



Richard Bernstein, Chief Executive
and Chief Investment Officer

Richard Bernstein Advisors

Richard Bernstein Advisors LLC (RBA) is an independent investment adviser focusing on longer-term investment strategies that combine top-down, macroeconomic analysis and quantitatively-driven portfolio construction. We strive to be the leading provider of innovative investment solutions for investors, and our competitive edge is our research-driven macro style of investing.

Our top-down macro approach differentiates our firm from the more common, traditional bottom-up approach of most asset managers. Our extensive array of macro indicators allows us to construct portfolios for clients that are innovative, risk-controlled, and focused on overall portfolio construction instead of individual stock selection.

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Cryptocurrencies: It's just Candy Crush

It's always hard to remain objective during the hype of a bubble, and the current cryptocurrency bubble is no exception. However, our take on cryptocurrencies is that cryptocurrencies are merely the winning bounty of on-line games. The difference between cryptocurrencies and on-line games' "coins" is that cryptocurrencies are tradeable. Playing Candy Crush and using the resulting coins to buy goods or to trade on an exchange sounds silly. However, change the words "playing Candy Crush" to "solving a sophisticated mathematical formula," and suddenly global currencies have been revolutionized.

What defines a bubble?

Since the bursting of the Technology and Housing bubbles, market observers tend to use the term "bubble" too frequently. There have been many periods of financial speculation, but bubbles are quite rare. It is true that bubbles contain speculation, but all periods of speculation aren't bubbles.

Financial bubbles differ from financial speculation and overvaluation because bubbles pervade society as a whole whereas financial speculation tends to be confined to the financial markets.

We've always argued there are five characteristics of a financial bubble. We've derived these from Edward Chancellor's *Devil Take the Hind Most*. As we've previously written (http://www.rbadvisors.com/images/pdfs/Some_thoughts_on_2018.pdf) all five of these characteristics exist within the cryptocurrency market.

1. Increased liquidity – there remains considerable liquidity in the financial markets.
2. Increased use of leverage – the use of futures contracts and borrowing to trade.
3. Democratization of the market – everyone gets to take part in the trading.
4. Increased turnover – trading volumes have soared.
5. Increased new issues – there are over 1300 cryptocurrencies (for comparison, there are only 180 country currencies).

The presence of a bubble does not mean that the economics and businesses related to cryptocurrencies are not viable businesses. Rather, a bubble suggests that the return-on-investment could be considerably lower than investors currently expect. Many forecasts made during the Technology bubble regarding the internet's impact on the global economy have turned out to be true. However, those who invested in the Technology sector during the bubble have largely been disappointed with their returns because so many internet-related companies were severely overcapitalized.

"Mining" cryptocurrencies is simply playing an on-line game

As any player of on-line games can attest, the goal of most games is to win coins, tokens, jewels, or the like that are helpful in reaching new levels in the game. One receives a certain number of coins when one wins a level, and is allowed to proceed to the next level of the game. Depending on the game, coins can be used to enter new levels of the game or to purchase accessories that help win. Additional coins can typically be purchased for real money via a credit card.

Winning game coins or tokens is remarkably similar to "mining" of cryptocurrency coins. Coindesk.com actually uses the heading "solving the puzzle" for the description below (emphasis is mine), which can be found on their website under the heading "How Bitcoin Mining Works".

The first miner to get a resulting hash within the desired range announces its victory to the rest of the network. All the other miners immediately stop work on that block and start trying to figure out the mystery number for the next one. As a reward for its work, the victorious miner gets some new bitcoin.

One needs considerably more computing power to mine cryptocurrencies than to play on-line games because the puzzle is very complicated. However, one cannot deny the similarity between on-line games and cryptocurrency mining. One solves a puzzle and wins a coin.

The only difference between cryptocurrency mining and on-line games seems to be whether the accumulated coins or tokens are tradeable. One would imagine that the folks who developed Candy Crush never thought to make the game nearly impossible to win and allow winners to trade their limited Candy Crush coins outside the game.

Regulation: 6th grade stock market game

When I was in 6th grade, our teacher formed a stock market game so that the class could learn how financial markets worked. The game included currency (made of construction paper), stock certificates, and daily business updates on the fictitious companies on our exchange. Looking back on our 6th grade stock market today, I realize there were crashes and bubbles, undervalued companies, and even long-term investors and short-term traders.

However, the aspect I remember the most was that the game ultimately needed a regulator. Some rather devious members of the class bought shares using counterfeit money (remember it was only construction paper). The game ultimately failed because many members of the class didn't trust their counterparties and one would receive a failing grade if caught with counterfeit money.

Similar to my 6th grade experience, cryptocurrency speculators should want regulation and oversight of the cryptocurrency markets to ensure proper counterparty protection, eliminate fraud, etc. We are not as certain as are cryptocurrency advocates that blockchain technology will truly eliminate these risks. There are now over 1300 cryptocurrencies with "circulating supply," and it seems reasonable to assume all 1300 are not of equal quality. *Cave etiam speculatoris.*

It's just Candy Crush

Playing an on-line game and getting coins for solving a puzzle can be great fun. Taking coins won from an on-line game and trading them with others is today called a cryptocurrency. The game may be hard to win, but it is still a game. If only the founders of Candy Crush had realized that selling the coin could be more profitable than selling the entertainment.

To learn more about RBA's disciplined approach to macro investing, please contact your local RBA representative.

www.rbadvisors.com/images/pdfs/Portfolio_Specialist_Map.pdf

RBA Investment Process:

- Quantitative indicators and macro-economic analysis are used to establish views on major secular and cyclical trends in the market.
- Investment themes focus on disparities between fundamentals and sentiment.
- Market mis-pricings are identified relative to changes in the global economy, geopolitics and corporate profits.

About Richard Bernstein Advisors

Richard Bernstein Advisors LLC is an independent investment adviser. RBA partners with several firms including Eaton Vance Corporation and First Trust Portfolios LP, and currently has \$7.3 billion collectively under management and advisement as of March 31st, 2018. RBA acts as sub advisor for the Eaton Vance Richard Bernstein Equity Strategy Fund and the Eaton Vance Richard Bernstein All Asset Strategy Fund and also offers income and unique theme oriented unit trusts through First Trust. RBA is also the index provider for the First Trust RBA American Industrial Renaissance[®] ETF and the First Trust RBA Quality Income ETF. Additionally, RBA runs ETF asset allocation SMA portfolios at UBS, Merrill Lynch, Morgan Stanley Smith Barney, Wells Fargo, RBC, Janney and on select RIA platforms. RBA's investment insights as well as further information about the firm and products can be found at www.RBAdvisors.com.

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