanently through direct sales, and temporarily via lending to bullion banks. At its peak the combined annual flows of gold were nearly 1,000 tonnes. As most of this gold found its way onto the spot market, many considered it to be a factor (and a consequence) of the price hitting 20-year lows in July 1999 of $252/oz. The rate of the sell-off should not, however, be exaggerated. We estimate that by the start of 1999 official sector holdings of gold, including multilateral institutions such as the IMF, were still around 33,000 tonnes, a reduction of less than 20% from its peak.

But the real problem was the market feared that much worse was to come – particularly as the gold sales made by Switzerland and the UK, both historic homes of gold markets, were regarded as a bad omen. And the European central banks, with huge historic gold reserves and much less need to hold them (as many were adopting the euro rather than their own currencies), were the next obvious source of further gold sales.

The era of gold sales

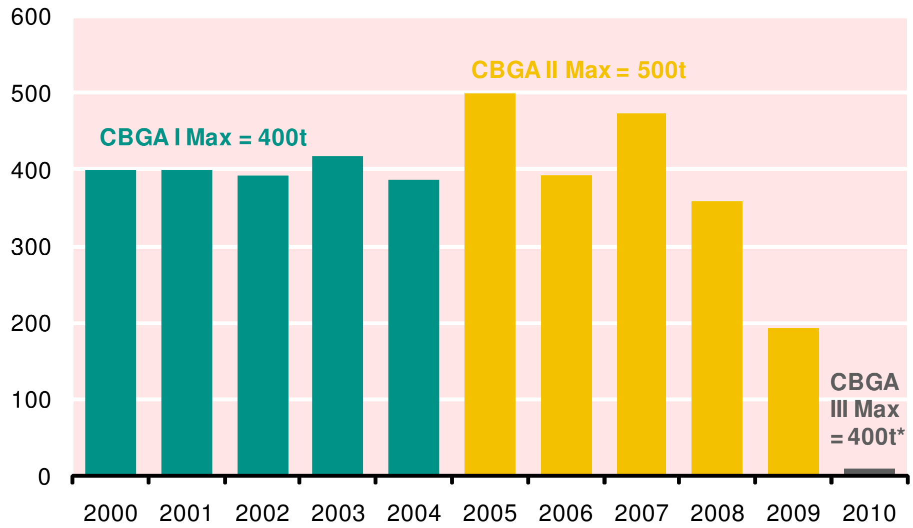
Enter the Central Bank Gold Agreement (CBGA), announced at the IMF meeting in Washington on 26 September 1999. This agreement, signed by 15 European central banks (including the European Central Bank), limited gold sales from the signatories to no more than 2,000 tonnes over five years and 400 tonnes in any 12 month period of the CBGA, which runs from the end of September. It also limited gold lending to then current levels. The gold price soon rallied back over $300/oz. This was not because sales were going to be lower – the limit of 400 tonnes/year was in fact on the high side. But more important is the fact that the market had already managed to digest the Swiss and UK gold sale announcements, which were going to put nearly 1,700 tonnes of gold on the market. Thus the first CBGA was essentially a ‘wrapper’ around that sales agreement, which reassured the market that only a few hundred tonnes more sales would be forthcoming. In addition, the leasing limit meant that no additional gold would come via that source.

Five years on (in September 2004), the first CBGA was renewed, raising the sales limit to 500 tonnes/year over five years, whilst the lending limit was maintained (although in practice it had ceased to matter, as lending had fallen sharply over the five years, in line with lower demand from miners’ for hedging purposes). Most of the participants in the gold market welcomed the renewal, when they noticed it at all; central bank sales had ceased to be the talking point they once were. Yet the new agreement in some ways should have been received much more warily. Under the first CBGA, the Swiss and UK sales of nearly 1,700 tonnes were already known to the market; CBGA I permitted only another 300 tonnes of sales over five years. Under CBGA II, except for a few sales made by the Swiss and Dutch central banks that had not quite fitted into the first five years of the Agreement, there had been no major announcements, and yet the agreement allowed 2,500 tonnes to be sold. If this maximum was not to be sold, and if the central banks had no plans to sell that much, it is difficult to see why the limit was raised; it was assumed that much of this gold must be coming from central banks that had not sold gold before, and indeed one or more of the big holders – Germany, France or Italy.

In the end it was France that sold. In the first year of CBGA II the French central bank offloaded 118 tonnes. Also a large number of other signatories sold, including Switzerland and the Netherlands, Spain, Portugal, Sweden, Austria and Belgium.

With almost 500 tonnes exactly being sold in the first year of CBGA II, it looked very likely that the reason the limit had been raised to 500 tonnes was exactly the reason why most analysts assumed it had been raised – because the central banks *wanted* to sell 500 tonnes/year and – more alarmingly – that they would keep on doing so. But this proved to be a false assumption. In the second year of CBGA II only 393 tonnes were sold, the first time in six years since the original CBGA was signed that the maximum permitted total had been missed, and by a wide margin. In year three, hefty sales from the Spanish central bank and *more* Swiss sales (together with ongoing French sales) brought the annual total back up near the limit at 477 tonnes. And that was the last year we saw sales even nearly reaching the agreed maximum limit. Thereafter sales began to tail off, to the extent that throughout CBGA II, sales totalled 1,883 tonnes, exactly 75% of the 2,500 tonnes that could have come to market under the agreement.

Annual sales under CBGA, tonnes



Source: IMF and ECB data
Note: On a de facto basis IMF gold sales to end 2011 will be accommodated in the CBGA III annual gold sales ceiling. IMF sales are not included in the chart.

Enter the IMF

Until recently the IMF held 3,217 tonnes of gold. There was a long-running debate over whether these gold reserves should be sold in order to fund either debt relief, or some of the running costs of the IMF. Back in the late 1990s such a proposal was defeated over fears of the impact on the gold price, and instead the reserves were revalued.

In January 2007, however, a committee chaired by Andrew Crockett with input from (among others) Alan Greenspan (chairman of the US Federal Reserve), Jean-

Claude Trichet, (President of the ECB), South African Reserve Bank Governor Tito Mboweni, and Governor of the Bank of China Zhou Xiaochuan, recommended that the IMF sell $6.6bn of gold (400 tonnes at $500/oz) in order to invest the proceeds in higher-yielding assets, and to fund a shortfall in the IMF's budget. The report recommended that the sales of these 400 tonnes should be within the existing CBGA. This proposal found support among the IMF's members, including the US Administration, and in April 2008 the IMF's Executive Board[1] agreed financing reforms broadly in line with the Crockett Report, that include the sale of 12.96 Moz of gold[2] (403.3 tonnes). These sales commenced in February 2010.

The era of reserve sobriety

September 2009 saw the CBGA renewed for a third time, with the sales and lending levels for the years to 2014 revised down to 400 tonnes/year and not to exceed 2,000 tonnes over the five-year period. During the first year (October 2009 to date, including July 2010) with only 5.82 tonnes of gold coming to market from the national signatories, although if we include in this total announced IMF sales – 191.3 tonnes to come in the fiscal year ending April 2011 – the total rises to 197.12 tonnes. Of this we believe 70.5 tonnes will have come to market during H1 2010. Despite the IMF sales, throughout 2010 the central bank signatories of the CBGA III have shown a strong disinclination to part with their gold reserves. This was evident prior to the BIS having published its 2009/10 Annual Report in July this year. There is one obvious reason why this is so – the far-reaching impact of the economic recession together with the consequent turmoil in paper currency markets.

The autumn of 2008 brought with it the chaos of the global recession and the commercial banking crisis, which saw the previously unthinkable collapse of a number of financial institutions. The weakened banking sector, initially in the US and Europe, was actually just the beginning of widespread international financial woes. By Q1 2010 it had become clear that the financial stress had spread from commercial banking into issues of sovereign risk, and Q2 2010 saw the Eurozone members bailing out Greece. For us, this heralded a new era in the attitude of the official sector towards its gold holdings. Little symbolises this better than the recently exposed mystery of the gold held by the BIS.

Tucked away on page 171 of the Bank for International Settlements' (BIS) Annual Report[3] was an almost throwaway line to the effect that, as of 31 March 2010, the BIS held (in addition to its own holdings) 346 tonnes of gold, up from zero in 2009. This gold was placed in the accounts under the category "gold bars held at central

[1] http://www.imf.org/external/np/sec/memdir/eds.htm
[2] http://www.imf.org/external/pubs/ft/survey/so/2008/NEW040708A.htm
[3] http://www.bis.org/publ/arpdf/ar2010e.htm

banks", and was valued by the Bank at SDRs 8.160bn – about $5.47bn. According to the report, "the Bank held [these] in connection with gold swap operations, under which the Bank exchanges currencies for physical gold. The Bank has an obligation to return the gold at the end of the [12 month] contract".

This tiny footnote generated an enormous amount of speculation in the week that followed the annual report's publication. There were initial suggestions that the transaction was a very recent single swap with a (presumably Eurozone) central bank – a not uncommon mechanism of a spot sale of gold and equal simultaneous forward purchase, thus allowing the counter-party to raise short-term liquidity. All eyes swivelled in the direction of beleaguered Portugal, Spain and even France – Portugal in particular, since that country holds a very high percentage (over 80%) of its reserves in gold. If this had turned out to be the case, the impact on the market price would have been minimal, unless in the future the central bank concerned unwound the forward leg of the transaction as opposed to delivering into it, in which case the deal would have been considered a sale.

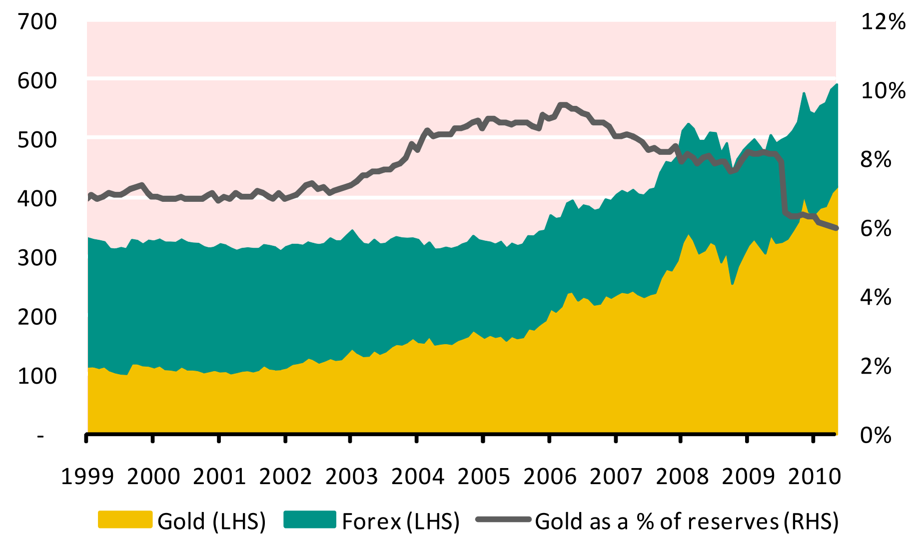
But – under pressure – the normally highly reticent BIS published a statement and then on 29 July commented in an article in The Financial Times, confirming that the counter-parties to the transaction had been commercial banks. The same FT article named Société Générale, HSBC and BNP Paribas as three of the ten participating commercial banks. It also confirmed that, rather than a gold swap, these transactions were collateralised loans; the gold deposited with the BIS provided collateral in return for which currencies could be drawn down. The article further confirmed that the gold was drawn down from unallocated metal held by the commercial banks.

What's the wider significance of this event? The fact that gold lease rates failed to react to the news supports the conclusion that (at the time of writing) the BIS had not lent the metal on deposit, and (so far at least) was merely holding it. The volumes are however substantial, suggesting that the investment community has been buying very considerable tonnages of gold. Getting a handle on the levels of these gold holdings is of course the Holy Grail when attempting to analyse the gold market. We do not believe it is possible to measure these investments with any degree of confidence – they are largely principal-to-principal and OTC transactions, implying no centralised reporting or public declaration of these purchases. In terms of calculations, we address this issue via our supply/demand balance ratios. We identify and model what we can by sector; a process that yields either an annual deficit or surplus in our supply/demand balance. Our statistics show that over the past seven years (since the beginning of 2004), a cumulative 818 tonnes of metal is assumed to have been available for investment purposes, the greatest volumes being inferred and forecast for this year; the BIS loans of 346 tonnes represent 42% of our inferred investment.

But why did the commercial banks not approach their own central banks directly, rather than the BIS? Maybe there were some cost savings to be had by completing this tripartite mechanism. But it's much more likely that at the time the central banks concerned were reluctant to be seen assisting commercial banks in this way; a highly public mobilisation of sovereign gold would appear too much like a further bailout for comfort.

While this turn of events has had little impact on the physical gold market, there are broader implications. This episode reveals just how fragile the financial system pre-April 2010 actually was, and demonstrates how governments have mobilised gold to indirectly support commercial banks. Above all, this will in our view slow to a standstill of official sector gold sales under the Central Bank Gold Agreement over the next couple of years – which central bank will now want to rid itself of this asset? Gold's old emergency usefulness has resurfaced, albeit behind closed doors in Basel. Could this mean that the official sector might turn buyer of large volumes of gold? Possibly not – in the era of reserve sobriety, lack of sales should not be confused with buying.

Eurozone central banks forex and gold reserves since 1999, billion $



Source: VM Group calculations from IMF data

Central bankers are as likely to be swayed by high prices as individual investors, and with the dollar (still for the moment the reserve asset currency of choice) declining in value against the euro (the currency of most of these central banks), gold has been the best performing reserve asset of the last few years. Furthermore, in terms of the recent financial turmoil, concern over the creditworthiness of other potential reserve assets (such as mortgage-backed bonds) means that, for diversification purposes, gold remains one of the few options. Thus there is a rational case for postponing gold sales; the memory of the UK and Swiss sales programmes, which occurred when gold was much lower than it is today, remains a

Gold reserves as percentage of total reserves for major holders, April 2010

	Total reserves (excl gold), bn $	Gold reserves, bn $	Gold reserves, tonnes	Gold reserves as % of total reserves
Euro Area (Incl. ECB)	253	409	10,798	62%
United States	102	308	8,134	75%
Germany	53	129	3,407	71%
IMF	n.a	112	2,967	na
Italy	40	93	2,452	70%
France	43	92	2,435	68%
China	2,177	40	1,054	2%
Switzerland	135	39	1,040	23%
Japan	897	29	765	3%
Russia	386	26	681	6%
Netherlands	17	23	612	58%
India	232	21	558	8%
Portugal	3	15	383	84%
Venezuela	13	14	364	52%
Saudi Arabia	370	12	323	3%
United Kingdom	53	12	310	18%
Spain	16	11	282	40%
Austria	7	11	280	59%
Belguim	14	9	228	38%
Algeria	132	7	174	5%
Sweden	37	5	126	11%
Rest of World	2,766	150	3,947	5%
World	7,745	1,157	30,520	13%

Source: IMF, VM Group

Note: The gold price used to calculate the above table was $1,179.25/oz (end April 2010 pm fix)

politician's nightmare. However, we do not believe that there is as yet a long-term reassessment of the role of gold in a central bank's portfolio. This is partly because they still hold so much gold, far more than portfolio theory would suggest optimal in most cases, and also because the current generation of central bankers in Europe persist in regarding gold as an anachronism. Furthermore, the adoption of the euro and the formation of the ECB have meant that all types of foreign reserves are less important than they were. In total, Eurozone area forex reserves (excluding gold) have fallen by 15% since the adoption of the euro on 1 January 1999. Gold reserves in tonnes have fallen by 13% in this time period, but by value they have risen by 88%, and so gold's share as a percentage of Eurozone reserves is far higher than it was, even before the first CBGA was signed. *Prima facie*, that would seem to imply that CBGA signatories could be building up for a fresh round of sales. But the world has changed – probably not forever, but for some years at least. Central bankers may still harbour an inclination to sell gold, but their political masters, under pressure of the almost total collapse in confidence in paper assets, have lost all their erstwhile eagerness to shovel the bullion out the back door. And quite rightly, too.

Our supply/demand balance estimate for the year 2010 reveals a particularly large residual of 818 tonnes. The reason why this residual is high – almost double that of 2009 – is largely because of a response to the high price from two key sectors.

First, scrap recycling remains high, at an expected 1,339 tonnes. This is only slightly lower than our estimate for gold recycling in 2009, at 1,408 tonnes, a record according to our calculations. Second, a combination of the high dollar price of gold and a lack of consumer confidence throughout North America and Europe have taken their toll in jewellery offtake, which we forecast will in 2010 be 1,424 tonnes, 150 tonnes less than in 2009. The fact that the gold lease rates have been marginally negative in the nearby trading months (especially out one month) suggests scant demand for gold on deposit might perhaps encourage central banks (the primary lenders of metal) to withdraw gold from the leasing market. In the absence of new producer hedging, these negative lease rates also suggest weaker demand for leased gold in the jewellery production pipeline hence our lower forecasts in the sector for 2010.

Other changes in the supply/demand balance in 2010 will tend to offset each other. Thus the very low level of central bank sales is going to be offset by the continued decline in dehedging. Strong demand for ETFs and legal tender coins have pushed up demand, while mine supply is expected to remain broadly unchanged compared to the previous few years.

But is this massive residual cause for concern about the price, going forward? We do not think so, simply because there is very strong anecdotal evidence to support the view that there remains almost unprecedented investor interest in gold – certainly more than sufficient to mop up this residual. Furthermore we do not anticipate this interest on the part of the investor to wane over the next 12 months (at least). Investors are likely to remain uncertain as to whether we are headed for a double-dip recession, something that the monetary authorities and governments of the Western world will be desperate to prevent. Possible further quantitative easing would only in turn heighten the threat of higher rates of inflation a couple of years down the line.

So the residual surplus that we estimate will exist may *prima facie* look large – but it is likely to be easily soaked up by continuing investment demand in the face of what currently remains a deeply uncertain macroeconomic outlook for the whole of 2011.

Data

Methodology

In an industry characterised by large and permanent above-ground stocks, a sensible 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. There are large swathes of the gold market that are clandestine and unofficial; movements of metal within these sectors are largely beyond measurement and unverifiable. VM Group shuns spurious accuracy; our estimates do not purport to measure to the last ounce of gold. Moreover, in the context of large volumes of gold shifting unrecorded – either smuggled across borders, or having been accumulated in private hands as a defensive measure against catastrophe or government intervention – it would be misleading to suggest that such fine measurements are even feasible. These supply/demand balances are designed therefore to give overall general flows of metal between regions and sectors.

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, the World Bureau of Metal Statistics and newswires.

- Scrap recycling: data from refineries and industry participants. VM Group estimates based on gold price movements, political developments.

- Producer hedging: data from the ABN AMRO Gold Hedging Report produced by VM Group 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 VM Group from our analysis of individual markets, discussions with the bullion banks, jewellery wholesalers, hallmarking figures, and trade data, which is subject to interpretation but gives direction of physical flows.

- Jewellery consumption: data series generated by VM Group based on our analysis of exports and imports of gold jewellery 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, e.g. 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 US, 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 generates 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 VM Group does not have data, and therefore this data series probably understates the sector. VM Group makes allowance for this in the "other industrial" data series.

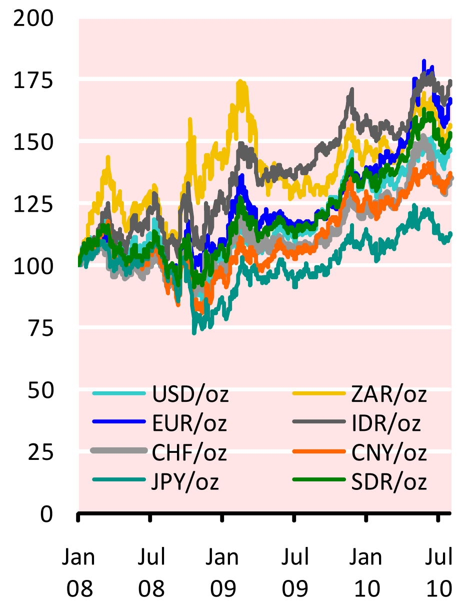
- Electronics: data series derived by VM Group based on work relating to the electronics industry when studying the pgm industry and the recycling of electronic scrap.

- 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.

The residual

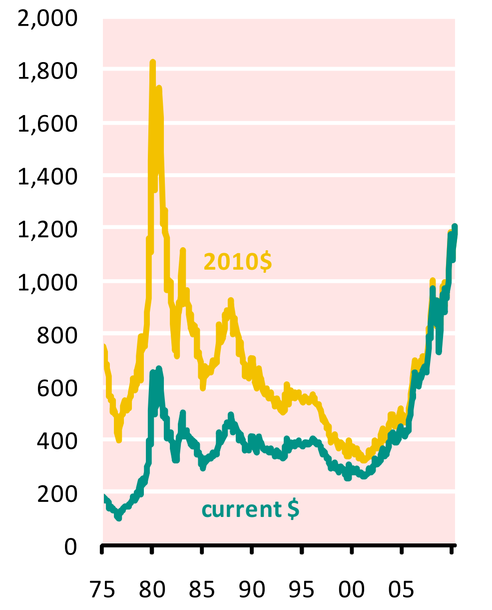
The overall supply/demand balance does not balance. The difference between supply and demand (negative is demand exceeding supply), we term the residual. The residual is an acknowledgement that a) omniscience about this market is impossible, and to pretend otherwise is misleading b) there are gold flows 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.

Gold in various currencies, start 2008=100



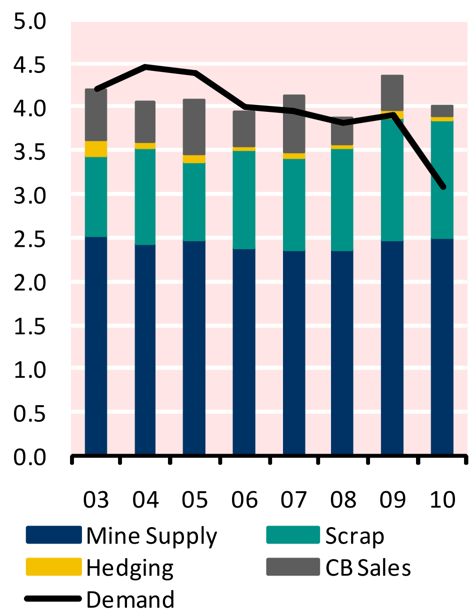
Source: VM Group

Monthly price of gold in current $ and 1975$



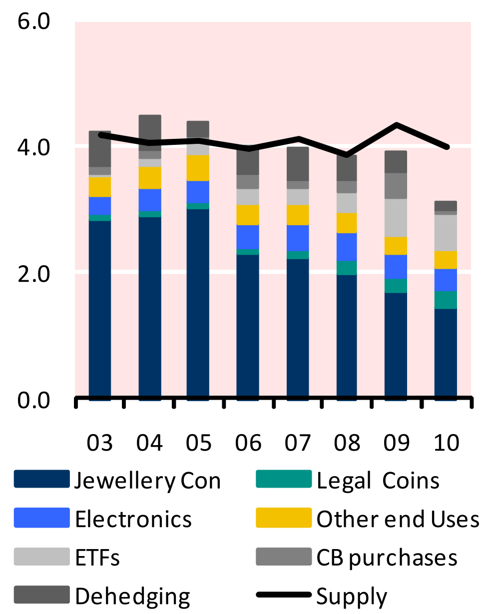
Source: VM Group

Gold supply by category v. demand, 000 tonnes



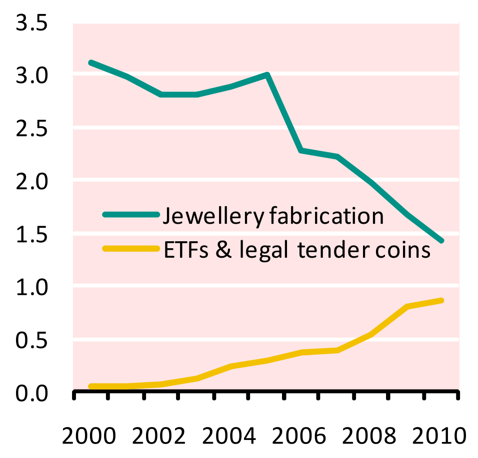
Source: VM Group

Gold demand by category v. supply, 000 tonnes



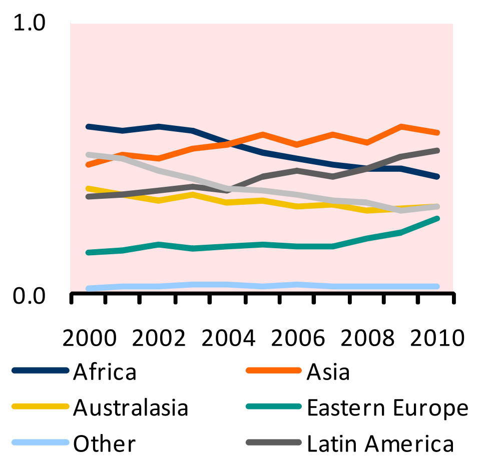
Source: VM Group

Jewellery demand v. investment demand, 000 tonnes



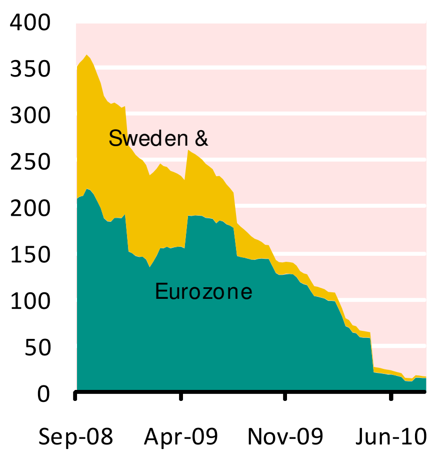
Source: VM Group

Mine production by region, 000 tonnes



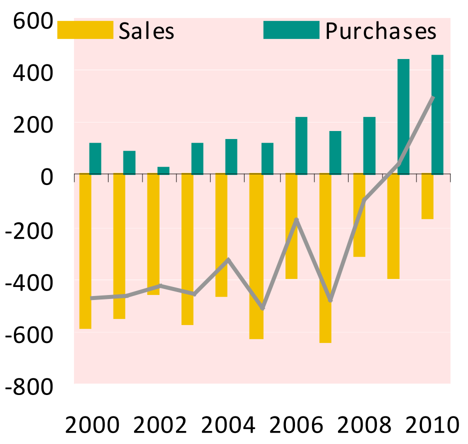
Source: VM Group

Rolling 12m sales under CBGA, tonnes



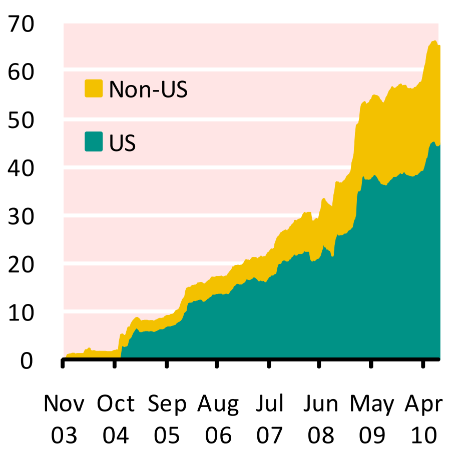
Source: VM Group

Global central bank sales and purchases, tonnes



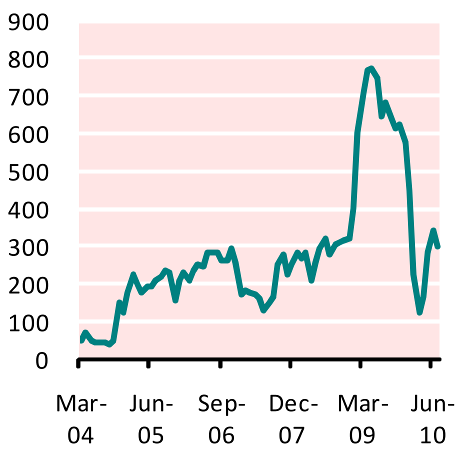
Source: VM Group

ETF Holdings, Moz



Source: VM Group

ETF year-on-year change in holdings, tonnes



Source: VM Group

Physical supply and demand: world total and by region, 2005–2010 (forecast)

World total	2005	2006	2007	2008	2009	2010f
Supply						
Mine Supply	2,478	2,382	2,359	2,347	2,465	2,495
Scrap Recycling	882	1,123	1,056	1,185	1,408	1,339
Hedging	83	45	70	33	74	65
Central Bank Sales	623	395	639	310	397	161
Total Supply	**4,066**	**3,945**	**4,124**	**3,875**	**4,344**	**4,059**
Demand						
Jewellery Fabrication	2,996	2,276	2,227	1,976	1,672	1,424
Jewellery Consumption	2,996	2,276	2,227	1,976	1,672	1,424
Legal Tender Coins	105	111	129	225	234	296
Electronics	357	372	403	422	375	356
Other end Uses	393	315	311	313	297	275
ETFs	195	254	253	320	576	563
Central Bank Purchases	115	221	164	215	437	223
Dehedging	224	456	491	373	321	105
Total Demand	**4,385**	**4,005**	**3,977**	**3,842**	**3,912**	**3,241**
Residual	**(319)**	**(60)**	**146**	**33**	**432**	**818**

North America	2005	2006	2007	2008	2009	2010f
Supply						
Mine Supply	380	364	339	333	309	320
Scrap Recycling	70	88	83	92	107	96
Hedging	29	29	47	0	27	3
Central Bank Sales	0	2	0	0	0	0
Total Supply	**479**	**482**	**470**	**425**	**443**	**419**
Demand						
Jewellery Fabrication	207	177	164	128	108	97
Jewellery Consumption	390	351	334	276	228	204
Legal Tender Coins	23	25	29	75	95	105
Electronics	75	78	84	87	74	70
Other end Uses	31	29	29	28	24	20
ETFs	178	212	185	164	375	400
Central Bank Purchases	0	0	0	0	0	0
Dehedging	147	337	246	132	193	23
Total Demand	**844**	**1,033**	**908**	**762**	**990**	**822**
Residual	**(366)**	**(550)**	**(438)**	**(337)**	**(547)**	**(404)**

Europe	2005	2006	2007	2008	2009	2010f
Supply						
Mine Supply	19	24	21	22	24	22
Scrap Recycling	102	126	117	125	154	153
Hedging	9	15	7	2	4	2
Central Bank Sales	529	338	534	283	138	3
Total Supply	**658**	**503**	**679**	**433**	**319**	**180**
Demand						
Jewellery Fabrication	791	671	688	542	423	345
Jewellery Consumption	546	476	473	382	318	274
Legal Tender Coins	66	69	72	91	71	103
Electronics	43	44	48	49	43	41
Other end Uses	143	114	112	113	108	100
ETFs	12	37	44	157	169	155
Central Bank Purchases	0	0	1	0	0	2
Dehedging	9	5	32	5	42	6
Total Demand	**819**	**745**	**780**	**797**	**751**	**678**
Residual	**(161)**	**(243)**	**(101)**	**(365)**	**(432)**	**(498)**

Indian sub-continent	2005	2006	2007	2008	2009	2010f
Supply						
Mine Supply	3	3	3	2	2	4
Scrap Recycling	142	198	180	215	276	292
Hedging	0	0	0	0	0	0
Central Bank Sales	0	0	0	0	0	0
Total Supply	**145**	**200**	**182**	**217**	**278**	**296**
Demand						
Jewellery Fabrication	661	397	357	337	270	189
Jewellery Consumption	714	437	401	377	303	217
Legal Tender Coins	0	0	0	0	0	0
Electronics	0	0	0	0	0	0
Other end Uses	105	79	78	80	79	76
ETFs	0	0	4	1	2	4
Central Bank Purchases	0	0	0	0	200	0
Dehedging	0	0	0	0	0	0
Total Demand	**819**	**516**	**483**	**458**	**584**	**298**
Residual	**(674)**	**(316)**	**(301)**	**(241)**	**(306)**	**(2)**

	Asia					
	2005	2006	2007	2008	2009	2010f
Supply						
Mine Supply	586	547	582	554	615	593
Scrap Recycling	262	327	320	350	408	376
Hedging	0	0	0	0	33	9
Central Bank Sales	67	11	12	12	21	6
Total Supply	**915**	**885**	**914**	**916**	**1,077**	**983**
Demand						
Jewellery Fabrication	716	584	566	520	489	462
Jewellery Consumption	633	499	485	446	413	385
Legal Tender Coins	9	10	13	25	25	33
Electronics	221	230	249	264	239	227
Other end Uses	74	64	64	63	55	46
ETFs	0	0	0	0	0	0
Central Bank Purchases	82	90	80	103	44	42
Dehedging	0	0	0	0	0	4
Total Demand	**1,019**	**893**	**891**	**899**	**776**	**737**
Residual	**(104)**	**(8)**	**23**	**17**	**302**	**245**

	Middle East					
	2005	2006	2007	2008	2009	2010f
Supply						
Mine Supply	8	7	6	5	5	5
Scrap Recycling	209	261	238	277	324	291
Hedging	0	0	0	0	0	0
Central Bank Sales	20	20	0	2	0	0
Total Supply	**237**	**288**	**244**	**284**	**328**	**296**
Demand						
Jewellery Fabrication	466	321	336	341	290	253
Jewellery Consumption	572	399	429	398	326	274
Legal Tender Coins	0	0	0	0	0	0
Electronics	0	0	0	0	0	0
Other end Uses	28	19	17	19	22	24
ETFs	0	0	0	0	0	0
Central Bank Purchases	30	113	32	34	35	50
Dehedging	0	0	0	0	0	0
Total Demand	**631**	**531**	**479**	**451**	**384**	**348**
Residual	**(394)**	**(243)**	**(235)**	**(167)**	**(55)**	**(52)**

Physical supply and demand: world total and by region, 2005–2010 (forecast)

	Latin America					
	2005	2006	2007	2008	2009	2010f
Supply						
Mine Supply	432	455	433	460	507	527
Scrap Recycling	40	50	48	51	56	53
Hedging	0	0	0	0	0	0
Central Bank Sales	0	6	0	0	9	1
Total Supply	**472**	**511**	**481**	**511**	**572**	**582**
Demand						
Jewellery Fabrication	80	68	63	57	48	41
Jewellery Consumption	66	56	52	47	40	34
Legal Tender Coins	0	0	0	12	16	18
Electronics	2	2	2	2	2	1
Other end Uses	11	10	11	10	9	7
ETFs	0	0	0	0	0	0
Central Bank Purchases	0	0	2	3	16	6
Dehedging	0	0	0	0	0	0
Total Demand	**79**	**68**	**66**	**75**	**82**	**67**
Residual	**394**	**443**	**415**	**436**	**490**	**515**

	Africa					
	2005	2006	2007	2008	2009	2010f
Supply						
Mine Supply	520	494	476	463	460	431
Scrap Recycling	15	18	16	17	20	19
Hedging	12	0	4	1	0	0
Central Bank Sales	0	0	0	0	1	0
Total Supply	**546**	**511**	**496**	**481**	**480**	**450**
Demand						
Jewellery Fabrication	31	21	20	20	17	14
Jewellery Consumption	29	19	18	18	16	13
Legal Tender Coins	2	2	9	9	15	18
Electronics	0	0	0	0	0	0
Other end Uses	0	0	0	0	0	0
ETFs	4	3	14	3	26	1
Central Bank Purchases	0	0	0	0	1	0
Dehedging	0	40	29	161	59	40
Total Demand	**35**	**63**	**70**	**192**	**116**	**72**
Residual	**511**	**448**	**426**	**289**	**364**	**378**

Australasia	2005	2006	2007	2008	2009	2010f
Supply						
Mine Supply	346	318	326	302	316	320
Scrap Recycling	3	4	3	4	4	4
Hedging	33	1	12	30	10	51
Central Bank Sales	0	0	0	0	0	0
Total Supply	**382**	**322**	**341**	**336**	**330**	**375**
Demand						
Jewellery Fabrication	6	5	4	4	4	3
Jewellery Consumption	6	5	4	4	4	3
Legal Tender Coins	5	5	6	12	14	20
Electronics	1	1	1	1	1	1
Other end Uses	0	0	0	0	0	0
ETFs	1	2	6	(5)	4	3
Central Bank Purchases	0	0	0	0	0	0
Dehedging	68	74	184	75	27	32
Total Demand	**80**	**87**	**201**	**87**	**49**	**59**
Residual	**302**	**235**	**140**	**249**	**281**	**316**

Eastern Europe	2005	2006	2007	2008	2009	2010f
Supply						
Mine Supply	184	172	174	205	228	274
Scrap Recycling	40	53	50	55	61	55
Hedging	0	0	0	0	0	0
Central Bank Sales	0	1	58	0	2	7
Total Supply	**224**	**226**	**282**	**260**	**291**	**335**
Demand						
Jewellery Fabrication	39	33	30	27	23	20
Jewellery Consumption	39	33	30	27	23	20
Legal Tender Coins	0	0	0	0	0	0
Electronics	17	17	19	19	16	15
Other end Uses	0	0	0	0	0	0
ETFs	0	0	0	0	0	0
Central Bank Purchases	3	18	50	75	142	123
Dehedging	0	0	0	0	0	0
Total Demand	**58**	**68**	**99**	**121**	**181**	**158**
Residual	**166**	**158**	**184**	**139**	**109**	**177**

Source: VM Group

Note: Regional totals include jewellery consumption but not jewellery fabrication. Totals might not add due to rounding. The allocation of hedging and dehedging to individual regions is complicated and for simplicity we have used the regions used in the Gold Hedging Report besides that for Asia. The IMF Gold sales are included in the World total table.

Primary Mine Supply, 2005–2010 (forecast), tonnes

	2005	2006	2007	2008	2009	2010f
South Africa	294.80	272.00	245.69	220.55	205.00	176.00
Ghana	66.53	72.00	70.83	80.87	87.00	86.10
Mali	49.00	45.00	56.75	52.87	46.53	42.00
Tanzania	45.51	45.00	42.00	37.60	40.00	42.50
Guinea	13.00	11.00	13.00	18.40	18.73	23.00
Other Africa	15.73	18.55	20.00	23.00	25.00	30.00
Congo (Dem Rep)	4.20	4.20	5.00	5.95	6.13	4.00
Ethiopia	6.00	5.70	5.70	5.50	5.50	5.50
Sudan	5.00	3.50	2.70	2.49	2.00	2.10
Zimbabwe	14.00	10.96	7.00	3.10	4.50	3.00
Cote D'Ivoire	2.00	1.40	1.50	1.92	5.30	4.50
Mauritania	-	0.30	1.69	6.28	10.26	9.00
Botswana	2.70	3.00	3.02	3.17	1.80	2.00
Algeria	0.70	0.38	0.50	0.60	1.20	1.00
Mozambique	0.56	0.63	0.60	0.70	0.63	0.50
Total Africa	**519.73**	**493.62**	**475.98**	**463.00**	**459.58**	**431.20**
China	224.00	240.00	270.49	282.01	296.11	300.00
Indonesia	142.00	110.90	117.00	76.91	110.00	91.00
Other Asia	10.70	9.16	13.00	16.00	18.00	20.00
Mongolia	18.00	22.60	17.40	15.30	10.10	5.60
Japan	8.47	7.50	7.50	7.10	8.00	8.40
Philippines	37.49	36.14	38.79	35.45	43.00	42.50
North Korea	5.00	0.00	0.00	0.00	0.00	0.00
Uzbekistan	84.20	74.15	72.89	74.10	74.14	73.00
Kazakhstan	22.00	20.00	21.40	20.33	23.70	19.50
Kyrgyzstan	17.00	11.00	11.00	16.28	17.00	20.00
Laos	6.30	6.10	4.16	4.30	5.40	4.30
Malaysia	4.20	3.50	2.91	2.50	2.20	2.70
Thailand	4.42	3.49	3.40	1.57	4.90	4.20
Tajikistan	0.90	0.90	0.90	0.90	0.90	0.90
South Korea	0.30	0.30	0.16	0.18	0.29	0.40
North Korea	5.00	-	-	-	-	-
Total Asia	**589.98**	**545.74**	**581.01**	**552.93**	**613.74**	**592.50**
Australia	264.00	247.00	253.00	219.00	230.00	243.00
Papua New Guinea	68.71	58.30	60.00	66.60	68.60	60.00
New Zealand	10.60	10.60	10.70	15.90	16.50	16.00
Fiji	2.83	1.70	2.00	0.90	1.00	1.20
Other Australasia	0.00	0.00	0.00	0.00	0.00	0.00
Total Australasia	**346.14**	**317.60**	**325.70**	**302.40**	**316.10**	**320.20**
Russia	168.00	159.00	157.00	185.00	205.00	248.00
Armenia	1.37	0.87	0.57	0.64	1.00	1.20
Bulgaria	3.87	3.82	3.96	4.01	5.00	5.60
Georgia	1.62	2.40	2.40	3.10	3.20	4.00
Hungary	0.50	0.50	0.50	0.50	0.50	0.80
Romania	0.50	0.50	0.50	0.50	0.50	0.70
Ukraine	0.50	0.50	0.50	0.50	0.50	0.80
Serbia	0.33	0.33	0.33	0.33	0.32	0.40
Other Eastern Europe	7.67	4.20	8.00	10.00	12.00	12.00
Total Eastern Europe	**184.36**	**172.12**	**173.77**	**204.58**	**228.02**	**273.50**
Sweden	6.50	6.75	6.80	6.00	6.00	7.20
Spain	3.00	2.80	0.20	0.10	0.00	0.00
Turkey	4.00	7.00	8.00	11.10	15.00	10.70
Other Western Europe	5.30	7.30	5.70	5.20	2.70	3.60
Total Western Europe	**18.80**	**23.85**	**20.70**	**22.40**	**23.70**	**21.50**
India	3.40	2.50	2.70	2.48	2.20	3.60
Total Indian sub-continent	**3.40**	**2.50**	**2.70**	**2.48**	**2.20**	**3.60**

Source: VM Group

Note: Subtotals might not add to total due to rounding

Primary Mine Supply, 2005–2010 (forecast), tonnes

	2005	2006	2007	2008	2009	2010f
Peru	207.82	203.60	170.00	179.87	183.47	170.00
Argentina	25.00	44.00	41.75	40.15	47.00	56.00
Brazil	35.00	41.00	45.15	52.87	65.00	67.00
Chile	39.55	40.75	40.88	39.20	38.57	46.00
Colombia	35.78	21.00	23.00	32.00	40.00	47.00
Mexico	31.55	38.90	47.70	49.70	54.67	60.00
Other Latin America	15.74	20.00	22.00	25.00	28.00	30.00
Venezuela	10.78	11.32	8.72	9.06	18.13	18.00
Bolivia	8.91	9.60	9.00	8.73	7.65	6.60
Guyana	8.17	6.40	7.10	8.05	7.20	8.50
Ecuador	5.34	5.17	3.19	3.25	3.31	3.30
Honduras	4.50	4.50	3.50	2.07	1.80	2.40
Nicaragua	3.40	3.50	3.60	2.59	2.60	3.80
Dominican Republic	0.00	0.00	0.00	0.20	0.40	0.40
Guatemala	0.74	5.04	7.07	7.26	9.00	8.40
Total Latin America	**432.28**	**454.78**	**432.65**	**460.00**	**506.80**	**527.40**
Saudi Arabia	8.00	7.10	6.00	5.00	4.50	4.60
Other Middle East	0.00	0.00	0.00	0.00	0.00	0.00
Total Middle East	**8.00**	**7.10**	**6.00**	**5.00**	**4.50**	**4.60**
USA	261.00	260.00	238.00	237.30	215.00	225.00
Canada	118.53	103.98	101.20	95.57	94.45	95.00
Total North America	**379.53**	**363.98**	**339.20**	**332.87**	**309.45**	**320.00**
World total	**2482.22**	**2381.29**	**2357.70**	**2345.67**	**2464.09**	**2494.50**

Source: VM Group

Note: Subtotals might not add to total due to rounding

Scrap recycling (excluding process scrap), 2005–2010 (forecast), tonnes

	2005	2006	2007	2008	2009	2010f
Algeria	4.0	4.9	4.4	4.7	5.4	5.1
Morocco	4.0	4.9	4.4	4.7	5.4	5.1
Tunisia	3.5	4.3	3.9	4.1	4.9	4.7
Other Africa	3.0	3.7	3.5	3.7	4.1	3.9
Total Africa	**14.5**	**17.7**	**16.2**	**17.2**	**19.8**	**18.8**
Thailand	45.0	54.9	52.3	55.4	64.2	61.0
Indonesia	40.0	48.8	44.4	47.0	54.3	48.8
Japan	30.0	35.1	33.4	35.4	40.8	41.8
Malaysia	30.0	36.6	33.3	35.3	40.7	36.6
China	50.0	70.0	80.0	95.0	114.0	102.6
Philippines	18.0	22.0	20.0	21.2	24.4	22.0
South Korea	15.0	18.3	17.4	18.5	21.3	19.1
Taiwan	12.0	14.6	13.9	14.8	17.1	15.4
Singapore	10.0	12.2	11.6	12.3	14.3	12.8
Hong Kong	10.0	12.2	11.6	12.3	14.2	12.8
Myanmar	2.0	2.4	2.3	2.5	2.9	2.6
Total Asia	**262.0**	**327.1**	**320.2**	**349.7**	**408.0**	**375.6**
Australia	3.0	3.5	3.3	3.5	3.9	3.5
Total Australasia	**3.0**	**3.5**	**3.3**	**3.5**	**3.9**	**3.5**
Russia	40.0	52.8	50.3	55.3	60.8	54.8
Total Eastern Europe	**40.0**	**52.8**	**50.3**	**55.3**	**60.8**	**54.8**
Turkey	40.0	48.8	44.4	49.7	74.5	78.3
Italy	26.0	32.5	31.0	31.9	33.5	31.8
France	6.0	7.5	7.1	7.4	7.8	7.4
Germany	5.0	6.3	6.0	6.1	6.5	6.2
Switzerland	5.0	6.3	6.0	6.1	6.5	6.2
UK & Ireland	5.0	6.3	6.0	6.1	6.5	6.2
Other	14.5	18.0	17.1	17.6	18.6	17.6
Total Western Europe	**101.5**	**125.5**	**117.4**	**124.9**	**153.8**	**153.6**
India	115.0	161.0	146.4	175.6	228.3	239.7
Pakistan	20.0	28.0	25.5	30.5	38.2	42.0
Bangladesh	4.0	4.9	4.4	4.9	5.4	5.9
Sri Lanka	3.0	3.7	3.3	3.7	4.0	4.4
Total Indian subcontinent	**142.0**	**197.5**	**179.6**	**214.7**	**275.9**	**292.1**
Argentina	6.0	7.5	7.1	7.6	8.4	8.0
Brazil	6.0	7.5	7.1	7.6	8.4	8.0
Chile	5.0	6.3	6.0	6.4	7.0	6.7
Colombia	5.0	6.3	6.0	6.4	7.0	6.7
Mexico	5.0	6.3	6.0	6.4	7.0	6.7
Other Latin America	5.0	6.3	6.0	6.4	7.0	6.7
Peru	4.0	5.0	4.8	5.1	5.6	5.3
Venezuela	4.0	5.0	4.8	5.1	5.6	5.3
Total Latin America	**40.0**	**50.0**	**47.6**	**51.0**	**56.0**	**53.2**
Saudi Arabia	70.0	87.5	79.5	92.3	110.7	99.7
Iraq	40.0	50.0	45.5	52.7	63.3	56.9
Egypt	27.0	33.8	30.7	35.6	42.7	38.4
Iran	32.0	40.0	36.4	43.6	43.6	39.3
Kuwait	22.0	27.5	25.0	29.0	34.8	31.3
UAE	10.0	12.5	11.4	13.2	15.8	14.2
Lebanon	5.0	6.3	5.7	6.6	7.9	7.1
Israel	3.0	3.8	3.4	4.0	4.7	4.3
Total Middle East	**209.0**	**261.3**	**237.5**	**277.0**	**323.6**	**291.3**
USA	65.0	81.3	77.4	85.1	98.5	88.7
Canada	5.0	6.3	6.0	6.5	8.0	7.2
Total North America	**70.0**	**87.5**	**83.3**	**91.7**	**106.5**	**95.9**
World total	**882.0**	**1,122.9**	**1,055.5**	**1,184.9**	**1,408.4**	**1,338.6**

Source: VM Group

Note: Subtotals might not add to total due to rounding

Jewellery fabrication, 2005–2010 (forecast), tonnes

	2005	2006	2007	2008	2009	2010f
South Africa	9.6	8.2	7.4	7.5	6.4	5.4
Morocco	10.0	6.0	5.7	5.8	4.9	4.2
Libya	5.0	3.0	3.0	3.0	2.6	2.2
Algeria	5.0	3.0	2.9	2.9	2.4	2.1
Tunisia	1.0	0.6	0.7	0.7	0.6	0.5
Total Africa	**30.6**	**20.8**	**19.6**	**19.9**	**16.9**	**14.4**
China	250.0	260.0	252.2	245.0	255.0	262.7
Indonesia	100.0	60.0	57.0	51.3	43.6	37.1
Thailand	70.0	56.0	53.2	45.2	38.4	32.7
Taiwan	70.0	56.0	53.2	45.2	38.4	32.7
South Korea	52.0	31.2	31.5	28.4	24.1	20.5
Malaysia	55.0	33.0	31.4	26.6	22.7	19.3
Japan	25.0	22.5	21.4	18.1	15.4	13.1
Vietnam	34.5	20.7	25.0	22.5	19.2	16.3
Hong Kong	20.0	17.0	15.2	13.7	11.6	9.9
Afghanistan	10.0	8.0	7.9	8.1	6.9	5.8
Singapore	10.0	8.0	7.6	6.5	5.5	4.7
Cambodia	10.0	6.0	5.7	5.2	4.4	3.7
Other Asia	9.0	5.4	5.1	4.7	4.0	3.4
Total Asia	**715.5**	**583.8**	**566.4**	**520.5**	**489.1**	**461.7**
Australia	5.5	4.7	4.3	4.1	3.5	3.0
Total Australasia	**5.5**	**4.7**	**4.3**	**4.1**	**3.5**	**3.0**
Russia	35.0	29.8	26.8	24.3	20.7	17.6
Uzbekistan	3.0	2.6	2.3	2.2	1.9	1.6
Croatia	0.7	0.6	0.5	0.5	0.4	0.4
Bulgaria	0.3	0.3	0.3	0.2	0.2	0.2
Estonia	0.2	0.2	0.2	0.1	0.1	0.1
Total Eastern Europe	**39.2**	**33.4**	**30.1**	**27.5**	**23.4**	**19.9**
Italy	320.0	304.0	288.8	240.7	190.0	171.0
Turkey	283.5	192.7	230.8	163.9	114.7	74.6
UK & Ireland	38.0	32.0	32.8	24.7	20.0	16.0
Switzerland	30.0	28.5	27.1	22.6	19.6	16.7
Spain	30.0	28.5	27.1	22.6	19.6	16.7
Germany	22.5	21.4	20.3	16.9	14.7	12.5
France	22.0	20.9	19.9	16.5	14.4	12.2
Portugal	10.0	9.5	9.0	7.5	6.5	5.6
Greece	10.0	9.5	9.0	7.5	6.5	5.6
Poland	5.5	5.2	5.0	4.1	3.6	3.1
Other Western Europe	19.6	18.6	17.8	14.8	12.9	11.0
Total Western Europe	**791.1**	**670.8**	**687.5**	**541.8**	**422.6**	**344.8**
India	592.5	355.5	319.9	303.9	243.1	170.2
Pakistan	50.0	30.0	27.0	24.3	19.4	13.6
Bangladesh	14.0	8.4	7.6	6.8	5.4	3.8
Sri Lanka	5.0	3.0	2.7	2.4	2.0	1.7
Total Indian sub-continent	**661.5**	**396.9**	**357.2**	**337.4**	**270.1**	**189.4**

Source: VM Group

Note: Subtotals might not add to total due to rounding

Jewellery fabrication, 2005–2010 (forecast), tonnes

	2005	2006	2007	2008	2009	2010f
Mexico	30.0	25.5	23.6	21.4	18.2	15.5
Brazil	22.0	18.7	17.3	15.7	13.4	11.4
Dominican Republic	6.0	5.1	4.7	4.3	3.6	3.1
Peru	5.0	4.3	3.9	3.6	3.0	2.6
Chile	5.0	4.3	3.9	3.6	3.0	2.6
Colombia	3.0	2.6	2.4	2.1	1.8	1.5
Bolivia	3.0	2.6	2.4	2.1	1.8	1.5
Venezuela	2.0	1.7	1.6	1.4	1.2	1.0
Ecuador	2.0	1.7	1.6	1.4	1.2	1.0
Argentina	1.5	1.3	1.2	1.1	0.9	0.8
Total Latin America	**79.5**	**67.6**	**62.5**	**56.8**	**48.3**	**41.1**
Saudi Arabia	190.0	133.0	139.7	142.4	121.1	109.0
Egypt	85.0	55.3	58.0	59.2	50.3	42.8
UAE	55.0	38.5	40.4	41.2	35.0	29.8
Iran	40.0	34.0	35.7	36.4	31.0	26.3
Iraq	35.0	21.0	22.1	22.5	19.1	16.2
Kuwait	17.5	10.9	11.4	11.6	9.9	8.4
Israel	15.0	12.3	11.7	10.2	9.2	7.8
Lebanon	12.0	6.6	6.9	7.1	6.0	5.1
Other Middle East	16.3	9.3	9.8	10.0	8.5	7.2
Total Middle East	**465.8**	**320.8**	**335.7**	**340.6**	**290.1**	**252.6**
USA	195.0	165.8	153.3	117.9	100.2	90.2
Canada	12.0	11.4	10.5	9.6	8.1	6.9
Total North America	**207.0**	**177.2**	**163.9**	**127.5**	**108.4**	**97.1**
World total	**2,995.6**	**2,275.8**	**2,227.0**	**1,976.2**	**1,672.4**	**1,423.8**

Source: VM Group

Note: Subtotals might not add to total due to rounding

Jewellery consumption, 2005–2010 (forecast), tonnes

	2005	2006	2007	2008	2009	2010f
Morocco	8.9	5.4	5.2	5.3	4.5	3.8
South Africa	5.9	5.1	4.7	4.6	3.8	3.3
Other Africa	14.1	8.5	8.5	8.6	7.3	6.2
Total Africa	**28.9**	**19.0**	**18.4**	**18.5**	**15.6**	**13.3**
China	274.2	252.6	243.2	228.6	225.6	222.5
Indonesia	82.8	57.7	55.2	50.8	46.4	42.7
South Korea	39.0	23.4	23.6	21.3	18.1	15.4
Japan	28.8	24.2	23.0	19.6	16.7	14.2
Afghanistan	28.5	19.9	20.0	20.1	16.9	14.4
Thailand	28.3	21.6	20.5	17.6	14.9	12.7
Taiwan	27.3	21.8	20.7	17.6	15.0	12.7
Vietnam	34.5	20.7	25.0	22.5	19.2	16.3
Malaysia	29.1	18.4	17.5	15.0	12.8	10.9
Singapore	19.4	12.9	12.2	10.5	9.0	7.6
Philippines	11.8	7.5	7.1	6.2	5.3	4.5
Myanmar	12.6	8.0	7.5	6.6	5.6	4.6
Other Asia	16.5	10.7	9.9	9.0	7.6	6.3
Total Asia	**632.9**	**499.3**	**485.4**	**445.5**	**413.0**	**384.7**
Australia	5.5	4.7	4.3	4.1	3.5	3.0
Total Australasia	**5.5**	**4.7**	**4.3**	**4.1**	**3.5**	**3.0**
Russia	35.0	29.8	26.8	24.3	20.7	17.6
Uzbekistan	3.0	2.6	2.3	2.2	1.9	1.6
Croatia	0.7	0.6	0.5	0.5	0.4	0.4
Bulgaria	0.3	0.3	0.3	0.2	0.2	0.2
Estonia	0.2	0.2	0.2	0.1	0.1	0.1
Total Eastern Europe	**39.2**	**33.4**	**30.1**	**27.5**	**23.4**	**19.9**
Turkey	137.6	98.9	114.7	85.1	64.1	46.9
Italy	85.1	81.1	77.1	64.6	51.8	46.8
Switzerland	71.7	63.7	59.6	47.8	41.3	36.8
Germany	57.4	50.1	46.7	37.0	32.0	28.8
UK & Ireland	51.2	47.0	45.3	38.4	32.7	29.6
Spain	38.3	36.2	34.6	29.1	25.5	22.1
France	21.8	20.8	19.8	16.9	15.0	13.2
Portugal	15.5	14.5	14.0	11.9	10.7	9.5
Greece	10.8	10.3	9.8	8.5	7.7	7.1
Austria	9.3	8.9	8.5	7.5	6.8	6.3
Belgium	9.3	8.8	8.5	7.3	6.6	6.1
Netherlands	8.1	7.6	7.3	6.0	5.0	4.3
Poland	7.3	6.8	6.6	5.4	4.6	3.9
Former Yugoslavia	3.0	2.9	2.7	2.3	2.0	1.7
Other Europe	20.1	18.6	18.0	14.7	12.6	10.6
Total Western Europe	**546.5**	**476.1**	**473.2**	**382.4**	**318.5**	**273.8**
India	576.3	353.2	323.2	305.9	246.2	176.5
Pakistan	100.2	61.4	57.3	52.6	41.9	29.8
Bangladesh	32.9	19.7	17.8	16.5	13.2	9.2
Sri Lanka	5.0	3.0	2.7	2.4	2.0	1.7
Total Indian sub-continent	**714.5**	**437.3**	**400.9**	**377.4**	**303.3**	**217.3**
Mexico	27.4	23.3	21.5	19.6	16.6	14.1
Brazil	12.0	10.2	9.4	8.5	7.3	6.2
Other Latin America	26.6	22.6	20.9	19.0	16.2	13.8
Total Latin America	**66.0**	**56.1**	**51.9**	**47.1**	**40.1**	**34.1**

Source: VM Group

Note: Subtotals might not add to total due to rounding

Jewellery consumption, 2005–2010 (forecast), tonnes

	2005	2006	2007	2008	2009	2010f
Saudi Arabia	160.0	116.8	123.4	114.8	94.6	82.1
Egypt	85.8	56.4	61.2	57.4	47.1	38.4
Iran	55.6	44.0	46.1	47.1	40.0	34.4
Iraq	60.3	39.0	42.4	39.6	32.4	26.9
UAE	43.1	31.3	34.9	27.6	21.9	17.2
Lebanon	38.1	24.6	26.5	25.2	20.8	17.6
Syria	34.4	23.4	26.0	22.9	18.3	14.8
Yemen	33.3	22.8	24.6	23.3	19.2	16.2
Kuwait	30.8	20.3	22.6	19.4	15.3	11.8
Jordan	29.0	18.6	20.1	19.1	15.7	13.3
Israel	1.8	1.5	1.5	1.3	1.2	1.0
Total Middle East	**572.3**	**398.7**	**429.3**	**397.7**	**326.5**	**273.7**
USA	372.2	334.5	317.8	261.8	216.1	192.9
Canada	17.7	16.8	15.8	14.1	12.3	11.0
Total North America	**390.0**	**351.3**	**333.6**	**276.0**	**228.5**	**203.9**
World total	**2,995.6**	**2,275.8**	**2,227.0**	**1,976.2**	**1,672.4**	**1,423.8**

Source: VM Group

Note: Subtotals might not add to total due to rounding

Gold usage in electronics, 2005–2010 (forecast), tonnes

	2005	2006	2007	2008	2009	2010f
Japan	131.6	135.5	146.3	150.7	132.6	126.0
South Korea	15.4	15.6	16.9	17.4	15.3	14.6
Singapore	66.6	69.2	74.8	77.0	67.8	64.4
China	3.4	3.6	3.9	4.0	3.5	3.3
Taiwan	3.8	5.7	7.4	14.5	20.0	19.0
Total Asia	**220.8**	**229.6**	**249.2**	**263.6**	**239.2**	**227.2**
Australia	0.5	0.6	0.6	0.6	0.6	0.5
Total Australasia	**0.5**	**0.6**	**0.6**	**0.6**	**0.6**	**0.5**
Russia	16.5	17.2	18.6	19.1	16.3	15.4
Total Eastern Europe	**16.5**	**17.2**	**18.6**	**19.1**	**16.3**	**15.4**
Germany	10.9	11.3	12.2	12.6	11.0	10.4
France	9.5	9.9	10.6	11.0	9.5	9.1
Switzerland	9.4	9.8	10.6	10.9	9.6	9.1
UK & Ireland	5.4	5.6	6.0	6.2	5.5	5.2
Other Western Europe	7.4	7.6	8.0	8.1	7.5	7.3
Total Western Europe	**42.6**	**44.2**	**47.5**	**48.8**	**43.0**	**41.0**
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	1.4	1.5	1.6	1.6	1.4	1.4
Mexico	0.1	0.1	0.2	0.2	0.1	0.1
Total Latin America	**1.5**	**1.6**	**1.7**	**1.8**	**1.6**	**1.5**
Israel	0.1	0.1	0.2	0.2	0.1	0.1
Total Middle East	**0.1**	**0.1**	**0.2**	**0.2**	**0.1**	**0.1**
USA	74.4	77.4	83.5	86.0	73.1	69.5
Canada	0.7	0.7	0.8	0.8	0.7	0.7
Total North America	**75.1**	**78.1**	**84.3**	**86.9**	**73.9**	**70.2**
World total	**357.2**	**371.3**	**402.1**	**420.9**	**374.6**	**356.0**

Source: VM Group

Note: Subtotals might not add to total due to rounding

Other end uses, 2005–2010 (forecast), tonnes

	2005	2006	2007	2008	2009	2010f
Japan	56.2	47.8	47.0	45.7	39.8	33.3
South Korea	14.7	13.5	13.9	13.9	12.1	10.1
Other Asia	2.7	2.5	2.6	2.7	2.5	2.2
Singapore	0.4	0.3	0.3	0.3	0.4	0.4
Total Asia	**74.0**	**64.1**	**63.7**	**62.6**	**54.8**	**46.0**
Australia	0.5	0.4	0.5	0.5	0.4	0.3
Total Australasia	**0.5**	**0.4**	**0.5**	**0.5**	**0.4**	**0.3**
Turkey	72.8	48.9	46.9	49.6	52.5	54.0
Germany	24.1	22.6	22.1	21.2	18.5	15.0
Switzerland	17.7	16.2	16.5	16.1	14.0	11.8
Italy	7.8	7.2	7.2	7.1	6.4	5.6
France	6.7	6.0	6.3	6.2	5.4	4.5
Netherlands	6.7	6.4	6.1	5.8	5.0	4.2
Spain	2.7	2.5	2.6	2.5	2.2	1.8
Other Europe	4.7	4.4	4.3	4.2	3.7	3.1
Total Western Europe	**143.3**	**114.1**	**112.0**	**112.7**	**107.7**	**100.0**
India	102.5	76.9	76.1	77.4	76.3	73.4
Pakistan	2.3	2.2	2.0	2.2	2.5	2.8
Total Indian sub-continent	**104.8**	**79.0**	**78.0**	**79.5**	**78.8**	**76.2**
Brazil	10.1	9.2	9.6	9.4	8.2	6.8
Other Latin America	1.0	0.9	0.9	0.9	0.8	0.7
Total Latin America	**11.1**	**10.1**	**10.5**	**10.3**	**8.9**	**7.5**
United Arab Emirates	22.2	13.3	12.1	13.3	15.3	16.8
Other Middle East	6.1	5.8	5.3	5.8	6.7	7.3
Total Middle East	**28.3**	**19.1**	**17.4**	**19.1**	**22.0**	**24.2**
USA	30.6	28.3	28.6	27.7	24.1	20.2
Canada	0.3	0.3	0.3	0.3	0.2	0.2
Total North America	**30.9**	**28.5**	**28.8**	**27.9**	**24.3**	**20.3**
World total	**392.8**	**315.4**	**311.0**	**312.6**	**297.0**	**274.5**

Source: VM Group
Note: Subtotals might not add to total due to rounding

Legal tender coins, 2005–2010 (forecast), tonnes

	2005	2006	2007	2008	2009	2010f
South Africa	2.0	1.9	8.7	9.1	14.6	18.0
Total Africa	**2.0**	**1.9**	**8.7**	**9.1**	**14.6**	**18.0**
Japan	0.0	0.0	0.0	8.5	10.6	12.0
Singapore	0.0	0.0	0.0	0.4	0.5	2.0
South Korea	0.0	0.0	0.0	1.4	1.9	1.0
Taiwan	0.0	0.0	0.0	0.4	0.5	2.0
Thailand	0.0	0.0	0.0	0.4	0.5	2.0
China	9.1	9.7	13.1	13.6	10.8	14.0
Total Asia	**9.1**	**9.7**	**13.1**	**24.7**	**24.8**	**33.0**
Australia	5.1	5.2	5.8	11.8	13.5	20.0
Total Australasia	**5.1**	**5.2**	**5.8**	**11.8**	**13.5**	**20.0**
Austria	5.9	3.2	5.4	25.8	25.4	30.0
Belgium	0.0	0.1	0.1	0.2	0.2	0.4
France	0.2	0.1	0.4	0.2	0.6	1.0
Italy	0.0	0.0	0.0	2.0	1.6	2.0
Netherlands	2.5	2.5	2.3	3.0	3.5	4.0
Switzerland	0.1	0.1	0.1	0.1	0.1	0.5
Turkey	55.0	61.8	61.9	57.8	36.7	60.0
UK & Ireland	1.9	1.3	1.6	2.0	2.2	4.0
Former Yugoslavia	0.0	0.0	0.0	0.1	0.2	0.5
Total Europe	**65.7**	**69.1**	**71.7**	**91.3**	**70.5**	**102.4**
Chile	0.0	0.0	0.0	0.5	0.7	1.0
Mexico	0.0	0.0	0.0	11.5	15.0	16.0
Venezuela	0.0	0.0	0.0	0.3	0.2	0.5
Total Latin America	**0.0**	**0.0**	**0.0**	**12.3**	**15.9**	**17.5**
Canada	9.4	7.2	7.5	26.4	36.4	40.0
USA	14.0	18.2	21.9	48.9	58.6	65.0
Total North America	**23.3**	**25.4**	**29.4**	**75.3**	**95.0**	**105.0**
World total	**105.2**	**111.3**	**128.7**	**224.5**	**234.2**	**295.9**

Source: VM Group

Note: Subtotals might not add to total due to rounding

Gold Prices in various currencies, 1995–2010, tonnes

	$/oz	Euro/oz	Rand/kg	Yen/gr	A$/oz
1995	384	297	43,343	1,162	518
1996	388	310	52,205	1,356	494
1997	331	293	47,377	1,287	445
1998	294	262	50,729	1,238	469
1999	279	261	53,006	1,018	433
2000	279	303	60,106	967	481
2001	271	303	74,496	1,056	525
2002	307	328	101,011	1,243	570
2003	363	321	85,026	1,346	559
2004	409	329	84,361	1,422	556
2005	444	358	90,829	1,577	583
2006	604	480	131,490	2,256	801
2007	695	507	156,820	2,628	829
2008	872	593	229,426	2,906	1,033
2009	973	697	260,169	2,920	1,234
Jan-08	887	603	199,354	3,075	1,006
Feb-08	922	625	226,839	3,175	1,010
Mar-08	964	621	247,483	3,123	1,045
Apr-08	910	577	226,708	3,002	977
May-08	889	571	217,305	2,980	936
Jun-08	889	571	226,821	3,056	935
Jul-08	940	596	230,152	3,228	977
Aug-08	838	561	206,148	2,948	951
Sep-08	830	578	214,719	2,842	1,015
Oct-08	807	607	252,065	2,602	1,177
Nov-08	761	598	247,133	2,368	1,160
Dec-08	822	607	261,491	2,405	1,221
Jan-09	859	647	272,272	2,495	1,272
Feb-09	943	737	301,343	2,816	1,453
Mar-09	924	708	294,030	2,903	1,387
Apr-09	889	674	255,169	2,827	1,243
May-09	928	679	248,725	2,879	1,213
Jun-09	946	675	243,702	2,939	1,180
Jul-09	934	663	238,070	2,837	1,161
Aug-09	950	666	241,329	2,897	1,137
Sep-09	997	684	239,415	2,928	1,157
Oct-09	1,043	704	249,944	3,029	1,151
Nov-09	1,127	755	270,642	3,228	1,224
Dec-09	1,126	773	270,753	3,257	1,250
Jan-10	1,117	782	267,171	3,274	1,224
Feb-10	1,095	801	269,618	3,175	1,235
Mar-10	1,113	820	264,734	3,246	1,220
Apr-10	1,146	854	270,026	3,445	1,237
May-10	1,204	961	295,851	3,556	1,389
Jun-10	1,233	1,010	302,513	3,598	1,447
Jul-10	1,193	932	288,346	3,358	1,360

Source: VM Group

Note: Subtotals might not add to total due to rounding

Gold Inflation-adjusted gold price (in 2009 dollars)

	Nominal gold price ($/oz)	US CPI (2008=100)	Real gold price (2009 dollars)
1980	612.6	38.4	1594.7
1981	460.0	42.4	1085.4
1982	375.7	45.0	835.2
1983	424.4	46.4	914.0
1984	360.5	48.4	744.5
1985	317.3	50.1	632.8
1986	367.7	51.1	719.6
1987	446.5	53.0	843.0
1988	436.9	55.1	792.7
1989	381.4	57.8	660.1
1990	383.5	60.9	629.7
1991	362.1	63.5	570.4
1992	343.8	65.4	525.7
1993	359.8	67.3	534.3
1994	384.0	69.1	555.8
1995	384.2	71.0	540.9
1996	387.8	73.1	530.4
1997	331.0	74.8	442.4
1998	294.2	76.0	387.3
1999	279.0	77.6	359.3
2000	279.1	80.3	347.7
2001	271.0	82.5	328.4
2002	309.7	83.8	369.4
2003	363.4	85.7	423.8
2004	409.7	88.0	465.4
2005	444.7	91.0	488.6
2006	603.5	94.0	642.2
2007	695.4	96.6	719.5
2008	872.0	102.0	854.9
2009	972.4	100.0	972.4

Source: VM Group

Note: Subtotals might not add to total due to rounding

Gold Price volatility, 1995–2010, (%)

	Daily	1M	3M	6M	12M
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
2006	18.23	23.11	23.79	23.05	20.00
2007	11.54	14.74	14.50	15.36	18.57
2008	22.95	28.70	27.45	24.55	21.20
2009	16.42	20.56	22.57	26.03	29.39
Dec-08	30.48	41.34	44.58	37.06	30.78
Jan-09	20.64	27.75	37.92	37.74	31.39
Feb-09	23.14	26.37	32.20	37.64	31.80
Mar-09	27.64	31.64	28.76	37.41	32.23
Apr-09	18.96	29.28	29.50	34.24	32.44
May-09	14.36	17.57	27.02	29.93	32.25
Jun-09	10.86	16.06	21.67	25.60	32.01
Jul-09	9.94	13.04	15.57	23.47	31.55
Aug-09	11.69	14.71	14.53	21.56	30.66
Sep-09	13.91	15.01	14.25	18.27	29.02
Oct-09	10.75	16.47	15.31	15.39	25.58
Nov-09	20.45	17.18	16.17	15.45	22.97
Dec-09	15.47	21.83	18.87	16.69	21.19
Jan-10	15.71	20.14	20.20	17.84	20.62
Feb-10	11.77	20.04	20.78	18.68	19.96
Mar-10	10.85	14.41	18.25	18.56	17.89
Apr-10	8.55	11.41	15.44	17.92	16.65
May-10	11.85	15.49	13.63	17.59	16.56
Jun-10	14.22	16.95	14.73	16.56	16.66
Jul-10	12.14	17.32	16.75	16.06	17.00

Source: VM Group

Note: Subtotals might not add to total due to rounding

Lease rates, 1995–2010, (% pa)

	1-month	3-month	6-month	12-month
1995	0.54	0.66	0.75	0.91
1996	1.74	1.69	1.59	1.59
1997	1.52	1.71	1.90	2.17
1998	1.84	1.90	1.97	2.12
1999	2.60	2.69	2.94	3.27
2000	1.71	1.90	2.05	2.27
2001	0.60	0.82	1.04	1.50
2002	1.29	1.33	1.42	1.68
2003	0.26	0.40	0.58	0.94
2004	0.09	0.14	0.23	0.41
2005	0.08	0.11	0.15	0.25
2006	0.11	0.11	0.13	0.18
2007	0.09	0.11	0.12	0.12
2008	0.16	0.21	0.25	0.26
2009	0.51	0.71	0.83	0.82
Dec-08	0.81	1.49	1.66	1.55
Jan-09	0.16	0.75	1.04	1.17
Feb-09	0.08	0.49	0.86	1.03
Mar-09	(0.04)	0.36	0.84	1.04
Apr-09	(0.15)	0.28	0.77	1.01
May-09	(0.12)	0.16	0.64	0.91
Jun-09	(0.03)	0.16	0.61	0.90
Jul-09	(0.01)	0.10	0.48	0.85
Aug-09	(0.09)	(0.01)	0.32	0.72
Sep-09	(0.09)	(0.09)	0.21	0.63
Oct-09	(0.04)	(0.05)	0.15	0.59
Nov-09	(0.03)	(0.05)	0.11	0.51
Dec-09	(0.10)	(0.10)	0.04	0.42
Jan-10	(0.01)	(0.02)	0.09	0.43
Feb-10	0.05	0.04	0.13	0.43
Mar-10	0.02	0.03	0.10	0.39
Apr-10	0.01	0.04	0.13	0.43
May-10	(0.12)	(0.06)	0.04	0.38
Jun-10	(0.20)	(0.10)	0.01	0.32
Jul-10	(0.13)	(0.03)	0.08	0.41

Source: VM Group
Note: Subtotals might not add to total due to rounding

Official Sector Purchases, 2005–2010 (forecast), tonnes

	2005	2006	2007	2008	2009	2010f
Africa	0.00	0.00	0.16	0.00	0.93	0.00
Asia	82.07	89.97	79.94	102.57	43.89	42.42
Australasia	0.00	0.00	0.00	0.00	0.00	0.00
Eastern Europe	2.70	17.70	49.90	74.70	141.58	122.64
Western Europe	0.00	0.00	0.79	0.00	0.06	1.56
Indian sub-continent	0.00	0.00	0.00	0.00	200.00	0.00
Latin America	0.00	0.00	1.52	3.40	15.53	6.22
Middle East	30.00	113.00	31.82	34.00	35.00	50.00
North America	0.00	0.00	0.00	0.00	0.00	0.00
IMF/BIS	0.00	0.00	0.00	0.00	0.00	0.00
Total	**114.77**	**220.67**	**164.12**	**214.67**	**437.00**	**222.84**

Source: VM Group
Note: Subtotals might not add to total due to rounding

Official Sector sales, 2005–2010 (forecast), tonnes

	2005	2006	2007	2008	2009	2010f
Africa	0.00	0.00	0.00	0.00	1.09	0.00
Asia	66.90	11.00	12.06	12.30	21.20	5.59
Australasia	0.00	0.00	0.00	0.00	0.00	0.00
Eastern Europe	0.00	1.20	58.34	0.20	1.83	6.60
Western Europe	529.00	338.30	534.21	283.20	137.80	3.36
Indian sub-continent	0.00	0.00	0.00	0.00	0.00	0.00
Latin America	0.00	6.00	0.34	0.30	8.82	1.38
Middle East	20.00	20.00	0.00	1.60	0.30	0.00
North America	0.00	2.00	0.00	0.00	0.00	0.00
IMF/BIS	7.00	16.00	34.31	12.80	225.81	144.40
Total	622.90	394.50	639.26	310.40	396.85	161.33

Source: VM Group
Note: Subtotals might not add to total due to rounding

Gold lending, 2005–2010 (forecast), tonnes

	2005	2006	2007	2008	2009	2010f
Africa	107	104	92	83	69	60
Asia	536	520	438	373	290	275
Australasia	76	72	64	58	46	40
Eastern Europe	382	345	306	234	180	170
Western Europe	2,002	1,737	1,459	1,180	980	975
Indian sub-continent	95	94	94	72	50	45
Latin America	277	251	231	164	133	120
Middle East	356	294	232	179	140	130
North America	2	1	1	1	1	1
Total	**3,833**	**3,418**	**2,917**	**2,344**	**1,889**	**1,816**

Source: VM Group
Note: Subtotals might not add to total due to rounding

Gold hedging, delta-adjusted, end-period, 2006–Q2 2010 (tonnes)

	2006	2007	2008	2009	Q2 10
Global					
Net forwards	922	563	336	106	99
Net calls	291	252	138	130	121
Other products	36	3	2	0	0
Net puts	7	17	19	11	8
Total hedge impact	**1256**	**835**	**495**	**247**	**229**
Change	**(411)**	**(421)**	**(340)**	**(247)**	**(19)**
Americas					
Net forwards	503	325	201	38	25
Net calls	24	13	5	4	4
Other products	10	3	2	0	0
Net puts	3	2	2	1	1
Total hedge impact	**541**	**342**	**210**	**43**	**31**
Change	**(306)**	**(199)**	**(132)**	**(167)**	**(13)**
Africa					
Net forwards	129	120	48	2	(5)
Net calls	237	217	125	114	102
Other products	0	0	0	0	0
Net puts	-9	-4	(3)	(4)	(0)
Total hedge impact	**358**	**334**	**170**	**112**	**97**
Change	**(40)**	**(24)**	**(164)**	**(59)**	**(15)**
Australasia					
Net forwards	249	93	57	51	65
Net calls	14	10	4	5	7
Other products	25	0	0	0	0
Net puts	8	20	20	9	6
Total hedge impact	**297**	**124**	**81**	**65**	**78**
Change	**(73)**	**(173)**	**(43)**	**(16)**	**13**
Europe*					
Net forwards	41	25	30	16	14
Net calls	16	12	4	8	8
Other products	0	0	0	0	0
Net puts	4	-1	(0)	3	2
Total hedge impact	**61**	**36**	**33**	**27**	**23**
Change	**10**	**(25)**	**(3)**	**(6)**	**(4)**

Source: VM Group

Note: Subtotals might not add to total due to rounding

** includes Asia*

Gold hedging, committed, end-period, 2005– Q2 2010 Q1, (tonnes) – Q2 10 column shows change from end-2009

	2006	2007	2008	2009	Q2 2010
Global					
Net forwards	934	575	343	107	100
Net calls	361	286	164	169	155
Other products	36	3	2	0	0
Net puts	146	156	100	90	89
Total hedge impact	**1331**	**865**	**509**	**276**	**255**
Change	**(400)**	**(466)**	**(356)**	**(233)**	**(21)**
Americas					
Net forwards	510	334	207	38	25
Net calls	44	18	7	9	9
Other products	10	3	2	0	0
Net puts	57	27	17	17	14
Total hedge impact	**565**	**355**	**215**	**47**	**34**
Change	**(301)**	**(210)**	**(140)**	**(168)**	**(2)**
Africa					
Net forwards	131	121	48	2	(4)
Net calls	271	243	148	121	105
Other products	0	0	0	0	0
Net puts	9	(46)	(16)	(27)	(17)
Total hedge impact	**402**	**364**	**196**	**122**	**101**
Change	**(31)**	**(38)**	**(168)**	**(74)**	**(11)**
Australasia					
Net forwards	252	96	58	51	65
Net calls	16	11	5	6	11
Other products	26	0	0	0	0
Net puts	51	153	94	68	62
Total hedge impact	**294**	**107**	**63**	**58**	**76**
Change	**(81)**	**(187)**	**(44)**	**(5)**	**15**
Europe*					
Net forwards	41	25	30	16	14
Net calls	29	14	5	32	30
Other products	0	0	0	0	0
Net puts	29	22	5	32	30
Total hedge impact	**70**	**39**	**35**	**48**	**44**
Change	**12**	**(31)**	**(5)**	**14**	**(3)**

Source: VM Group
Note: Subtotals might not add to total due to rounding
** includes Asia*

Exchange Traded Funds, 2005–2010 (forecast), tonnes

	World total					
	2005	2006	2007	2008	2009	2010f
Africa	4.3	2.6	13.5	3.2	26.1	1.0
Australasia	0.9	2.1	5.8	(4.9)	3.6	3.0
India	0.0	0.0	4.4	1.0	1.6	4.0
Europe	11.9	36.7	43.6	156.6	169.4	155.0
North America	178.2	212.3	185.4	163.9	375.0	400.0
Total	**195.3**	**253.6**	**252.7**	**319.8**	**575.7**	**563.0**

Source: VM Group

Note: Subtotals might not add to total due to rounding

Comex speculation futures, end-period, 1995–2010, tonnes

	Open Interest	Large specs' net long	Small specs' net long	Total net long
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	1,226	481	108	589
2006	1,059	212	109	321
2007	2,089	620	121	741
2008	1,342	392	52	444
2009	2,084	740	151	913
Jan-08	2,006	640	122	813
Feb-08	2,011	651	133	834
Mar-08	1,932	547	95	698
Apr-08	1,726	500	77	596
May-08	1,637	596	83	695
Jun-08	1,619	478	103	599
Jul-08	1,734	567	116	712
Aug-08	1,561	327	52	353
Sep-08	1,524	366	72	431
Oct-08	1,496	244	21	248
Nov-08	1,236	255	35	319
Dec-08	1,325	373	40	454
Jan-09	1,501	439	54	535
Feb-09	1,693	503	90	650
Mar-09	1,561	482	84	615
Apr-09	1,462	402	76	518
May-09	1,614	551	96	691
Jun-09	1,547	509	78	634
Jul-09	1,547	537	93	649
Aug-09	1,558	569	88	685
Sep-09	1,789	720	136	897
Oct-09	2,027	752	130	961
Nov-09	2,158	816	136	992
Dec-09	2,084	717	151	913
Jan-10	2,026	659	114	814
Feb-10	1,960	624	116	782
Mar-10	1,877	540	106	693
Apr-10	2,183	702	124	916
May-10	2,416	708	127	921
Jun-10	2,553	761	141	995
Jul-10	2,263	588	120	756

Source: VM Group

Note: Subtotals might not add to total due to rounding

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

Source: VM Group

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	

Source: VM Group

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: VM Group

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