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Gold bars and bitcoin: what price is right?

By ABC's Alan Kohler

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It's not enough to say that an asset is worth what someone is prepared to pay for it, writes Alan Kohler. So what is gold, and a bitcoin for that matter, really worth?

It's probably cold comfort to the many nervous souls who invested in gold as a safe haven, but the bitcoin price has fallen a lot more than the gold price: 70 per cent in a week versus 15 per cent.

There is a world of difference between them of course, but they have two things in common: they are both seen as an alternative to what is called fiat money, which is the paper or digital money created by governments, and neither, it turns out, is very safe.

After a small bounce this morning the price of gold has now fallen 25 per cent in six months, shattering the hopes of those who thought it would keep rising as governments printed more and more money to refloat their economies.

Now the question being asked is: what is gold, and a bitcoin for that matter, really worth? It's not enough to say that an asset is worth what someone is prepared to pay for it. That gives no guidance at all, and anyway, it's wrong.

The value of something comes from either the cash it will generate in future or the utility it provides. Prices can differ from value for a while because both of those concepts are malleable. Future cash flows can be uncertain and utility is in the eye of the holder.

But prices don't deviate from value for long, something we have been reminded of frequently and painfully throughout history.

Neither bitcoins nor gold generate a future cash flow but they are hard to come by and are quite useful, so they clearly have some value.

Bitcoins have to be mined by solving mathematical equations that use huge amounts computing power that chews through a lot of electricity. A recent Bloomberg article estimated the power used for bitcoin "mining" at 982 megawatts a day.

Apart from that, and the fact that they are supposed to be limited to a maximum of 21 million, fundamental value will end up settling at cost of production plus some scarcity value - as opposed to the increasing lack of scarcity of normal money.

The fundamental value of gold seems to have a similar basis - that is, cost of production plus scarcity value. But it also has a much longer history as money than bitcoins.

Since it was greatly valued by the ancients as jewellery, gold came to be used to store wealth and settle payments. After a while, this moved to certificates of title to gold instead because they were lighter and easier to carry. And then governments realised they could print more certificates than there was gold until, in 1971, the connection between the certificates and the gold was broken entirely.

Since then gold's value has derived from its utility as jewellery and decoration, and the echo of its use as a store of wealth and medium of settlement.

And although there is some confusion around whether it may be used to protect wealth from inflation or deflation and crisis, it's really all about inflation. Gold's value basically derives from the persistent loss in the value of money since 1971 - otherwise known as inflation, or rising consumer prices.

The IMF's latest World Economic Outlook, issued last night, contains a chapter entitled "The dog that didn't bark: has inflation been muzzled or was it just sleeping?"

The IMF observes that "inflation has been remarkably stable in the wake of the Great Recession even though unemployment has increased significantly. Inflation in advanced economies has become less responsive to changes in economic slack and that longer-term inflation expectations have become more firmly anchored."

It concludes:

> *Our analysis suggests that ongoing monetary accommodation is unlikely to have significant inflationary consequences, as long as inflation expectations remain anchored. In this regard, preserving central banks' independence is key.*

Last year two researchers - Claude Erb, a former commodities trader and Campbell Harvey, a Duke University finance professor - published a paper that attempted to calculate the fundamental value of gold with reference to inflation.

They found that the average ratio of the gold price to the US consumer price index (not the rate of change in the CPI, which is the inflation rate) since 1975 is 3.2. On that basis, the "fair value" of gold last year was about $780 an ounce. At the time, the ratio was 7.3 times.

At the time this analysis was dismissed by those who believed the price of gold was, and is, anticipating future inflation that will inevitably be caused by the current frenzy of quantitative easing, or money printing, going on in the United States, Britain, Europe, and now Japan.

Yes, but another piece of work published last week by Societe Generale economists suggested that the gold price of $US1,500, as it was then, assumed US inflation of 45 per cent per annum over the next five years - clearly impossible.

So the gold price, along with the bitcoin price, simply got too far ahead of fundamental value, whatever that might be. And that's the problem, of course – it can't be calculated; only estimated, and estimates add emotion.

Alan Kohler is host of Inside Business and finance presenter on ABC News, as well as editor in chief of Business Spectator and Eureka Report. View his full profile here.

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