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The Global Gold Market and the International Monetary System

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The role of gold in the global economy has been complex and variable over the past few centuries. This chapter examines how gold became established at the foundation of national and international monetary systems and traces its movement from the core to the periphery of the global monetary system. The monetary role of gold has had a profound effect on the global gold market which trades in gold both as a commodity and as a portfolio asset. Despite dramatic changes in the global economy, traditional jewellery demand has consistently dominated the use of gold. The demonetisation of gold has generated financial innovation that has transformed the global gold market through diversification into a range of derivative products that supplement the physical investment and commodity markets.

Key words: gold market, monetary role of gold, gold standard, London gold market

For most of the history of civilization, gold has played an enduring role as a store of value, means of exchange and unit of account. These are the three properties that traditionally define 'money' and, indeed, gold has periodically been at the core of national and international monetary systems. Gold has acted most consistently as a store of value and this has generated a highly developed global market in gold and in gold derivative products. Gold's physical attributes, scarcity and geographic distribution have combined to ensure that it remains a precious and sought after mineral. Physically, gold is malleable, heavy and robust; features which make it suitable for easy storage, transport and division into a range of standard denominations. Moreover, scarcity and the cost of mining or extracting gold sustains its value over the long term, although there have been periods of wild fluctuations in relative gold prices that mean that it is best accumulated as part of a diversified portfolio

of assets rather than a single store of value. This chapter argues that the monetary and commodity roles of gold have been closely intertwined historically, with profound effects on the global gold markets.

While trading in gold likely began at the time when it was first used for ornamentation, the global gold trade took many centuries to develop. By 1300 the Goldsmiths in London had worked to define the value and quality of gold through hallmarking, but the shortage of gold from European mines restricted its circulation as coinage and pushed exploration further afield. While the softness of the metal made it easy to mould into ornaments and to mint into coin, it also made it quickly degradable through chips and rubbing. Once higher quality technology was available to mint base metal coins, the advantages of gold receded. As a result, gold came to be used mainly for larger transactions and as a store of value among the wealthier classes. The powerful Venetian empire used its commercial and political links to bring gold from Africa and Central Asia as part of the exercise of its wealth, striking 1.2 million gold ducats in 1422.[1] Likewise, the Spanish state's hunger for gold drove the exploitation of the American continents through the 16th century (on the monetary, social and cultural disruption this caused for Spain, see Vilches 2010). During the period of mercantilism in the sixteenth to 18th centuries the economic imperative for many states was to accumulate as much treasure and wealth in central coffers as possible. Gold was an important determinant of the ability to defend a sovereign's power and influence in an era of costly national and international conflict.

Economies of scale and scope ensured that London developed into the world's largest gold market, attracting customers from throughout Europe and beyond. Although gold is not produced in quantity in the British Isles, London offered a natural home for the metal as London emerged as the world's dominant international financial and commercial centre in

the 18th and 19th centuries. Figure 1 shows the official gold price in London as recorded by Officer and Williamson from 1254 to 1799 (2011).

Insert Figure 1

Despite prolonged periods of relative stability, this data show the relentless inflation in the gold price (or the depreciation of the British pound) during these centuries. From 1696 the London market became more formalised and the price was eventually stabilised at £4.25/0z from 1717. This marked the beginning of the Gold Standard for the UK, whereby the value of the pound was fixed by statute to a weight of gold. Gold circulated as coin alongside paper notes and the national money supply was partly determined by the flow of gold in and out of the country due to fluctuations in the balance of payments. Other countries that did not have substantial gold reserves preferred to denominate the value of their currencies either in silver (silver standard) or in silver and gold (bimetallic standard) (for a survey of bimetallism see Redish 2000). France, for example, minted both gold and silver coins that operated as legal tender and circulated side by side, supported by the Banque de France fixing the relative prices of the two metals (Flandreau 2004). France led the Latin Monetary Union, which persisted with the bimetallic standard until the 1870s (other members included Belgium, Italy and Switzerland). The USA and German states were the other major economies that embraced bimetallism until the 1870s while Mexico, India and China were on a silver standard.

By the end of the century the value of silver was falling sharply, encouraging more countries to link to gold rather than suffer the pressures of linking to a depreciating standard. Moreover, when gold was in the ascendency it tended to be hoarded, leaving the less valuable silver coins in circulation (a phenomenon known as Gresham's Law). Under pressure from the expenses of the Napoleonic Wars and a bank run when a French victory

seemed likely, convertibility of Bank of England notes into gold was suspended in February 1797 and only restored in 1819 after a decade of vigorous debate. The 'bullionist controversy', pitched those who wished to restore the gold anchor to the Bank of England's note issue to restrain inflation on the one hand against proponents of the Real Bills Doctrine and the Bank of England on the other hand. The Real Bills Doctrine suggested that gold convertibility was not the only way to operate a stable monetary system so long as the Bank of England only discounted bills that were self-liquidating (so-called 'real' bills) (de Cecco 1997, pp. 62-80). In the end, the Bullionists won the debate, and in 1819 convertibility was mandated to be restored, effective from 1821. However, this was only the beginning of the controversy over the role of gold in the international monetary system.

Discoveries of substantial gold reserves in South Africa, Australia and the West coast of North America from the 1850s increased the availability of the metal, and the relative price of silver became more unstable. Debate raged in Europe and the Americas during the last quarter of the 19th century over the appropriate metal to use as the foundation of the international monetary system (See, for example, Gibbs and Grenfell 1888). Those with large silver reserves and silver coin circulation were unwilling to abandon that metal and the discovery of huge reserves of silver in the western US state of Nevada in 1859 prompted the USA to encourage the global use of the silver standard, but it was not to be. From the 1870s, more countries moved to the gold standard and soon network externalities and the falling price of silver encouraged others to follow. However, the demonetisation of silver seemed to some observers to be a contributing factor in the deflation and economic depression of international commerce in the 1880s and 1890s. A last ditch effort by the US Congress led to an international conference in Paris to reconsider the potential for bimetallism in the summer of 1878. By this time the tide seemed to have fully turned

toward the Gold Standard, although there is still debate over whether the dominance of gold was completely inevitable (Oppers 1996, pp. 143-162; Flandreau Dec. 1996, pp. 862-897, Meissner 2005, pp. 385-406). In 1872 Germany demonetized silver, followed a year later by the USA. Also in 1873, France limited silver coinage to try to combat Gresham's Law, and gradually moved to the gold standard. After 1900 the only major countries on the silver standard were relatively low income countries like China and Mexico. Figure 2 shows that the adoption of the gold standard from the 1870s was accompanied by a rise in the ratio of ounces of silver to ounces of gold from about 15:1 to almost 40:1 by 1900.

Insert Figure 2

The four decades from 1870 are usually considered the era of the classic gold standard, when most countries defined their currencies in terms of a value of gold, gold circulated as coin and there was a free movement of gold between countries. The gold standard facilitated the operation of the international monetary system by encouraging stable exchange rates and linking the money supply and prices to an apparently self-correcting system. Under the stylised system described as the Price Specie Flow mechanism, balance of payments deficits would cause an outflow of gold and a contraction of the money supply. Prices would tend to fall relatively and interest rates to rise, restoring competitiveness. As a result, capital would flow back and the trade balance would improve, thus eliminating the balance of payments deficit (for more detailed accounts of the gold standard see Bordo 1989, pp. 23-113; Eichengreen and Flandreau 1997). In the classic stylised design, the gold standard was a self-correcting system that required little government or central bank intervention and ensured that global imbalances were minimised. In practice, the system was not nearly so automatic and required a degree of coordination. Nor was this a period of uninterrupted economic peace. Countries on the periphery of the global economy

experienced debt crises and financial crises through this period, and the USA experienced a sharp depression in the 1890s. Nevertheless, relatively stable exchange rates underpinned a huge and unprecedented surge in international investment, international migration and international trade that promoted global growth, particularly in economies that received large flows of migrants, capital and technology like the USA, Canada and Argentina. In retrospect, after almost thirty years of conflict from 1914-1945, the classical gold standard era seemed, indeed, to have been a 'golden age' for globalisation.

The operation of the classic gold standard in which gold circulated as coin was, in the end, relatively short-lived. Already in the 1890s many countries 'economised' on gold by holding sterling or dollars in their reserves instead of gold itself. The onset of the First World War in 1914 prompted the suspension of the convertibility of gold and a rebalancing of the global economy. Britain's economic and commercial dominance had been eroding relative to the rise of the USA and Germany in the thirty years before World War One, but the end of the war marked a sharp shift in economic power toward the USA, as Germany struggled under the economic pressures of defeat. Despite this dramatic change in the architecture of the global economy, there was a strong collective will to return to the era of relative prosperity of the pre-war era. It was assumed that this was predicated on a return to the Gold Standard.

The restoration of the gold standard was complicated by the increase in the global money supply during the war. National money supplies could no longer be as closely linked to the physical circulation of gold and most countries demonetised gold by withdrawing it from circulation and outlawing private trade in gold. Rather than backing their currency issue with gold, many held sterling or dollars as foreign exchange reserves so the role of gold was further reduced. These changes were designed to make the system more flexible and

robust, but in the end they became the foundation of a dysfunctional international monetary system. In their zeal to return to the ‘golden age’ of the pre-war globalisation, many countries adopted inappropriate gold values for their currencies, based more on sentiment and politics than economic reality. Thus both Italy and the UK returned to the pre-war parity despite the fundamental weakening of their relative economic positions. France undervalued in order to promote balance of payments surpluses, but this undermined price stability by increasing inflationary pressure. The pegged exchange rate system meant that as the US slid into depression in the late 1920s, other countries were drawn down alongside as they sought to stabilise their exchange rate rather than promoting economic growth. The result was that the interwar depression spread through the pegged exchange rate system (Eichengreen 1996; Kindleberger 1986). After years of struggle, the UK abandoned the gold standard in September 1931 and was followed by most other countries in the next two years, until the USA finally abandoned the fixed gold value of the dollar and suspended convertibility in 1933. The perils of linking the global system to a commodity whose supply could not be controlled were clearly apparent at a time when many states sought to combat deflationary pressures through monetary expansion. The interwar gold standard was too inflexible to endure the substantial external economic shocks of the interwar period. The challenges were even greater after 1945 when many states committed to ambitious growth programs and elaborate welfare systems. However, the lure of gold as a neutral basis of the international monetary system that would exert discipline on the expansion of the global money supply survived into post-war Bretton Woods system.

Under the Bretton Woods system the dollar was the main currency directly convertible to gold at a fixed price and most other currencies were pegged either to a value of US dollars

or to the British pound sterling. Gold was thus at the foundation of the system and was designed to operate as an anchor to the value of the dollar, but this structure quickly revealed its flaws. The London gold market re-opened in the early 1950s and traded in gold at the official price of US$35/oz but as the supply of US$ in the global economy increased through the 1950s, the credibility of a fixed price for gold evaporated. The supply of dollars in the global economy was determined by the US Federal Reserve System and the issue of dollar denominated financial assets such as US government bonds and Treasury Bills, while the supply of gold was constrained by geology and the cost of extraction. Moreover, as Robert Triffin pointed out in 1960, as the global economy grew, it would require an increasing money supply (Triffin 1960). As the issuer of the major international currency, this required the USA to run persistent balance of payments deficits to increase the supply of dollars available to international traders and for international reserves. As the amount of dollars increased relative to the supply of gold, the credibility of the value of the dollar deteriorated. Gold itself could no longer meet the needs of liquidity for expanding international trade, but relying on a national currency tied to gold was not a sustainable solution either.

The de-linking of gold from the US dollar in March 1968 was the first stage in the final demonetisation of gold. The fiction of a fixed price for gold had been sustained since 1960 by the Gold Pool; a collective agreement among leading central banks to support the market price of gold in London at the official price (Toniolo and Clement 2005, pp. 375-81; on the 1968 crisis see Schenk 2010, pp. 183-5). From 1966, sales of gold by G10 central banks to depress the dollar price led to a reduction in the volume of gold held as reserve assets. The amount of gold held by Advanced Economies in their reserves fell by 14% from the end of 1965 to May 1968. As shown in Figure 3, this reversed a global trend of accumulations of

gold in national foreign reserves over the previous ten years. Figure 3 also emphasizes the long term decline in the amount of gold held in official reserves that only began to be reversed in 2008.

Insert Figure 3

After the devaluation of the secondary global reserve asset (sterling) in November 1967, speculation against the dollar price of gold increased the cost of the Gold Pool's operations. In the following three months, the Gold Pool lost $3 billion in gold and the London gold market was finally suspended on 15 March 1968 to stem the flow (Bordo 2005, p. 470). When gold markets re-opened two weeks later central banks pledged to trade at the official price of $35/oz while the private market price was allowed to float. The London market suffered from the closure, since the Zurich market took the opportunity to lure away South African producers by offering $40 per ounce. Switzerland became the largest entrepot for new gold, averaging about two thirds of the world's new gold supply from 1968-1990 (O'Callaghan 1993, pp. 19-20).

The expensive Gold Crisis of 1968 exposed a fundamental flaw in the use of a natural commodity as a reserve asset. Commodity prices are exceptionally difficult for governments to control when they don't have the market power to intervene effectively. In the case of gold, the amount traded outside the global central banking system made it impossible to control the price. As part of the Nixon Shock of August 1971 the convertibility of gold through the Fed at the official price was finally ended. Figure 3 shows that while advanced economies subsequently reduced their gold reserves to about 900 million ounces, other countries began to accumulate gold, so that there was a flow back into global official

reserves of about 54 million ounces during the inflationary 1970s. This trend was renewed with the onset of the global financial crisis in September 2008, as will be discussed below.

Once the pegged exchange rate system was de facto abandoned from March 1973, gold should have been a more attractive reserve asset, particularly since the dollar was depreciating. At the same time, however, the demand for foreign reserves decreased with the new floating regime. From October 1973, with the onset of the OPEC oil crisis, the value of the dollar recovered and national demand for the currency increased, partly because the oil trade was primarily denominated in dollars. Figure 4 shows that the dollar price of gold and of crude oil move remarkably closely together as commodity prices (correlation coefficient of 0.88 for 1960-2010). This emphasises the role of gold as a traded commodity and that the demand for gold rises in times of inflationary expectations (expectation of depreciating purchasing power of currencies) or commodity price instability. It is also clear that what goes up comes down; the dramatic oil and gold spike of 1979-80 was not sustained. Moreover, from 2002, representation of the value of gold was exaggerated by the effective depreciation of the dollar. This raises the question of whether the dollar price of gold is the best measure, unless the only alternative assets under consideration are the dollar and gold.

FIGURE 4

Figure 5 compares the price of gold denominated in SDR (a weighted basket of the value of USD, Euro, Yen and Sterling in USD) with the USD price. While the numeraire makes little difference in earlier years, the depreciation of the dollar in the 2000s meant that the USD price was 50% above the SDR value on average from 2005-2010.[2] However, this also shows that gold can be an effective hedge against the depreciation of the dollar.

FIGURE 5

After the end of the Gold Pool in 1968 the advanced economies moved deliberately toward the demonetisation of gold. The price volatility (and cost to the Gold Pool) as well as political factors related to the sources of gold were both important factors. South Africa and the USSR together produced 80% of the world's new gold output at the height of Apartheid and the Cold War in the 1960s and 1970s.[3] Increasing the prominence of gold would disproportionately benefit these states that were excluded from international economic relations with the West for political reasons. More fundamental, however, was the process of on-going reform of the international monetary system in an effort to develop a deliberately managed and neutral international reserve asset. In 1967 these discussions culminated in the Special Drawing Right to try to replace gold and dollars with a neutral global reserve asset, but a lack of consensus limited its use (For details see Schenk 2010, pp. 241-272 and de Vries 1976). By the mid-1970s these issues were complicated by global imbalances arising from the 1973 oil crisis and by a growing awareness of the persistent inequality between rich and poor economies.

Through the 1970s the amount of gold held in the reserves of advanced economies declined due to deliberate investment policies and due to the structure of the IMF, which required payment in gold. For example, Figure 6 shows the decline in the Bank of England's gold holdings. This arose from sales to protect the sterling exchange rate (most visible in the months leading up to the 1967 devaluation), from gold swap transactions with the BIS and from payments of charges, interest and quota supplements to the IMF. When gold prices are low or falling, alternative financial assets that generate interest income become more attractive components of a portfolio. Over the 12 months from October 1970 the

Comment [SB1]: If you could replace partly by a synonym.

Bank of England sold over 19 million ounces of gold, reducing the amount of gold in the reserves by 47%. This episode marked the largest divestment of British reserves away from gold until the sales by Chancellor of the Exchequer Gordon Brown from mid-1999. The sales in 1970-71 came at a low point in the gold price, which subsequently rose from $42.5/oz in October 1971 to $65/oz a year later. Similarly, the sales from July 1999 to March 2002 took place at an average monthly price of $277/oz whereas the following three years the price averaged $376/oz. Picking the right time for portfolio changes is clearly challenging.

FIGURE 6

The IMF accumulated gold from member countries in the form of charges and interest on loans and subscriptions due to increases in quota (25% of which had to be paid in gold). In February 1970 quotas were increased by 35.4% across the board, rising a further 33.6% in March 1976. By 1976 the IMF had accumulated about 150 million ounces of gold (equivalent to 55% of the USA's holdings, then the largest national holding) and it was agreed that the IMF should divest itself of one third of its gold, bringing its holdings to about 100 million oz. Half of this was sold 'cheaply' at SDR35/oz to member countries in line with their quota allocation. The other half was sold at market prices to create a Trust Fund to support developing economies through the impact of the oil price shock. As part of the second amendment to the Articles of Agreement in April 1978, any further gold sales required 85% approval from the members of the IMF. The IMF's gold continued to be controversial; countries with large quotas wanted it to be used for further 'restitution' (i.e. sold to them cheaply) while developing countries wanted it used to support development and eliminate poverty. With a large majority required to sell gold, there emerged a stalemate through the 1980s. In 1999 a further 14 million ounces was sold to support the

Heavily Indebted Poor Countries initiative and in 1999-2000 sales of a further 13 million ounces were authorised. In March 2011 the IMF still held 90.5 million ounces of gold (then equivalent to 35% of the US holdings).

The Second Amendment to the Articles of Agreement of the IMF in 1978 finally eliminated gold as the basic numeraire of the international monetary system. The SDR was valued against a basket of currencies instead of a weight of gold, the IMF no longer required payment in gold, central banks could trade in gold at market prices (the official price was abandoned). One third of the IMF's gold was to be sold off, but the Fund was not to influence or set the market price. Finally, members pledged to develop the SDR as the primary international reserve asset. The reasons for the demonetisation of gold in the 1970s can be summarised as follows. First, the floating exchange rate regime reduced the need for owned foreign exchange reserves to be held by central banks and they reduced these assets. Secondly, gold was considered an inadequate unit of account or numeraire because the price was volatile and unable to be influenced by central monetary institutions. The market price of gold is closely linked to commodity prices, in particular oil, and is a hedge against inflation (depreciation of national currencies) so demand rises (and price rises) in times of insecurity/instability. Thirdly, there were two decades of on-going efforts to develop a neutral international reserve asset that were rekindled by the 1978 Second Amendment of the Articles of Agreement, which asserted a commitment to enhance the role of the SDR as the primary international reserve asset. All the requirements of the Second Amendment were achieved, except for the last. The dollar continued as the main international reserve asset despite variations in its value and the system functioned adequately without an enhanced role for the SDR until the emergence of global imbalances

in the 2000s. Partly this was due to the decline in the importance of national reserves in the context of floating. Additionally, no consensus was possible about how to mobilise the SDR into a more useful reserve asset that could come to rival the dollar in terms of network externalities and liquidity (Chatham House 2010). Almost immediately, pressure to remonetise gold entered the US political debate.

At the peak of the inflationary pressures of the second oil crisis of 1979-80 members of the US Republican party called for a reassessment of the role of gold in the US and international monetary system. The main protagonists were Congressman Ron Paul in the House of Representatives and Jesse Helms in the Senate who sought to use a return to a gold standard to exert discipline on monetary policy (Schwartz 1987, pp. 317-332). The Gold Commission was convened in July 1981 but the pro-gold members were outnumbered and the majority report rejected a return to a fixed gold price for the dollar, although the door was open for the Federal Reserve Board to undertake further study of the possibility. Since this would undermine Fed autonomy, the governors of the Federal Reserve Board were opposed. A more substantive recommendation was that the US Treasury should be able to mint gold coins, although these would not be legal tender and would not have a fixed dollar value. After a hiatus of fifty years, the first $10 gold coins were minted for the 1984 Los Angeles Olympics, but they did not circulate as money and demand was related to investment rather than transactions (trading at many times their face value, with quotes of $1700 in 2012). This effort to remonetise gold failed in its aims, although the arguments for and against were successfully brought to public attention through the hearings and the publication of the report (with a substantive pro-gold minority report) in March 1982.[4]

With the depreciation of the US dollar from 2002, the dollar price of gold rose steadily, emphasising its role as a hedge against exchange rate disturbances. This was compounded by the 2008 global financial crisis, which prompted the identification of gold as a safe haven to protect against declining returns on other assets and a hedge against inflationary pressure given the enormous monetary easing that most central banks used to ameliorate the effects of the crisis. The resulting surge in the gold price and increased activity in the gold market led to fresh interest in the monetary role of gold as an anchor to restrain inflation. During the US presidential campaign of 2012 Ron Paul (then a presidential candidate) renewed his call for a return to the gold standard as a way to restrain monetary expansion in the USA. With the persistence of slow growth and moderate inflation in the USA despite continued recourse to monetary expansion to promote recovery, the prospects for a return to gold receded after the victory of Democrat President Barack Obama in November 2012. The main problems with gold as a monetary anchor identified in the interwar period, such as price volatility and constrained supply, persist (for a critique of a return to gold see, Chatham House 2012). Figure 7 shows that gold is a very small proportion of global reserves in real terms, although the rise in the price of gold has increased its share in nominal terms. The most likely outcome is that gold will play a moderately more important role as part of portfolio diversification at a time of uncertainty about the value of the main reserve currencies, as happened during the inflationary environment of the 1970s.

FIGURE 7

The International Gold Market

While the monetary role of gold was gradually reduced, its role as a traded commodity has been retained. In periods of uncertainty associated with wars and economic crisis, gold seemed to retain an intrinsic and resilient value for investors. This was particularly the case in the post-1945 period as states dramatically increased the issue of paper currency to fund their war efforts and to support economic growth, leading to internal and external depreciation. The increase in fiat money emphasized gold's scarcity and sustained its attractions as a store of value. As fiat currencies depreciated, relatively small amounts of gold could be used to transfer large values and retain purchasing power. On the other hand, the drawback of gold as a means of exchange also became clear. The supply was constrained and capricious: depending on discovery and affected by political barriers. The Cold War interrupted global access to the large supplies in the Soviet Union, for example. Later, the international sanctions against Apartheid South Africa complicated the flow of gold from the rich mines of Witwatersrand. The value of gold in terms of national currencies increased, making gold coins even less useful for day-to-day transactions. As the means of exchange use of gold receded, the store of value function increased in importance. In the 1970s and 1980s new technologies also came to rely on gold for industrial production, particularly electronics, because of its high conductivity and malleability. It is particularly important for the semiconductors that drove the retail explosion of information technology and telecommunications in the 1980s and 1990s. Dentistry is a final category of persistent demand, particularly in Japan and USA, which together accounted for about half of global demand for dental gold by the late 1990s.

Switzerland's bullion market is located in Zurich, organised through three banks (UBS, Credit Suisse and Swiss Bank Corporation) which were able to capture the supply of South

African and Soviet Union producers through offering competitive prices and ancillary banking facilities as well as secrecy for its customers (O'Callaghan 1993, pp. 19-20). London, however, continued to fix the benchmark international gold price twice daily at 10:30am and 15:00 pm (to meet the needs of European and US markets) , and trading persisted in loco London transactions so that the London market was remained the largest over the counter market in the world. In 1987 the London Bullion Market Association was formed with 52 members to trade in gold. The market clearing was cumbersome, taking place by telephone and fax. In 2001 the LBMA agreed that the clearing members of the association should establish a separate entity to consolidate electronic clearing and the London Precious Metals Clearing Ltd (LPMCL) was formed in 2001 with eight members. Of the original group, two withdrew from precious metals dealing in the London market and resigned from the company: Credit Suisse First Boston International in October 2001 and NM Rothschilds & Sons Ltd in June 2004. Barclays Bank became a member of LPMCL in September 2005 and opened its own gold vault in London in mid-2012.[5] The withdrawal of Rothschilds resulted from a restructuring of the company and a fall in the income deriving from commodity trading. Nevertheless, this marked the end of an era in which Rothschilds had led the gold fixing in London since its inception in 1919. The daily gold fixing moved from the Rothschild's London office to a telephone conference call amongst the five market making members of the LBMA.[6] In 2012 LPMCL recorded 2500-3000 transfers per day compared with 1000-1500 in 1996, however the number of ounces transferred fell from 30-40 million per day in 1996 to about 20 million ounces from 2007-2012 when the price surged as mining companies reduced their hedging.[7] While London hosts the world's main OTC market, Switzerland records larger physical gold flows across its borders. Figure 8 shows the flow of gold through London and Switzerland. Substantial stocks were

accumulated in the UK in the early 1960s and subsequently run down later in the decade. Conversely, Switzerland became the primary storage centre for gold from the late 1960s, steadily accumulating stocks of gold until by 1990 they amounted to 3.4 billion tons.

Insert Figure 8

But the bullion sector is just one part of the market. Figure 9 shows the geographical distribution of gold sales for the twenty years from 1992-2011. The largest single market is clearly India and this has been the case for most of the post-war period. While the USA also has an important position in the market, it has a smaller presence relative to its per capita GDP than other countries such as Saudi Arabia, China and other Middle Eastern states. The gold market is one commodity market in which lower income consumers in developing and emerging markets have tended to dominate. This can be explained by the importance of gold to the cultural and social lives of these nations and also to the limited range of alternative savings and investment opportunities for lower income populations.

Insert Figure 9

The sources of supply to the gold market are more stable than the demand. New mine production accounted for about 70% of gold supply in the 1990s, although a proportion of that total was held back by producers in anticipation of rising prices. One quarter to one third of the market is gold that has been melted down and sold for cash, particularly in relatively low income countries such as China, India and Southeast Asia. Once again, this emphasizes the importance of developing country populations in the global gold market.

Insert Figure 10

Figure 10 shows the demand for gold by use from 1950-1980, which clearly reveals the overwhelming importance of the jewellery industry. From 1968, when the separate data are available, the jewellery demand is fairly equally divided between developed and

developing economies. The demand in India and other developing countries was particularly important for this part of the market and it was affected by rural incomes and rates of marriages, at which gold was traditionally exchanged. In the run up to the March 1968 gold crisis there was a surge in private demand for bullion, which was drawn out of the central banks of the Gold Pool as they sought to protect the market price. Figure 11 shows that from 1997-2007 the jewellery trade amounted to an average of 83% of global market demand, but this fell to 56% in 2008 and to 43% in 2011 as investors surged into the rising market. The rising price of gold during the global financial crisis encouraged more retail investment in bars and coins (which reached one third of the market in 2011) but also led to an absolute decline in the amount of gold entering the jewellery trade because it became too expensive for its rural low income consumers.

Insert Figure 11

In addition to the physical market, the liberalisation of gold trading after demonetisation resulted in financial innovation and Gold derivative products began to be traded globally. The New York commodity exchange (COMEX) launched gold futures contracts at the end of 1974 (as soon as legislation permitted American residents to trade in gold) and futures options were introduced in 1982. By 1991 6.8 million futures contracts and 1.4 million options contracts were traded in multiples of 100 ounces per contract. New York dominated the market (O'Callaghan 1993, p. 29).[8] By the end of 2012, the volume of gold futures contracts in New York was over 200,000 per day and for options over 42,000 per day.[9] From 2003, retail investors had a new way to invest in gold when the first gold exchange trade fund (ETF) was launched in Australia. The ETF market expanded quickly and includes companies that trade units in mutual funds that hold physical gold on international

stock exchanges. The market allows easier and smaller amounts of retail gold trading. In 2009 ETFs and similar products absorbed 17% of the demand for gold. Another important feature of Figure 11 is that the official sector (mainly central banks) were net sellers in the market until 2010. As the price rose sharply some emerging market countries then began to accumulate larger gold reserves to hedge against the risks in the purchasing power of the US dollar. By diversifying their portfolios, central banks hoped to insulate themselves from exchange rate instability in the wake of the global financial crisis. Clearly, the recent economic instability has had a profound effect on the global gold market.

Conclusions

This chapter has examined the long term developments in the global gold market that shifted gold from a central to a peripheral place in the international monetary system by the late 20th century. Speculative demand for gold has been heightened in times of political and monetary instability when it has been a hedge against inflation and a safe haven from fluctuating returns on other assets. The global financial crisis of 2008 renewed interest in gold both as a speculative investment and as a longer term element in a diversified portfolio of assets. However, calls for the remonetisation of gold to exert greater discipline on national monetary authorities have generally fallen on unresponsive ground because of the transformation in national monetary systems and the greater responsibilities of governments for their population's welfare since the time of the classic gold standard. The interwar gold standard and the post-war Bretton Woods period showed that a gold anchor is not flexible enough to meet the needs of modern governments with greater discretionary spending powers and responsibilities in a more complex international economic and financial environment. Rather than marking an end to gold's global role, the

demonetisation in the 1970s and the end of restrictions on trading allowed the innovation of financial products linked to gold in the 1970s (e.g. futures and options), which supplemented the physical commodity market. The enduring fascination with gold ensures that it will continue to play a prominent role in saving, hedging and cultural exchange that is enhanced rather than diminished by the poor prospects for a return to the classic gold standard.

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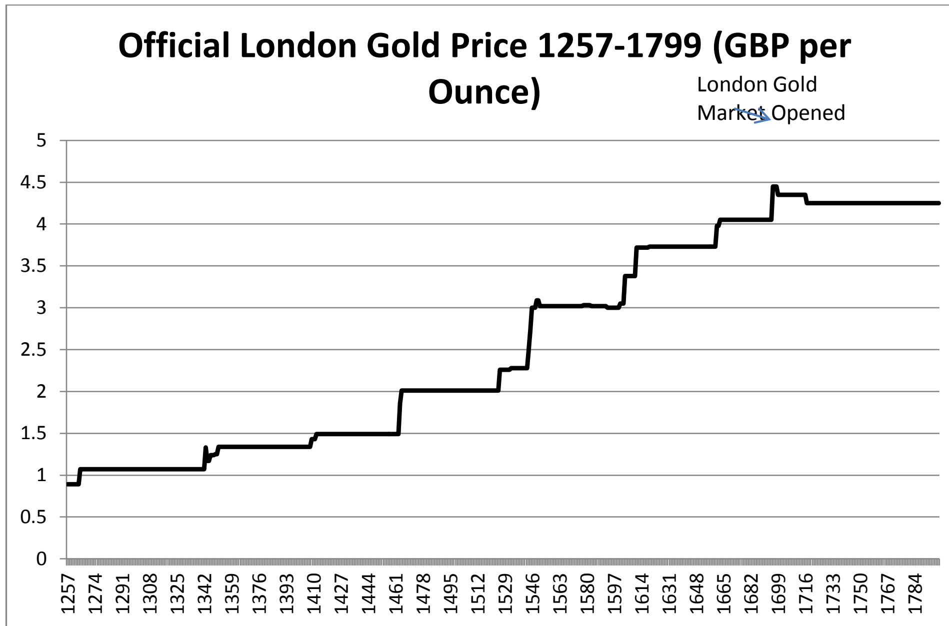
Figure 1



Source: Lawrence H. Officer and Samuel H. Williamson, "The Price of Gold, 1257-2011," MeasuringWorth, 2011

Figure 2

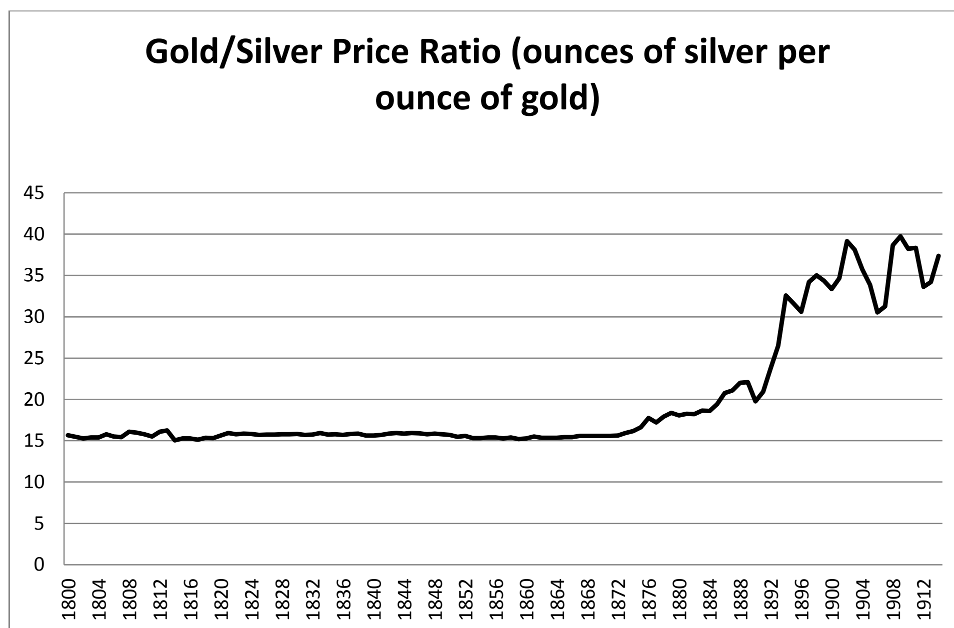


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Figure 3

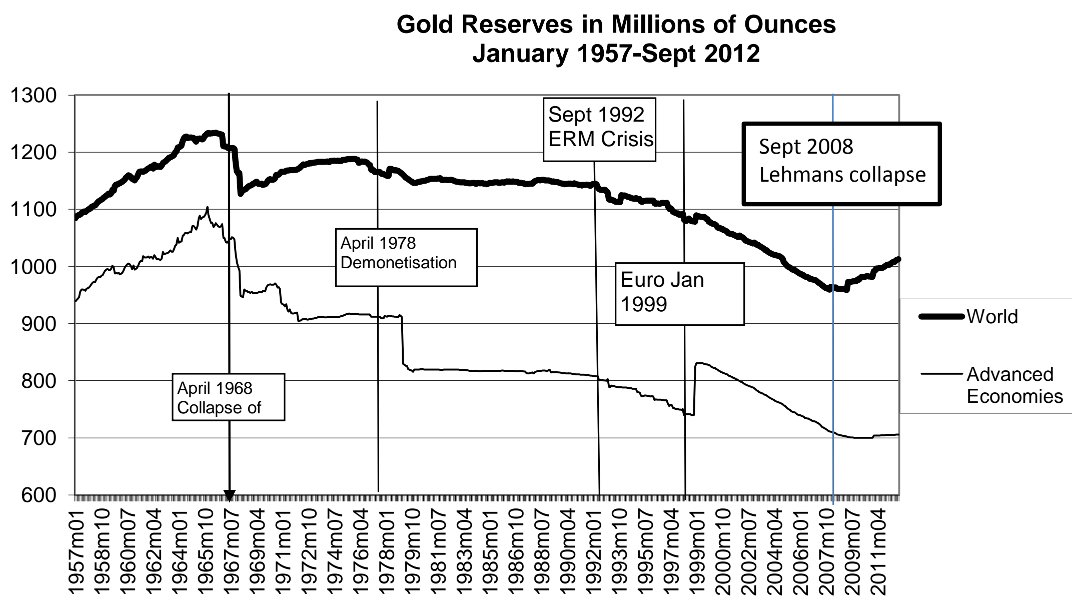

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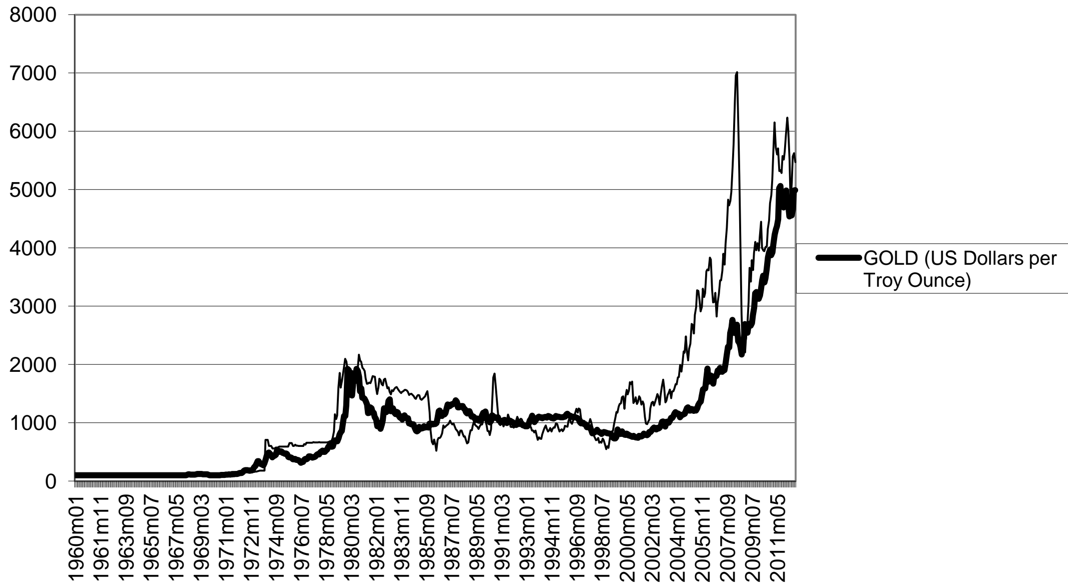
Figure 4



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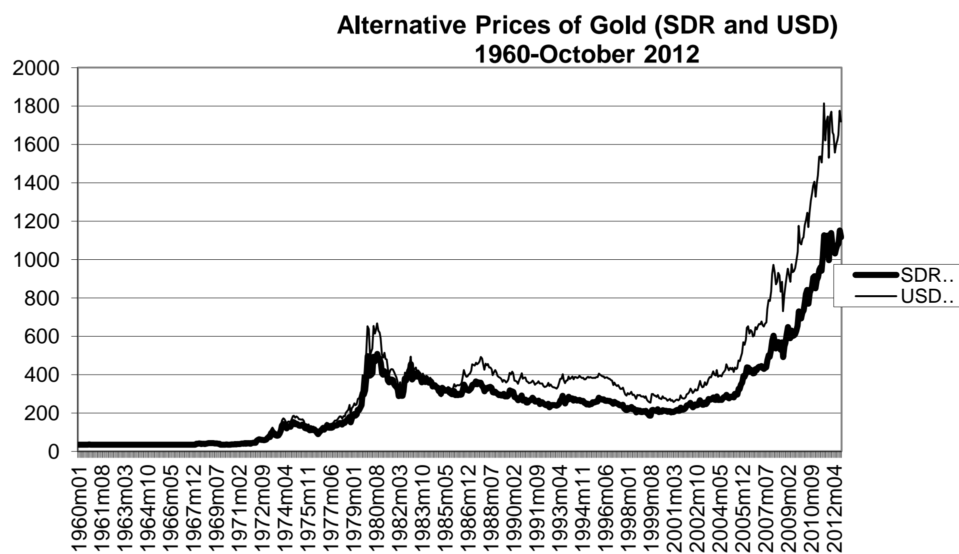

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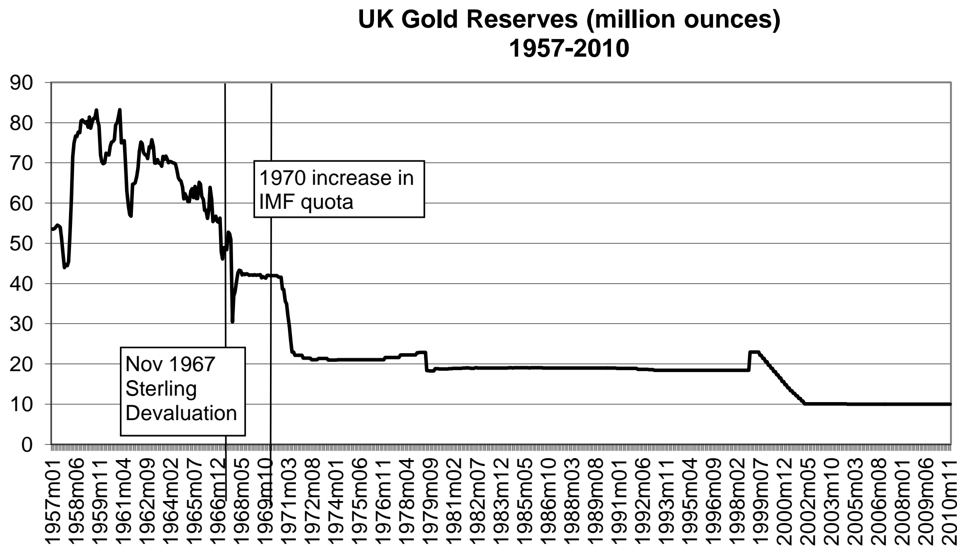

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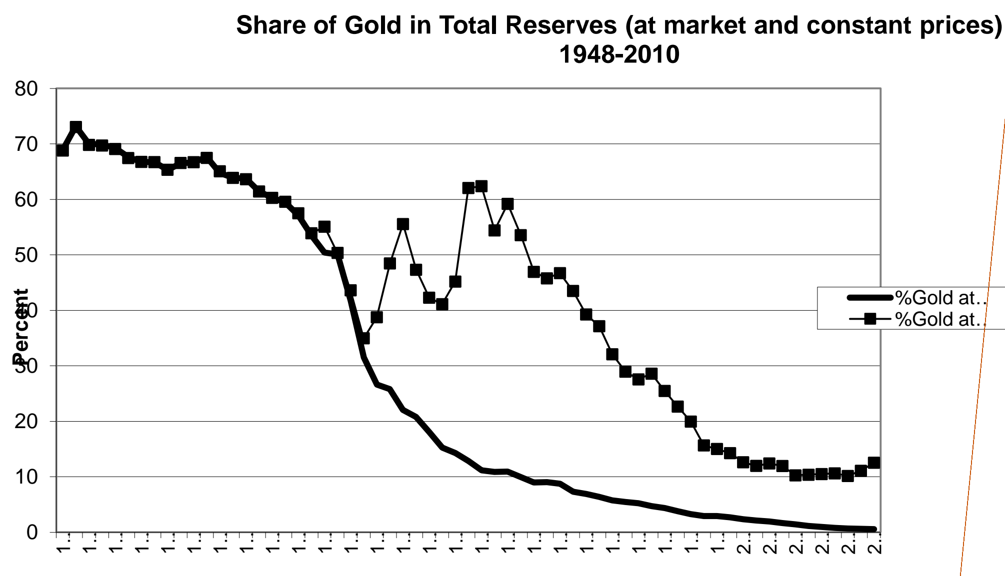

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Source: IMF, *International Financial Statistics*

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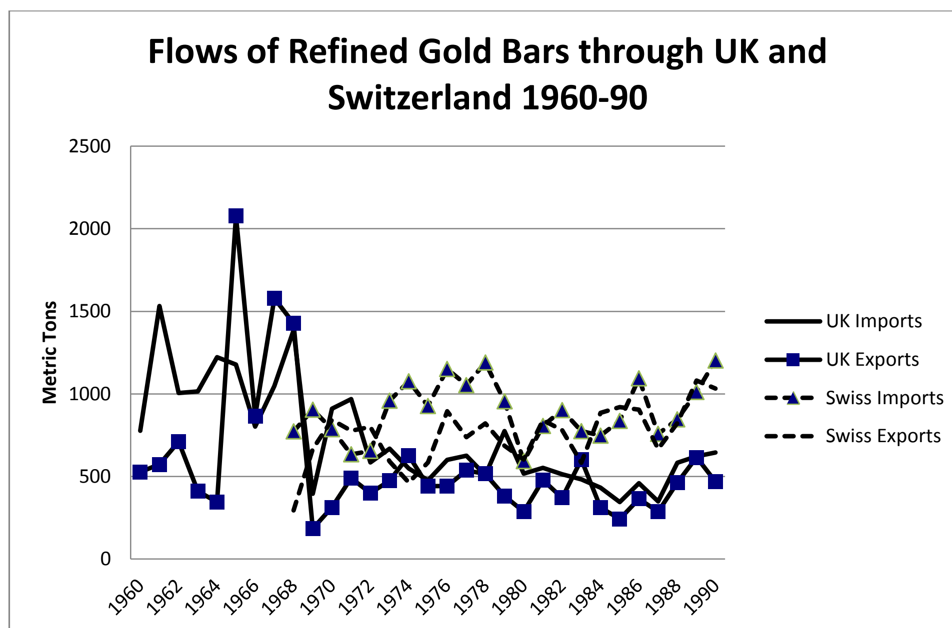
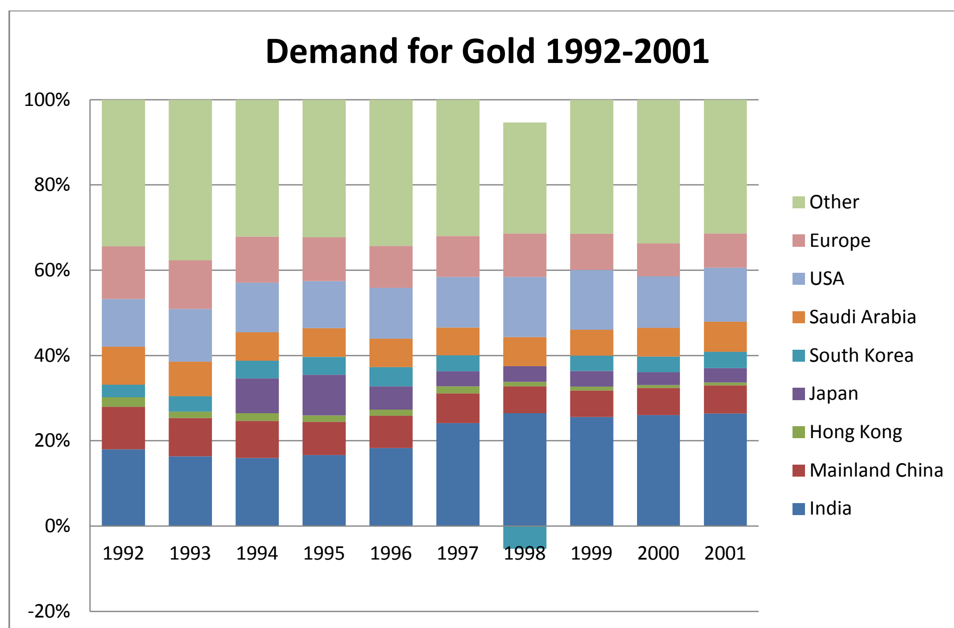


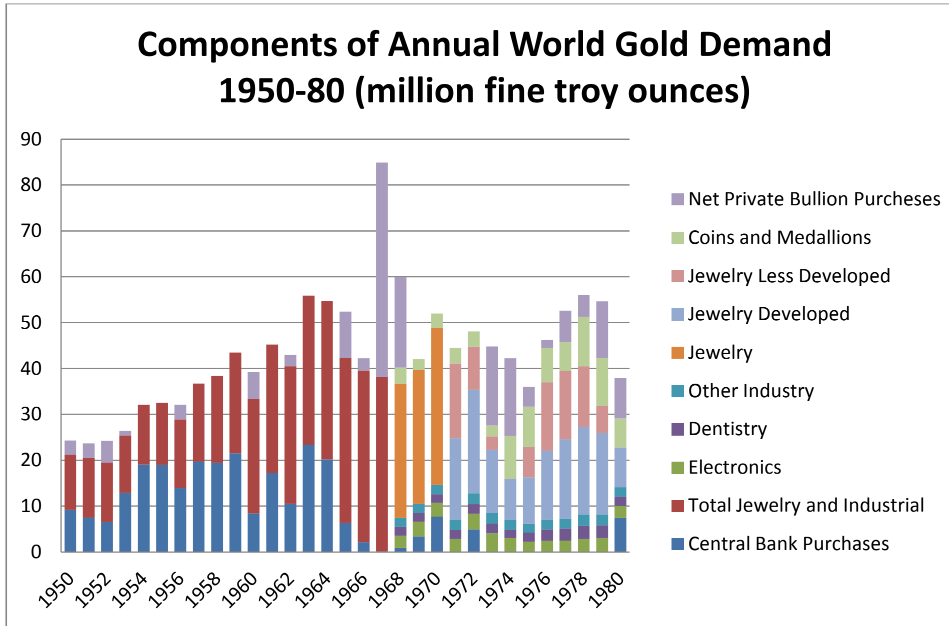
Source: G. O'Callaghan, *The Structure and Operation of the World Gold Market,* International Monetary Fund, Washington, 1993.

Figure 9



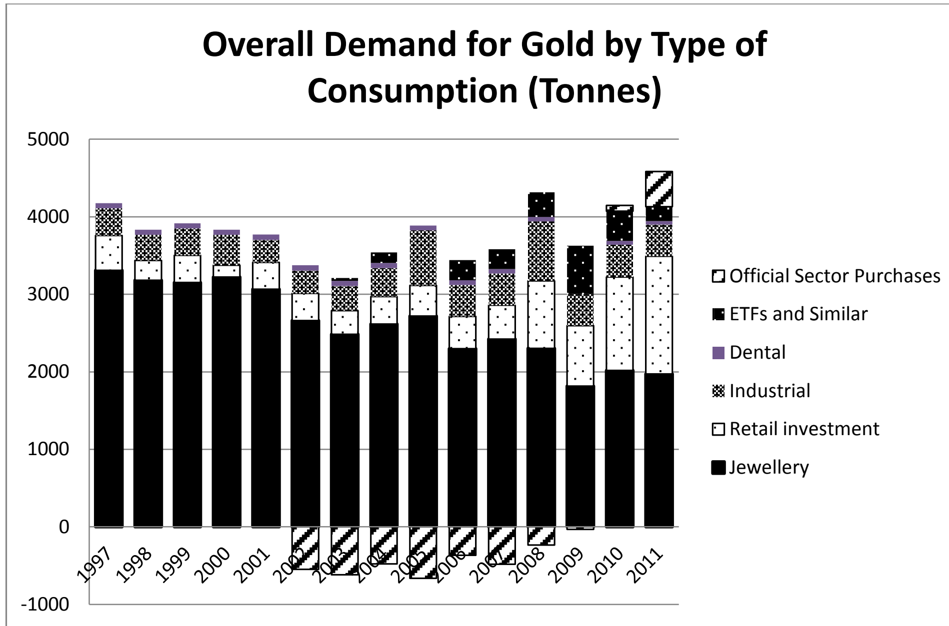
Source: World Gold Council*, Gold Demand Trends*, various issues, http://www.gold.org/investment/research/regular_reports/gold_demand_trends/ accessed 17 January 2013

Figure 10



Source: Report to the Congress of the Commission on the Role of Gold in the Domestic and International Monetary systems, March 1982, p. 210.

Figure 11



Source: *Gold Demand Trends*, various issues, http://www.gold.org/investment/research/regular_reports/gold_demand_trends/ accessed 17 January 2013

[1] World Gold Council, http://www.gold.org/about_gold/story_of_gold/heritage/ (accessed 17 October 2012).

[2] In 2011 the valuation of the SDR was based 37.4% on the Euro, 9.4% Yen, 11.3% sterling, 41.9% USD based on share of the currencies in world exports of goods and services and international reserves.

[3] Report to Congress of the Commission on the Role of Gold in the Domestic and International Monetary Systems, Volumes 1 and 2, March 1982, p. 192. http://fraser.stlouisfed.org/docs/meltzer/schsta82.pdf accessed 8 January 2013., p. 192.

[4] Report to Congress of the Commission on the Role of Gold in the Domestic and International Monetary Systems, Volumes 1 and 2, March 1982, http://fraser.stlouisfed.org/docs/meltzer/schsta82.pdf accessed 8 January 2013.

[5] In 2012 six members offered clearing services through London Precious Metals Clearing Ltd. They include Barclays Bank, Bank of Nova Scotia-ScotiaMocatta, Deutsche Bank AG – London Branch, HSBC Bank USA National Association – London Branch, JPMorgan Chase Bank, UBS AG.

[6] The Market Making members of LBMA in 2012 were Bank of Nova Scotia-ScotiaMocatta, Barclays Bank, Deutsche Bank, HSBC Bank USA and Societe Generale.

[7] LBMA website. http://www.lbma.org.uk/pages/index.cfm?page_id=50&title=clearing_-_statistical_table accessed 17 January 2013.

[8] Futures markets also operated in Tokyo and Sao Paulo.

[9] *CME Monthly Metals Review*, November 2012. http://www.cmegroup.com/trading/metals/files/momu-2012-11.pdf accessed 7 January 2013.