



MEMBERSHIPS AND INTERNATIONAL CERTIFICATIONS

(<u>ICVS</u>)



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## **1 – The Crypto Revolution in Emerging Markets**

Crypto is the revolution leading emerging countries to financial inclusion. One of the biggest problems emerging markets face is volatility. Volatility is driven by political and economic instability.

While it doesn't appear that many of these elements will change anytime soon, there are financial and technological implementations that can be introduced to provide stability. Tokenization – a relatively novel, blockchain-based, cryptographic ratification of assets – can be the vehicle that empowers this vision to be realized.

#### **1.1 – The Problem in Emerging Countries**

- Low liquidity is partly driven by the lack of investors.
- High volatility and political instability.
- Lack of transparency: The high volatility of the markets generate both information asymmetries and lack of information, thus creating opportunistic behaviour among financial players.
- Huge transaction costs driven by lack of transparency, regulations, restrictions, speculation, and arbitrage.
- Bureaucracy: The high risk of the economy and the complexity of financial system force banking and financial institutions to work with personalized auditing processes lacking of any kind of automatization. Further, financial statements are difficult to analyse (due to inflation and devaluation) and subject to fraud. Therefore, credit is based on personal trust rather than company's risk.
- Lack of digitalization and automatization

Interest rate cuts in EMs have not kept pace with advanced economies Real interest rates\* (%)



Source: Maurice Obstfeld, University of California, Berkeley © FT

(Figure - 1.a)



#### Total Debt (Private + Public) & Correlation Between Debt Level & Level of Short-Term Rates

As a consequence, emerging economies become more dependant on a few strong industries with big and well established companies while SMEs may not have the financial strength to face these markets.

0.0								
-1.00	-0.80	-0.60	-0.40	-0.20	0.00	0.20	0.40	0.60

#### Correlation Between Total Debt and Level of Short-Term Interest Rates 2000-2019

Source: Bank for International Settlements, Total Credit to the Non-Financial Sector; Bloomberg Professional for Short Term Interest Rate Series, CME Economic Research Calculations

(Figure - 1.b)

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## **1.2 - Blockchain: An Opportunity for Emerging Countries**

Blockchain technology has spurred the potential for a real financial revolution, by bringing liquidity and efficiency to emerging countries

Distributed Ledger Technology - DLT / Blockchain system and its application in asset tokenisation may deliver efficiency gains through the transfer of value without the need of centralised intermediaries and/or through the efficient automation of processes, resulting in faster, potentially cheaper and frictionless transactions driven automation.

Tokenization can turn almost any asset, either real or virtual, into a digital token and enables the digital transfer, ownership and storage without the necessary need of a central third party / intermediary. The corresponding basis is built by using the Blockchain technology.

### 1.3 – Stable Coins and the Tokenization Process

The value of Stable Coins is frequently linked to an underlying asset. The usual objective of such projects is to minimize the price volatility. The volatility of Stable Coins is lower than the one of crypto assets such as Bitcoin because they derive their value from their underlying asset. On the other hand, due to their global reach, Stable Coins have started to impact historical fiat money and central bank positioning on monetary emission and securitization.

From both the investor and issuer sides of ICO, IEO and STO token a key issue was the ability to create a stable, trustable and digitally accessible monetary bridge between the crypto and the more traditional fiat world.

Privately held payment Stable- Coin initiatives have been launched with the ambition to address cross border issues or to other financial inclusion problems.



(Figure - 1.c)

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BVint has crypto teams or expertise in different locations and we offer a "one stop shop" solution for our crypto clients bringing together crypto specialists from across our global network. Our Services Include:

- Initial Coin Offerings (ICO), Security Token Offerings (STO)
- Tokenisation projects including stable coins and asset backed tokens
- Crypto Valuations
- Crypto Banks
- Crypto Funds
- Crypto Exchanges



A StableCoin without collateral is among the most innovative approaches. The stabilisation mechanism is based on algorithmic and mathematical driven interventions. The European Central bank outlined in an analysis dated as of August 2019 the relationship between the innovation of a particular type of Stable Coin and its capacity to limit price volatility expressed in a currency of reference are inversely related, meaning that innovative Stable Coins are price volatile.

#### Digital Assets Collateral

Instead of being pegged by real world collateral, a token might be pegged against one or more cryptocurrencies or cryptoassets. Thereby, the value of the Stable Coin is constant to the underlying cryptocurrency / -asset. This is a decentralized system, that can be liquidated quickly and cheaply into underlying crypto collateral, because this would only require a DLT / Blockchain transaction.

It is very transparent, since everyone can easily inspect the collateralization ratio of the Stable Coin at any point in time. In the event of plumming prices it could be liquidated automatically into the underlying collateral. It is, however, less price stable than Fiat. These Stable Coins are rather risky, as they are tied to the health of a particular cryptocurrency (or basket of cryptocurrencies).

#### Traditional Assets Collateral

Collateralized Stable Coin projects are expected to actually hold the assets against which their token is pegged (e.g., Fiat, precious metals), i.e., a trusted custodian is required to store the avoid underlying asset to vulnerability to brick and mortar theft. This comes with the requirement of regular audits to ensure transparency for clients.

By being pegged to real world collateral, these Stable Coins are rather resistant to high levels of volatility Further for real world examples individual collateral are properties, real estate portfolios as well as securities.

Commodities Real Estate

Securities

For the time being there is no evidence yet that algorithmic Stable Coins are capable of withstanding market shocks and maintaining a stable value in the currency of reference.

(Figure - 1.d)

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## 2 – Security Token Offering (STO) Valuation

## 2.1 – Planning a Security Token Offering (STO)

Blockchains are poised to become a transformative feature of financial markets, both in financial products and in the underlying market infrastructure itself.

The willingness and ability of the industry to agree on coordinated efforts to develop global or interoperable infrastructure solutions is not guaranteed. Standardisation in the protocols and coordination between market participants would also enable the quicker adoption of DLT-based technologies and a broader and faster transit to such networks.

Risk of unrealistic expectations built by some industry participants may incentivise them to transition to DLTbased solutions without a proven rationale for such transition. As a consequence, there are a number of steps that need to be taken:

- Company valuation, Asset Valuation and Token Valuation as described in the Figure - 2.b and Figure -2.c
- A solid business rationale for the application of DLTs (e.g. does the use of DLT solve a real business problem? Are there deficiencies in trust or safety, is there sufficient room for disintermediation, are there measurable efficiency gains to be reaped? How does the DLT-based use case compare to the conventional one?);
- A technical feasibility assessment proving that the application of DLTs provides significant advantages when compared to the currently applying technology, and also that major technical



(Figure - 2.a)



challenges are overcome;

 An economic rationale for the transition to DLTs, i.e. proven and measurable economic justification for the application of DLTs (e.g. measurable efficiencies and cost reductions and how these compare to the investment required for the transition to an on-chain environment). always be backed by real value.

(Figure - 2.b)

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#### 2.2 - Simple Company Mining Sample

In this section, we will show the case of a gold mining company willing to tokenize its gold reserves. A simplification of the process is detailed in the Figure - 2.c and it includes the following steps:

- Collateral Asset: Gold Reserves = R.
- Value of one Token: We use the price of one gram of gold.
- Security Token Valuation (STO) = the capital invested (I) will be equal the value of the reserves minus the transaction costs (T) minus the expected returns (E) → I = R - T - E.
- The value of tokens issued will be equal to the value of reserves minus transaction costs  $\rightarrow$  R T.
- Future issuances will depend on the revaluation of the asset stored which will be driven by the successful extraction of reserves (converted into inventories) or by the discovery of new reserves.
- The Figure 2.d, 2.e, 2.f, 2.g, and 2.h show a simple quantitative sample for a mining case:



(Figure - 2.c)

	2020	2021	2022	2023	2024	2025
Gold Price x Gram	57	65	55	50	45	40
Growth Gold Price		14.0%	-15.4%	-9.1%	-10.0%	-11.1%
Expected Reserves Increase		12.0%	10.0%	12.0%	20.0%	10.0%
EPC Market 000	2020	2021	2022	2023	2024	2025
Value of Reserves	33,200,000	37,177,017	40,888,203	45,786,187	54,927,374	60,410,484
Value of Inventories		1,660,000	1,858,851	2,044,410	2,289,309	2,746,369
Collateral Asset Value	33,200,000	38,837,017	42,747,053	47,830,597	57,216,684	63,156,853
Transaction Cost Fixed	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%
Discount Based on Risk Premium Total Discount	10.00% <b>12.00%</b>	10.00% <b>12.00%</b>	10.00% <b>12.00%</b>	10.00% <b>12.00%</b>	10.00% <b>12.00%</b>	10.00% <b>12.00%</b>

Nr. of Tokens Issued per Year	512,561	76,317	62,561	89,470	183,550	130,684
Nr. of Tokens Issued Cumulative	512,561	588,878	651,439	740,909	924,459	1,055,143
Value of Tokens Issued Value of Token Increased Value of Token Increased %	29,216,000 29,216,000	4,960,575 34,176,575 17.0%	3,440,832 37,617,407 10.1%	4,473,518 42,090,925 11.9%	8,259,756 50,350,681 19.6%	5,227,349 55,578,031 10.4%

(Figure - 2.d)

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(Figure - 2.e)



(Figure - 2.f)













(Figure - 2.h)

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