

# BITCOIN—TULIP MANIA OR REVOLUTION

*Making inroads in some quarters, but concerns about risks and lack of regulation persist*

January 2014

CONFIDENTIAL

Bitcoin, a virtual monetary system based on digital coins with no intrinsic value, is a peer-to-peer currency with no central bank or authority. In recent years, it has gained much attention from investors and speculators, as well as some traction as more people transact with the currency. Although a growing number of merchants now accept bitcoin for transactions, European financial watchdogs and governments such as the European Banking Authority and the Chinese government, have warned about risks or have banned the currency due to lack of regulation and potential for use in criminal activities.

## Bitcoin basics

The virtual coins are produced by using powerful computers to complete increasingly difficult programming tasks, a process open to all, known as “mining.” The cyber currency relies on a distributed system of trust, centered on a public transaction ledger called a “block chain,” cryptographically authenticated and collectively maintained by bitcoin users. Bitcoins originated in 2008 with a paper published under the alias Satoshi Nakamoto and the system’s framework was implemented in open-source software in 2009. Total bitcoins in circulation are expected to rise gradually and predictably until reaching a predetermined 21 million bitcoin limit in 2140. The existing supply is approximately 12.1 million bitcoins (or 57.6% of the ultimate total) (Chart 1). Bitcoin market capitalization is currently \$12 billion (Chart 2).

Having long been favored by libertarians and gold bugs, the currency is winning several unexpected new fans, and received a benign [reaction](#) at a recent U.S. Senate hearing. Last November, Bitcoin gained further attention as the University of Nicosia in Cyprus elected to accept the virtual currency for tuition payments, becoming the first in the world to do so. Moreover, a small but expanding number of businesses accept payments in Bitcoin. Overstock.com will begin accepting the digital currency in the second half of 2014. The major online retailer, whose 2012 revenue surpassed \$1 billion, is the largest American company yet to support the Bitcoin movement.

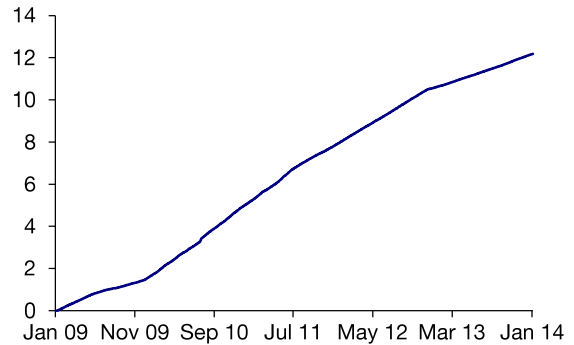
## Concerns about illegal activity

The spectacular rise in price and the absence of appropriate regulatory control has led to an increase in cyber theft of the digital currency on online exchanges: approximately \$1 million worth of bitcoins was stolen in November from BIPS, a European Bitcoin exchange, and in October, GBL, a Chinese exchange, mysteriously disappeared, taking \$4.1 million worth of deposits with it. Such breaches have raised regulatory and security concerns which will need to be addressed going forward. Further, there are concerns that Bitcoin facilitates illicit activity including financing terrorism, anonymous purchases of banned items including drugs, money laundering and illegal tax shelters. Because it is a decentralized peer-to-peer network, Bitcoin leaves governments with no intermediary or server to shut down, no Bitcoin corporation to subpoena, nor headquarters to raid, making it a real challenge for a state to regulate private transactions.

However, proponents of the digital currency are quick to point out that unlike cash, Bitcoin is not totally anonymous, since a public record is made of every transaction and consequently can be traced (in theory) by law enforcement organizations. With appropriate monitoring and investigating, it would prove difficult for criminals to conceal their trails as each bitcoin is identifiable by its unique transaction history. Furthermore, while it may be demanding to regulate private Bitcoin transactions, the numerous new businesses currently surfacing to facilitate consumer adoption of the cyber currency (as most users do not “mine” their own coins) such as “wallet services” and online exchanges

Chart 1

**Bitcoin Supply**  
 millions of bitcoin



Source: <https://blockchain.info/>

Chart 2

**Bitcoin Market Capitalization**  
 USD billion



Source: <https://blockchain.info/>

Chart 3

**Bitcoin Price Volatility**  
 30 day rolling standard deviation of daily percent change



Source: <https://blockchain.info/>; IIF calculations

*Despite its many ingenious features, Bitcoin's use as a widespread medium of exchange appears limited*

will be just as susceptible to regulation as banks and other third-party payment networks. In fact, many of these Bitcoin entrepreneurs, to the chagrin of the anti-establishment libertarians, are inviting regulation as a way to legitimize the virtual money. While new and comprehensive regulation would raise Bitcoin's transaction costs, offsetting and/or eliminating one of the cyber currency's main benefits, it would offer greater consumer protection and legitimacy as well as improve regulators' ability to monitor potential illicit activity involving the digital coin.

#### **Volatility could compromise the ability of Bitcoin to function as a medium of exchange**

A key concern for Bitcoin has been volatility. It is estimated that 50 to upwards of 90 percent of Bitcoin owners are speculators—thereby contributing to the substantial price fluctuations seen recently. In December, merely three days after reaching its high of \$1,240, the digital currency plunged to \$576 intraday (Chart 3, page 8), after China—citing concerns about money laundering and risks to financial stability—banned its financial institutions from conducting Bitcoin transactions. The ban prompted Baidu, China's largest search engine, to stop accepting Bitcoins, dealing a significant set-back to the cyber currency's struggle for legitimacy. Bitcoin has since rebounded and as of January 6 was trading at \$1,027 on Mt.Gox, one of the more active online exchanges. If it persists, this remarkably high volatility will compromise Bitcoin's capacity to function as a medium of exchange, as it deters most large companies from accepting the digital currency as a form of payment.

#### **Regulation of Bitcoin: varied approaches**

Governments worldwide are examining how Bitcoin will operate within the broader payment network and how they can and should be regulated given the decentralized and virtual components of the system. Government regulation and/or guidelines are continually evolving and amendments occur regularly; a few examples are set out below:

- In the U.S., while the Federal Reserve has provided a degree of tacit approval, stating “virtual currencies like Bitcoin have legitimate uses and should not be banned,” the IRS has not yet issued tax guidance. Washington policymakers are actively studying digital currencies, and taking steps towards solidifying their position and developing formal rules and regulation.
- While the **German** finance ministry has formally acknowledged Bitcoin as a “unit of account” (meaning it can be used for tax and private trading purposes in the country), the German Bundesbank has become the latest big central bank to warn about the risks of Bitcoin, amid rising concerns from regulatory authorities around the world as the virtual currency grows in popularity.
- **China** has banned the country's Bitcoin exchanges from accepting new inflows of cash, putting the virtual currency in danger in its biggest market. Regulators were concerned that people could use Bitcoins to skirt the country's capital controls, and about the widespread speculative demand for Bitcoins and potential for a price bubble. However, transaction activity is reportedly continuing, with some exchanges finding ways to work around the controls.
- Bitcoin exchanges in **India** shut down late December 2013, days after the Reserve Bank of India (RBI) warned users of virtual currencies against security and financial risks associated with them. The RBI stated that it fears users could unintentionally breach anti-money laundering and financing of terrorism laws; it continues to study the status of Bitcoin under current law.
- In July 2013, **Thailand** banned the buying and selling of Bitcoins, as well as sending or receiving the currency from other jurisdiction.
- Bitcoin-friendly sovereigns such as **Denmark**, **Poland**, and **Singapore** are currently taking a *laissez-faire* approach claiming that no regulation is needed presently, though the issue will be revisited in the future.
- **Norway** classifies Bitcoin not as money but rather as an asset subject to capital gains tax.

#### **Effectively a “fiduciary currency”**

Bitcoin proponents claim that the digital currency is a sound alternative to traditional physical currencies (notably those issued by profligate governments). In line with many libertarian thinkers, they suggest that monetary management is healthier if it reflects the decisions of a large community of users as opposed to a central bank board or governor. Conversely, Bitcoin detractors argue that the functionality (and ultimate success) of the digital currency is determined by programmers—and their goodwill is taken for granted. There is the possibility that over time such actors may become driven by individual self-interest potentially leading to widespread panic and chaos within the network. Thus it is far from certain that such a system would be healthier than one where central banks are mandated to stabilize the economic and financial markets, even if their performance is imperfect. Furthermore, Bitcoin detractors argue that the built-in scarcity incentivizes hoarding, decreases liquidity, fuels price volatility and thus impedes the digital currency's acceptance for payment. Lastly, unlike fiat money, nobody is obligated to accept bitcoins for payment. Consequently, its worth is determined by the users' perception of its value. Without a backstop buyer, Bitcoin could rapidly vanish should perceptions of its value deteriorate.

A recent [study](#) conducted by the Chicago Federal Reserve concludes that Bitcoin provides an elegant solution to the problem of creating a digital currency, i.e., “...how to regulate its issue, defeat counterfeiting and double-spending, and ensure that it can be conveyed safely—without relying on a single authority. However, the author also underscores that Bitcoin is effectively a “fiduciary currency” with no intrinsic value—hence inherently fragile. Thus despite Bitcoin's “ingenious features,” it cannot provide a currency of stable value and its use as a broadly accepted medium of exchange appears limited—though it is a “remarkable conceptual and technical achievement.”

*(Excerpted from IIF Capital Markets Monitor, January 2014, author: Fiona Nguryen, fnguyen@iif.com, 1-202-682-7443, Dennis Ferenzy, dferenzy@iif.com, 1-202-682-3643)*