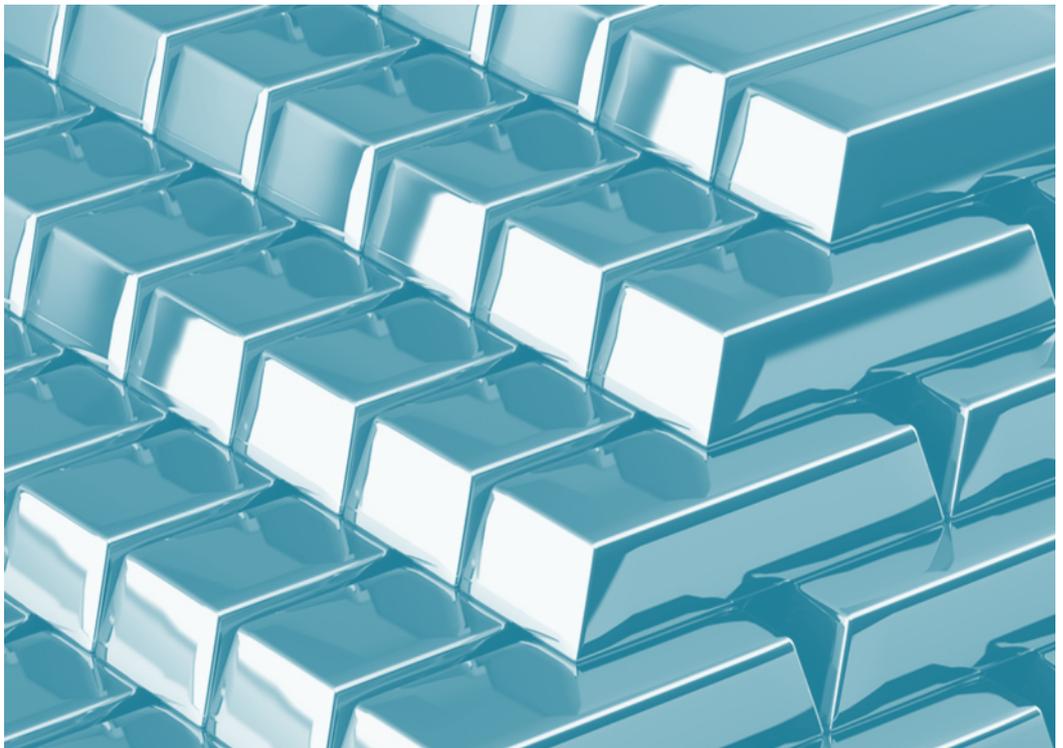




PHILO CAPITAL ADVISERS

“GOOD AS GOLD”



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Good as gold?

It seems gold fever is everywhere. Newspapers, magazines, TV, radio and the internet are full of stories about how gold is going to go to \$2,000 or \$3,000 and even \$5,000 per ounce and so you'd better not miss out! Gold buying shops are springing up in suburban shopping centres everywhere, and there are even ATMs that dispense gold bars on the streets of Europe.

In this paper we will attempt to answer some of the big questions about gold:

- Is it the ultimate safe haven?
- Is it an inflation hedge?
- Is it a store of wealth?
- Is it the ultimate "risk-free asset"?
- Should it be part of long term investment portfolios?
- Will there be a return to the "gold standard"?
- Is it a speculative bet?
- Or is it an historical relic with no relevance in today's modern world?

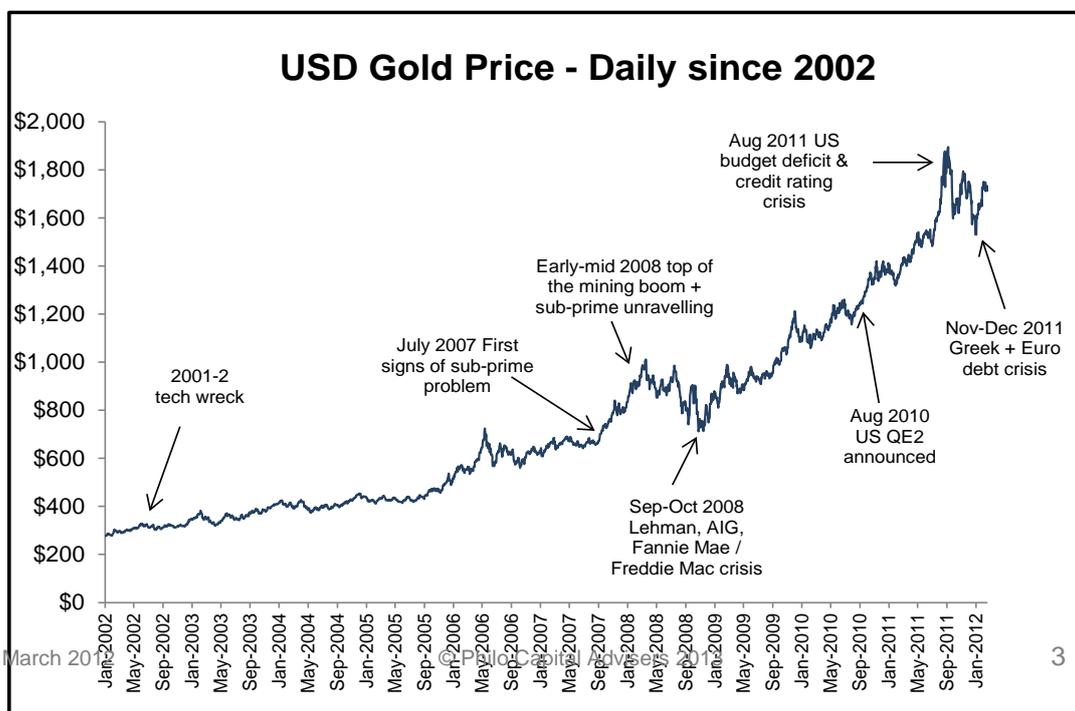
Most of the time it is hard to get people interested in buying gold as an investment, so why the recent frenzy? Gold is cumbersome to carry around, it is expensive to buy & sell, difficult to exchange for goods and services, hard to divide up, it pays no income, offers little or no long term real growth potential, it is expensive to store and insure, and it is a magnet for burglars.

What then is behind the sudden attraction for gold?

The current gold boom

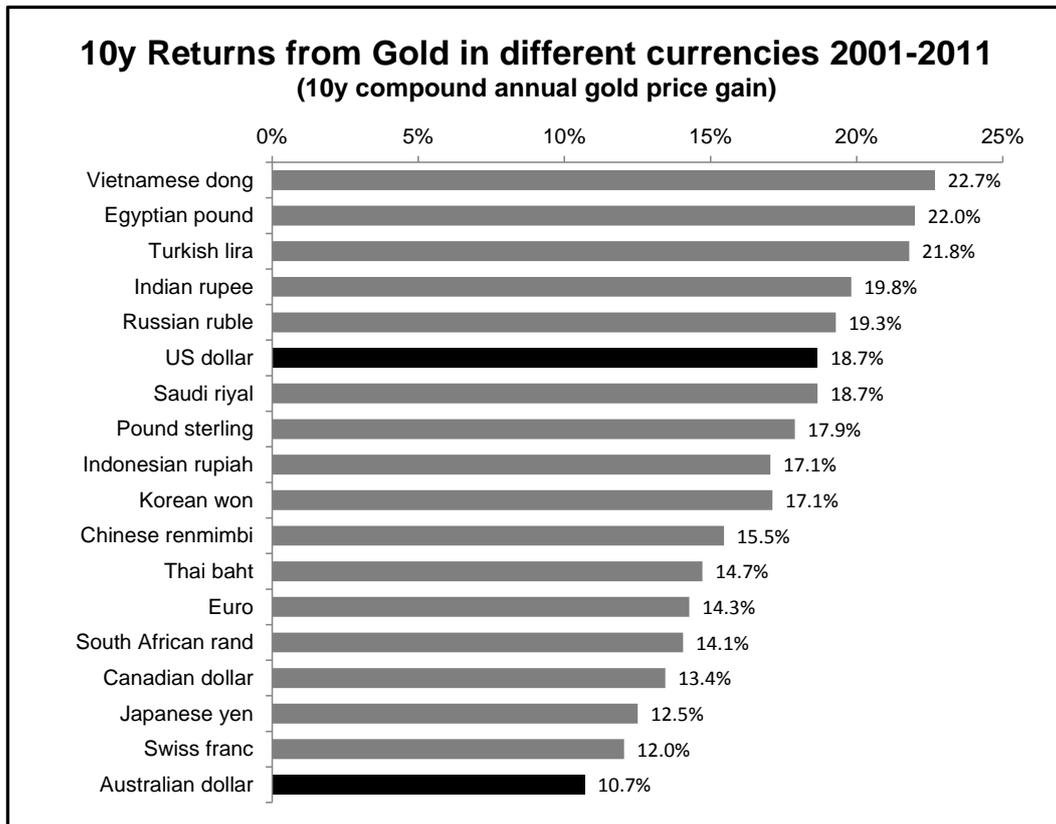
Without doubt the interest is fuelled by charts like this, which shows the US dollar gold price over the past 10 years:

Over the past 10 years gold has beaten just about every other asset class, including shares, property and even bonds, in almost every country in the world, including Australia.



Gold and the currency effect

The above chart disguises some important factors – the first is currency. The above chart is the gold price in US dollars because that is the most common way it is reported (and because the US is the largest holder of gold). However if we look at the gold price rise in different currencies we see another side to the story. The next chart is the compound annual rise in the gold price expressed in a range of currencies, over the 10 years to the end of December 2011:



This shows that the extent of the gold price increases over the past 10 years have been lower in terms of most other currencies than it has been in US dollars. The reason is that over the past 10 years the US dollar has declined against all the other major currencies in the world, especially against the Swiss Franc, the Japanese yen, the Euro (yes even the Euro has been stronger than the US dollar), and the pound sterling.

In the wake of the “tech-wreck” following the dot-com boom, the ultra-low interest rates in the US under Alan Greenspan fuelled price inflation and asset bubbles which, together with the massive build-up of budget deficits, current account deficits and debt levels across the US economy, has devalued the US dollar from its once-vaunted status. This was the case even before the US “money printing” episodes in the past couple of years. In past cycles, periods of negative real interest rates have generally been followed by rises in the gold price, and this was the case again in the US the early 2000s.

Over this 10 year period the Australian dollar has been strongest the currency, but this effect is largely a function of timing - because 2001 happens to be when the Australian dollar was near its weakest point – when it bought only 50 US cents per Australian dollar. Since then the Australian dollar has more than doubled against the US dollar, but most of that has been due to the US dollar itself weakening against all major currencies.

The real story of the 2000s decade was the deterioration of the US dollar, not the rise of gold per se, nor the rise of the Australian dollar. Over the period the US dollar fell against all major currencies while the Australian dollar rose, driven by rising commodities prices and rising mining investment in Australia, both as a result of the rapid rise of demand from China, and also by our relatively high interest rates.

All of this means that the gold price rise in Australian dollar terms has been good but not nearly as spectacular as the gold price rise in US dollar terms. Thus, the gold story is all about currencies.

Currency is important for two reasons. The first is that when looking at buy anything, it is critical to consider what currency the particular investor is going to use to buy it with, because that will have a large bearing on the return achieved for that investor.

The second reason for raising currency here is that gold is a currency in itself. Many would argue that gold is the ultimate currency against which all other currencies are measured. This is true to some extent, and certainly since the later part of the 19th century when gold progressively replaced silver as the main metallic basis for currencies, and it is also just as true today when no country in the world has a currency backed by gold, silver or any other hard asset of any kind.

In today's world of paper currencies, gold is a useful way of measuring the value of different assets including paper currencies. Don't think of the gold price as a measure of the value of gold in say US dollars or Australian dollars. Instead, think of the gold price being a measure of the value of a currency like an US dollar or an Australian dollar. Gold is a hard asset (as is silver, oil, copper, etc), and it is a currency for measuring the value of other things like dollars.

For example, most people say that oil prices rose dramatically in the 1970s (from \$3.35 per barrel at the start of the 1970s to over \$10 in the 1973 Yom Kippur crisis and then spiking to almost \$40 per barrel in the 1979 Iranian crisis), but this is true only if you measure oil prices in terms of US dollars (or pounds or yen, etc).

That is looking at it the wrong way around. In reality the oil price actually fell during the 1970s when measured in a hard currency like gold. What really happened in the 1970s was that the US dollar collapsed from being worth 1/35th of an ounce of gold at the start of the 1970s to being worth just 1/850th of an ounce of gold in January 1980. The real value of gold remained constant, and oil (relative to gold) actually fell during the 1970s, but it was the collapsing US dollar that lost 96% of its value in the 1970s.

Real assets

The real assets and real currencies have relatively stable values – gold is gold, oil is oil, wheat is wheat, etc but paper currencies are just pieces of paper (or plastic these days in many countries), and the value of paper currencies fluctuate quite significantly, depending how much paper people think it will take to buy real assets from time to time.

For example, the value of a bag of wheat is the fact that it can feed a family for a week, and that it can also be exchanged for many other types of foods that can feed a family. The value of a bucket of coal is that it can heat a house for several days in winter. The value of a litre of oil is that it can produce enough petrol to drive an average car about 10 km. The value of a sandwich is that it will keep me from being hungry for a few hours. The value of each of these

real items is pretty much constant but what fluctuates is the amount of paper currency that it takes to buy these real assets from time to time.

Gold is a little different from other commodities. It has no real uses of its own (it looks nice as jewellery but so does gold plated jewellery and good fakes). The value of gold is that it is readily exchangeable for virtually any other real asset and that this has been recognized and honoured universally for thousands of years by almost all societies on earth.

Gold and inflation

Gold is thus a currency for measuring other currencies and other items, and the concept of currencies cannot be separated from the concept of inflation. We cannot consider gold without considering currencies and inflation as they are all intertwined.

Inflation is by definition the increase (or decrease in the case of deflation) in the quantity of a currency that it takes to buy a particular item or group of items. Most people see inflation as the rise in the price of an item, but it helps to think of it in the reverse. The real value of the item to humans is relatively constant – what changes is the amount of a currency that it takes to buy the item from time to time. In that sense, inflation is the deterioration in the value of the currency that is used to buy things.

Since the 1970s, the paper currencies of the world are no longer backed by hard assets like gold, so gold is increasingly used as a measure of value and as a store of real wealth to protect against the rapid increase in the supply of paper money printed by governments and created by banks.

What is gold and how much is there?

About 170,000 tonnes of gold have been mined in all of human history on earth. Although gold has been mined systematically for at least the past 2,500 years, about 96% of all the gold ever produced has been mined since 1850, when the “gold rushes” in California and Victoria dramatically increased production. In total, South Africa has been by far the biggest source of gold, but over the past couple of years China has become the biggest producer, with Australia now producing about 10% of global production each year.

If all the gold ever mined in all of human history was put into a single solid block of gold it would form a cube measuring about 20.6 metres on each side, or about the size of a 5 storey building with the length and depth of a cricket pitch on each side. The 5 storey building of solid gold would be worth around \$10 trillion US dollars at today's gold price of \$1,770 per ounce (end of February 2012).

1 metric tonne of gold is approximately 32,151 troy ounces, with a troy ounce weighing about 31.1 grams. One metric tonne of gold would form a solid cube approximately 375mm (or about 15 inches) on each side, or about the size of a carry-on bag or a backpack. So, one carry-on bag of gold (1 tonne) would be worth about \$56 million US at today's gold price. (Gold is around 70% heavier than lead and more than three times as heavy as silver).

Around 85% to 90% of all the gold ever mined in all of human history is still in existence today in readily accessible form. It is held in the form of gold bars in central bank vaults, bars and coins held by private investors, jewellery, and in recoverable industrial applications (mainly in electronic wiring and in people's teeth). The other 10-15% has been “lost” – it is mainly in

unrecoverable industrial uses, where the cost of recovery exceeds its value, and in the teeth of humans buried long ago.

Why is it valuable?

Most (but not all) societies have seen gold as being valuable. Gold is very durable, it lasts thousands of years without degrading or eroding, it doesn't tarnish or oxidize, it is almost completely inert, it reacts with almost no other chemicals or elements, it is easy to work with, and it is not toxic. Although it is relatively soft, it can be hardened significantly by adding small proportions of a variety of other metals, especially in coins and jewellery.

Gold is also relatively scarce, and before the 1850s gold rushes it was extremely scarce. For most of the past 3,000 years of human civilization, silver has been used more often than gold in official coins and monetary systems because gold was simply too scarce. It was only after the dramatic rise in gold production in the 1850s gold rushes that gold was able to replace silver to become the dominant metal in monetary systems world-wide.

As with any other item, the value of gold is determined by supply and demand. Throughout human history the demand for gold has grown along with the supply. Demand is driven by rising populations, rising living standards, and rising total wealth in the world. Supply on the other hand is limited by what humans are able to dig out of the ground, and this has also increased over time.

Gold is one of the heaviest naturally occurring substances in the universe and as such it required extremely high temperatures and pressures to be formed from other elements. The only conditions that created enough extreme pressure and temperatures to create the heavier elements were in the explosions that occur when stars collapse at the end of their lives. The heaviest elements like gold were formed from the collapsing of the very largest stars, and so are relatively rare. The gas left behind from the explosive collapse of stars drifts across the universe and forms into gaseous balls that form the basis of new stars, and some of the material is flung off and forms planets. The heaviest elements sink to the core of the planets and therefore most of the gold within the earth is believed to be well below the surface and more toward the core.

Gold is generally found in great rocky outcrops formed when continents collided – in the Great Dividing Range in Australia, around the tectonic fault lines in California, in the Ural mountains in Russia (formed when Europe and Asia collided), the Klondike (Yukon) region at the western edge of Canada, in the Himalayas where India collided with Asia, and the base of the African continent. In addition, it is believed that gold was probably also brought to earth in the heavy bombardment of meteors that rained down on the earth and the moon about 4 billion years ago (and which created most of craters we now see on the Moon).

This cosmic dust from exploded stars also left gold particles in the oceans, and it has been estimated that the oceans contain some 15,000 tonnes of gold. In every gold boom there are new theories about how to extract this gold from seawater, but nobody has yet found a viable method.

The deeper we dig, the more gold we are likely to find. Already there are mines in South Africa that are more than 4 km deep, and this trend will continue as mining technology develops further in the years and centuries to come.

So far, the scarcity of gold has restricted the growth of mining production and this has underpinned its value to date.

“Be careful what you wish for” – the lesson from silver

Because silver was more abundant but still quite rare, silver was used more often than gold as a currency by most societies until the late 1800s. From the late 15th century the Spanish navy sailed the world and conquered new territories in the search for treasure. They dreamed of finding “mountains of silver” and that’s exactly what they found – mountains of silver in South America.

The problem was that they brought back so much newly mined silver to Spain in the 1530s and 1540s that the sheer volume of new silver flooded the market, resulting in runaway inflation in Europe from 1540 to 1640. This caused wide-spread social unrest and provided the seed for revolts all across Europe in which the people rose up against rising prices, rising inequality and rising debt levels, seeking to overthrow their autocratic Catholic monarchs. Civil wars erupted in almost every country across Europe and the chaos only came to an end with the “glorious revolution” of 1688 which installed a parliamentary system accountable to tax-payers, a bill of rights, and a new monetary system backed by silver. This was the start of the next great period of stable prices, low inflation and progress – the Enlightenment. Inflation was not the only cause of the social, political and religious upheavals, but it gave voice to the masses and fanned the flames of revolt, rebellion and revolution.

Gold has not yet experienced such explosions in supply because gold is much more scarce than silver due to the way it was originally formed billions of years ago. But gold’s scarcity is not guaranteed. One day we will find mountains of gold – it may be once new technology enables us to mine hundreds of miles below the earth’s surface, or maybe as a result of a major tectonic shift that throws up material from deep inside the earth, or perhaps it will fall to earth in a comet or asteroid shower like last time.

The gold standard

From the earliest settled human societies to the present day, all economies have experienced occasional bouts of inflation (ie currency depreciation), and the story of inflation has essentially revolved around the how governments have used and abused monetary systems. In general, monetary systems backed by hard assets (silver or gold) have tended to result in stable prices and this has allowed societies to flourish and economies to prosper.

However governments have frequently succumbed to the temptation to “print money” (usually to finance wars and other government spending programs) by taking their currency off an asset-backed monetary standard. In early societies this was done by adding progressively more and more cheaper metals to their silver or gold coins to reduce their metal value, and in other societies it was done by replacing precious metal coins with paper money with no “intrinsic” value. (We will leave the story of inflation to another day).

Fixed metallic currency systems may keep prices and currencies stable in normal times, but this stability has a downside in that it is inflexible in times of crisis, in particular when governments need to create large amounts of money quickly to finance wars, and also to respond to large reductions in demand for output.

Britain has had a gold standard the longest – started in 1717 by Sir Isaac Newton - and it only departed from this discipline briefly when it needed to print money to finance wars, against the US and against France. Other countries used silver rather than gold because it was more plentiful, but after the 1850s gold rushes in Australia and California, every major country adopted a gold standard in the late 1800s, with the exception of China.

China, paper currencies and money printing

China invented paper money in the 11th century and was the last to accept a gold-backed currency, so it is ironic that China is now worried about excessive money printing by the US and the resultant deterioration of the value of China's holdings of US dollars. When Marco Polo visited China in the 13th century he was so impressed with the ability of the Chinese government to print paper money not backed by hard assets to miraculously finance government spending programs, he took the idea back to Europe. The rest is history! The world can thank the Chinese for many great inventions and discoveries, but the printing of paper money to finance government spending programs was not one of the great success stories.

When demand and trade collapses (as in a severe recession), a fixed currency system means that a nation's currency cannot be depreciated, and either output must be cut quickly and severely (eg by closing factories on mass) and/or the price of labour (wages) must be cut quickly and severely. Also, governments are prevented from expanding money supply to pay for stimulus programs. This was the dilemma in the 1930s depression, so all countries abandoned the gold standard and embarked on policies to increase government spending, depress their currencies and also to protect their home industries. The result was the 1930s "great depression".

The 1930s depression was only ended by the massive increases in production and output required in the Second World War. Toward the end of the War, a new monetary system was created to create stable conditions to enable re-construction and prosperity. In 1944 the "Bretton Woods" agreement created the International Monetary fund and the World Bank, it fixed the value of the US dollar at $1/35^{\text{th}}$ of an ounce (ie gold was set at \$35 per ounce), and it set up a system whereby other countries tied their currencies to the US dollar. Every dollar was backed by gold held in the treasury and US dollars were convertible into gold. This fixed currency system prevented the countries from embarking on inflationary money-printing sprees.

This fixed currency system based on gold could not last long because of its inherent inflexibility, but it did produce a couple of decades of stable conditions that allowed the post-war reconstruction of Europe and Japan. Because countries needed gold (or US dollars backed by gold) to back their currencies, private ownership of gold was banned and the US bought up more than half of all the gold in the world at the set price of \$35 per ounce, and stored it in the vaults at Fort Knox, Kentucky.

The Bretton Woods system started to unwind in the late 1960s because it became increasingly difficult to maintain the US dollar at $1/35^{\text{th}}$ of an ounce of gold due to the increasingly large US government spending programs - on the Vietnam War, Lyndon Johnson's "great society" initiatives, the space race, and the cold war military build-up. After being partially disbanded in 1968, President Nixon finally abandoned convertibility of the US

dollar into gold on 15th August 1971, and soon after the US dollar and all other currencies were free to “float”, with market forces setting the exchange rates between currencies.

The late 1960s and 1970s saw the outbreak of high inflation in the US and around the world (including Australia) and gold went from \$35 per ounce to peak of \$850 in January 1980 – caused by a combination of the pent-up demand for gold created by being fixed for 27 years at \$35 per ounce, the big government spending programs of the late 1960s and 1970s, loose monetary policy, loose wages policies (including indexing wages to prices), plus the oil price spikes in 1973 and 1979.

Return to a gold standard?

There is a significant amount of anecdotal evidence that one of the motivations driving some of the recent gold buying fuelling the current boom has been the expectation that we may soon return to a gold standard once more. A return to the gold standard is often touted as the ultimate solution to the current problem of governments printing money irresponsibly. This idea has been suggested recently by the World Bank (Robert Zoellick, World Bank President, 8 Nov 2010)

There is plenty of historical evidence to support this idea. History is littered with examples in many countries including the US, Britain, several European countries, South America and China, and goes all the way back to Ancient Greece and Rome. Inflation from government money printing, and the resultant social unrest and political turmoil, has caused or contributed to the decline and/or collapse of social order, governments, regimes and even whole empires. Stability is only restored by returning to a hard currency standard, and often after a period of social and political chaos and/or war.

Despite the clear benefits of price and currency stability, and resultant peace and prosperity that has often been accomplished in periods of fixed currency standards backed by a hard asset like silver or gold, there are some significant barriers to this happening in the near future.

The first problem is that there is simply not enough gold in the world to provide the backing for today's level of global economic activity. This may be solved by using a combination of other real assets with relatively restricted supply. Oil is usually the most often suggested, but this probably raises a lot more problems than it solves.

Most often touted by academics is a fixed currency system run by a supra-national world government. This prospect terrifies many (or even perhaps most) Americans, Europeans, and just about everybody else in the world and so is extremely unlikely in the foreseeable future. The lessons of the European experiment are enough to put most people off the idea of an all-powerful supra-national government that controls money supply, interest rates and budgets.

One of the most important lessons from the great depression in the 1930s was that fixed currencies prevent governments from taking action to depreciate currencies and expand money supply in emergencies. If this lesson had been forgotten it has been re-taught with the recent experience with Euro fixed currency system, which is just as unsustainable as the old gold standard and for similar reasons.

Probably the last thing the US (or Japanese or European governments) want or need (in their eyes) is a fixed exchange rate system that prevents or restricts them from printing money to inflate their way out of their debts.

There is a possible scenario that could play out (which is outlined further in our “scenario 1” later in this paper) in which the US situation deteriorates so severely that the deficit/debt problem spirals out of control, probably accompanied by further rounds of large-scale money printing by the Fed. In this scenario, the resultant widespread civil unrest and breakdown in society and institutional infrastructure enables the extreme right wing of the Republicans, or perhaps the Tea Party in its own right, to take power and it imposes savage budget austerity and re-introduces a gold standard. However, the likelihood of this happening is very remote.

The current outlook scenarios are outlined in more detail toward the end of this paper.

Central bank buying of gold

Over the past 10 years, central banks have gone from being net sellers of gold to being net buyers, and this has been a large contributor to the rising demand and price of gold. It has been emerging market countries that have led this trend.

With the end of the gold standard, no country requires its currency to be backed by actual physical gold any more (Switzerland was the last to remove the link in 1999). However, most developed countries still hold most of their national store of foreign reserves in the form of gold.

The only practical alternative to holding gold is to hold the paper currencies of other countries. The problem with a paper currency is that it is just a paper promise that the issuing government will not print more paper (eg to finance wars, or to increase government spending or to reduce the real size of its debts). In most cases the issuing government is usually elected for a few short years and has little interest in long term outcomes. Governments’ promises not to devalue their currencies by printing more money are not backed by any hard assets or any enforcement mechanism.

There is little faith in these types of hollow government promises, and so the developed nations have been clinging to gold as the best way to preserve their nation’s foreign reserves.

Most governments have an official inflation “target” and so in their eyes it gives them a free ticket to deliberately debase their paper currencies. Australia’s official target for inflation is 2-3% which is the highest in the developed world. On 25th January 2012, the US Federal Reserve announced its first ever formal inflation “target” at 2% per year, which was higher than most people expected, and it formalizes the US strategy to try to devalue its currency and inflate its way out of debt.

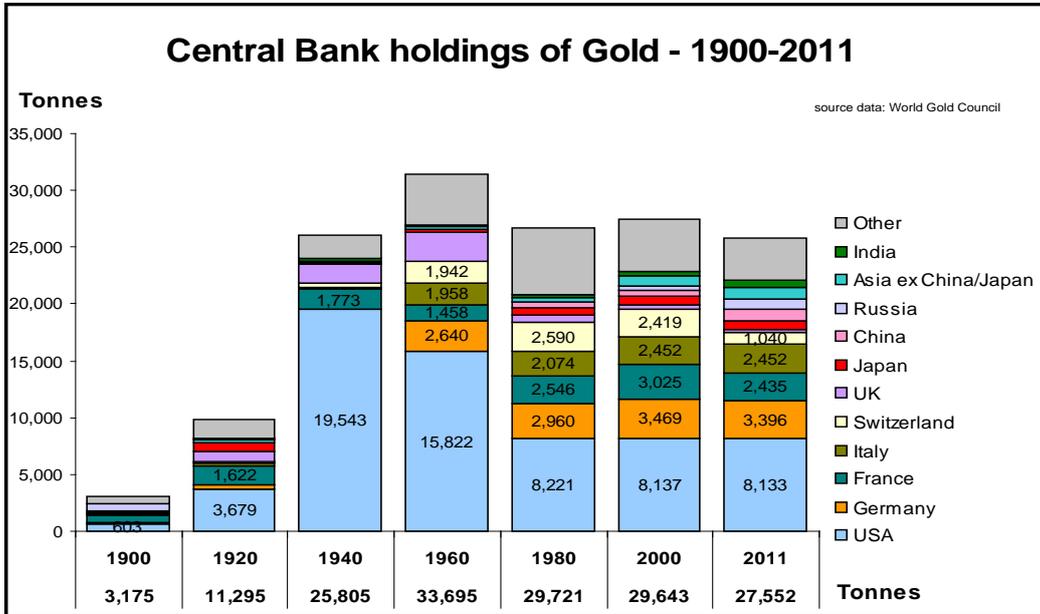
Most emerging markets (and Australia) have been more trusting of paper currencies and they hold the vast majority of their foreign reserves in the form of other countries’ paper currencies and not gold. Emerging markets have only recently been able to accumulate large stores of foreign reserves and it has been mostly been in the form of US dollar bonds, notes and bills, supplemented by other currencies like yen and euros, with very little held in the form of gold. Their faith in paper currencies is now waning and that is partially driving the gold price rise in the 2000s, especially since the GFC. The main buyers of gold have been emerging markets central banks.

Central banks hold about 28,000 tonnes of gold or about 16% of all the gold ever mined. The US Federal Reserve is still by far the largest holder with 8,130 tonnes, which is worth around

half a trillion US dollars at today's prices. The total held by European central banks is about 11,000 tonnes, with Germany, Italy, France and Switzerland each having large holdings.

Central bank holdings of gold peaked at over 38,000 tonnes of gold in 1965, which was at the beginning of the end of the Bretton Woods system, and the level of central bank holdings of gold have been falling since then.

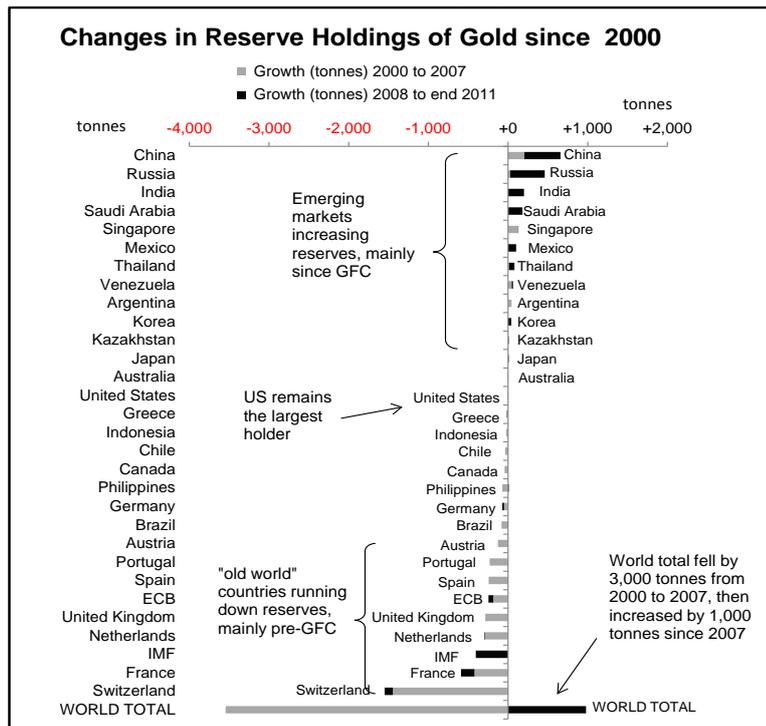
The following chart shows the holdings of gold by central banks since 1900:



Over the past 30 years the US, Germany, Italy and Japan have kept their reserves intact, but the rest of Europe has been running down their gold reserves. This sell-down has continued during and after the GFC and during the current sovereign debt crisis. This sell-down of gold by European central banks has more than been taken up by emerging markets as they try to diversify their reserve holdings away from European debt and into relative "safe havens" of US treasuries and gold.

This chart shows changes in reserve holdings over the past decade.

The emerging markets have been the big buyers. One of the key outcomes of the 1997 Asian currency crisis was that Asian emerging countries



resolved to eliminate their current account deficits, pay off debt, and run high savings rates and export-led trade surpluses. They used some of the proceeds of the resultant current account surpluses to increase their foreign currency reserves and to buy gold, especially since the GFC.

Meanwhile most developed world countries (including Australia) did the opposite in the 2000s – running current account deficits, low savings rates, and running up debts to fund consumption, housing, big governments and unsustainable welfare programs.

The largest emerging market buyer of gold in recent years has been China. It held less than 400 tonnes 10 years ago, but now holds more than 1,000 tonnes including 450 tonnes it bought in the middle of 2009. Russia has been the 2nd largest buyer and has doubled its holdings by buying steadily since 2007. India also bought 200 tonnes at the end of 2009.

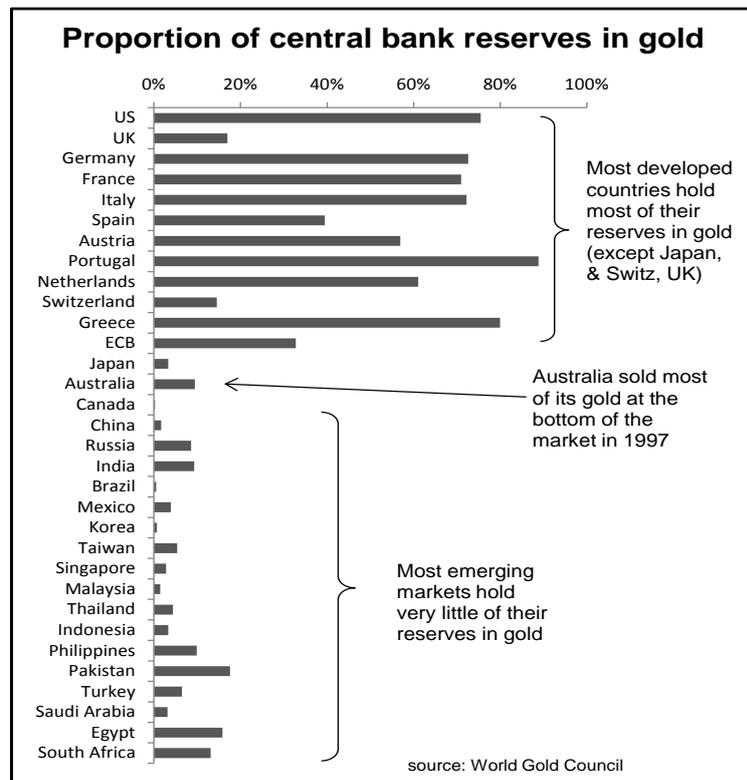
Will this trend of emerging market central bank buying continue?

In many instances the austerity programs in the developed countries (primarily the US, Europe and Japan) are likely to result in even larger government deficits and debts (as budget austerity generally results in lower tax revenues and higher welfare costs) but probably accompanied by lower trade deficits, as export growth may in several cases exceed import growth. Governments will be reluctant to sell foreign currency reserves as this would have a side-effect of strengthening their own currencies which would hurt exports, so the big debtor governments may continue to sell down their gold holdings, as some have been doing in the past two years.

In this environment, emerging markets will probably continue to buy up gold. It is important to note that, despite the recent surge in gold buying by emerging markets led by China, India and Russia in particular, they still hold only very small proportions of their total foreign reserve holdings in gold.

Even though the major emerging markets may see their current account balances reduced due to slower exports to the developed markets and stronger imports from domestic demand, they are still likely to want to continue to shift their reserve holdings from developed market debt into alternative assets like gold.

There are at least four reasons for emerging markets to diversify away from the traditional “safe haven” debts of the US, Japan and Germany. The



first is that developed country bills, notes and bonds are paying very low yields. US and German long term yields are around 2% and Japanese yields are below 1%. The US and Japan are seeing their government debt levels continue to soar with no credible plans to reduce deficits and pay off debt. German debt levels are lower than in US or Japan, but creditors are wary of the impact on German debt levels if Germany picks up the tab for the PIIGS, as West Germany did for the fiscal integration of East Germany in the 1990s.

These current ultra-low yields on US, Japanese and German bonds allow for no credit/default risk and no inflation risk (but at least they pay 1% to 2% yields whereas gold has a negative yield – it is expensive to store).

A second reason for emerging markets to favour gold is that when inflation expectations do return to the developed markets, rising inflation expectations would result in lower bond prices (ie losses on their foreign currency bond holdings) but higher gold prices.

A third reason for emerging markets to increase their gold holdings is that almost all emerging markets have inflation problems of their own. In that environment, holding gold gives their reserves a hedge against their own domestic inflation if their currencies fall. For example, Indian rupee has fallen heavily due to its inability to keep inflation in check. China does not have this problem as the yuan is probably still undervalued significantly against the US dollar and should see its currency keep rising against the US dollar and other major currencies. In China's case, holding gold beats holding US dollar debt if the yuan continues to appreciate (ie the USD depreciates against the yuan).

A fourth reason behind emerging markets gold buying has been the desire to sell down their holdings of Euro denominated paper (Euro-zone member government bonds, notes and bills), not only because of the increasing likelihood of default in by PIIGS governments, but also because of the on-going uncertainty over the fate of the Euro as a viable currency.

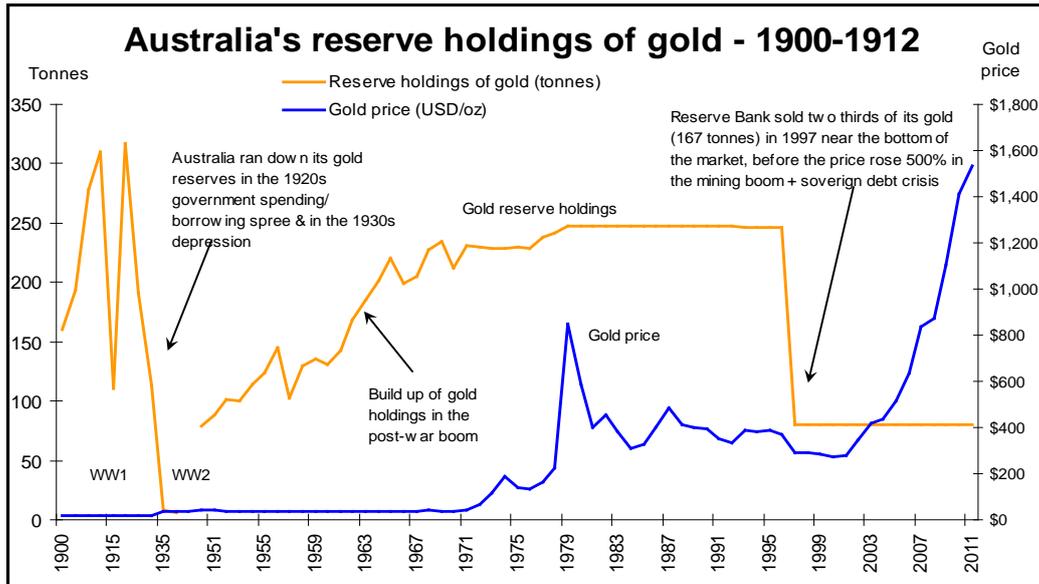
The most recent machinations over the Greek debt situation have so far kept central bank holdings free from default. So far, it is the private owners of Greek debt, mainly European commercial banks, that are being forced to “volunteer” to take a haircut, but this may change at any time if the situation deteriorates further.

In summary, there are still powerful motivations for emerging markets to keep buying up gold in their foreign reserves instead of more paper currencies in the current environment of developed market money-printing.

Timing is everything!

One of the most ill-timed gold trades in recent time was when the Reserve Bank of Australia sold 167 tonnes of gold (two thirds of Australia's gold reserves at the time) in early 1997, near the bottom of the market before the gold price surged 500% in the mining boom.

The RBA sold 167 tonnes (5.34 million ounces) at around \$350 per ounce, but if it had kept the gold it would be worth around \$9 billion at today's price, which is \$7.7 billion more than the value it received when it sold out in 1997.



Worse still, it used the proceeds of the sale of gold to buy US dollars, yen and German marks (which became Euros in 1999). The US dollar, yen and Euro have all fallen since then, losing an average of 25% against the AUD over the period. So not only did we miss out on the \$7.7 billion gain from the rising gold price had we kept it, we have also lost another \$400 million on the currency losses since then.

All up, Australians are more than \$8 billion worse off than if the RBA had just kept the gold we had spent 50 years accumulating.

Australia's gold holding is now just 80 tonnes, which is even less than the PIIGS - Greece has 111 tonnes, Spain 282 t, Portugal 383 t, and Italy 2,400 t. Even some of our relatively small Asian neighbours have been more careful – Singapore (127 t), Thailand (152 t), the Philippines (142 t).

Probably the other leading candidate for the worst gold trade of all time was when an Australian gold miner named George Harrison (not the Beatle) discovered the first gold at Witwatersrand in South Africa (where Johannesburg stands today) in March 1886. He registered his claim with the government, but then promptly sold his stake for 10 pounds and disappeared without a trace. The Witwatersrand gold deposit turned out to be the largest gold deposit in the world and the region has since produced about half of all the gold ever mined in the entire world.

Australia and gold

About 7% of all the gold ever mined in all of human history has come from Australia in the past 160 years. Australian mines have produced a total of 12,400 metric tonnes of fine gold, or 400 million ounces, which would have a total value at today's prices of about \$700 billion dollars. It would form a solid block of pure gold 8.6 metres on each side, or enough gold to fill an average family house of 250m² (roughly 2,500 square feet, or 25 "squares").

There have been five distinct phases of gold production in Australia, and many great fortunes have been made and lost in each phase.

The first was the Victorian gold rush in the 1850s, primarily in Bendigo and Ballarat, which coincided with the Californian gold rush. The flood of new gold from Australia and California enabled the shift to widespread use of gold coins and gold-backed monetary systems throughout most of the world in the late 19th century. Before the 1850s gold rushes, the only country on a true gold standard was Britain, but by 1900 every major country was on a gold standard.

During the second half of the 19th century, Australia and California between them produced 80% of the world's gold until South Africa took over and dominated gold production in the 20th century.

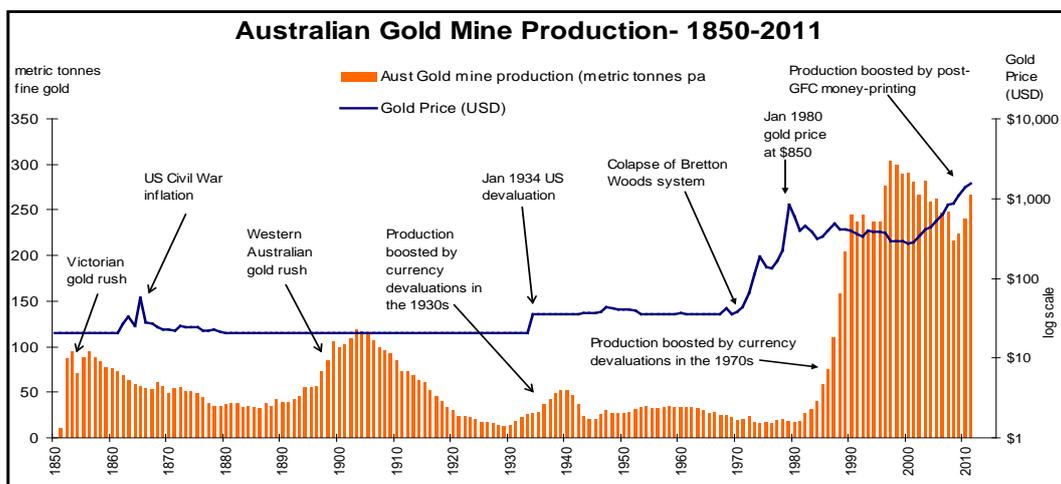
The next trigger for a burst of exploration activity was the gold price spikes in the American Civil War in the 1860s and the “panic of 1873”, leading to the discovery and development of new mines in 1880s and 1890s – in the Kalgoorlie region of Western Australia in the 1890s, the Klondike region in Canada and the enormous Witwatersrand deposit in South Africa.

Australia's third surge in gold production was in the 1930s, after the US devalued its dollar against gold at the start of 1934, which triggered a resurgence in gold exploration. Although the gold price jumped in 1934, it takes several years for new mines to be brought into production, and production peaked in 1940.

The fourth surge in gold production was in the late 1980s. Following the high inflation 1970s the gold price peaked in 1980 and this triggered another resurgence in exploration. With the lag times between exploration and production, production picked up only in the late 1980s. As in prior cycles, when the new production eventually comes on stream, the flood of new supply depresses prices.

The fifth and latest gold mining phase has been in response to the high gold price in the 2000s, caused by fears of inflation in the US due to Alan Greenspan's ultra-low interest rates, and which has accelerated since the GFC with the money printing by governments (particularly the US government), and also by fears of impending failure of the Euro. Just like in prior cycles, the rising prices in the early 2000s triggered new exploration, and new mines are only just starting to come into production now.

The next chart shows Australia's gold production since 1850.



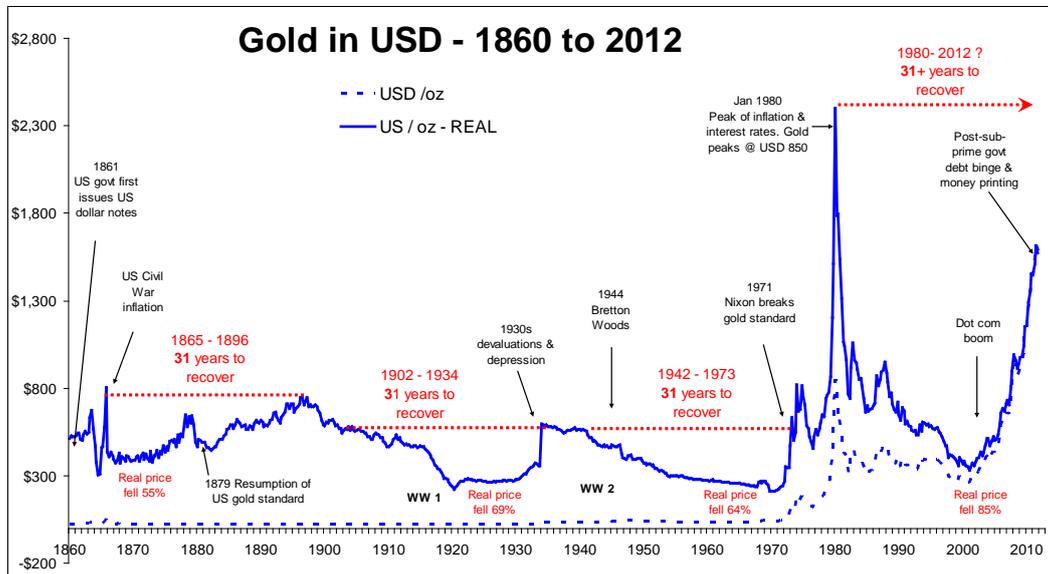
Australia is now a relatively minor producer, accounting for around 10% of the world's gold production.

Gold over the long term

Despite rising populations and rising wealth over the past 3,000 years, the supply of gold has also increased and kept pace with the rising demand. The supply of gold has been constrained by the amount of gold in able to be mined, advances in mining technology, and also by the economics of exploration, mining and processing it profitably. Whenever the price rises, exploration, mining and production increases, and the flood of extra supply from the new mines, after a lag of several years taken to develop the mines, inevitably causes prices to fall. It is the same in every cycle and it is the same with every commodity.

Over the past 3,000 years the value of gold has oscillated around a relatively constant level. One ounce of gold has been able to buy around a half a week's labor for the average worker, or a suit of clothes for an average worker, or about a month's worth of food for the average worker's family. Some studies have found that one ounce of gold has been able to buy about 350 loaves of bread since the rein of Nebuchadnezzar of Babylon in the early 6th century BC, and that the value has oscillated around this same level right up to modern times. The value has frequently departed from this level quite significantly for short periods but it has always reverted to this central core level, despite the fact that many hundreds of different currencies have come and gone in various societies and nations over this period of thousands of years.

The first chart at the start of this story showed how the gold price has risen strongly over the past 10 years, but if we stand back a little we can start to see this recent rise in the context of a bigger picture. The next chart shows the gold price per ounce in US dollars since the US government printed its first US dollar notes in 1861.

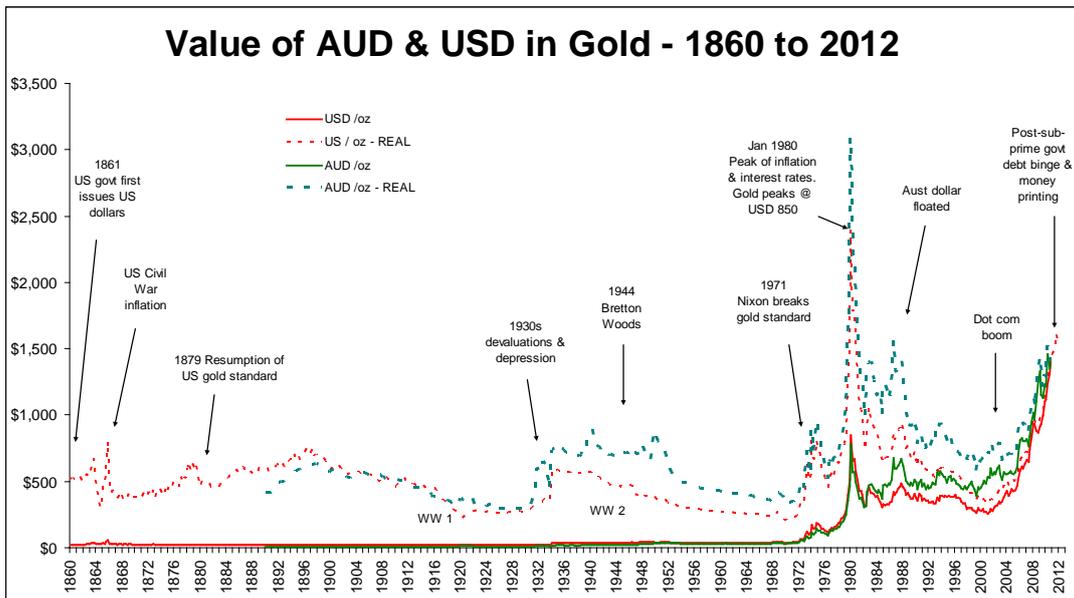


The real gold price may have oscillated around \$500 in today's dollars for thousands of years but it has gone through wild speculative bubbles and busts every 30-odd years over the past couple of centuries. Interestingly it has taken 31 to 32 years to recover from each speculative bubble. And it is now 31 to 32 years since the top of the last bubble that peaked in January 1980, so people who bought in that bubble (which is always when the general public get caught up in the frenzy and end up getting right at the top of the market) – are just now getting near getting their money back from buying it in the last bubble.

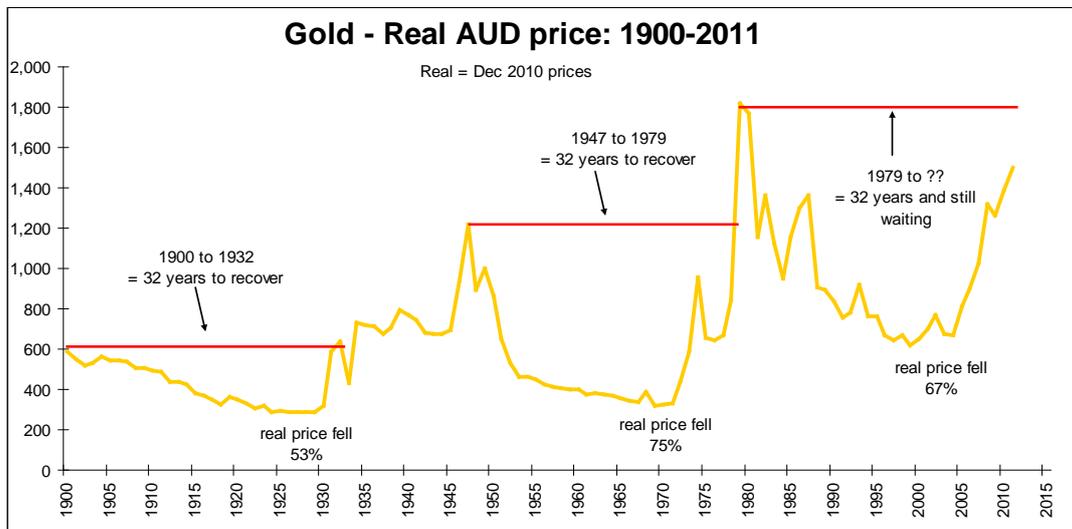
30-ish years is the average memory span for humans – the time it takes for a generation to forget about the last bubble only to get caught up in the next bubble and to start telling themselves that “this time its different” !

So right now it is clearly well into (or perhaps even near the top of) a speculative bubble once again. The USD gold price may well shoot up to \$2000 or more in this cycle, but it will probably collapse back to below \$500 (in real terms after inflation) again in the glut and the collapse that follows every speculative bubble.

The above chart is the price in US dollars, but for Australian investors the AUD picture is a little different because the AUD is a fundamentally weaker currency than the US (because Australia has higher structural inflation than the US for a variety of reasons), but it goes through cycles of its own.



In AUD terms the gold price cycle has taken a similar 31-2 years for people who bought at the top to get their money back in real terms (after inflation):



I remember the end of the 1970s gold boom when all the newspapers and “experts” were urging everybody to buy into the gold frenzy, as an “inflation hedge” and/or just to get in on the bubble.

Retail “investors” always wait for bubbles to rise exponentially for several years before finally deciding to take the plunge. It is very hard to get people to buy when things are cheap – what they want to see is steadily rising prices – the longer the rise the better. They see a long steady rise as “proof” that the strong upward trend will magically continue forever. But by the time they finally decide to take the plunge and buy, it is inevitably near the top of the market right before the collapse.

Those people who bought into the gold frenzy in the late 1970s have had to wait 30+ years and they still haven’t got their money back in real terms after inflation. In fact it took 20 years to just to get their money back in nominal terms before inflation.

Gold as an investment

Aside from buying jewellery for aesthetic reasons and collecting gold coins as a hobby, there are three main reason reasons for individuals to own gold. Two are long term reasons, and the other, short term:

1. As a long term inflation hedge, ie as a store of real value
2. As a safe haven, ie an emergency currency for use in an “Armageddon” scenario
3. As a trading instrument, ie for speculation

Looking at each in turn:

1. Gold as an inflation hedge

As a durable long term inflation hedge, gold can form part of long term portfolios if bought when it is cheap in the gluts between the bubbles. This is the only time it acts as an inflation hedge – certainly not if bought in speculative bubbles like in the current environment.

The recent gold price rises is not a reflection of fears of future inflation nor of some impending default of the US on its debts, because those fears are not reflected in the ultra-low yields on US government bonds. The government bond market is a much larger and deeper market than the gold market, and yields on US government bonds are showing no sign of any fear of rising inflation over at least the next 30 years, and no sign of any fear of default.

If bond yields are telling us that there are no fears of future US inflation or US default for the foreseeable future, the high gold price may be caused by Americans’ fear of the collapse of their US dollar, but that does not apply to Australians. Gold has provided an effective hedge against hyper-inflation on several occasions, but only for the people in the country affected by the hyper-inflation. For example:

- gold was an effective store of wealth and inflation hedge for Germans and other people who owned German paper assets in the 1920-3 German hyper-inflation,
- and it was also effective for Japanese and people who owned Japanese assets in the 1945-8 Japanese hyper-inflation

- and also for Brazilians and people who owned Brazilian paper assets in their long period of hyper-inflation between 1942 and 1990, which is probably the worst bout of hyper-inflation in recent history
- also for Zimbabweans and people who owned Zimbabwean paper assets in the 2007-2009 hyper-inflation.

In each case the people who were actually inside (or who owned assets inside) the countries that were hyper-inflating certainly would have been largely shielded by holding portable and easy to hide assets like gold, but the people in other countries were not affected so did not need to hold gold. If Americans fear hyper-inflation, this would not apply to Australian unless they hold American paper assets.

Americans perhaps have half a reason to buy gold in fear of US hyper-inflation, but that is highly unlikely. A much more urgent threat for the US is deflation, not hyper-inflation. The US Fed has been printing money as fast as it can since late 2008 in order to create inflation (ie in order to depress the value of its currency), but so far has failed.

So far, 3½ years of money printing has staved off deflation for the being, but the Fed is running out of ammunition (since the Democrats lost control of Congress), and price deflation may soon be around the corner if the Fed stops printing money.

For Australians, there are no indications of any outbreak of hyper-inflation in Australia in the foreseeable future. So how might Australians be affected by possible (but unlikely) US hyper-inflation?

If the US dollar collapses due to a German or Japanese or Brazilian-style bout of hyper-inflation in the US, the US dollar would collapse relative to other assets including gold (which is another way of saying that the USD gold price would soar), but the US dollar would also fall relative to other currencies like the Australian dollar, and so the AUD gold price would probably remain relatively unaffected, just as Australians (or British or Americans) were not directly affected by the German hyper-inflation in 1920-3 or the Japanese hyper-inflation in the 1945-8).

Australia would be affected indirectly by a collapse in demand for our exports, but the US buys very little from Australia. Our exports to China would suffer indirectly, but a large-scale collapse in the US economy and US demand would push the whole world into recession, and that would be deflationary, not inflationary, and such a global crisis would probably result in a stronger US dollar, not a weaker one.

As such, Australians will probably have little to gain from holding gold as a protection against US hyper-inflation, especially if bought at current elevated levels.

Apart from bouts of hyper-inflation, which are very few and far between, gold is less effective as a hedge against mild or moderate inflation. In real terms after inflation, gold has gone backwards for up to three decades at a time on several occasions in the recent past. It is hardly an effective “hedge” in practice if you have to wait up to 30 years for it to work.

Role of gold in long term portfolios

Gold may have a role in long term portfolios but probably not a major one for most investors.

One critical aim of long term investing is to preserve real value of wealth, ie to provide protection against future inflation. Gold can do this if bought when it is not above its long term expected real value. Clearly this is not the case at current prices, and especially not for Australian investors.

When the gold price collapses (as it always does after a bubble) then investors can always buy up gold in their long term portfolios. It will be easy to tell when it is a good time to buy because that will be when everybody is saying that you'd be crazy to buy gold with prices so low and still falling. This is what people were saying all through the 1950s and 1960s, and again in the late 1980s and all through the 1990s. Even the Reserve Bank of Australia thought it was a good time to sell two thirds of Australia's gold reserves in 1997 near the bottom of the market and right before the start of biggest gold price rally in history.

Most investors also want to grow the real value of their wealth, not merely preserve its current real purchasing power. In order to grow the real value and increase the real purchasing power of their wealth, investors need to seek to achieve returns in excess of the inflation rate. This is only achieved by taking risk. There are several ways of taking risk in order to seek not only an inflation hedge, but also seek real returns above the inflation rate:

- company shares – ie taking a risk that a business can generate returns over and above the cost of the raw materials and inputs, and that if the business is wound up there is something left over after paying off all suppliers and debtors
- real estate - taking a risk that the demand of accommodation (for people and businesses) will exceed supply in a particular location, and that economic activity will not shift away from a particular location
- farmland - taking a risk on the future supply & demand for food, and on the vagaries of the weather

While company shares perform poorly in real terms in high inflation conditions, shares have generally proved an effective hedge against low and moderate inflation. In addition, shares provide the potential for real total returns in excess of the inflation rate. Total returns (ie including dividends) from Australian shares have averaged around 6% to 7% above the inflation rate for the past century in Australia.

In contrast, gold can at best generate real returns of zero over the very long term, and that is only if it is bought for no more than its long term expected value – ie around \$500 per ounce in today's dollars.

Whose inflation?

Another problem with gold as a hedge against inflation is that its effectiveness depends on whose inflation one is seeking to hedge. Most long term investors are interested in protecting the real purchasing power of their wealth, especially in retirement, when they no longer earn an income. The problem is that many or most of the expenses of retirees tend rise (and can be expected to continue to rise) by more than the general CPI inflation rate.

The Consumer Price Index is constructed by using a basket of goods typically bought by Australian households. Many items rise in price (like medical costs, healthcare, accommodation, utilities, education, and most services), while others items rise by less or even fall in price over time (including, cars, phones, TVs, computers, electronic gear, appliances, toys, clothes, etc).

In general, the typical retiree basket of goods and services is likely to rise by a percent or so more than the overall CPI basket, so just keeping pace with (or hedging) the overall general rate of inflation in the overall economy is not going to preserve the real purchasing power of their wealth for their specific expenses. An investment (like gold if bought when it is not in a bubble) that hedges the overall general inflation rate has a high likelihood of resulting in declining real purchasing power of wealth for most retirees.

For this reasons, retirees facing a long retirement have an added need to seek real growth above the overall general inflation rate.

Positive event risk

One advantage of holding gold, including when it is held in long term portfolios together with “risk” assets like shares, is that it tends to display “positive event risk”, meaning that the gold price generally jumps up in response to major shocks, whereas most other asset classes fall in value in crises.

This is often the case in financial shocks, natural disasters, wars, etc. For example:

- In the Asian currency crisis (August to October 1997) - the Australian stock market index fell 8%, the Australian dollar (against the USD) fell 5%, but the gold price (in AUD) rose 1%
- In the September 11 2001 bombings - the Australian stock market index fell 7%, the AUD fell 8%, but gold price in AUD rose 16%
- In the October 1987 stock market crash - the Australian stock market index fell 42%, the AUD fell 6%, but gold price in AUD rose 9%
- Following Paul Keating’s “Banana Republic” crisis in May 1986 - the Australian stock market fell 9% by the end of July 1986, the AUD fell 11%, but gold in AUD rose 24%

This positive event risk benefit is not as powerful for Australian investors as it is for Americans or Europeans because sudden shocks (of either global or domestic Australian nature) generally cause the Australian dollar to fall, and this partially neutralizes the full effect of rises in the USD gold price.

However, this characteristic of gold has still proven to be a useful benefit for Australian investors.

2. Gold as a safe haven asset in an Armageddon scenario

Gold will probably be very useful in an “Armageddon” scenario. A major crisis may have a number of causes - civil war, invasion and occupation by a foreign power, or a global nuclear winter. At least one of these is almost inevitable some time during the next century. Here in Australia we probably face little prospect of civil war, foreign invasion or nuclear winter in the next few years. But anything is possible, and it pays to be prepared.

In an Armageddon scenario, gold is likely to be very useful if held in small, readily tradable coins (bought for intrinsic or metal value, not rare coins bought for numismatic or collectors' value) or small denomination bullion, or gold jewellery. Gold is one of the very few assets that is universally recognized, easily measured, easily tested and readily tradable for essential survival items in the event of complete breakdown of existing institutions and infrastructure.

As there is no imminent threat in Australia of civil war, foreign invasion or nuclear winter, now is not a good time to buy up gold coins and/or small gold bars in preparation, with gold prices so high. It would be far better to wait for prices to fall first and use the time to research what to buy. We cover various types of gold for this purpose a little later in this paper.

3. Gold for short term trading or speculating

Because gold is widely traded and has volatile prices (in terms of paper currencies anyway), it can be useful for short term trading in certain conditions. This is considered briefly in this paper, but is not really "investing" – it is short term speculation and any short term speculative activity should not take place in long term investment portfolios.

Trading and speculating

Aside from the long term motivations for holding gold, there is money to be made in capitalising on short term swings in the gold price, but speculators need to have the ability to watch the market closely and be in a position to switch directions quickly.

For Australian investors the returns from gold have been influenced by currency moves as well as changes in the gold price, so we need to understand what drives both of these factors in Australia.

Since the start of the mining boom in the early 2000s the AUD has been traded as a "commodity currency". This wasn't the case through the 1980s and 1990s, when the AUD was driven more by foreign investors' concerns about our chronic current account problems.

For most of the past decade the USD/AUD exchange rate and the USD gold price have been "coupled" in the sense that they have tended to move in the same direction most of the time, because both the Australian dollar and gold have been regarded as barometers of world growth outlooks. When global growth outlooks become more favourable, the gold price generally rises in USD terms and so does the Australian Dollar. This coupling of gold and the USD/AUD exchange rate largely neutralises the gold price gains and losses in AUD terms, so the AUD gold price remains more or less flat.

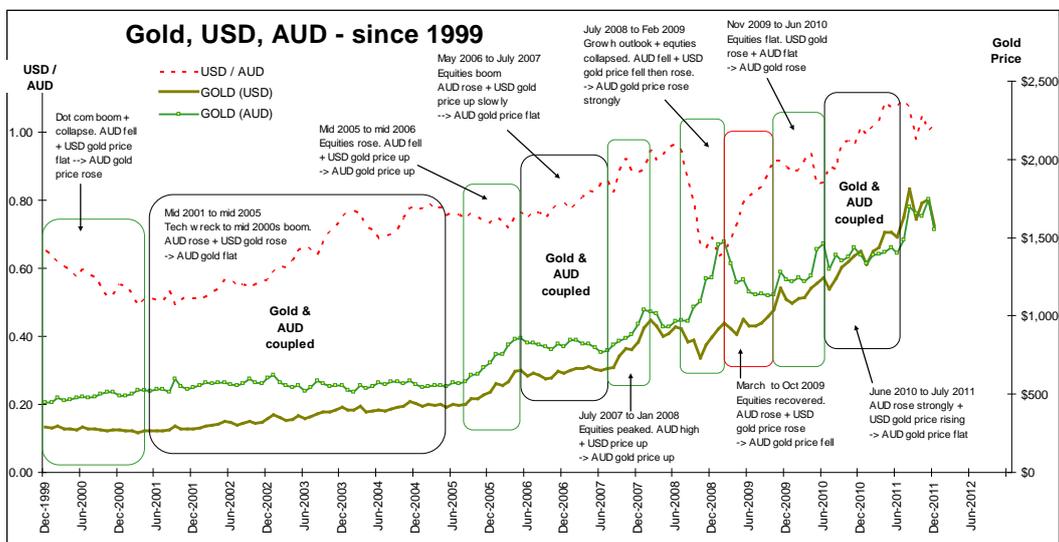
For example, in the 2½ years following the bottom of the equities markets in February/March 2009 to the US budget deficit crisis in July 2011 the USD price of gold nearly doubled (from \$900 to \$1600 USD), but the AUD price remained more or less flat (at around \$1500 to \$1,600) because of the dramatic rise of the AUD (from 0.65 to 1.10 USD) over that period. Holding gold was great for Americans but not for Australians.

For most of the past 10 years this coupling of the USD gold price and the USD/AUD exchange rate has meant that rises in the USD gold price were neutralized for Australian investors so the USD gold prices were not reflected in similar rises in the AUD gold price.

The rises in AUD gold price in the 2000s have been due entirely to gains made during a few short periods when gold and AUD have been un-coupled – ie when the USD gold price rose, but the AUD rose less or didn't rise at all. These periods were:

- mid 2005 to mid 2006,
- July 2007 to Jan 2008,
- Nov 2009 to Jun 2010, and
- July and August 2011.
- The other exceptional period was July to October 2008 when the gold price fell in the lead-up to the Lehman crisis but the AUD fell even more.

These periods are indicated by the green sections in the following chart.



In the middle of 2011 the conditions started to show that the USD gold price and the AUD were likely to un-couple again and the opportunity opened up for Australian investors to profit. That was a very short term trade opportunity and certainly not an “investment”. It worked well because the gold price then spiked up in August (during the US Congressional stand-off over the budget deficit ceiling, and the US credit downgrade crisis) while the AUD fell 10 cents over August-September as global growth outlooks deteriorated, and so the gold price in Australian dollars rose nearly 30% from \$1400 AUD at the start of July to \$1,800 AUD by late August.

But that trade is now over as the relationship has now re-coupling once again. This type of trading is very short term and has no place in long term investment portfolios, but it does demonstrate that there is money to be made in trading short term swings in gold.

The current outlook

For the immediate outlook there are four main scenarios (the labeling lines up with our 4 scenarios outlined in our quarterly portfolio reviews):

Scenario 3

Our “base case” for the immediate outlook is for the gold price and USD/AUD exchange rate to remain “coupled” – ie for both to act as barometers of world growth outlooks as they have done for the most of the past 10 years where, for most of the time, the USD gold price movements are more or less neutralised by similar parallel movements in the USD/AUD exchange rate.

Under this scenario, the outlook for world growth improves slowly, involving the following:

- the European debt problem is kicked further down the road by more short term patchwork solutions
- continued recovery (albeit weak) in the US, and
- soft landing in China
- money printing by central banks in the US, UK, Europe and Japan stimulate rallies in share markets, in PIIGS bond prices and in industrial commodities

In this base case scenario the gold price will either edge a little higher (but probably more likely to fall, since US hyper-inflation fears would recede), and the AUD would drift up leading to flat or perhaps mildly negative AUD gold prices for Australian investors.

Scenario 2

This alternate scenario would involve deteriorating world growth outlooks during 2012:

- Europe stagnates in falls back in recession,
- hard landing in China (or at least less soft), and
- the US recovery slows, but not enough to require more large-scale money-printing

In that scenario, both the USD/AUD exchange rate and the USD gold price are likely to fall, and so the AUD gold price will probably remain relatively flat as well.

Scenario 4

The two scenarios above are the two most likely scenarios. However, a less likely scenario (very unlikely for several years in our opinion) is that:

- World growth miraculously recovers strongly and sustainably. The US, Europe, China and even Japan return to sustainable growth, which would revive genuine inflation fears.
- The huge reserves sitting in central bank reserve accounts from of the central bank asset purchases since late 2008 (the so-called “money printing”) are used by banks to start lending strongly again to consumers and businesses
- If the USD gold price does rise, so would the AUD, so the upside for AUD gold price would most likely be neutralised.

More likely the USD gold price would fall from its current levels but still remain above its long term real level – it may fall to between \$500 and \$800 or so.

Scenario 1

A scenario for buying gold in AUD as a medium term play would need to involve the following:

- Europe descends into deep austerity-induced recessions, requiring even further budget blow-outs (caused by falling tax revenues and rising welfare costs in the recessions)
- China slowdown gets materially worse – eg with massive bad debt problems crippling the major state-owned banking groups, leading to contractions in state-driven lending and capital investment
- In the US - dramatic slowing in the economy, double-dip recession plus rising unemployment - necessitating even more large scale unsterilized asset purchases (money printing) by the Fed. Obama is returned to power in November and the Democrats win back both houses, and they embark on large scale FDR-style deficit spending programs, which necessitate more money printing to repay debt and to fund even wider government deficits. This may scare millions of middle Americans into full-scale panic buying of gold, and also people elsewhere would panic buy gold for fear of USD depreciation and US default as the debt mountain grows even larger with escalating deficits and no credible plan to repay debt.

In that scenario, USD gold may spike up to much higher levels (this is the “gold to \$5,000” scenario) and the AUD would probably fall or at least not rise as much as the USD gold price, leading to strong AUD gold price rises at least in the short term.

However this last scenario is highly unlikely. The US economy is much stronger than Europe or Japan (for a variety of reasons). Democrats are highly unlikely to win back the Presidency PLUS both houses of Congress, and then suddenly go on a spending spree, given the current level of government debt and budget deficits.

The current situation is the opposite of the 1930s in some key respects. In the 1930s the US was the world’s biggest creditor nation and it could afford to deficit spend – but now it is the world’s biggest debtor nation. In addition the neither the President nor Congress have (or are likely to receive after the November election) a voter mandate to increase the deficit or the federal debt levels.

Nor is there a voter mandate to embark on another major war effort – eg against Iran – in order to galvanise the nation and spend more money. On the other hand, if Iran strikes first, the US would respond and Americans would enthusiastically embrace a new war effort. This would be inflationary and the gold price (and oil) would spike higher very quickly. However this is a long shot scenario.

If the US did slow dramatically from here, the more likely outcome would be deflating asset prices and deflating consumer prices (like Japan in the 1990s and 2000s) and this is likely to lead to a stronger USD, not a weaker USD, just as deflation, stagnation and numerous rounds of money printing in Japan over the past 20 years have resulted in a stronger yen, not a weaker yen.

It is clear that the current gold bubble has little to do with either inflation fears or concerns about the destruction of the US dollar or the creditworthiness of the US government.

If people were worried about future inflation or the prospect of US government defaulting on its debt, US treasury bonds would not be trading at yields of 2% for 10 year bonds, and 3% for 30 year bonds. Clearly there is no inflation premium or default premium build into the price of any US government debt.

Therefore the current gold spike in USD appears to be pure speculation – the hope of getting in on the bubble and selling out before the inevitable collapse.

Regardless of which of these scenarios eventuates, we are facing rising mine production from the new mines (and the new investment in existing mines) that were developed in response the rising gold price earlier in the early-mid 2000s. This new supply is starting to come on stream and mine production is now at an all time high, at 2,800 tonnes per year. This trend is set to continue in the next couple of years and it would mean that the gold price will fall unless demand increases further to soak up the new supply.

Another way to look at the current outlook is to line up the current conditions with the conditions in the last gold price bubble at the end of the 1970s to see the similarities and differences.

Late 1970s-early 1980s	Late 2000s – early 2010s	Similar or different
Recession caused by high interest rates designed to restrict money supply in order to bring inflation under control	Recession caused by freezing of credit markets which dramatically cut trade and caused companies to slash production and cut jobs	Different cause of recession
Double-dip recession in 1980 and 1981-2	Long deep recession in 2008-9	Similar, but unemployment rate lower this time
Banking crisis and bank losses caused by loose lending (to un-creditworthy Latin American countries that subsequently defaulted, requiring bail-outs, and bank lending contracted	Banking crisis and bank losses caused by loose lending (to un-creditworthy home buyers and home owners that subsequently defaulted, requiring bail-outs, and bank lending contracted	Similar, but bigger impact on global banking and credit markets this time
Major commercial banks bailed out by the Fed	Major commercial banks bailed out by the Fed	Similar, but bigger this time
Falling bond yields due to declining inflationary expectations in economic slowdown	Falling bond yields due to declining inflationary expectations in economic slowdown	Similar, but yields have fallen further this time (due to lower inflation at the start of cycle)
Short term interest rates cut dramatically to stimulate economic recovery	Short term interest rates cut dramatically to stimulate economic recovery. Short term rates at zero for 3½ years so far	Similar, but this time taking longer to revive the economy, due to the severe over-hang of housing stock and negative equity in a quarter of mortgage borrowers
Low short term interest rates didn't result in inflation as feared	3½ years of zero short term rates haven't produced inflation yet	Similar
Inflation falling dramatically due to tight monetary policy, despite the economy recovering well, because the Fed kept tight rein on interest rates	Inflation had been falling during the 1990s and remains low, despite ultra-loose monetary policy since early 2000s, and especially since 2008	Similar – inflation still very low
Stock market soared for next 5 years after recession (1983-7)	Stock market recovered in 2009, pause in 2010-1, but rising again in 2012	Similar so far. Low interest rates are stimulating investment in shares

Late 1970s-early 1980s	Late 2000s – early 2010s	Similar or different
USD strengthened in the economic slowdown and in the recovery (recessions, and early-mid 1980s recovery)	USD strengthened in the GFC as a safe haven currency (even though the US was the cause of the crisis)	Similar. If conditions deteriorate further, US is likely to continue to be safe haven, even if the US is the cause of the problem, because of America's position as the largest economy and the global currency for trade
Central banks reduced holdings of gold	This time central banks have been buying gold, to diversify away from government debt, especially Euro debt	Different this time
Gold price collapsed from bubble heights as inflation didn't materialize as feared, thanks to tight monetary restrictions	Inflation hasn't materialized yet despite ultra-loose monetary policy	Lack of tight monetary control this time is fuelling fears of inflation (reflected in high gold price), but no sign of inflation yet

Despite the ultra-loose monetary policy in the US since late 2008, there are very few signs of price or wage inflation. Unemployment is still up around 8%, there is still spare capacity throughout the economy. Banks are not lending – they are hoarding capital in readiness for the up-coming new Basel-3 bank capital adequacy rules. Consumers are spending but still very gingerly. A quarter of all mortgage borrowers have negative equity in their homes and retirees are receiving lower incomes as bond yields collapse. Many companies are now re-hiring workers, but federal, state and city governments are firing staff (and are likely to continue to do so) due to budgetary pressures.

In these conditions the US faces a more likely threat of deflating prices (and resultant strong US dollar) than inflation in the near future.

Long term bond yields are down to extremely low levels not seen since the bottom of the previous interest rate cycles in 1900 and in the middle of the Second World War, and the ultra-low yields tell us that the global bond markets are not expecting inflation for at many years.

When bond yields were at similar ultra-low levels in the last two major interest rate cycles, they did turn out to be the bottom of the interest rate cycle in each case, and on both occasions it marked the start of the next long inflationary cycle, but inflation took many years to materialize and cause problems.

After bond yields bottomed in 1897-1900 after the McKinley election put the US on the gold standard, it marked the start of the long rise in inflation up to 1919-20. Also, after bond yields bottomed in 1941-2 with the bombing of Pearl Harbor, that too marked the start of the long rise in inflation up to the late 1970s. But in each case it took a couple of decades for inflation to build.

Inflation will certainly return to the US in time, but it is likely to take several more years of de-leveraging and recapitalization, rather than a quick jump to late 1970s-style inflation that is implied by the current gold price. It will take several years of growth to soak up the current levels of spare capacity in the US –

- excess supplies of labour - unemployment is still near 8%, so workers have little power to demand higher wages. In fact wages are falling.
- excess supplies of industrial production - there are factories lying idle all across the US and this is depressing prices

- excess supplies of housing - there are still about two years' worth of empty new houses unoccupied, plus several million empty re-possessed houses from bank foreclosures, and this is depressing house prices, which is restraining consumer spending.

Ordinarily this spare capacity would take several years of economic growth to soak up. One way to quickly ramp up demand for labour and production is a major war effort, in the same way that the Second World War quickly soaked up the spare capacity of labour and industrial output to end the 1930s depression. There are no large-scale wars on the horizon.

How to buy gold

Gold can be held in many different ways, including:

- gold jewellery
- gold coins
- gold bars & bullion
- exchange traded gold funds
- shares in gold mining companies

Gold jewellery

This has always been the most common way that individuals have held gold. It is said that most of the wealth in India is held around the necks of the people in the form of gold chains and jewellery. Most people in Australia are doing in already and have been doing it for years without a concrete plan in mind. The main issue with buying gold as jewellery is that the price of any item is made up of the gold content (the metal value measured by weight) plus the price of the workmanship, design, marketing, the retail mark-up and GST. The metal value of an item will preserve its value because it is gold, but the rest of the price depreciates, unless it is a particularly rare and desirable designer or had a famous owner, etc. If buying gold for its metal value, aim for simple, generic designs where most of the price is in the metal value. Estate jewellery is tax free and is often sold for near its metal value.

A very common type of gold jewellery is in the form of gold watches. Gold cased men's watches can contain two to three ounces and women's watches up to an ounce. You can wear them for years then pass them down to the next generation. Good watches trade for well above their metal content because of the workmanship in the mechanism and also a substantial part of the value is in the brand value of the maker. Like any other hobby, it takes many years to learn what and how to buy watches, so it pays to take your time and do plenty of research.

Personally I find jewellery a very appealing way to accumulate gold over many years. You can accumulate it gradually over time and you can enjoy it at the same time, but it does cost money to insure (and maintain in the case of watches). Another bonus is that it doubles as birthday presents for your spouse (This year I gave my wife 100 trillion dollars for her birthday – but it was Zimbabwe dollars. I'd better go back to jewellery for next year!)

Gold and India

Indians are the biggest owners and buyers of gold jewellery and have been for many centuries. The Indians' obsession with gold is thought to stem from ancient Hindu legend. Gold is still used as the primary store of family wealth, it is used as dowries for daughters getting married, and as collateral for loans of all sizes. Indian families own around 18,000 tonnes of gold – worth around 1 trillion dollars at the current gold price.

Although the continuing re-emergence of India should be a positive development for sales of gold (and gold jewellery in particular) this may not be as powerful a force as it first appears. Indian's use of gold may start to wane as more alternatives become available - as the Indian banking system improves, as the system of land tenure and the protection of property rights improve, and as the burgeoning middle classes diversify their wealth into other assets, including property, and spend more of their money on consumer goods.

Gold coins

Before the gold rushes in Australia and California in the 1850s, gold coins were relatively rare, and most countries used silver as a monetary standard and for coinage. But the flood of gold from the 1850s gold rushes enabled almost every country to move onto the gold standard during the late 1800s. Gold coins (made from Australian, Californian, Russian and later South African gold) were issued in huge numbers by many countries and were widely used as currency by the general public until the late 1920s.

Most countries no longer issue gold coins as part of their regular currency systems any more, but many countries, including Australia, issue near-pure gold coins as special issues from time to time.

Unfortunately the prices of these coins (both the “new” price and the traded prices on the secondary markets) are almost always well above their intrinsic (metal) value. For example, a newly issued 1oz gold coin has an intrinsic (metal) value which is the current gold price (say \$1700 per oz) but it will cost much more than that to buy new (typically around 50% or more above the metal value). These coins generally trade in the secondary market for well above their metal value as well, and some such coins go on to trade at very high values on the secondary market, far above the issue price because of their scarcity or desirability. This is what collectors are aiming for.

But that is collecting, it is not investing per se. Like any other hobby or pursuit, if you dedicate many years to collecting coins you can make not only a good living but you can also make a lot of money if you get to know your chosen market intimately over many years.

A second way of holding wealth in gold coins is by holding gold coins that have little or no “numismatic” value – meaning that most of the value is in the metal content and not in the scarcity value. These are much cheaper and much more tradable than the collectors items that have numismatic value well above their intrinsic metal value.

One very common example is British gold sovereigns. These are a fraction under 8 ounces (1/4 of an oz) of 91.67% pure gold and were issued as standard currency in huge numbers by the British government in the late 1800s up to the 1920s, and they were also minted by the NSW and Victorian governments in much lesser numbers. Hundreds of millions of sovereigns were minted in Britain (for example 30 million were issued in 1913 alone), and almost all are

still in existence today. The British sovereigns are so common even today that they can be bought and sold at any coin dealer in Australia and around the world for only a small margin above their metal value (which is around \$400-\$450 per sovereign at today's prices). A coin's condition is a very important determinant of its value. Uncirculated or "gem" or "proof" condition coins can trade for many thousands dollars each, but typical used, circulated coins are much more common and trade for around their metal content value.

On the other hand, the NSW and Victorian minted sovereigns are the same size and pure gold content and many issues look identical to the British minted coins except for Sydney Melbourne mint marks. Most of the British sovereigns were actually made from the same Australian gold from the same mines as the Sydney and Melbourne minted coins, because around 90% of Australian gold production was shipped to England for refining and minting. However, because of the scarcity of the Sydney and Melbourne coins, they generally trade for at least double their metal value. Some are very rare and trade for thousands of dollars and will probably only increase further in value over time due to their scarcity.

Each type of gold sovereign has its role. The common British sovereigns offer a great way to hold gold in the form of small, easily recognizable, easily verifiable, easily tradable, easy to carry, easy to hide, durable coins that will always trade at around their metal value. They are the sort of things that are likely to prove invaluable in an "Armageddon" situation.

However this is not the time to buy them as part of a long term inflation hedging strategy because we are now in a price bubble and, if past bubbles are any guide, the price will probably collapse back to around (or even below) its long term average level which will mean a loss of around 75% if bought at current prices. It will probably take around three decades to wait for the next bubble to get your money back.

The rarer coins that trade for well above their metal value due to their numismatic value are priced not according to the metal content, but according to their rarity value to collectors. How much money you make from buying these collectors coins depends not on the gold price but on your skill as a collector, and this takes many years to study and perfect. In an Armageddon scenario you will probably not get any more than the metal value in them because the person on the other side of the transaction will not understand anything other than the raw metal value in them.

For example, this photo is of two coins from the author. Both are sovereigns of identical weight, gold content and purity (7.988g at 91.67% purity – ie 22-carat), and therefore identical intrinsic metal value (about \$420 at today's gold price).



The coin on the left was minted in Sydney in the very early years of the Sydney Mint and is quite rare, but the coin on the right was made from the same gold but shipped to Britain for minting and was minted in the millions, and therefore is very common. The rare Sydney sovereign trades for several times its intrinsic value and is a collectors' item, but the coin on the right trades for around its gold metal content and has very little "numismatic" value over and above its metal value. Suffice to say, most of my gold coins are the common garden

variety coins that trade for around their metal value, bought years ago. In a true “Armageddon” scenario, the collectors’ coins will probably not trade for much more than their metal value.

For those readers interested in buying coins as part of either a long term inflation hedge strategy, or as a collector, or common garden variety coins for use in an “Armageddon” scenario, now is not a good time to buy in either case. The current bubble conditions are drawing a flood of new buyers into the collectors markets and pushing up prices. Readers who are interested should probably spend the next few years researching the market so they are in a position to know what to buy after prices have fallen.

Gold bars and bullion

“Bullion” refers to fine gold not minted into coins. Most of it is held in the form of 400 oz bars of fine gold (about 12.4 kg), worth about \$700,000 each. Not very practical for ordinary investors! Fortunately, gold bars come in many different denominations down to fractions of an ounce. All gold bars bear the stamp of the refiner and the level of purity – usually 99.99% (or “four nines”) fine gold. One ounce bars are very popular and are readily bought and sold through gold dealers in every country.

One advantage of gold bars is that you don’t pay for any “numismatic” value. The dealer’s price is always a small margin above the metal value to cover their overheads and a profit margin for themselves.

One disadvantage is that they are not interesting or collectable and there is no story attached to each bar, as there is for coins, and therefore no prospect for any appreciation beyond any rise in the metal value. Another disadvantage (which is also the case with coins) is the cost for storage and insurance.

Gold bars are not ideal as a vehicle for short term trading in gold because of the dealers’ costs of buying and selling. Gold bars (like coins) are really more for long term holding in order to amortise the transaction costs.

Exchange traded gold funds

Exchange traded funds (ETFs) for gold are a relatively recent development. In the early 2000s when the gold price was still languishing below \$400, the World Gold Council (which is a body funded by the major global gold mining companies) wanted to find a way to increase the interest in gold and the ease with which ordinary people could buy it, thereby hoping to boost the gold price and therefore gold company profits. They came up with a structure that would allow gold to be bought by ordinary people anywhere in the world with a few mouse clicks and without having to actually buy physical gold in the form of bars or coins.

Exchange traded funds have been a very popular way of holding other assets (mainly shares) for a couple of decades, so they applied the same structure to create a gold ETF as a more convenient way of buying, selling and holding gold.

Gold ETFs have become extremely popular in the recent gold price boom, and in fact they have fuelled part of the price rise. There are now a number of gold ETFs traded on various global markets, the largest being SPDR Gold Shares (not traded on the ASX) which holds around 300 tonnes of gold worth about \$70 billion.

In Australia the main ASX-listed gold ETF trades under the code “GOLD” on the ASX. Each unit in the GOLD ETF represents 1/10th of an ounce of fine gold and is claimed to be backed by an actual gold bar held in a vault in London. If an investor buys 10 units in the GOLD ETF on the ASX this represents 1 oz of fine gold held in the vault. The traded price on the ASX sticks very close to 1/10th of the AUD gold price and there is usually a good deal of volume and liquidity in the market on most days, so trading is relatively easy and quick.

The main advantage of ETFs is the cost and simplicity. The only cost is the usual brokerage for trading ASX listed stocks – and there is no need to pay for storage or insurance because you only get a piece of paper (a HIN statement like with any other share listed on the ASX). However there is an annual fee (currently around 0.40% pa for the ASX-listed gold ETF), which does eat into the real value over time. This comes to around \$7 per ounce per year at current prices, which is not insignificant.

This 0.4% pa fee adds up over time and detracts from the value of the gold ETF as a long term inflation hedge. If inflation remains low or moderate (which it has in Australia most of the time), this annual fee will eat away at the real capital value (and eat away 10-20% of the inflation hedge), meaning that it will not provide a complete hedge. The fee becomes less important in times of hyper-inflation, but ETFs would probably be of little use in that event anyway because a hyper-inflation scenario usually also means a break-down in social and financial institutions. In a severe crisis including hyper-inflation, your piece of paper may be worth money in theory, but the stock exchange and banking system will probably be closed, so your paper will probably be heavily discounted.

However, ETFs are a convenient way of holding gold in short term or medium term trading strategies, because they are much more convenient to buy sell and hold than physical gold.

Despite the advantages of ETFs, there are some downsides. As with all ETFs there is a “counter-party” risk – the risk that the issuer and the custodian doesn’t honour their contract. In normal times this should not be a problem, but the past three years have demonstrated that all sorts of things can and do go wrong in financial markets, especially in times of crisis.

As mentioned above, ETFs will probably be no good for an Armageddon scenario because with an ETF all you hold is a piece of paper with a promise. To actually get your hands on the gold you will need to make your way to London somehow (which may take months) and even if you get there the gold may have long since been looted.

This may be an extreme set of conditions, but it does happen. London has been attacked many times – including twice in the past century. Australia was almost invaded by Japan in 1942, and it was serious enough for our national gold reserves to be shifted from Sydney to various country towns – in trains, which were very difficult to secure. Severe crises do occur and they will probably happen again in our lifetime, so we need to recognize it in our long term plans.

When (not if) a real Armageddon scenario does eventuate you don’t want to left holding a worthless piece of paper. You want real gold in small, easily recognizable, easily measurable, easily traded portions.

Another problem that ETFs have created is that the rise of popularity of the gold ETF has probably been partly responsible for the recent rise especially since 2008 (just as the World Gold Council intended). When you buy units in the gold ETF, the issuer must go into the

market that day and buy the equivalent amount of physical gold to put in the vault in London so that the total units of all the gold ETFs in the world are backed by physical gold at all times. That buying of physical gold pushes up the price which in turn fuels more demand from speculators.

The same would also be true in a selling panic. For example, if Israel/US bombs Iran, gold and oil would probably shoot through the roof and people would panic buy ETFs to get in on the action, and the resultant buying of physical gold by the ETF issuers would push the price even higher. However, if hostilities escalate much further to the point where it looks like a real crisis is coming – eg war in North Asia (China / Koreas / Taiwan/ Japan / US) or war in Europe over who pays the PIIGS debt, or perhaps if a rogue state launches a nuclear strike, people may start to realise that a piece of paper is not much good in an Armageddon scenario so they suddenly start to sell their ETFs to buy hard assets instead, including stock-piling food and fuel. That could cause an avalanche of selling of ETFs, putting pressure on the counter-parties, and perhaps a gap might open up between the ETF price and the physical gold price.

Because of this risk, long term holders might hold their part of their gold in ETFs, but the rest in physical gold – in the form of coins, bars and/or jewellery, and use ETFs for short term trading if any.

Gold mining stocks

Australians love a “punt” (a gamble) and one of their favourite ways to have a punt has been on mining stocks. From the early days of the stock exchanges in the Australian colonies right up to the present day, the majority of stocks listed on the Australian stock exchanges have been mining stocks, and the vast majority of them have never produced a cent in profits nor paid a cent in dividends.

Australians have always been happy to punt their hard-earned money on mining stocks in the hope of striking it rich - finding the “big one” - the long shot – the stock they “discover” and buy for 1 or 2 cents per share and then shoots up to \$100. There are very few ways in which an ordinary worker can hope to turn a small bet into a fortune – the lotteries, the pokies, the races, and mining stocks. (Dot com stocks had their day in the sun for a couple of years in the late 1990s, but the prospect of making a fortune with mining stocks has been around for centuries).

In every mining boom, hundreds of new companies are hastily formed to harvest money from the pockets of “investors” (ie punters) caught up in the mining fever. Unfortunately most of the money raised in every mining boom has been lost – either pocketed by promoters, siphoned off by brokers, or simply wasted looking for minerals that either never found or are found in grades not high enough to mine profitably.

In every boom the vast majority of mining companies run out of money and collapse, but a very small number of mining companies do survive and prosper.

Western Mining

One notable example of success (for those who got the timing right) was Western Mining, one of the dozens of new gold stocks floated in the 1930s gold boom, and one of the very few to survive more than a few years. It was formed by a group of London investors in 1933 to explore for gold in WA in the gold price boom caused by the US dollar devaluation against gold and the Keynesian spending spree in the depression. It found commercial grades of gold

in Kalgoorlie and then moved progressively into other minerals, including bauxite in the 1950s, nickel in the 1960s, uranium, oil & gas, phosphates, copper, and finally back to gold.

Western Mining was rare in that it managed to make enough money out of several of these booms, and then had the foresight and courage to recognise that the boom was over and move on in search of the next one. It was a “hot” gold stock in the 1930s gold boom, a “hot” bauxite stock in the late 1950s, it was the original “hot” nickel stock in the late 1960s nickel boom even before Poseidon (Western Mining’s discovery of nickel at Lake Lefroy January 1966 kicked off the wild nickel boom), and it reverted to being a hot (or rather luke-warm by that time) gold stock in the late 1970s gold boom.

Western Mining’s share price peaked at \$19 per share in 1969. The late 1960s nickel boom collapsed in the early 1970s, the late 1970s gold boom collapsed in the early 1980s, and the prices of all commodities including gold, oil and industrial metals fell heavily in the 1990s. Even at the top of the gold bubble in early 1980, WMC only reached \$3.50 per share. It reached a peak of \$12 at the top of the 1987 stock market boom, but it then collapsed to 84% to just \$1.92 in the October 1987 crash.

In 2002 the company was split into WMC Resources, which was taken over by BHP Billiton for \$7.85 in cash, and the remainder was renamed Alumina, which is still listed today and worth around \$1 per share today. Those investors who bought Western Mining shares its heyday in the late 1960s mining frenzy are still waiting to get their money back after 43 years! It had a great run, and great fortunes were made in each of the booms, but the trick is to get out when prices are high and not hang on in the forlorn hope that “this time it’s different”.

Today there are 220 gold stocks listed on the Australian stock exchange. 80% of them are still in the exploration stage, and only 46 actually produce gold profitably. Of these producers, only 6 companies (or 3% of all the listed gold stocks) make enough money to pay a dividend.

Listed gold producers

The following table shows the gold miners listed in Australia that produce gold and make enough profits to pay a dividend:

Company	Mines	ASX Code	Market capitalisation (\$b)	P/E ratio	Div Yield	10y Total Return pa	Comments
Newcrest Mining	Several mines in Australia, PNG, Indonesia, Fiji	NCM	\$25.0	19.3	1.0%	19.4%	
Medusa Mining	Copper/gold mines in Philippines	MML	\$1.2	11.1	1.7%	47.0%	Since listing 2004
Kingsgate Consolidated	Gold mines in Thailand	KCN	\$1.0	10.6	3.4%	17.6%	
Anglogold Ashanti	South Africa based, mines in Africa, Americas	AGG	\$0.7	194	2.5%	-0.3%	Based in South Africa
Troy Resources	Gold mines in WA & Brazil + exploring in Argentina	TRY	\$0.5	10.3	1.7%	16.8%	
Eldorado Gold	Canada based, mines in Brazil, China, Greece, Turkey	EAU	\$0.1	25.2	1.0%	3.0%	Based in Canada. Listed in Aust 2010

This list reveals several characteristics of the market for listed gold stocks in Australia:

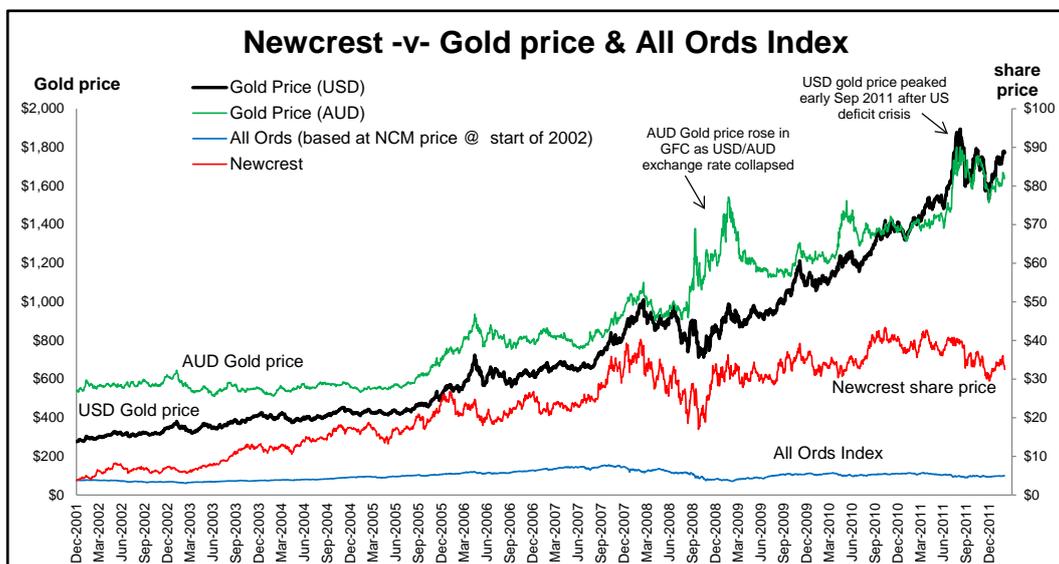
- Two are based overseas (Anglogold and Eldorado) and were listed in Australia to tap into the willing base of investors here
- All have substantial mining operations outside Australia. These days Australia is mainly a source of willing capital more than it is a source of gold.
- The share prices of all except one (Troy Resources) are well down from their peaks, even after the early 2012 rally. The peak for gold miners was between April 2011 following the bounce back from the Japanese tsunami/nuclear crisis in mid-March, and the US debt crisis in late August / early September 2011, when gold reached \$1900 per ounce.
- Despite the falls in share prices since the peaks last year, the gold miners are still trading on relatively high price/earnings ratios and/or low dividend yields, indicating that investors are still rather bullish and are expecting gold prices to rise significantly higher from current levels.

Mining stocks have tended to benefit from rising commodities prices, but it has usually been mostly in the early stages of the commodity price rise. This has been the case with gold producers in past good booms and it has been the case in this current cycle.

Newcrest

As an example, we will use the largest listed gold producer in Australia – Newcrest Mining, which dominates the gold mining index here because of its sheer size. Newcrest has a long history of mining in Australia. It was spun out of BHP in 1987 as BHP Gold, changed its name to Newmont Australia when merged with some of Newmont's gold mines (Newmont is a huge US-based gold miner), changed its name again to Newcrest, and it recently acquired Lihir Gold, which has major operations in PNG. It also has mines in Indonesia and Fiji. Newcrest is producing about 2.5 million ounces of gold pa (around 2% of global production), which is about 78 metric tonnes (78 carry-on bags), or about 4 cubic metres - the size of two good sized 2-seater lounge suites.

The next chart shows the Newcrest share price, All Ordinaries index, USD gold price and AUD gold price over the past 10 years:



Newcrest's share price rose strongly during the early 2000s as the gold price first awoke from its 1990s slumber, but it has not followed the dramatic rise in the gold price in more recent years. The next table shows the returns each year:

Calendar Year	Newcrest	Gold price (USD)	Gold price (AUD)	USD / AUD exchange rate	All Ords Index
2000	-15.8%	-5.4%	11.4%	-15.3%	0.1%
2001	-6.1%	0.7%	9.4%	-7.8%	6.5%
2002	89.8%	25.6%	14.2%	10.9%	-11.4%
2003	79.9%	19.9%	-10.4%	32.5%	11.1%
2004	34.7%	4.6%	0.6%	3.9%	22.6%
2005	39.3%	17.8%	25.9%	-5.8%	16.2%
2006	8.4%	23.2%	14.7%	7.9%	20.0%
2007	25.6%	31.9%	18.4%	11.4%	13.6%
2008	2.4%	4.3%	31.4%	-21.4%	-43.0%
2009	4.2%	25.0%	-3.1%	29.5%	33.4%
2010	14.5%	29.7%	13.4%	13.3%	-0.7%
2011	-26.8%	11.6%	13.1%	-0.1%	-15.2%
5 years to end 2011 (pa)	2.4%	20.0%	14.1%	5.1%	-6.2%
10 years to end 2011 (pa)	22.7%	19.0%	11.1%	7.1%	2.0%
Correlation to changes in <u>USD</u> gold price	0.44	1.00	-0.06	0.72	0.30
Correlation to changes in <u>AUD</u> gold price	-0.26	-0.06	1.00	-0.73	-0.58

Although Newcrest has beaten the overall stock market by a big margin over the past 10 years, this was primarily due to the big share price gains in the early years (2002 to 2007 – highlighted in blue). This was when the gold price was in the early stages of its rise in the current cycle, which led investors to re-rate and “re-discover” the gold miners after they had abandoned them in the 1990s.

While most of the gold price rise has been in the more recent years, the Newcrest share price has not benefited from this gold price rise, but has remained virtually flat for the past 4 years (through the ups and downs in the GFC). Since the heights of the 2000s boom at the end of 2007, the USD gold price has nearly doubled and the AUD gold price has risen 60%, but Newcrest shares have gone nowhere, despite rising production and rising revenues.

Despite the relatively high gold prices in recent years, rising production costs have eroded profitability, and this is generally true of all commodities miners in the late stages of booms.

Over the full decade, Newcrest shareholders have received returns similar to the rise in the USD gold price (both have risen by around 20% pa – highlighted in green), but this has only been the case for shareholders who bought in the early years (before 2005) when the gold price was still relatively low. On the other hand, over the most recent 5 years of the boom, the gold price kept rising an average of 20% pa, but the Newcrest share price has only risen 2% pa (highlighted in red).

The main lesson from this is that gold miners do offer a way for investors to benefit from rising gold prices, but generally it is only when they are bought in the very early stages of the boom when prices are still relatively low.

Aside from the fact that the share prices of gold producers do not follow the gold price, most gold mining companies from time to time hedge part or all of their gold sales by locking in forward sales contracts, rather than take a risk on the gold price each year. What is important for investors to understand is that the use of hedging contracts by producers further removes the link between movements in the current (“spot”) gold price and gold miners’ profits and therefore share prices.

Listed gold exploration stocks

The vast majority of listed gold stocks are still looking for gold or have found gold but not started producing yet. Most were floated in the past 5 years in the mining float frenzy, and a large proportion of them are exploring in other countries, from Africa, South America to Asia. Most will probably run out of money, as this has been the case in all previous booms with all commodities including gold, but perhaps a small number will strike it rich and prosper. This is where great fortunes are won, by finding “undiscovered” stocks that end up striking it rich, and this “once-in-a-blue-moon” chance of a big win is what keeps the punters hooked.

The best chance of striking it rich with an exploration stock is if you find a company on the cusp of a great discovery, with a mineral that is on the cusp of a price boom.

First, gold is hardly on the cusp of a price boom. The price has already risen 500% in the past 10 years and that is when the money was made in this cycle, and mostly in the early years of the boom. The gold price may rise further from current levels, but even if it spikes up to even \$5,000 per ounce, that is not even a 200% rise from here. The best days are well behind us in this cycle.

Second, given the current frenzy of interest in gold, driven by the high prices of gold and gold stocks, investors, punters, stock brokers and fund managers everywhere have been poring over geological maps and geotechnical reports for years, and so there is very little chance of finding an “undiscovered” bargain among the hundreds of mining stocks out there. The hype and the hope is already built into their share prices. The best time to find undiscovered bargains is when nobody else is looking, and that is when prices were low 10 years ago.

As with gold itself, the best time to buy gold stocks (or any asset for that matter) is when prices are cheap and nobody else is buying them. In gold booms, that time was a decade ago when gold was less than \$300 per ounce and when gold stocks were still cheap.

This is not to say that gold stocks will not go higher. The gold price may spike up to \$2000 or even \$3000 or even more in certain scenarios, but the prospect of this occurring is already priced in to current prices (as evidenced by the relatively high price/earnings ratios and low dividend yields for the gold producers). Meanwhile costs are rising, wages are rising and profitability is suffering, so the gold stocks need the gold price to rise significantly just to maintain current levels of profitability.

In the current environment our preferred strategy for our long term portfolios is to hold the larger diversified miners, like BHP and RIO, which are very experienced in range of markets and commodities, and tend to have relatively low production costs, together with a pipeline of

new exploration projects. BHP and RIO have very little exposure to gold mining. Investors will not find any “hot” stocks in our long term portfolios.

Summary

Investors cannot consider gold without also thinking about currencies and inflation, as the three concepts are inextricably linked. In this paper we have covered several of the main forces at work in shaping the recent performance and future outlook for gold, and this also involved taking a view on the likely prospects for currencies and inflation.

Our conclusion is that gold should probably not be added to long term investment portfolios at current price levels as part of a long term investment strategy. Long term holding of gold only makes sense as an inflation hedge or as a store of value if bought when it is at or below its long term price around which it has oscillated for thousands of years (ie at or below around \$500 per ounce in today's dollars). The exception would be if the investor's home country is about to embark on a massive hyper-inflationary money-printing spree, which is very unlikely for Australia in the foreseeable future.

Long term investors in gold or gold stocks would either be selling into the current price bubble, or holding on to the gold or gold stocks they bought when it was cheap in the glut, and simply ignoring the current prices. Long term investors certainly would not be falling into the trap of chasing the bubble up now as part of any long term “investment” strategy.

Over short/medium terms, Americans have perhaps half a reason for buying gold, but Australians have even less of a reason given the impact of currencies on returns from gold. Australians who buy gold in a bubble generally have had to wait up to 30 years to get their money back in real terms after inflation.

Short term trading has its place – we can't stop people taking a punt with their own money as long as it doesn't put at risk their long term financial health – and it should be kept well away from their long term portfolios. Long term portfolios are designed and managed to be there to look after investor's critical long term needs – most people will probably live longer they expect, and their expenses in their old age will probably be higher than they expect. Long term investment portfolios should not include any short term speculative activity.

If buying as a very short term speculative bet, there is money to be made but it requires constant vigilance and the ability to switch directions quickly, but it should not be done in long term portfolios.

Let us conclude by answering the questions posed at the outset:

Is gold a safe haven?

- Yes, but only if bought when it is cheap. It has been relatively cheap for most of history but does experiences price bubbles for a 3-5 years every few decades. We are currently in a price bubble. Gold in the form of small tradable objects like jewellery, coins and bullion bars may be very useful in times of extreme stress and complete breakdown of financial systems and social infrastructure, for example in the event of civil war or hostile invasion/occupation of Australia, or in a nuclear winter.

- This is most unlikely in Australia in the next 5 or so years, it so it would be better to wait for prices to fall (they always do after a bubble) before buying gold in readiness for a possible “Armageddon” scenario.

Is it an inflation hedge?

- Yes, but generally only times of high inflation and hyper-inflation. Aside from in bouts of hyper-inflation, gold has proven to be a very poor hedge against inflation unless bought when it is cheap and held for at least 30 years, because in several past cycles it has taken 30 years to recover its value if bought in the gold price bubbles.
- In Australia, we have never experienced hyper-inflation, and periods of high inflation have been rare - in 1853-55 (in the gold rush), 1919-20 (post WW1 inflation), 1948-52 (Korean War), and 1974-83 (oil price spikes and prices-wages spiral).
- Company shares have provided effective inflation hedges in periods of low to moderate inflation (and have the advantage of providing scope for real growth above inflation), but shares have performed poorly with high inflation. Bonds also perform well in low inflation conditions but suffer with high or moderate but rising inflation. Property also offers a hedge against high/hyper-inflation but has the disadvantages of high transaction costs, lack of portability, it is hard to hide and easy to tax. Gold does not have these disadvantages of property.
- Australia is not currently in, or heading into, a period of high (eg 10%+) inflation.

Is it a store of wealth?

- Yes, in times of severe hyperinflation. For example it was an effective store of wealth for Germans against the 1920-3 German hyper-inflation, and for Japanese against the 1945-8 Japanese hyper-inflation.
- There is no sign of a hyper-inflation break-out in Australia in the foreseeable future. Hyper-inflation in the US is very unlikely and, even it did happen, it would have little affect on the Australian dollar gold price for Australian investors due to the likely currency effects.

Is it the ultimate “risk-free asset”?

- Hardly. Aside from the real risks of fraud and theft in the case of physical gold, and the counter-party risk in the case of ETFs, owners of gold still face the prospect of going backwards in real terms if they bought in price bubbles, which is when the general public tend to get caught up in the frenzy and buy.

Should gold form a part of long term investment portfolios?

- Gold does offer some benefits in long term portfolios, but only in a minor role and only if it is bought when it is relatively cheap, which it is most of the time, but not at present levels. If bought at current levels it will probably under-perform for many decades as it has done for decades following past price bubbles.

Will there be a return to the gold standard?

- Most unlikely - there is not enough gold in the world to meet the demands of the current level of economic activity, and the recent problems with the Euro system has reminded

the world of the fatal shortcomings of fixed currency systems. If countries did return to a gold standard, governments would probably need to outlaw private ownership (as they have done in the past) and may demand mandatory re-purchase at a low price, or confiscate it outright.

Is it a speculative bet?

- Yes, due to the large and frequent price swings in the gold price when priced against paper currencies, there is money to be made (and lost) for traders with gold. To trade successfully, one generally requires trading in large parcels, extremely low costs, an edge, and some luck. There are many consistently successful traders in the world but there are also probably hundreds or even thousands of unsuccessful ones for every success story.
- From current levels, the gold price may spike to \$3,000 or even \$5,000 or more if certain events play out, but it is a long shot and one for pure speculators.
- So far in this cycle the gold price has risen 500%. Even if the price did rise further to say \$3,000 or even to \$5,000, that would not even be a 200% rise from here. Clearly most of the boom is behind us, and chasing the tail end of a boom is always fraught with danger.

Is it an historical relic with no relevance in today's modern world?

- No. Gold still has a vital function in the modern economic system. Most developed nations still hold most of their national stores of foreign reserves in the form of physical gold because the only alternative is to hold paper currencies of foreign governments. Paper currencies are not backed by any hard assets or security or enforcement mechanism, and governments frequently debase their paper currencies by printing too much money.

To sum up, gold serves a number of purposes and offers a number of benefits. The decision as to whether it is a good time to buy gold (and if so, in what form) will depend on the relative importance each person places on each of these purposes, and how they believe the future will unfold. Each person's needs, motivations and outlooks for the future will be very different, so there is no universal right or wrong answer that will apply to everybody.

We hope that this paper provides some context for people to make informed decisions.



Ashley Owen, CFA
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March 2012

Disclosures

This author holds gold in the form of coins, bullion, and shares in companies that include gold mining operations, primarily BHP and RIO (which have very minor gold operations), and has owned units in gold ETFs from time to time. The gold trade example outlined in the section on trading was actually undertaken by the author. In the past he has also had direct interests in developing and financing gold refining operations in Sydney, Perth and PNG.

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$\sigma_p = \sqrt{(w_A^2 \sigma_A^2 + w_B^2 \sigma_B^2 + w_C^2 \sigma_C^2 + 2w_A w_B \text{Cov}_{AB} + 2w_A w_C \text{Cov}_{AC} + 2w_B w_C \text{Cov}_{BC})}$
 $(E(r_M) - r_f) \beta_i \equiv \rho_{i,M} f(x_i) = e^{-((x_i - \mu)/\sigma)^2} \frac{1}{\sigma \sqrt{2\pi}} \sum_{n=1}^{\infty} (x_i - \mu)^n$
CAPM: $E(r_i) = r_f + \beta_i (E(r_M) - r_f)$
 $\sigma_p = \sqrt{(w_A^2 \sigma_A^2 + w_B^2 \sigma_B^2 + w_C^2 \sigma_C^2 + 2w_A w_B \text{Cov}_{AB} + 2w_A w_C \text{Cov}_{AC} + 2w_B w_C \text{Cov}_{BC})}$