Bitcoin

Valuing BTC using a macro framework

I am sure you are all vaguely aware of Bitcoin (BTC), which was initially something of fringe interest to a few of us.

For those of you who don't know, Bitcoin is a digital peer-to-peer currency that functions without the intermediation of any central authority.

Complex but cool

The maths behind it is so complex and robust that it is well beyond my intellectual abilities to understand it. But those super-geeks who understand its creation and function, swear by its clever complexity and robustness. Let me suffice with the Wikipedia description:

Bitcoin is called a cryptocurrency since it is decentralized and uses cryptography to prevent double-spending, a significant challenge inherent to digital currencies. Once validated, every individual transaction is permanently recorded in a public ledger known as the blockchain. The calculations required to authenticate Bitcoin transactions are completed using a network of private computers often specially tailored to this task. As of May 2013, the Bitcoin network processing power "exceeds the combined processing strength of the top 500 most powerful supercomputers". The operators of these computers, known as "miners", are rewarded with transaction fees and newly minted bitcoins. However, new bitcoins are created at an ever-decreasing rate. Once 21 million bitcoins are distributed, issuance will cease. As of August 2013, approximately 11.5 million bitcoins were in circulation.
Got it? OK, neither have I. But neither do I understand how QE positively changes the outlook for the world's debt-laden economies, so I must be a super-simpleton!

It is because it is

The point is, not *how* it is created but *that* it has been *created and stands up to the most rigorous testing and analysis*. And to me that means that is has a chance of surviving as the medium of exchange for the cyberworld and potentially the real world too.

The rebel's currency

In essence, Bitcoin's success is due to the fact that the man in the street understands that central banks and governments are going to take their money via confiscation or default or devaluation and it is their way of voting against it and them (since gold is not easily exchangeable for them).

This is the 99% sticking their fingers up at the authorities and saying we don't need you or want you...

We are rebels too

There are many of us who share the same fears. *We are tired of our money being used as the collateral of others and tired of living in a system that simply refuses to correct its imbalances in any way except devaluing, debasing, taxation and theft.*

This is why I am interested in Bitcoin.

So let's look at the price of this new currency…

Looks kind of like a bubble doesn't it?

Well, I'm not so sure…

Firstly, let's look at the log chart to give us better perspective…

OK, now let's look at the price after the initial early adopters bought it and it subsequently crashed in 2011. It then rose from a price of $3 to around $227, which is a rise of 7,500%. It then fell 70% before recovering again.

A pretty wild ride.

Early stage volatility

But what I know from past experience is that initial stage investments like this are always volatile. *But if they take hold then they can go up further than you could ever, ever, ever, ever imagine.*

Microsoft back in 1986 to 1987 rose 400% then corrected 30% – twice – before rising again. Microsoft eventually topped out after a 44,000% rally from *that* point. Forty-four THOUSAND.

Looks awfully similar

Now, when I saw the chart of BTC I knew it reminded me of something. And this bit is important. It looks just like the price of gold back in the 1950s to 1980s…

The rise in BTC has been much larger in percentage so far, because it basically started its creation worth nothing, whilst gold had a multiple thousand-year history of value (but it too at some point was worth nothing).

What happened to gold next is what I am interested in. Gold suddenly had real value in an inflationary world as Nixon left the gold standard. Gold exploded higher, further than anyone could forecast. People were desperate for gold…

After that bubble, Gold went down for years before exploding once more…

Why I find the gold analogy fascinating is that Bitcoin has many of the attributes of gold.

Firstly, there will only ever be 21 million of them. No more can ever be created, which is part of the genius of the design.

55% of all Bitcoins in existence have already been "mined". Mining is the process of Bitcoin creation that takes truly enormous computing power and gets more and more difficult to do as less and less are left to be mined.

This is just like gold.

65% of all of the world reserves of gold have already been mined. Gold becomes more and more difficult to get out of the ground as the low hanging fruit has been taken and more technology and more money is needed to do so. Gold requires higher prices for the remaining reserves to be mined. Right now, gold is not profitable for new mines so production is slowing rapidly, but at higher prices, more gold comes on line although in decreasing amounts.

Gold – with less complex collateral issues

Thus Bitcoin is a currency that is essentially a digital version of gold. Once you understand that, you understand Bitcoin. Like gold it can be held within the system anonymously ("my wallet") or held outside the system. Like gold, it only has a value because we attribute it to have a value.

Unlike gold, no one as yet can offer leverage on it (and it is not yet used as collateral so every time someone takes a large physical delivery the price does fall as leveraged trades have to be unwound as collateral leaves the system – which is the issue right now with gold.)

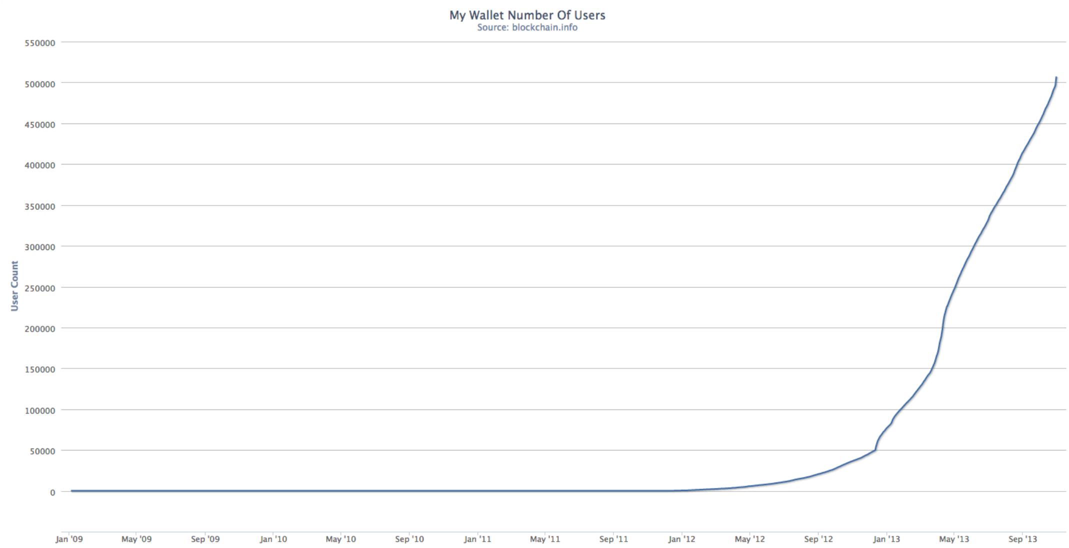
OK, let's not get ahead of ourselves.

Here is the chart of the mathematical difficultly of mining for Bitcoins: (the scale is essentially computing power required)…

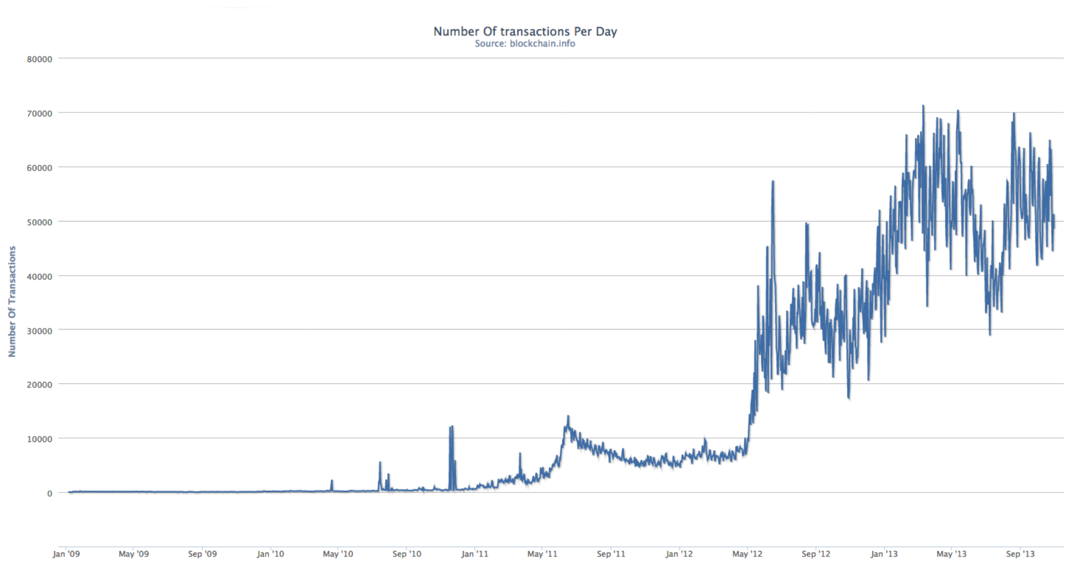
… and because of the massive computing power required, the operating margins of mining BTC have collapsed…

Thus, we have a somewhat restricted supply at these prices.

However, the number of people storing Bitcoins is going up exponentially…



… and the number of transactions per day is so far robust…



Meanwhile, BTC has switched from being a mechanism for some people to find an alternative to gold to something more of a transactional currency and a way around capital controls.

China love

In China, BTC use has been explosive. There has even been tacit Chinese Government approval on its use with a TV programme dedicated to it, along with newspaper articles. The Chinese are using it for online gambling and for getting around capital controls. Bitcoins being exchanged into or out of RMB now accounts for 21% of all volumes (versus 65% versus USD and 6% versus Euro). The main Chinese Bitcoin exchange is now the third largest in the world and soon likely become the largest (we are seeing equally strong demand in other Asian countries).

What is driving a renewed surge in demand is that Baidu, the most visited website in the world, is allowing one of its subsidiaries to accept payment in Bitcoin.

It's just supply and demand

Thus we have a classic supply and demand imbalance in the making and acceptance is growing rapidly.

I think we are in the take-off stage.

Valuing BTC using a macro valuation model

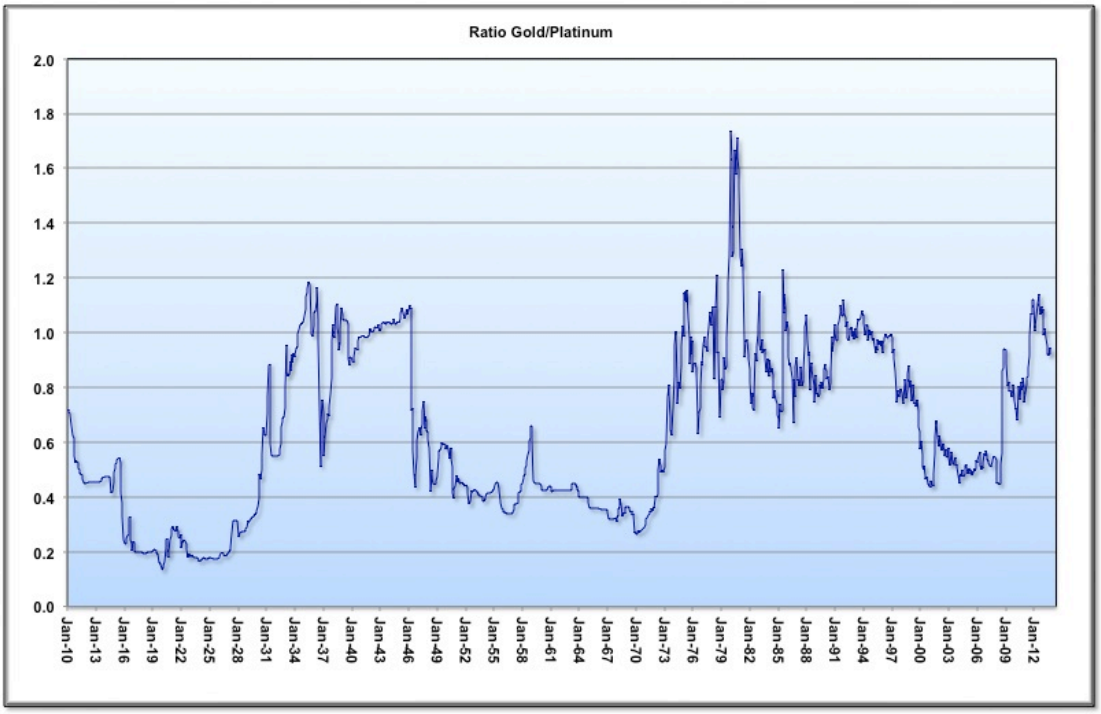
OK, this all sounds good but what the hell is the fair value of such a currency?

Again, we can turn to gold. If Bitcoin exhibits the same properties as gold in that it is finite in amount, is an exchange of value, is transportable and it costs more and more to mine the remaining reserves, then it should have a relative value versus gold which is *vaguely* quantifiable.

Relative values must apply for it to be an asset

As I have shown over the years, all asset prices trade in broad bands versus each other, going up and down in secular cycles. Whether it's Gold versus Stocks, or Oil versus Gold, or Wheat versus Oil, or Property versus Gold. All assets have a relative value and always will do (and must do to be an asset).

You can see the obvious relative value from the chart of Gold versus Platinum. They trade in a range. The same should be true of Bitcoin…



Thus, taking into account that only 55% of all Bitcoins have been mined, versus 65% of all gold, then the total stock of Bitcoins adjusted for the lower supply may well be equal to the same equivalent value in gold.

A fudge, but not a stupid one

Look, this is far from perfect and a mathematician would be able to model it, taking into account difficulty of future mining etc., but it is beyond my abilities…

However, let's use a broad guesstimate. *One Bitcoin should theoretically be worth 700 ounces of gold or pretty close to $1,000,000*, if we adjust existing supply of both to equal each other.

One BTC is currently worth 0.14 ounces of gold.

That gives BTC an upside of 5000 times to equal the current price of gold, supply adjusted.

Clearly, I and everyone else believes that Gold may well be much higher than here in the next 5 to 10 years, thus versus the US Dollar the upside for BTC could be *multiples* of that.

Now, before you shake your head, simply go back to the chart of Gold versus the US Dollar and just recognise that it has risen 8750% since the 1920s. And just remember that Microsoft rose 61,000% from its IPO to it's peak.

Considering what we know about the world, I personally believe that Bitcoin may well explode in value as more and more people begin to use it.

If you stuck $5,000 into Bitcoins and each Bitcoin did go up to a gold equivalent of let's say, *only* 100 ounces of gold (not the potential fair value of 700), then at current prices your Bitcoin stash would be worth $3.3m.

Now that's what I call a tail-risk option. It's either worth zero or it's worth a truly outstanding amount of money.

I bet you never thought you'd see this in a macro publication. But I'm serious. This just might work.

Trade Recommendation:

Buy Bitcoin

Note: This is an excerpt that appeared in the November 2013 Monthly of The Global Macro Investor, written and published by Raoul Pal

Bit coin was priced at $210 at time of publication on November 1st.

Background

Raoul Pal has been publishing The Global Macro Investor since January 2004 to provide original, high quality, quantifiable and easily readable research for the global macro investment community. It draws on his considerable experience in running a hedge fund and advising many more.

The Global Macro Investor has one of the very best, proven track records of any newsletter in the industry, producing extremely positive returns in 6 out of the last 8 years.

Raoul Pal retired from managing client money at the age of 36 in 2004 and now lives on the Valencian coast of Spain.

Previously he co-managed the GLG Global Macro Fund in London for GLG Partners, one of the largest hedge fund groups in the world.

Raoul moved to GLG from Goldman Sachs where he co-managed the hedge fund sales business in Equities and Equity Derivatives in Europe. In this role, Raoul established strong relationships with many of the world's pre-eminent hedge funds, learning from their styles and experiences.

Other stop-off points on the way were NatWest Markets and HSBC, although he began his career by training traders in technical analysis.

Should you wish to receive information about membership please email us at **info@globalmacroinvestor.com**. The number of members is STRICTLY limited, with only a few free spaces coming up each year, as the membership is full. If there are no free spaces available, a waiting list will apply.

Raoul Pal, The Global Macro Investor, Spain
1st November 2013