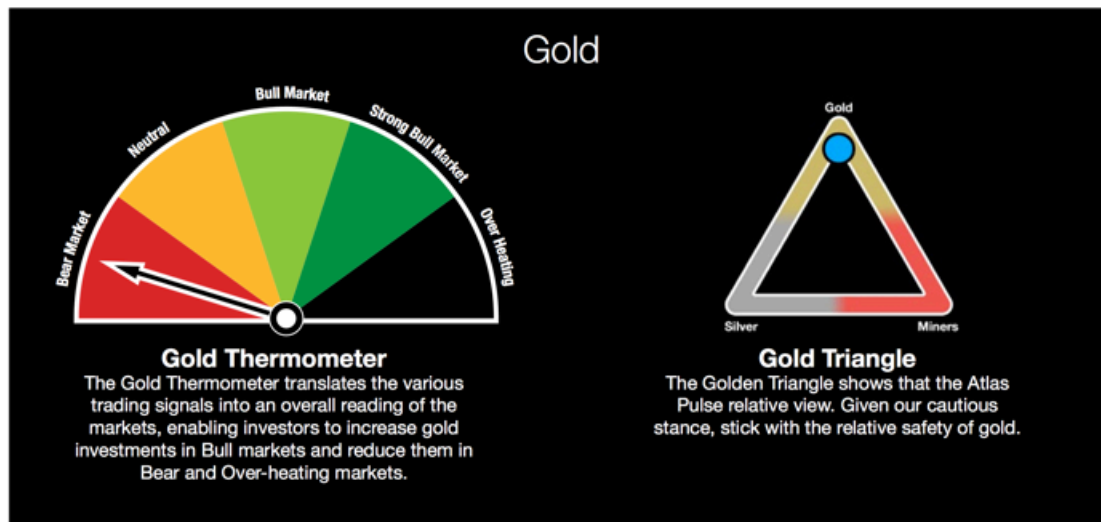
No.31 – February 2015

Atlas Pulse

See the facts, trade the action, ignore the noise



Gold Recent recommendations

Gold:

Jan 2013	downgrade to bull market at $1,675
Feb 2013	downgrade to neutral at $1,663
May 2013	downgrade to bear market at $1,476
July 2013	bear market rally with range $1,180 to $1,400
Nov 2013	expect new lows into 2014
Sep 2014	silver smash
Dec 2014	bear market rally, $1,350 is possible
Feb 2015	bear rally threatened as rates rise $1,233

Crypto:

Dec 2013	initiating coverage on bitcoin. Price to fall between 65% to 85%
Mar 2014	buy bitcoin

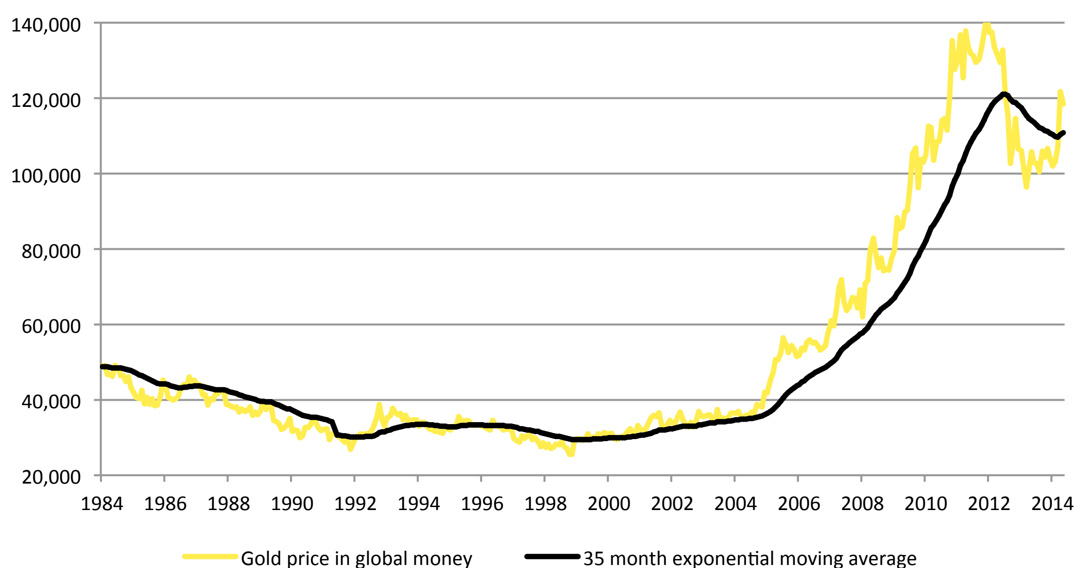
Summary

- A buy signal but …
- The dollar takes a break
- Rates scenarios and sovereign default spreads
- Short-term technicals
- COT, flows, 3x and sentiment
- Bitcoin’s death may be greatly exaggerated

A buy signal but …

For the first time since 2012, an Atlas Pulse core model has turned positive. The long-term trend test has recently turned upwards. That means the price of gold has been rising in most of the world’s currencies, just less so in dollars.

Gold in global money since 1984



Source: Bloomberg

Chart note: Looking at this chart that I showed last month, we have a clear turn on the 35 month exponential moving average. Gold has risen over 10% in dollars during a dollar bull market. That means it has rocketed in other currencies. There’s an all time high in Rubles and it’s not far off in Yen and Euros. Too much, too soon perhaps, but strength should never be dismissed.

An Atlas Pulse bull market score requires three positive models out of three. A neutral score will settle for two and a bear will be one or less. It can be stated unambiguously that gold is not yet in an upward trend versus the stock market; for that to happen, we need to see US stocks fall, or at the very least, stand still in the

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face of gold strength. The second point therefore remains illusive so it would be impossible to describe this recent strength as a bull market.

That said, an upgrade to neutral could still come about from a positive turn in the Atlas Pulse rates model. If we consider the obvious, easy money is in abundance courtesy of central bank policies. However, the 2013 gold snap can be fairly attributed to the taper tantrum when bond yields spiked. Interest rates didn't change but future perceptions did. That caused a sell off in the bond market that hit gold hard.

So with one bullish core model in the bag, an upgrade to neutral requires a closer examination of rates. In order to do that, we'll also examine sovereign risk and the dollar.

The US Dollar takes a break

Everyone knows the dollar is in a bull market, but this upward move appears to be temporarily exhausted. Short positions in Euros, Yen, Aussies and Sterling are extreme. The dollar bull market may well be intact, but an intermediate correction may have begun. This ought to be bullish for gold in dollars but not necessarily.

More broadly, we are seeing a modest bounce in commodities such as oil and copper, a bounce in weak currencies, an upward reversal in bond yields and strength in distressed stocks. This may all be temporary, but it's happening right now. Gold, having been relatively strong since November, may be on the wrong side of this flip in the prevailing trends.

Cheap oil has lowered the probability of a rise in US interest rates, which has in turn, removed a key driver of dollar strength. Indeed European QE, which is supposedly euro bearish, was widely anticipated by markets and so perhaps much of the weakness is already in the price for the time being. It is worth remembering that gold has risen in conjunction with a strong dollar which is unusual, but not infrequent. It could be that dollar weakness will boost the dollar gold price, but if the gold correction in global currencies is slight, then all will be well, but if it is severe, that will leave doubt as to whether the gold bear market is finally complete.

Rates scenarios and sovereign default spreads

The rates situation is far from simple to comprehend. In a nutshell, the bullish scenario for gold requires falling 'real' bond yields. That means the 'risk free' return after inflation must not only be low, but falling. However, if bond yields and inflation both drop in unison, then real rates will remain constant and that won't give gold the boost it needs.

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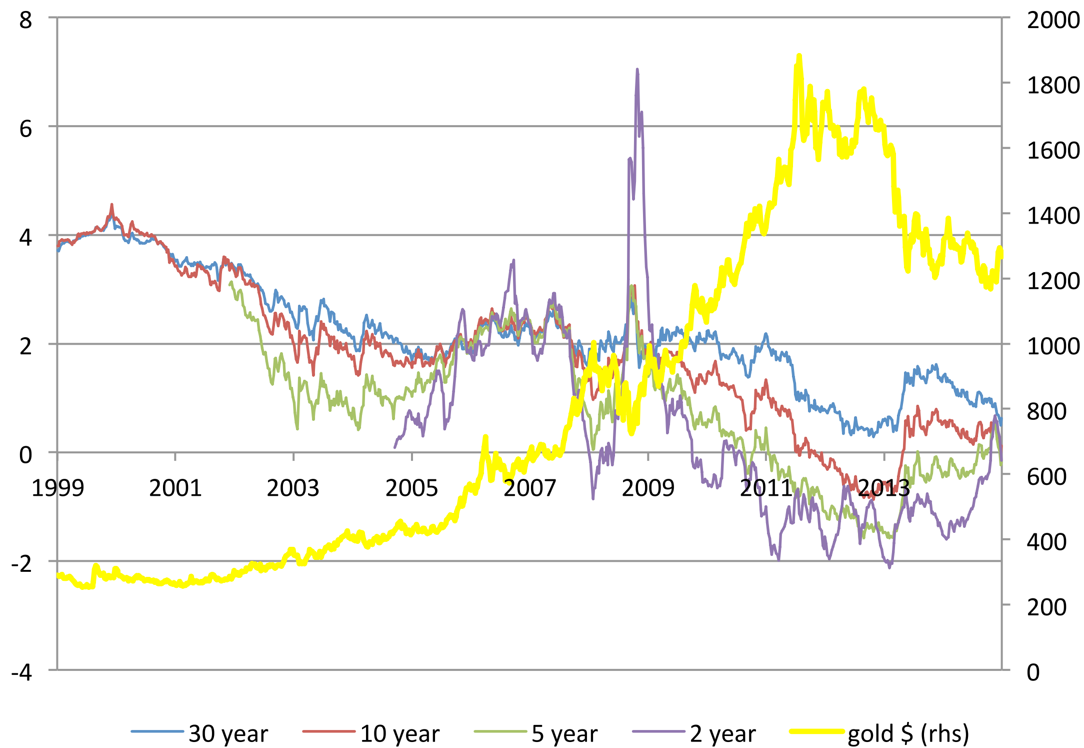
USA real rates and the gold price – since 1999



Source: Bloomberg

Chart note: The price of gold in dollars has been driven higher by falling real interest rates. Gold did manage to rise ($450 to $650) in 2005/6 in spite of rising rates, but only did so at a time when it was significantly below fair value. Perhaps gold should have been stronger from 2000 to 2005 ($300 to $450) when long-term real rates halved. According to the Atlas Pulse rates model, gold should have achieved $650 two years earlier than it did. The fact it took longer is an example as to why trend following often works; these major adjustments take longer that they should, especially following a 20 year bear market when scepticism remained high. In 2008, gold fell as rates rose only to rebound in 2009 as rates fell. The 2013 gold snap coincided with the 'taper tantrum' and triggered gold's bear market. In January 2015, rates have eased back and caused gold to rally, but the medium-term trend for rates is upward. In recent days rates have started to rise once again.

Most rational investors, and especially the gold bugs, expect the bond market to come unstuck at some point in the future. When yields rise whilst deflationary forces remain intact, that would lead to higher real interest rates. In other words, the bond market could blow up and cause gold to fall. This is the single most important consideration I've had to grapple with in recent months. After all, how could the financial system come under pressure and send gold prices down?

I believe I have an answer to that question and it relates to sovereign default risk. Unsurprisingly, investment banks will sell you bond insurance against default known as a credit default swap (CDS). They probably won't pay you when the day of

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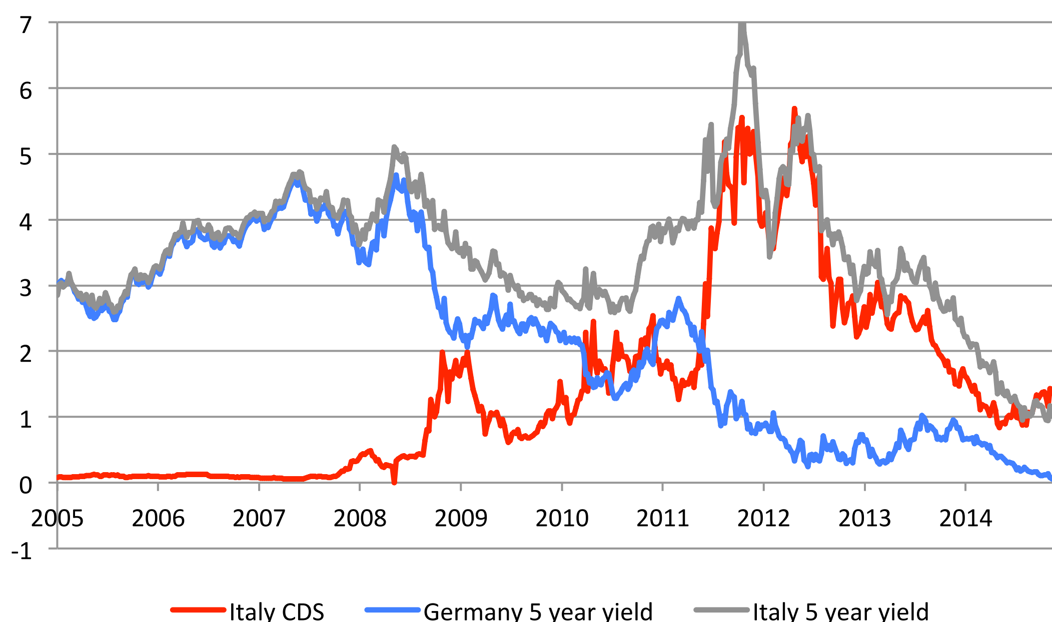
reckoning finally comes, but that's another matter. In the mean time, they enable us to see a more complete picture of the price of risk.

Being realistic, sovereign bonds are hardly risk free. Japan has an A rating whilst Italy has a BBB rating which falls a long way short of the risk free AAA rating. The lessons from financial history tell us that countries that get into debt normally default. CDS gives us a way to measure this likelihood and over the course of 2015, I would expect the current complacency to come under pressure.

Rather than depend on these ratings, perhaps we could adjust yields for the price of CDS insurance. For example, in the summer of 2012, at the height of the Euro debt crisis, Italian bonds yielded 6% when the CDS cost 5.5%. Therefore, the risk free rate was 0.5% (6% - 5.5% = 0.5%) or approximately the same as Germany's rate at that time.

Italian and German 5 year bond yields with CDS – since 2005



Source: Bloomberg

Chart note: Up until the credit crisis, German and Italian yields marched in step. The CDS was low as default wasn't on the agenda. Post 2008, Germany remained risk free whilst Italy deteriorated. This can be seen by the CDS price (red line). This shot up during the Eurozone crisis along with Greece, Spain, Portugal and Ireland. Interestingly, the Italian CDS is now higher than the yield, meaning that the 'risk free' yield is now negative. Italy's 5 year rate is -0.4%, which is even less than Germany's at -0.2% after taking into account the cost of insurance.

When bond yields around the world rise, CDS prices will likely stay low if the recovery is real, but if it isn't, they will rise. If bond yields rise in conjunction with CDS prices, then the risk free rate will remain low or negative. That is the interesting

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point for the gold market as rising yields will then lead to higher gold prices. As the bond crisis unfolds there will be a logical and bullish outcome for gold.

The world blows up and gold rises… huh? What a revelation!

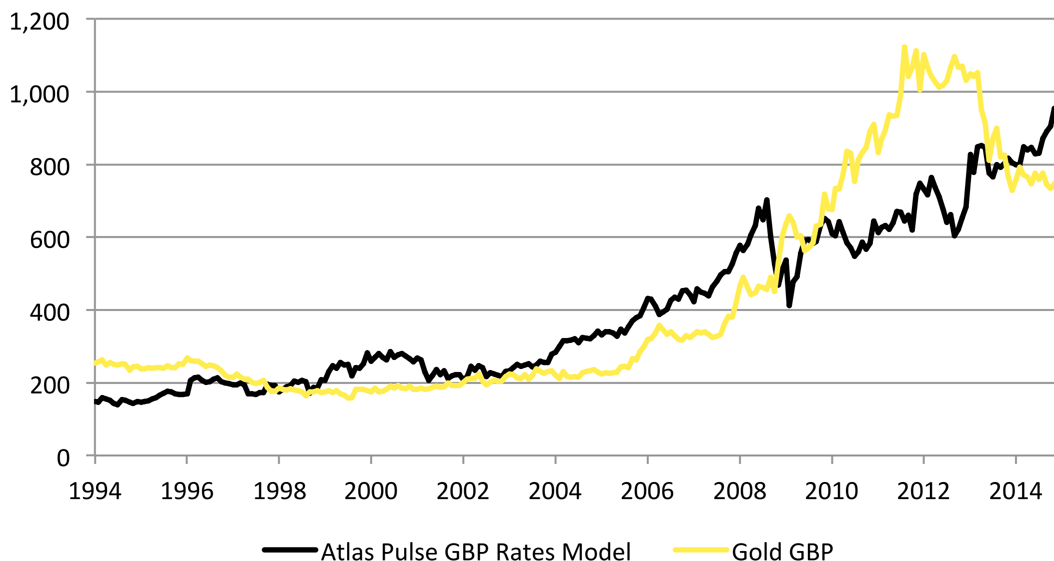
Maybe it's entirely obvious, but CDS prices enable us to measure the fair value of gold, from a rates perspective, as the crisis unfolds. Now that's magic.

This simple idea, for me at least, clarifies a potentially complex scenario. If we assume the forthcoming weakness in bonds, when the bubble finally pops, is due to economic weakness and therefore an increase in default risk, then gold will rise in a totally rational and measurable manner. In contrast, should the economy spring back to life, default risk will remain low, yields will rise and the price of gold will fall.

It goes without saying that if the bond market blows and leads to higher inflation, then gold will immediately be a buy.

As a special treat for readers, I'll now show the Atlas Pulse UK rates model. Remember that 30 year real interest rates are -1%. That is largely driven by the pension funds that are effectively forced buyers of long-term assets that will harm their returns. For Britons, gold is a better bet than long-dated linkers (30 year inflation linked gilts) by 12% over 30 years. That's not huge, but certainly worth having given that it's a genuinely risk free alternative.

Atlas Pulse UK rates model – since 1996



Source: Bloomberg, Atlas Pulse

Chart note: According to my estimates, gold in sterling was undervalued between the late 1990s and 2008. It wasn't until after the crisis that it shot up to an 80% premium in 2012. That has since fallen back to a 12% discount as real rates have dropped to

-1%. To be really bullish on gold, one has to assume that real rates will keep on falling which will be negative for the pound. Don't forget that this is the Sterling model. The US rates model is still showing gold to be 8% overvalued at $1,233.

Having examined the rates scenario in more detail, and in the absence of a CDS shock, it is very difficult to be bullish on gold from a rates perspective. Of course gold will rise in a weak currency, but so will the price of puppies.

I remain unconvinced that real rates will collapse from here and so in conclusion, gold has been upgraded to one out of three which falls short of a neutral rating at this point in time.

The Atlas Pulse philosophy is that gold is a commodity, a very high quality one, but nonetheless, a commodity. When oil, food and copper have collapsed, gold is expensive relative to other commodities. Over the long-term, commodities should beat gold because they have a fear discount rather than a safety premium. We mustn't forget that important point.

Short-term technicals - gold daily past two years

Source: Bloomberg

Chart note: Gold remains in a medium-term downtrend but is rising in the short term. The gradient of trend line A falls -11% per year and B rises at 18%. Lines A and B converge and will meet soon. Gold has broken above line A only to come back down through it. The bearish scenario reawakens below $1,200, whilst the bullish scenario kicks in above resistance at $1,350. A break above this will cause Atlas pulse to upgrade to neutral. The bulls must hope line B holds.

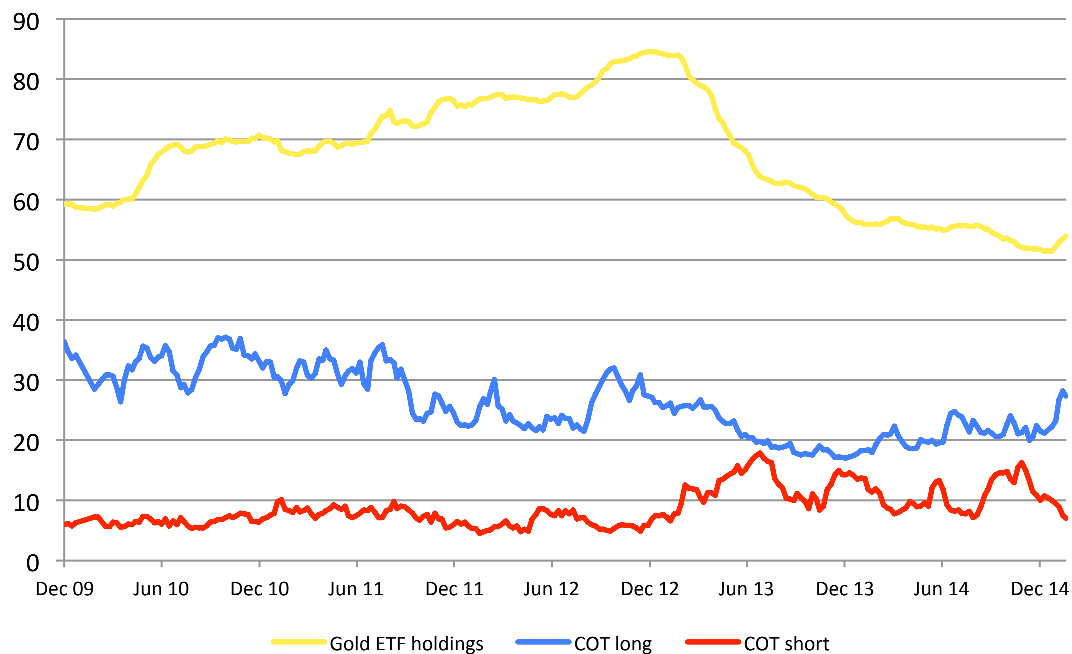
COT, flows, 3x and sentiment

COT stands for commitment of traders; it is the data series from the Chicago exchange that shows the positioning of speculative, as opposed to commercial, investors. Those are typically hedge funds.

ETF stands for exchange-traded fund. These hold physical gold and silver and are mainly traded by institutional and retail investors. The number of ounces of gold or silver that they hold is reported on a daily or weekly basis. All holdings are shown in million ounces (Moz) on a like for like basis. The ETF movements tend to be slow, the COT longs faster, whilst the COT shorts move very quickly.

3x refers to the leveraged exchange-traded notes that are used by investors to express a strong view. The daily returns are 3 times (hence 3x) the daily percentage move of the underlying asset either long or short. These funds are highly speculative but excellent trading vehicles when volatility is low. Use them when volatility is high at your peril.

Gold COT and ETF flows in million ounces (MOZ) – past five years



Source: Bloomberg

Chart note: The gold strength since November has attracted real money. Since the low reading at that time, 1.5 million ounces (Moz) of gold have been shoved back into the vaults. The blue longs are also excited and had a major tug of war with the shorts, creating a short squeeze. The net position (longs less shorts) is back to the levels last seen in early 2013. Sentiment is bullish which ought to cap strength in the short-term unless the real money can keep on filling up those vaults.

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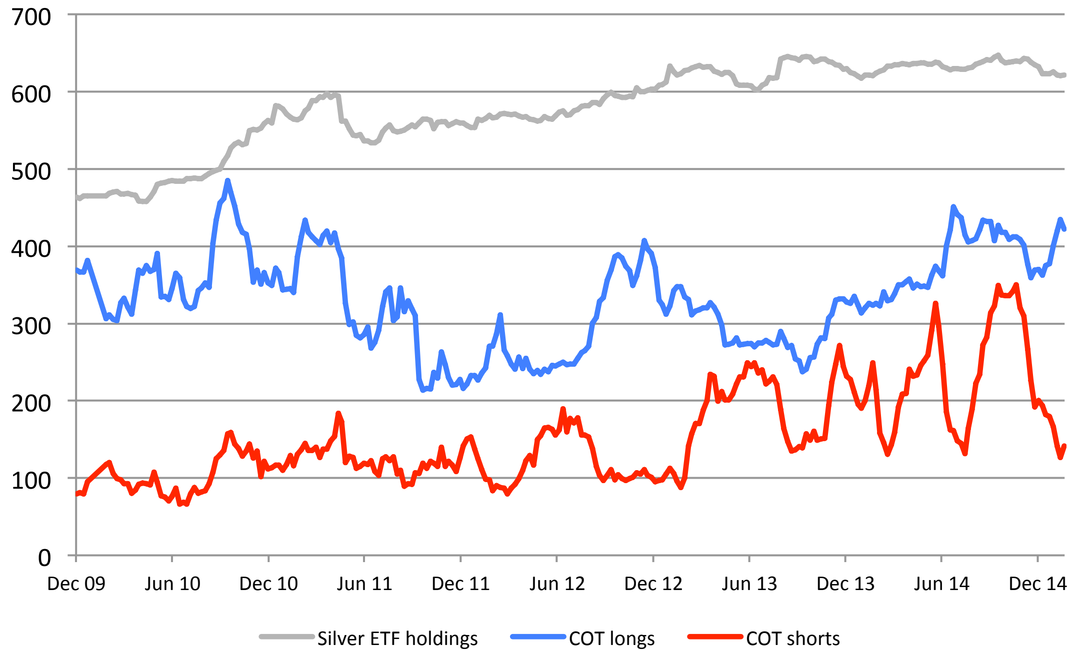
Silver COT and ETF flows in million ounces (MOZ) – past five years



Source: Bloomberg

Chart note: The silver stackers have capitulated. For the first time in recent years they haven't bought into a rally unlike the gold bulls. In fact whilst the gold vaults have seen a boost, over the same period, the silver vaults have lost 4% of their bullion. The COT longs are very high and the shorts have been flushed out. Sentiment is too high. I still expect to see the gold silver ratio break into the 80s from the current 73.

Gold, silver and the miners 3x ETF holdings

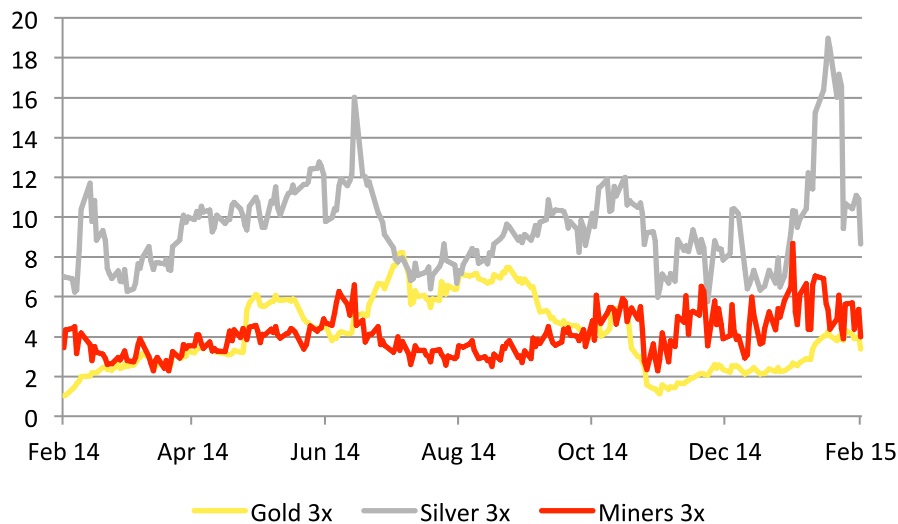
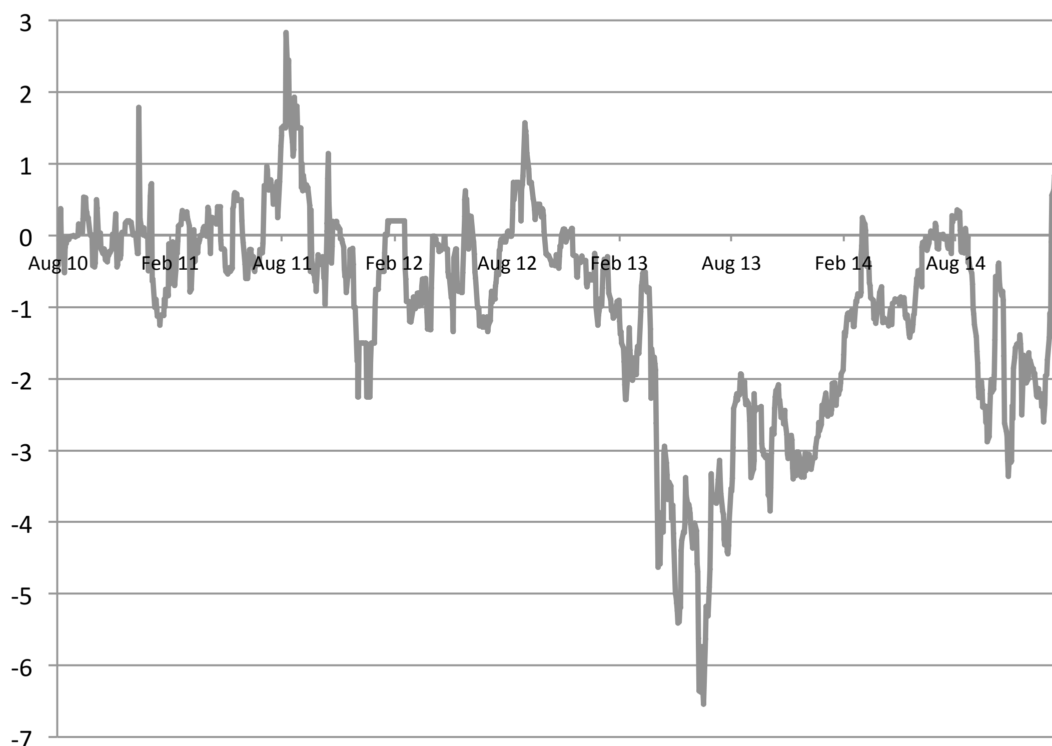


Chart note: The silver ETFs rocketed in January to a record 18:1 bulls to bears. Gold has risen from 1:1 to 4:1 whilst the miners have remained steady. The silver bulls just keep chasing the leverage. The miner 3x traders are fed up with the extreme volatility.

Gold option prices – since 2010



Source Bloomberg

Chart note: Just for fun, I thought I'd add the relative price of gold call and put options. High readings imply a bullish consensus (expensive calls) and vice versa (expensive puts). Extreme bullishness was last seen in mid 2011 and late 2012. The taper tantrum led to extreme bearishness and registered a higher reading than in 2008. Interestingly, the new low late last year was also accompanied by bearish sentiment which must have influenced the reversal. It certainly helped Atlas Pulse make the tactical bullish call in November 2014. The current reading is too bullish for my liking and will make further upward progress difficult.

Gold sentiment is too high to be a buy and a spike in rates could be devastating. The short-term strength in multi currency is perhaps more a sign of their weakness rather than gold's strength. I'm also mindful of the hefty premium that gold trades at versus other commodities. All in all, I'm not tempted to jump the gun and upgrade gold to neutral, a 20% price rise from the low will override all remaining concerns. That's a break above the mid $1,300s.

Bitcoin's death may be greatly exaggerated

In the past few days, the Guardian, The Financial Times and the Evening Standard have written their bitcoin obituaries. They have generally composed sympathetic articles but aren't bull markets capped by praise and bears halted by capitulation? The problem with negative sentiment as a buy signal is that it only works if the underlying still has a pulse.

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That pulse can be examined by looking at the number of transactions, but this is harder than it sounds. Obviously there's an exact and measurable answer but it is full of noise. For example, there are change transactions that overstate activity and more recently, the evolution of what has been described as spam. It's not actually spam, but transactions that may be deliberately designed to increase traffic or obfuscate the audit trail. (i.e. trading in illicit goods)

The chart shows the total daily transactions with the 'long chains' removed. Bitcoin transactions behave in what's known as a merkle tree that is not dissimilar to a family tree. If one line of the family breeds like flies compared to a normal generational pattern, then one might think the kids are reproducing before their time. You would expect the generation gap to average 25 years or so and not weeks or months. By applying this logic to the bitcoin merkel tree, we can remove overly active lines of transactions and get a truer picture of the underlying reality.

Bitcoin transactions – since 2012

Source: Blockchain.info

Chart note: When you transfer bitcoin from one address to another, the network counts one transaction. This series adjusts for so-called 'spam', which would be better described as noise. You can't deny the fact that bitcoin transactions are still growing in the face of multiple obituaries, albeit much more slowly than in the past.

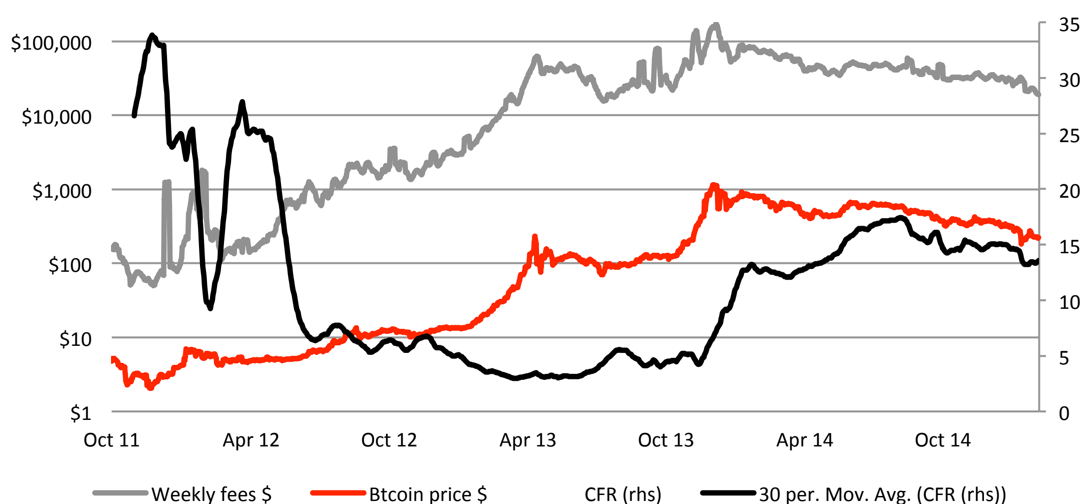
The bad news is that with the price is down by 80% from the peak in late 2013 and so the value of those transactions have diminished significantly. This can be seen on the next chart via fees. Fees are earned by prioritising transactions. No spammer would rationally pay them, but someone who wanted a prompt and secure transaction most certainly would.

If the network was larger today than a year ago, the value of the dollars fees earned would have grown. In order to compensate for a price fall of 80%, a stable network would need to see the average transaction size increase, in bitcoin terms, by a factor of five. It hasn't.

However, this is one of the most challenging statistics to measure because of the change algorithm. Quite simple, if you pay 1 btc and use a 8.5 btc coin (not kidding), you get a 7.5 btc coin in return (to either a new address or your old address depending on the type of wallet). The total output (transaction size) will record 8.5 btc and not 1 btc, which was the true value of the transaction. The available statistics are therefore heavily overstated.

So the average transaction size remains elusive for the time being. At the CryptoComposite project, we're working on it.

Bitcoin network and valuation – since 2011



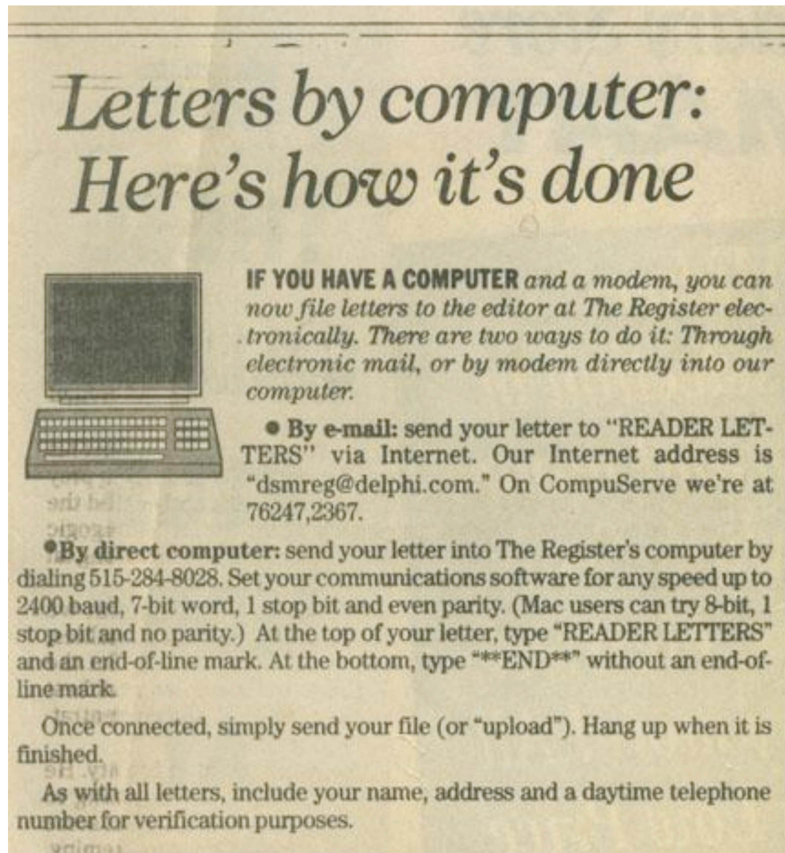
Source: CryptoComposite.com

Chart note: The dollar price, the smoothed cap to fees ratio (CFR) and the dollar weekly fees are shown in the chart. Think of the CFR (rhs) as a price to earnings equivalent. The total fees earned per week has fallen from $100k to $20k. Dividing the total bitcoin market capitalisation by that figure and multiplying it by 10,000 gives the CFR. The current valuation is 15.9 compares to a historic median of 12.3; that's a 29% premium. Notice how the big price move from mid-2012 to mid-2013 coincided with strong network growth (rising fees) and started from a very low CFR. The 2013 bull market saw minimal network growth but a large jump in valuation. Rising dollar fees are the most important indicator of network strength that I have identified.

Bitcoin responds to growth in usage but the price has historically risen the most when growth spurts followed a low valuation starting point. Bitcoin grew the fastest between mid 2012 and mid 2013. The price rose from single digits to $200, but all the while, bitcoin actually got cheaper over the period, such was the extent of the

underlying growth. The late 2013 price surge was less well deserved as growth had slowed significantly. The last time weekly fees were at the current levels of $20k was in March 2013.

But I remain upbeat on this space despite the ugly facts. Never let the truth get in the way of a good story. My favourite spot last month was this newspaper extract demonstrating how to use email in 1995. It's quite funny but more importantly, it reminds us how much work is yet to be done in bring electronic money to the masses.



Letters by computer: Here's how it's done

IF YOU HAVE A COMPUTER *and a modem, you can now file letters to the editor at The Register electronically. There are two ways to do it: Through electronic mail, or by modem directly into our computer.*

- **By e-mail:** send your letter to "READER LETTERS" via Internet. Our Internet address is "dsmreg@delphi.com." On CompuServe we're at 76247,2367.

- **By direct computer:** send your letter into The Register's computer by dialing 515-284-8028. Set your communications software for any speed up to 2400 baud, 7-bit word, 1 stop bit and even parity. (Mac users can try 8-bit, 1 stop bit and no parity.) At the top of your letter, type "READER LETTERS" and an end-of-line mark. At the bottom, type "**END**" without an end-of-line mark.

Once connected, simply send your file (or "upload"). Hang up when it is finished.

As with all letters, include your name, address and a daytime telephone number for verification purposes.

Don't lose interest in cryptos. The future of finance is still under construction. The next bull will be much bigger than the last. In the coming months we'll have the CryptoComposite project up and running and don't forget, there's also Ethereum to look forward to.

Summary

Having upgraded one gold model, it's a shame that the weight of evidence still urges caution. This gold bear market is mature, but a material change in rates could still see $1,000 gold. This November bear rally is probably done for now and the clue is that gold hasn't rocketed above 20%. Turn rallies are generally swift and this one isn't.

Just as I wrote about CDS spreads and measuring the risk free bond yield, I read an article by Tracy Alloway in the Financial Times. Would you believe it, some delinquent wants to create eBonds that would embed the CDS into the bond, thus creating an ample supply of 'risk free' AAA securities. Here we go again. I just hope that institutional investors aren't stupid enough to fall for it this time. Sadly, they are.

It's interesting to see the silver buyers haven't bought bullion, just futures and leveraged ETFs. The gold to silver ratio tends to correlate quite closely with credit spreads. These have been widening for a few months now but may have turned down again now that QE is back. That could be bullish, but I doubt it. Principally that's because whatever credit spreads are, they should be much wider. When risk assets finally snap, you'd prefer to be in gold than silver.

Cryptos are the most fascinating development. They bring together so many different issues and ideas but the world just isn't ready quite yet. That email explanation from that 1995 newspaper says it all. The price action is terrible but just hang in there. When the world has lost interest, this is the time to gain an edge. $200 may hold and I hope it does, but without value and growth the gods are against us. If bitcoin fails, a bigger and better one will takes its place; that's inevitable.

Twitter: @AtlasPulse

The gold thermometer remains in a bear market (we thought we had them, but they're not giving in).

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