The Gold Price For the Next 16 Years

The high rate of debasement of paper currencies ensures the gold price trend will be solidly up until interest rates rise sharply, to maybe 15% in 2028.

Dr David Evans, 23 May 2012

Gold is monetary. It is the main non-government currency, evolved in the marketplace over 5,000 years.

If you want shiny yellow stuff for jewelry, there are plenty of cheaper alternatives—jewelry is made of gold because gold is valuable, and gold is valuable because it is money. Gold is not a commodity like wheat or iron, because it does not get used up—nearly all the gold ever mined is still available for sale at the right price. Nor is gold an investment that produces goods and services, like farms or factories—it is just a medium of exchange, like cash.

Gold becomes a good investment only when the other currencies are failing, inflating, and debasing. This is one of those times.

Manufacturing Money

There is a lot more money around today than there was 30 years ago; a billion dollars used to be a lot of money, but now we talk of trillions. So someone has been manufacturing a lot of money.

In the modern money system, there are two sorts of "money". First is ***base money***, which is physical cash or the numbers in an account at the central bank. It is created out of nothing by government, by ***fiat***. Technically there are no constraints on its manufacture, but in practice it is moderated by the desire not to raise inflationary expectations. It is about 5 – 10% of today's money.

Secondly, there is ***bank money***, which is numbers in bank accounts at commercial banks. In essence bank money is a receipt for base money—if you deposit a $100 note, the bank increases the number in your bank account by 100. (The banks themselves call this money "credit", which can be confusing because "credit" has other meanings.) A little bank money is created by cash deposits, but the vast bulk of it is created when commercial banks make loans—which they do by simply increasing numbers in bank accounts. Thus, nearly all bank money is created out of nothing by commercial banks when loans are made. (The banks then charge interest on the newly created bank money—great business model!) Bank money constitutes about 90 – 95% of today's money. Most commercial transactions today just move bank money between bank accounts.

The manufacture of bank money by lending is moderated by the obvious problem that if a bank issues more receipts than it has cash, too many customers might withdraw cash at once and the bank would be broke—with no cash, but owing cash to its account holders. It has long been established by trial and error that in normal times a bank can issue about 10 times as many receipts (that is, make loans of bank money) than it has base money, because not all its account holders will show up at once wanting cash. Central banking and government guarantees reduces this risk further, and modern bank runs are rare.

This ratio of bank money to base money illustrates the notion that the base money is “amplified up” tenfold by bank money. It is called ***fractional reserve banking***. However since about 1990 the manufacture of bank money in western countries has been constrained instead by the ***Basel Accords***, which limit the amount of bank money a commercial bank can create using a formula based mainly on the equity capital of the bank, the riskiness of its loans, and the amount of depositor’s funds. Although banks still technically must obey reserve requirements as well, they are mainly irrelevant due to modern practices like retail sweep and lending of reserves. The Basel Accords can be loosely thought of as limiting the ratio of bank money created by commercial bank lending to about 20 times the amount of base money in circulation.

So the current government currencies are a fiat base, amplified by a modified fractional reserve system. Both parts create money out of nothing: base money is created by the central bank, and bank money is created by the commercial banks. Historically, any money system where money can be created from nothing is unstable because it eventually gets very debased—and they tend to last on average about 50 years. Each part of our current system is unstable in its own right, and the current system is just 41 years old. What could possibly go wrong?

Our Debt Crisis

Our current money system essentially started in 1971, when Richard Nixon cut the last link to gold, which allowed unconstrained manufacture of base money for the first time in the West. The stagflation of the 1970s dealt with the inflationary consequences of the 1960s, then the system was reset in 1980 by 20% interest rates—which halted money manufacture by making it very expensive.

Banks and government then proceeded to blow the deepest and most global monetary bubble in history, by (1) keeping interest rates as low as possible such that CPI did not rise, but ignoring asset inflation, (2) changing banking rules to make money manufacture ever easier and cheaper, and (3) responding to each crisis by bailing everyone out with cheap loans of new money.

We can measure the size of the bubble. Since the vast bulk of money is bank money created by lending, the amount of money is roughly the amount of all debt, both government and private. The size of the economy is its GDP, so the size of the bubble is the debt-to-GDP ratio (for all debt, not just the debt of the national government). We will discuss the US figures because those are easily accessible and of good quality, but the ratios for other western countries are similar.

Normally the ratio is about 150%—the amount of money is about 1.5 times the GDP. There are two notable exceptions. The first was the roaring 20’s, when the ratio soared. At 235% in 1929 the market crashed, and ushered in the Great Depression of the 1930’s. The ratio returned to the usual 150% by 1950, and strong real growth followed.

The second exception started in 1982, when the ratio started soaring again. By 1987 it reached 235%, and again there was a market crash. In contrast to 1929 when the central banks let the money supply fall rapidly as businesses and banks went bust, Fed Chairman Alan Greenspan flooded the markets with liquidity. The real economy shrugged off the market crash after a couple of years, and the ratio soon resumed its ascent, rising strongly until 2008 when it peaked at 375%.

Now nothing can move away from its normal value forever, but why did the ratio stop rising in 2008? Basically the world ran low on borrowing capacity. There was no longer enough income to service the debt (debt was roughly 400% of GDP and paying around 4%, so interest payments were around 16% of GDP). Also, the world was running low on the unencumbered collateral required to take out a loan. The manufacture of money by commercial banks stalled, which brought on the global financial crisis (GFC). Governments promptly stepped in to take up the slack in money manufacture, lowering interest rates, borrowing, and printing a little ("quantitative easing").

What Now?

In 2012 the ratio is still stuck around 375% and governments cannot borrow much more. Worse, the world is finally realizing that the private sector is debt-saturated, and that there is no return to the pre-2008 "normal". Most everyone making financial decisions today grew up in the bubble, which started in 1982. All we know is the bubble, when loans were easy to get and the amount of money was increasing quickly. But monetary history tells us that the period 1982 to 2008 was very unusual. Many people now realize that we cannot go back there.

There is an important constraint that is often overlooked. Last year's debt has to be repaid ***with interest***, so each year the money supply must increase or there will be widespread business and bank failure. It's like a game of musical chairs—if there isn't as much money as last year, plus some extra to pay interest, then arithmetically not everyone can pay back their loans. (We don't literally have to pay back and re-borrow our loans each year, but for big business loans it is effectively like that because the banks are looking over their shoulder and will demand immediate repayment if they get nervous.) If a lot of businesses cannot repay their loans, then some banks will go bust and more businesses will go bust. This is what happened in 1929 – 1932.

But if the private sector cannot manufacture more bank money by borrowing from commercial banks, the only way for more money to be manufactured is for government to manufacture base money.

So the world is now, in 2012, at an important fork in the road: Either print and inflate, or allow the amount of money to decrease and suffer widespread business and bank failure. ***Inflation or austerity.*** The first path is one of continued currency debasement that keeps the economy stronger in the short term; the second responsibly stops the monetary debasement but 1930's style failures will ensue.

This is the sort of mess that always eventuates when currency is debased. There is no painless solution; the day of reckoning can only be put off and drawn out. Philosophically, money is a promise, of similar purchasing power anytime in the future. Work is motivated by these promises. But too much money has been manufactured—too many promises have been made. Not all debts can be repaid in dollars near their current value –not all those promises can be kept. There are going to be many losers. The political system, not the usual economic rules, will determine who the losers will be, because the politicians will change the rules as we go.

Politicians Will Choose Inflation

It's the basic democratic calculus: Lenders are few, but borrowers are many—they vote, and they might riot. Further, all big businesses borrow money so powerful business interests will push for an inflation so they can pay back their loans in smaller dollars. The Keynesian fog will be invoked to excuse the inflationary choice, something like "reducing the people's debt burden".

Ben Bernanke, present Chairman of the US Federal Reserve, is a student of the 1930s depression and blames it on the drop in money supply—he has made it clear that his Fed will not allow a 1930's deflation. Academic economists in the US who strongly influence economic policy, such as Rogoff and Mankiw, are already suggesting running a mild inflation of maybe 6% for a few years. Government spending in most western countries is considerably more than tax receipts, giving governments extra incentive to print (when governments print to make up for insufficient tax receipts, price inflation quickly follows—this is what drove the German inflation of the early 1920s). And finally, most western governments are already deeply in debt and face huge interest bills, so they want low interest rates.

Gold

Gold enforces honesty, because you have to earn it before you can spend it. No one can conjure it up for little effort, and even digging it out of the ground often takes almost as much effort as it's worth. Gold is an anti-cheating device, because when someone cries "bullshit" you've either got it or you haven't.

In particular, banks and government cannot print it. And who hates gold? The monetary elite and governments prefer their dishonest money. They enjoy the first use of the new money, spending it before it pushes up prices. Governments can print to cover their debts if necessary. For centuries the greatest game in banking has been to buy assets in a sector, approve more lending for purchases in that sector, then sell their assets when the prices subsequently rise, then cut off lending into the sector and watch the prices fall—rinse and repeat every few decades.

Banks and governments bash gold. For the last 15 years most large financials have been predicting gold prices a year hence as 10% less than whatever it was at the time—but considering that gold has been rising at 21% p.a. for the last ten years, a track record that bad is hard to acquire by accident.

As any currency trader knows, the long term value of currencies is determined mainly by their relative rates of manufacture (or debasement). Since 1982 the amount of above-ground gold has been increasing at just over 1% p.a., while the amount of the main paper currencies has average growth around 12% p.a. In 2007 the Australian broad money supply grew at 23% (yet CPI was less than 3%).

Some say gold is in a bubble. Not so. A bubble suggests that some ratio or pricing metric has moved up away from its normal value, and later reverts to its mean. But gold always debases much more slowly than any paper currency, so basically gold goes up forever against paper currencies, at an average rate equal to the difference in their rates of debasement. A gold price of one million dollars per ounce is only a matter of time—but will it take 50 years or 500 years?

By historical standards, the price of gold is now low. In the gold rushes of the 1850s, it was worth leaving the city to sail on a wooden boat for three months, then live in the wilderness scratching in the dirt for a few ounces of gold per year. What gold price would it take to get you to do that today? Modern gold mining is a highly mechanized business yet it is barely profitable.

The total amount of debt in the world in 2011 was around 210 trillion USD, and the world's GDP was 60 trillion. Yet the value of all the gold ever mined, going back to the Egyptians, is just 9 trillion USD. If gold ever re-enters the official financial system, it will have to move up in value quite considerably.

The last gold price rise was 1968 – 1980, when it rose from 35 to 800 USD per ounce. What stopped its rise then? Overnight interest rates around 20%, which made paper currencies attractive and stopped their debasement. Presumably it will take similar interest rates to again stop the rising gold price. But nobody today can afford to pay 20% interest rates, especially governments, so gold is going to keep trending up for quite a while.

Forecast to 2028

We can calculate how long the upcoming inflation will last and how high gold will go, based on a few reasonable assumptions. The usual caveats about forecasting apply, and if the central banks lose control of the situation we are likely to veer off either into hyperinflation (more likely) or depression (less likely). But let's be optimistic and assume they successfully chart the most politically feasible course.

Debt levels are currently around 375% of GDP, but need to revert to their normal level of 150%. This requires a 60% reduction in the real value of debt.

Let's suppose we get inflation cranked up by 2014, that we run a 1970s high but tolerable inflation of around 12% (which the modern CPI is likely to register as only around 5 – 8%) ,and that interest rates are around 6%. Then the real interest rate is -6%—so it takes 14 years to reduce the value of debt by 60%.

To end the inflation, governments must make a credible commitment to halting the rapid growth in the stock of money: they must raise interest rates sharply, to maybe 15 – 20%. The gold price will continue trending up until that happens, so until then gold investors can relax (ok, the ride might be volatile). But when real interest rates go strongly positive, it's time to get out of gold ☺

Gold has been rising at a remarkably steady 21% p.a. for the last ten years. About 11% of that might be due to the current debasement differential, while the rest might be a combination of catch up for the period 1980 – 2001 when the gold price fell substantially in real terms, fear over the possible abandonment of paper currency, and the possibility that gold will re-enter the official money system. Under the scenario outlined above, the rate should remain roughly similar.

Assuming gold continues to rise at an average of 21% p.a.:

	Nominal price in USD/oz	Price in today's money, USD/oz
1980	850	3,300
2001	260	360
2012	1,800	1,800
2015	3,800	3,000
2020	10,000	4,600
2025	25,000	6,100
2028	50,000	8,400

Don't let the nominal prices bedazzle you. Due to the inflation, a dollar of 2028 is only worth 17 cents in today's money, so the peak price of $50,000/oz is only around $8,400/oz in today's money.

The amazingly straight rise of gold for the last 10+ years. Graph from Nick Laird at sharelynx.com.