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## Emerging Bitcoin Derivatives Offer Choice to Merchants and Institutional Investors

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Products being developed for large, sophisticated players is usually a sign of a maturing market. And the Bitcoin market is no different.

Until recently, derivatives based on Bitcoin, such as those offered by [ICBIT](#) and [BTC Oracle](#), were suited only for small, individual traders. But recent months have witnessed the development of two types of derivatives contracts that are suitable for institutional investors and large merchants.

Derivatives are contracts whose value changes based on the value of some underlying security, currency, commodity, or price index. Derivatives can be used to hedge risk, speculate, or take an investment position in the underlying asset or price index.

Derivatives come in a wide variety of forms, such as stock options and S&P futures. But the new institutional-grade Bitcoin derivatives take forms that are less common.

The first Bitcoin derivative for sophisticated parties to come to market was the TeraExchange (Tera) Bitcoin forward. The Tera contract works in the following way: First, on the initial trade date, the buyer and seller enter into a contract for a certain amount expressed in U.S. dollars. The minimum contract size is \$1,000. Then, on the contract's settlement date, the buyer pays the seller in cash if the price of Bitcoin in U.S. dollars has increased since the trade date. The amount the buyer has to pay the seller is based on the size of the contract and how much the price of Bitcoin has appreciated since the trade date. On the other hand, if the value of Bitcoin decreases after the initial trade date, the seller makes the cash payment to the buyer.

The Tera Bitcoin forward is traded on a platform regulated by the Commodity Futures Trading Commission (CFTC) and known as a swap execution facility. The platform provides prices and matches up parties, but does not clear the trade or otherwise assume any risk related to the parties not paying each other. The Bitcoin swap is uncleared, meaning that the buyer and seller assume the risk that the trade will not properly settle. But as is typical with swap agreements, the Bitcoin forward requires collateral to be posted when the trade is entered, and for parties to make adjustments based on the market value of Bitcoin. Using collateral reduces counterparty risk.

The first Tera Bitcoin derivatives trade was executed on October 9, 2014, between [digitalBTC](#) and another party. [digitalBTC](#) is a publicly listed Australian company that provides Bitcoin mining, trading, and liquidity-provision services. [digitalBTC](#) seems to have entered the forward to gain exposure to Bitcoin as opposed to hedging its Bitcoin price risk that arises from holding bitcoins due to its business activities.

A second type of Bitcoin derivative is under development by [SolidX](#) partners. According to its [press release](#), the SolidX agreement will take the form of a total return swap, which is a relatively common type of derivative instrument that emerged in the late 1980s. A total return swap enables a buyer to get investment exposure to an underlying asset--including its gains and losses--without having to actually own the asset or necessarily even pay any money upfront.

A total return swap is structured the following way: the buyer pays the seller a set rate in exchange for receiving payments that reflect the gains, if any, from owning an underlying asset. If the underlying asset produces a gain from interest income or market appreciation, the total return swap buyer gets paid that amount. If the underlying asset suffers a loss, the the buyer must pay the swap seller the amount of the loss (in addition to the set rate).

The SolidX Bitcoin total return swap will give its buyer the same gains and losses it would have as if it purchased bitcoins outright (minus the fixed rate it pays to SolidX). Because bitcoins qualify as a type of "commodity" under the Commodity Exchange Act, the SolidX swap will be regulated by the CFTC.

The following diagram shows some basic structural differences between the Tera and the SolidX bitcoin swaps.

Both instruments permit parties to effectively invest in bitcoins without actually owning any. The benefit of doing so is that it allows merchants and financial institutions to gain exposure to Bitcoin without having to deal with anti-money laundering issues and other regulatory concerns that could arise from directly holding bitcoins.

There are some important differences between the Bitcoin forward and the swap, however. Only the Tera Bitcoin forward offers parties the ability to "short" the Bitcoin market and gain from a Bitcoin price decline. Merchants, investors, and others

that hold bitcoins can benefit from Tera's forward giving them the ability to hedge their Bitcoin price exposure.

Another major difference is the source of counterparty risk. With a Tera Bitcoin forward, the other party to the trade will be the source of counterparty risk. With the SolidX Bitcoin swap, SolidX itself will be the source of the counterparty risk. The ability of SolidX to make good on its end of the bargain will depend on how well it translates Bitcoin price gains into an income stream for the buyer.

Gaining exposure to Bitcoin may have different accounting and cash-management consequences with each instrument as well. The Tera Bitcoin forward only triggers the primary payment obligation on the settlement date. By contrast, the SolidX swap may require a more frequent exchange of cash flows. As a result, the SolidX product would have a more direct impact on earnings and liquidity. On the other hand, the buyer of the SolidX swap may not have to post collateral or any cash upfront, which may make the instrument more attractive than an equivalent Tera Bitcoin forward.

Ultimately, differences between the Tera Bitcoin forward and the SolidX Bitcoin swap will depend on the particularities of the terms of the trade and counterparties involved.

With the advent of these two products, and likely many more on the way, the Bitcoin economy will attract a wider range of commercial and financial market participants.

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