



Cryptocurrencies, Bitcoin, and the Psychology Driving Global Currency Values

March 30, 2013, v3, n5

What is Value?

"There is no subtler, no surer means of overturning the existing basis of society than to debauch the currency. The process engages all the hidden forces of economic law on the side of destruction, and does it in a manner which not one man in a million is able to diagnose."

~ John Maynard Keynes, "The Economic Consequences of the Peace" (1919).

In 2008 MarketPsych's CTO Thomas Hartman worked on a secretive software project in Panama. The goal of that project was to disrupt and supplant the global banking system. The fruits of such efforts are emerging in the increasing importance and acceptance of cryptocurrencies.

Last week Eurogroup chief Jeroen Dijsselbloem revealed that the Cypriot bank bailout package is a template for future euro rescues. European bank depositors can expect seizures of uninsured deposits if their bank becomes insolvent. In Cyprus today bank account holders, including accounts of **a Russian MarketPsych team member living in Cyprus**, are effectively frozen, limited to withdrawals of 300 Euro daily.

The freeze of Euro-denominated bank accounts in Cyprus corresponded with a spike in the price of gold and a massive bull run in the value of cryptocurrencies such as [Bitcoin](#), LiteCoin, and Namecoin. As the realization dawns that similar seizures could happen in Portugal, Spain, and Italy, capital will continue searching for a haven away from the sticky fingers of banking and government officials.

Cryptocurrencies are currencies without a government sponsor, composed of unique cryptographic codes (solutions to complex



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Fearmometer
March 31, 2013

Recent Press

[Following Your Bliss. Right off the Cliff.](#) Kai Ryssdal and Megan Larson. *New York Times*. March 25, 2013.

[Exodus from bonds? Not yet.](#) Mark Jewell and Matthew Craft. *Associated Press*. March 24, 2013.

[Dow record makes those not in the market itchy to](#)

mathematics problems), and consensus legitimacy. Their conversion value to national currencies depends entirely on supply, demand, security, confidence, and the whims of the investing crowd and businesses who accept them. The most secure and popular cryptocurrency is Bitcoin. Bitcoin was released in 2009 as the financial crisis smoldered, and there is now over \$1 billion of Bitcoin in circulation today and hundreds of legitimate (and many sketchy) businesses who accept it. In the first three months of 2013 Bitcoin has appreciated 6-fold versus the U.S. Dollar. Cryptocurrencies are benefitting from the loss of public trust in fiat currencies issued by [currency war](#)-prone governments.

We are in a unique position to comment on cryptocurrencies and the psychology of currency valuations.

For one, our software team includes early crypto-currency speculators and Thomas - an evangelist in the development of Ripple - an early player in the alternate currency space whose assets were recently bought by investors with BitCoin-derived wealth.

Secondly, our [psychological data](#) is the world's largest database of currency-related sentiment, and we have been mining that data for currency predictive models.

And thirdly, and unfortunately, one of our team members is a Russian living in Cyprus who is [frozen out of his Cypriot bank account](#). Needless to say, this week's newsletter strikes close to home.

This week we'll take a look at the amazing rise of the world's first viable cryptocurrencies. Then we examine the psychological and macroeconomic drivers of currency valuation and touch on a future where currencies are no longer solely under the control of governmental and banking officials.

Subverting the Banking System

When our CTO Thomas went to Panama, he was on a mission to help productize ripplepay.com, an alternative currency money transfer scheme that aimed to disrupt our current banking system with a decentralized web of trust. Ripplepay had communitarian roots and, some critics claimed, unrealistic utopian goals. With Ripplepay, anyone could back a new currency, or issue IOUs in existing currencies, and IOUs could be chained. The Ripple platform was transparent and open by design.

While in Panama the Ripplepay developers became acquainted with many projects, and players, in the "alternative economy" space, including schemes that differed radically from theirs. Of note they met developers from a software team working to replace global fiat currency - the BitGold team. The BitGold team were libertarian and perhaps justifiably paranoid. The below photo is Thomas in Panama.

[act](#).
Eve Troeh. *Marketplace Morning Report* for Wednesday March 6, 2013.

[MarketPsych Preps Sentiment/Chatter-Driven Recommendation Engines](#). Vicki Chan. *Waters Technology*. Jan 11, 2013.

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The effort to productize Ripplepay ended in late 2008, but the development team stayed in touch and continued to follow developments in the alternative economy space. When Bitcoin, an offshoot of BitGold, entered the alternative currency scene in 2009, it created a stir. It used new algorithms to defeat the problems that had plagued and sunk prior cryptocurrencies. When a pizza was sold for 10,000 Bitcoin in 2010, this was a significant milestone, and when Bitcoin started trading against the US dollar Thomas bought some – despite the uncomfortable feeling that a paranoid technology had won against the communitarian ideals his Ripplepay team held dear.

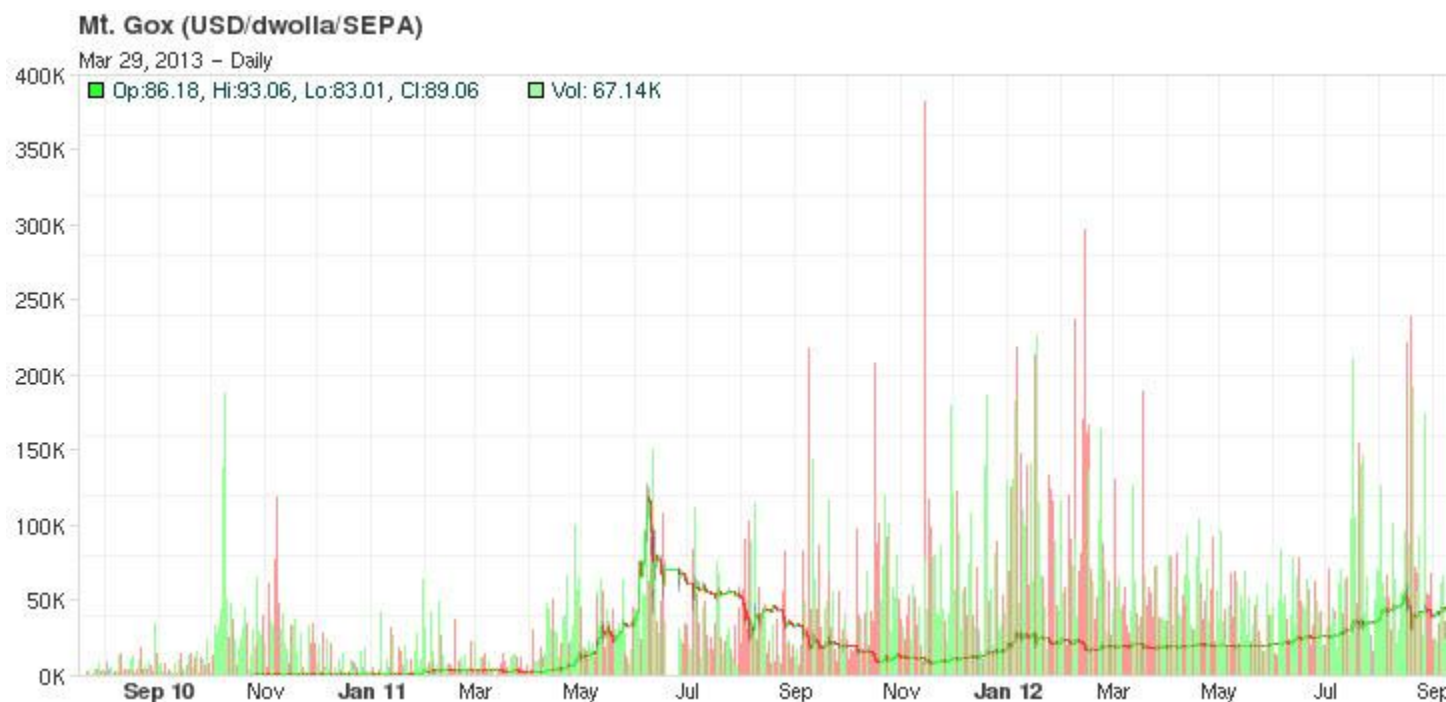
In contrast to Ripplepay and BitGold, Bitcoin had users: lots of them. Additionally, Bitcoin had solved a problem that BitGold had not. Bitcoin used an ingenious feedback mechanism that raised and lowered the difficulty of “mining” depending on how many CPU cycles were aimed at the hard cryptographic problems whose solutions yielded the coinage (the Bitcoin miners). In short, Bitcoin was a significant step forward.

In 2013, the Ripplepay intellectual property was bought by a consortium of bitcoin millionaires, and a true commercial variant of Ripplepay was launched: Ripple.com. The prospects for Bitcoin are bright, and we are observing the situation with the new Ripple and the other cryptocurrencies closely.

Bitcoin

In response to chronic debasement of currencies by governments, cryptocurrencies that live entirely in HEX codes and magnetic memory were pioneered over the past decade. None of those cryptocurrencies had legs until now. Yet following a massive recent bull run, some are holding virtual currencies worth in excess of \$100 million (e.g., Butterfly Labs, a manufacturer of

mining equipment). This [New Yorker article](#) explores the murky origins of Bitcoin, which is also summarized on [Wikipedia](#) and in many online chat rooms. The amazing appreciation of the value of Bitcoin versus the USD has continued up to today. Below is a price chart of the past 1 year of Bitcoin value versus the USD, obtained from MtGox, the major currency exchange:



Do I Own Bitcoin? Unfortunately Not

Really good investment opportunities contain what Nassim Taleb calls “**Optionality**” – enormous upside multiples and limited downside. Given a few bubble-ready characteristics of cryptocurrencies (limited issuance, steadily increasing publicity, declining trust in the banking system), I knew the conditions were right for a massive Bitcoin bubble, and since early 2011 I wanted in.

Terrific investing insights cross my mind occasionally, and in my opinion I’ve honed a keen intuition for identifying the really good ones. The problem is, I often don’t act on these golden insights. But maybe once every two years an insight is so monumental that I tell my wife to hound me until I make a specific investment. Bitcoin in 2011? Yup, I knew it was set up to be a classic bubble.

Now to be clear, when I see the above price charts I feel the pain disappointment. You see, I don’t own any Bitcoin. I’ve watched Bitcoin bounce through \$2 twice. When it last was under \$3 I asked my wife to PLEASE NAG ME to buy some. I realize that most men don’t ask their wives to nag them. But I’m a lucky man - my wife doesn’t nag - so if she were to nag, the logic went, I would be sure to pay attention. But this wasn’t a foolproof strategy.

As I had requested, my wife did nag me at the appointed times, “Rich, buy Bitcoin. Rich, did you buy Bitcoin yet?” But somehow I stored her reminders in that empty space in my brain

where most men seem to file non-emergent, quickly forgotten, and later regretted wifely reminders like: “Rich, please take out the garbage, the kitchen is getting stinky,” “Rich, please buy gas for the generator, another big snowstorm is coming,” and “Rich, don’t forget to brush your wild-man-just-rolled-out-of-bed hair before you present at that important meeting.”

But getting into cryptocurrencies isn’t so easy. Back then it required wiring money to Japan, and trading on an exchange (MtGox) that was a frequent target of hacking attacks (true story: the login and password of my first Bitcoin trading account at MtGox are displayed on the internet for the world to see). In fact, I even bought a Bitcoin-derived domain name. Ultimately, due to inertia, lack of urgency, and general busy distraction, I didn’t get around to buying any Bitcoin itself. (But a disclaimer, I do own other cryptocurrency).

What drives currency values?

Given that Bitcoin has appreciated 40x over the past 12 months, I’m keen to know how much longer this rally might continue. Now the first warning sign that a short-term bubble top is near is the excited tone of this newsletter itself. Also, bank research reports will no doubt be issued on cryptocurrencies in the next month or so. That doesn’t mean the top is here today, but it does mean that the recent surge of attention, largely based on the amazing price appreciation, is probably overdone and a retreat will happen at some point... (don’t ask me when).

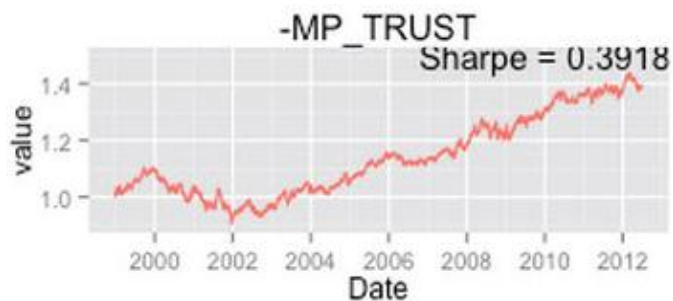
In our investigations of the psychological forces that drive currency valuations, we performed yearly and weekly studies on our [Thomson Reuters MarketPsych Indices](#) (TRMI). As you may know, the TRMI contain 15 currency and 35 country-specific sentiments derived from social media and news from 1998 to the present. The list of currency TRMI is below. Each of these is extracted in references to the currency through a process of text analytics. You’ll see how this is relevant to cryptocurrencies below:

Currency TRMI

Sentiment
Optimism
Fear
Joy
Trust
Violence
Conflict
Urgency
Uncertainty
Price
PriceForecast
CarryTrade
CurrencyPegInstability
PriceMomentum

Of the 15 TRMI, using the past 12-months TRMI average and the next 12-months currency return, 5 are correlated with future currency price direction with high confidence (p -value < 0.01). Significantly for our newsletter today, **Trust** in a currency expressed in news is **inversely correlated** with future currency price direction. When the news media expresses high trust in a given currency, you'd be better served moving to a currency with less expressed confidence. Keep in mind we're looking at the top ten global currencies based on past year's Buzz in the News, so known unstable currencies such as the Zimbabwe Dollar are not included.

After the simple regression, we decided to look at the results of a long-short arbitrage. The below is an equity curve of extremity arbitrage, 12-month holding period, in which we selected the 10 currencies over the past 12-months with the most Buzz, then bought the 4 with the lowest Trust and shorted the 4 with the highest Trust expressed. As you can see, trading against what everyone else trusts is generally profitable.

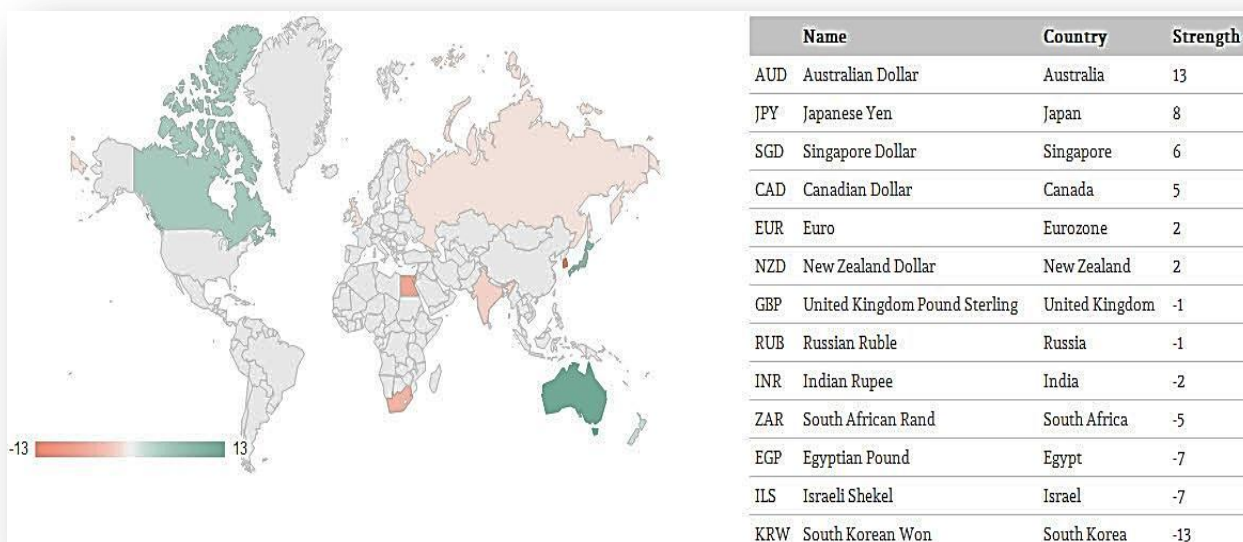


Similarly, **PriceMomentum** (direction of price trend) reported in news is **inversely correlated** with future return direction. So when you read that a currency is trending strongly in one direction, it is likely to be nearing a reversal.

What does this mean for cryptocurrencies? Given that Trust in cryptocurrencies is low and Uncertainty is high while fundamentals are strong, we have a positive set up. But there are some short-term headwinds coming from the recent strong uptrend.

Currency Trading Recommendations

Using our currency research, we pulled the best TRMI into a final model. We see a fairly good distribution of currencies selected by the strategy. The annual currency forecast of this model as of March 1, 2013 is below. **Long Australian, Singaporean, and Canadian dollars and the Japanese Yen. Short South Korean, Israeli, Egyptian, and South African currencies.**



We also developed a weekly currency trading model with more than double the returns of the annual model (assuming no transaction costs). I'll write more about our weekly currency trading model in a subsequent newsletter. We have a new website hosting our annual and weekly currency forecasts with strategy construction explanations. Please email me for more information or access.

Buying Cryptocurrency

"[Lenin](#) is said to have declared that the best way to destroy the capitalist system was to debauch the currency."

~ John Maynard Keynes, "The Economic Consequences of the Peace" (1919).

Cryptocurrencies based on digital bits are emerging as a real phenomenon, used for actual transactions, beyond the pale of government regulations. Cryptocurrencies have the potential

to upend banking systems and central banks. If you think banks are OK as is, then consider that most wouldn't have survived 2008 without TARP. And take a look at the 720,000 Euros in "Blocked Funds" in this [guy's bank account](#) in Cyprus.

Cryptocurrencies have their problems of course. The transaction history of each unit of currency is becoming quite long, leading to delayed transaction times as each unit of coin is reconciled. Additionally, there may be disputes along the "Blockchain," leading to forked transaction histories and multiple species of the same currency (although this has not happened yet). And of course, some day, with enough computing power and ingenuity, additional vulnerabilities may be discovered and exploited. With Bitcoin's market cap now \$1 billion, the incentive to find and exploit vulnerabilities is present. Yet one could say something similar about physical currencies – they are inconvenient for large purchases, can be counterfeited, and are subject to devaluation. Of course, with **physical** currencies there is **physical** punishment (prison) for those who counterfeit or sabotage. Not so with cryptocurrencies.

The takeaway from this newsletter is to make a psychological shift to treating the ongoing cryptocurrency revolution as real and not something that can be ignored indefinitely.

If you want to buy cryptocurrencies, it's important to get cash in place to buy even if you don't plan to do so for months. The cash placement problem is one of the deterrents that kept me out of Bitcoin early on. If you're a busy person, find someone you trust who is technically sophisticated and understands cryptocurrencies. Keep in mind that most people feel inertia around this, and even with nagging, we often wait to make the obvious investment **after** it has been proven valuable (and we are too late in entering).

I'm personally waiting for a major sell-off on bad news. But that's what I've been doing since Bitcoin was \$10 (now it's around \$90). The past year has been notably absent of bad news such as hacking attacks and trading problems, hence the rally. But with Bitcoin over \$1 billion in market cap, the incentives for cryptocurrency crime (counterfeiting, hacking accounts, etc...) have increased as rapidly as the value.

The future of banking is likely to look far different than it does today. If Bitcoin is in fact the first secure and accepted cryptocurrency, then it is likely to appreciate much further and destabilize national currencies that are debauched in the service of debt payment (i.e., through inflation). Bitcoin may not be the ultimate cryptocurrency - for example it has major delays such as transactions requiring at least 10 minutes to be verified and the price is very volatile - but it is certainly a huge step in the direction of currency outside of governmental control and the various complexities such a world will introduce.

Housekeeping and Closing

We love to chat with our readers about their experience with psychology in the markets and with alternative economics - we look forward to hearing from you! We especially love interesting stories or your or others experiences.

We will be in London at TradeTech Europe and in Dallas in April. We have additional 2013 speaking engagements in New York, Orlando, and San Francisco – we look forward to seeing

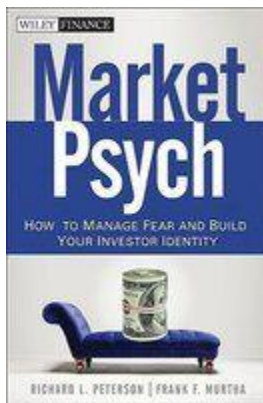
our friends in those cities! Please contact Derek Sweeney at the [Sweeney Agency](http://www.sweeneyagency.com) to book us: Derek@thesweeneyagency.com, +1-866-727-7555.

In 2012 we launched the [Thomson Reuters MarketPsych Indices](#) for monitoring market psychology for 30 currencies, 50 commodities, 120 countries, and 40 equity sectors and industries in social and news media. This data is used by top global hedge funds to improve their investment returns. Please let us know if you'd like to learn more.

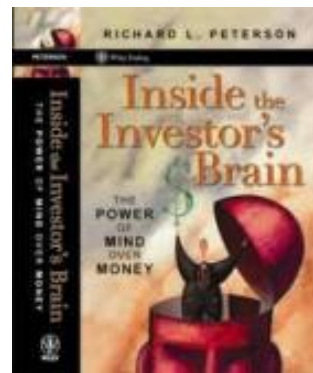
Happy Investing!
Richard L. Peterson, M.D. and The MarketPsych Team

Books

Both books named "Top Financial Books of the Year" by *Kiplingers*.



[MarketPsych: How to Manage Fear and Build Your Investor Identity](#)



[Inside the Investor's Brain: The Power of Mind Over Money \(Wiley Trading\)](#)

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- MarketPsych Data provides granular quantitative sentiment data from streaming social and news media through Thomson Reuters. Please contact us for data access and more information.
- Optimized to identify value over two+ years of real-time trading.
- The MarketPsych Data feed includes minutely macro indices tracking reported price action, supply and demand dynamics, media expectations, and other concepts for all major countries, commodities, currencies, ETFs, and equities (over 6,000).

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