Bitcoin and Digital Gold

- Bitcoin is gaining traction as a store-of-value and digital gold
- Bitcoin is becoming a digital diversifier vs. rest of crypto gaggle
- Bitcoin is simply retracing the 2018 bear market, for now
- The macroeconomic landscape favors Bitcoin, cryptos
- Gold or Bitcoin? Store-of-value debate heats up as price climbs

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Most data as of July 2

Performance:
- Bloomberg Galaxy Crypto Index (BGCI)
  June +17.2%, 2019 +109.0% thru July 2
- Bitcoin:
  June +43.6%, 2019 +191.6%, thru July 2

Bitcoin and Gold Bull Markets Set to Leave Others Behind in 2H

(Bloomberg Intelligence) -- Like gold, some back-and-fill of 1H gains should be expected in Bitcoin's price before it resumes retracing last year's bear market, in our view. One key distinction vs. past bull markets: Both the cryptocurrency and precious metal are far from new highs. Each experienced their worst one-day declines in over a year on July 1, indicating their increasingly shared purpose as stores-of-value vs. favorable macroeconomic trends. Uniquely quasi-currencies and commodities, and standouts among peers, the dollar value of Bitcoin and gold should keep appreciating in 2H.

This year's $10,000 on the way up appears as $6,500 did on the way down in 2018. Our wide range for Bitcoin is $6,500-$20,000 because the levels are significant. Above $20,000 would be a new bull market. The rest of the cryptos are increasingly vulnerable vs. Bitcoin.

Bitcoin Vs. All Others

Bitcoin Gaining Traction as Store-of-Value and Digital Gold. Our indicators, which are clearly pointing upward, show $10,000 Bitcoin about fair value at the beginning of July. Macroeconomic trends are also demonstrably favorable for gold and its digital cousin. Increasing transactions and addresses support higher Bitcoin prices on the back of more countries with negative sovereign yields.

Passing the Digital Divide Toward Gold. Following some back-and-fill of 1H gains, we expect Bitcoin in 2H will resume retracing last year's bear market. Our graphic depicts the resumed uptrend in Bitcoin and gold. Both reached key thresholds in June -- $10,000 Bitcoin and $1,400-an-ounce in gold -- that are likely to act as consolidation magnets for awhile. With a strong dollar, Bitcoin up near 60% and gold 13% on a year-over-year basis to July 2 indicate the path of least resistance. A key test should come with expectations of Federal Reserve easing in 2H and the potential for a peak greenback.

Bitcoin May Be Building a New Base Near $10,000

The trade-weighted broad dollar is up about 2% vs. year-ago levels and, after rallying 20%-plus in the two-year run-up to the first rate hike in December 2015, is prime for a peak with easing. This year should mark the continued maturation of Bitcoin to be more like gold.

Favorable Bitcoin Price Indicators. Primary Bitcoin price indicators show a healthy upward trajectory and prices near fair value at the beginning of 2H. Active addresses and transactions -- primary bear-market indicators last year -- have shifted quite favorably. Our most robust price companion -- the 10-day average of
adjusted transactions in dollars based on data from Coinmetrics -- has caught up to prices and shows Bitcoin near $10,000 may be a bit low.

**Bitcoin is On Sound Footings with Indicators**

Although averages, these measures can often be leading indicators and have among the firmest correlations to prices. On a quarterly basis since the beginning of 2014, Bitcoin is about 0.95 correlated to the 10-day average of transactions. To addresses, the correlation is near 0.65. For comparison, the same correlation measure to the MVIS Cryptocompare Digital Assets 10 Index is 0.73.

**Bitcoin Gaining Traction vs. Negative Yields.** The ease with which Bitcoin's price broke through significant bear-market resistance portends new highs. Our graphic depicts a similar resistance level in 2015 that held the market advance in check for about six months. Macroeconomic forces, including rapidly increasing levels of negative-yielding debt, are price supportive. What was resistance near $6,500 -- last year's most widely traded price -- should now be support. Maturing toward a sounder store-of-value like a digital version of gold, Bitcoin got a bit ahead of itself in 2H but should continue to move upward in 2H.

**More Negative-Yielding Debt Supports Bitcoin**

Limited supply, anticipated Fed easing, increasing institutional interest, Facebook's Libra coin and its unique status as the first-born crypto asset with the vast majority of computing power favors Bitcoin-price appreciation.

**Less Favorable Broader Market**

**Bitcoin Becoming Digital Diversifier vs. Rest of Crypto Gaggle.** The broad cryptocurrency market will continue to lose its luster vs. Bitcoin, in our view. The one-year-change of 60% to July 2 for the first-born crypto, vs. a 14% decline in the Bloomberg Galaxy Crypto Index, indicates the increasing evolution of Bitcoin to becoming a digital version of gold.

**Widening Divide: Bitcoin vs. Crypto Assets.** The trend favoring stable coins is widening the disparity between Bitcoin and most highly speculative digital assets known as alt-coins, in our view. Following the path laid by Tether, the dominant stable coin, the potential for wide global-payment adoption of Facebook's proposed stability-focused Libra cryptocurrency should expose the fallacy of many crypto assets masquerading as currencies. Tether and Libra enhance the value of Bitcoin toward becoming a digital version of gold.

**Bitcoin Leaving Behind Most Crypto Assets**

Similar to gold, Bitcoin towers above peers. Its computing power (hash rate) surpasses all others and is still increasing rapidly. Our graphic depicts Bitcoin gaining favor in the midst of supportive macroeconomic conditions vs. the Bloomberg Galaxy Crypto Index.

**Bitcoin's Beta to the Market Is Increasing.** The broad crypto market is increasingly vulnerable and subject to the performance of Bitcoin. Our graphic depicts the highest 100-day beta of the MVIS Cryptocompare Digital Assets 10 Index vs. Bitcoin in the index history since
2014. This atypical way to measure beta -- the index vs. a primary constituent -- captures the unique relationship of the first-born crypto vs. the gaggle of copycat coins. Like gold, Bitcoin isn't practical to purchase a cup of coffee but is increasingly gaining favor as the default digital-portfolio diversifier.

**Bitcoin’s Beta to the Market at Record Highs**

We expect this trend to continue on the back of the increasing number of tradable cryptos and institutional interest, which defaults notably to Bitcoin. Near 2,200 in June, the amount of cryptos listed on Coinmarketcap.com is up about 600, or 40%, from a year ago.

**Macroeconomic Landscape Favors Bitcoin, Cryptos.** The macroeconomic foundation is firming for Bitcoin and the crypto market. Our graphic depicts the recovering Bitcoin price and Bloomberg Galaxy Crypto Index along with gold's price, stock-market volatility and futures shifting to expectations of Fed easing. The one-year fed funds futures spread began pricing for a rate cut in January as Bitcoin bottomed.

**Crypto Supply Is Slowing, But Still a Headwind.** The broad crypto market has an excessive supply overhang that Bitcoin doesn't. The first-born crypto is gaining status as a digital version of gold with limited supply. Bitcoin forks and the potential for more are part of the broader-market pricing headwind. Bitcoin may not fulfill its initial intent as a peer-to-peer electronic cash system, but is rapidly becoming a go-to digital-age store of value. Our graphic depicts the Bloomberg Crypto Index falling behind the performance of Bitcoin.

**Increasing Crypto Supply Favors Bitcoin**

Getting past the stage of deflating the 2017 frenzy, Bitcoin is maturing into a digital version of gold. Rapidly advancing technology, increasing adoption and limited supply support its price. Dominated by speculators and extended in the shorter term based on most of our indicators, the Bitcoin alternative asset store-of-value macro foundation is firming.

**Bitcoin 2H: $6,500 - $20,000**

Bitcoin Support of $6,500 and Resistance of $20,000 in 2H. What's different about the increasing Bitcoin price this time is it's retracing familiar territory with supportive institutional and macroeconomic drivers. A bit extended near the end of 1H, the cryptocurrency should be about revisiting resistance near $20,000 and holding support above $6,500 in 2H.

**Bitcoin to Continue Evolution to Digital Gold.** Some back-and-fill in the Bitcoin price supports its migration to becoming a digital version of gold, but the bias should remain higher in 2H. The process of retracing last year's bear market comes on the back of increasing institutional interest and favorable macroeconomic conditions.
Federal Reserve easing and a growing number of countries with negative yields are tailwinds for Bitcoin and gold. The ease with which Bitcoin broke above the bear market's most-traded price near $6,500 and ending 1H near the halfway mark indicate full recovery. That puts the next big resistance near $20,000. Sustaining below $6,500 is a good definition of risk as it would indicate failure.

**Bitcoin Initial Mission - Bear Market Retracement**

Elevated shorts, getting past the Tether troubles, Facebook's proposed Libra coin and political unrest in Hong Kong were primary 1H Bitcoin support factors.

**Bitcoin Institutional Interest Is in a Bull Market.**

Steadily increasing futures open interest indicates Bitcoin migrating to a more mature marketplace, supporting prices. Our graphic depicts CME traded open interest reaching a new high at the end of 1H. On a year-over-year basis, the number of open positions has increased more than 2x. Perhaps more significant from a price indication standpoint, net positions have declined from the elevated shorts during the bear market. Institutions are using futures increasingly for long-only exposure.

**Definitive Uptrend, Bitcoin Futures Open Interest**

Measured on a dollar basis, open interest peaked in 1H near $2 billion, representing about 1% of the Bitcoin market cap listed on Coinmarketcap.com (CMC). Futures volume is more robust. The average daily dollar value of Bitcoin futures volume in June was about 10% of that listed on CMC.

**Bitcoin Simply Retracing 2018 Bear Market, for Now.**

Gaining status as a digital version of gold, Bitcoin appears to be in the early days of retracing last year's bear market. In June, Bitcoin bumped into $10,000 resistance, but simply regaining half of the decline would get it toward $11,300. For a unique asset that's designed to appreciate via limited supply and that isn't linked to a central authority like most copycat cryptos, we think there's little to stop a rally.

**50% Retracement in Bitcoin: $11,300**

The increasing number of countries with negative interest rates, Fed easing and stock-market volatility with the potential to revert higher are key Bitcoin and gold supports. To suppress the dollar price of Bitcoin, it'll likely take the digitization trend to subside and for macroeconomic forces to reverse.
**Bitcoin Vs. Gold**

Gold or Bitcoin? Store-of-Value Debate Heats Up as Price Climbs. The debate between gold bugs and Bitcoin believers over which is the better store of value is heating up as Bitcoin's price rises. The gold camp cites the metal's long history and Bitcoin's instability and lack of regulatory support. Bitcoin backers see the cryptocurrency as "digital gold," with superior efficiency and untapped potential.

**Complementary Assets in a Portfolio.** Rather than positioning Bitcoin and gold as polar alternative assets, we think they can complement each other in a portfolio. Gold has better applications in some cases, and Bitcoin in others. Bitcoin is more transportable and divisible, and more applicable as a currency. But gold is more stable, with a proven track record. Both offer almost zero correlation to traditional asset classes. Bitcoin currently is most aptly characterized as a speculative asset.

**Comparison: Bitcoin vs. Gold**

<table>
<thead>
<tr>
<th>Property</th>
<th>Bitcoin</th>
<th>Gold</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age &amp; Durability</td>
<td>105 yrs</td>
<td>~5,000 yrs (Proven)</td>
</tr>
<tr>
<td>Scarcity (Supply &amp; Inflation)</td>
<td>Fixed &amp; Limited</td>
<td>Estimated &amp; Limited</td>
</tr>
<tr>
<td>Divisibility</td>
<td>Easy &amp; Fast</td>
<td>Difficult</td>
</tr>
<tr>
<td>Price Stability (Volatility)</td>
<td>59%</td>
<td>12%</td>
</tr>
<tr>
<td>Storage/Security Costs</td>
<td>Dependent on Security Level</td>
<td>Dependent on Security Level</td>
</tr>
<tr>
<td>Use as Payment/Currency</td>
<td>Yes</td>
<td>Not suitable</td>
</tr>
<tr>
<td>Portability</td>
<td>Easy with Internet</td>
<td>Difficult, especially in bulk</td>
</tr>
<tr>
<td>Taxation</td>
<td>Property</td>
<td>Collectible</td>
</tr>
<tr>
<td>ETF</td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td>Correlation to S&amp;P 500</td>
<td>Zero</td>
<td>Zero</td>
</tr>
</tbody>
</table>

**Limited Supply and Fixed Inflation.** Gold has been accepted as a store of value globally for centuries. While Bitcoin is a store of value within the world of cryptocurrencies, it now has prospects of being embraced on a larger scale. The amount of gold available on Earth is finite and the mining rate has been relatively stable, with World Gold Council estimates of "above ground" gold supply increasing about 1-2% a year. Bitcoin's limited supply and controlled inflation are its monetary backbone. The last Bitcoin is expected to be mined in 2140 (coded to a maximum of 21 million coins), according to a fixed, disinflationary schedule.

**U.S. Tax Rates More Favorable for Bitcoin.** Gold and Bitcoin have different long-term U.S. tax rates (on investments bought and sold over more than one year). For short-term capital gains (on investments bought and sold within a year), both are taxed at the individual's income-tax rate. Bitcoin is taxed in the same way as stock ownership, with a long-term capital-gains rate of 0-20% depending on income level. Gold is taxed as a collectible, so it carries a long-term rate of 28%, irrespective of an investor's income.

**Medium-of-Exchange Edge Goes to Bitcoin.** Bitcoin is superior to gold as a medium of exchange or form of payment. Unlike gold, Bitcoin is a fixed unit of account and easily divisible and transportable. Gold isn't easily divisible on the spot, and there are potential issues with purity and verification. The ability to trace Bitcoin on blockchain ledger technology will likely prove to be a substantial advantage, especially in cross-border transactions. Digital currencies are starting to be accepted as a form of payment with vendors and...
retailers.

**Market-Cap Leaders: SV, Binance Coin and Tether**

<table>
<thead>
<tr>
<th>Category</th>
<th>Bitcoin</th>
<th>Gold</th>
</tr>
</thead>
<tbody>
<tr>
<td>Useful as Payment/Currency</td>
<td>Yes</td>
<td>Not Suitable</td>
</tr>
<tr>
<td>Portability/Transport</td>
<td>Easy &amp; Fast to</td>
<td>Difficult</td>
</tr>
<tr>
<td></td>
<td>Anywhere (with</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Internet</td>
<td></td>
</tr>
<tr>
<td>Divisibility</td>
<td>Highly divisible</td>
<td>Difficult</td>
</tr>
<tr>
<td>Verifiability</td>
<td>Authenticated</td>
<td></td>
</tr>
<tr>
<td></td>
<td>via Blockchain</td>
<td></td>
</tr>
<tr>
<td></td>
<td>by Anyone</td>
<td></td>
</tr>
<tr>
<td>Trackable/Traceable</td>
<td>Yes (w/ caveats)</td>
<td>No</td>
</tr>
<tr>
<td>Decentralized</td>
<td>Yes</td>
<td>Yes</td>
</tr>
</tbody>
</table>

**Superior Stability, Smaller Drawdowns.** Bitcoin's price volatility and history of drawdowns limits its use as a store of value, and even as a form of payment. Gold supporters rightly assert that an asset can't be a store of value when it has seen drawdowns of more than 80% in just 12 months. Yet gold isn't entirely immune -- most recently, from September of 2011 to December of 2015, the metal realized about a 45% drawdown in U.S. dollar terms.

Bitcoin vs. Gold Price Volatility & Drawdowns

<table>
<thead>
<tr>
<th>Category</th>
<th>Bitcoin</th>
<th>Gold</th>
</tr>
</thead>
<tbody>
<tr>
<td>Volatility</td>
<td>59%</td>
<td>12%</td>
</tr>
<tr>
<td>Drawdown</td>
<td>-84%</td>
<td>-45%</td>
</tr>
<tr>
<td>Drawdown Length</td>
<td>1 Year</td>
<td>4.25 Years</td>
</tr>
<tr>
<td>Avg. Intraday Price Change</td>
<td>6.4%</td>
<td>0.9%</td>
</tr>
<tr>
<td>Max Intraday Price Change</td>
<td>31.8%</td>
<td>2.9%</td>
</tr>
</tbody>
</table>

**Gold a Better Store of Value...for Now.** Bitcoin is still best characterized as a speculative asset at this point. As Tyrone Ross Jr. of NobleBridge Wealth Management told Bloomberg Television, “Bitcoin is a call option on a store of value.” Some of Bitcoin's characteristics give it store-of-value potential, but others currently make that non-viable. For example, since 2013, Bitcoin's value has swung by thousands of percent, while gold has been comparatively steady.

**ETFs and ETHE Mispricing**

Grayscale Ethereum Premium Hits 2,000% Without ETF Safeguards. Retail investors were the likely victims of early trading in the Grayscale Ethereum Trust (ETHE), which closed at a 20-fold premium to its underlying net asset value on its second day of over-the-counter trading. ETHE is a private trust that acts like a closed-end fund, and it lacks an exchange-traded fund's ability to prevent such a large premium.

Even Worse Than It Looked for Some. ETHE's June 21 closing price of $580 for a security with an underlying net asset value (NAV) of $27.33 is bad for investors, and it was even worse for some. One share traded at 4:23 p.m. New York time for $699.99, a 2,561% premium to closing NAV. While ETFs sometimes misprice, they do so far less frequently and less severely. With ETFs, market makers have incentives to use the creation-redemption process to arbitrage away bad pricing, keeping share supply close to demand and the trading price aligned with underlying NAV. ETHE acts more like a closed-end fund and lacks this functionality.

One ETHE Share Changed Hands for Almost $700
Paying $700 for a share of ETHE is the equivalent of $7,271 for one Ether, more than 5x its all-time high during the 2017 crypto bubble.

**Premium's Cause Likely Retail Investors.** Retail investors excited at the prospect of trading ETHE likely drove its inaccurate pricing -- making them both the cause and the victims of the wide divergence with its net asset value. The retail crowd’s role is evidenced by the fact that almost all of the trades on June 21, the second day of OTC trading, were well-below the lot size of 100 shares, with many involving just one share. A total of 3,566 shares traded that day, out of about 838,600 outstanding. The price plunged on June 24 as volume surged.

**Small Sizes of ETHE Trades (QR<GO>)**

SEC Should Weigh Risks of Crypto Products. The Securities and Exchange Commission should take into account the risks and deficiencies of products already on the market when considering whether to approve a cryptocurrency ETF. ETHE, an open-ended grantor trust that isn’t registered with the SEC, trades over-the-counter and isn’t subject to the regulatory requirements of typical funds. While available to any investor with access to an OTC broker, ETHE can be subject to massive mispricings. SEC Commissioner Hester Peirce said allowing a crypto exchange-traded product would reduce risks for retail investors in her dissent of the denial of a Bitcoin ETP.

**Government Filing**

"An ETP based on bitcoin would offer investors indirect exposure to bitcoin through a product that trades on a regulated securities market and in a manner that eliminates some of the frictions and risks of buying and holding bitcoin directly. If we were to approve the ETP at issue here, investors could choose whether to buy it or avoid it."

Hester M. Peirce - Commissioner, Securities and Exchange Commission, Sec. July 26, 2018
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