Analysing Crypto-Currencies and the Block-Chain Technology

What is the issue?

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- Indian Finance Ministry and the RBI had issued warning against investing in crypto-currencies (CC) and have likened them to '**Ponzi schemes'**.
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- The risks of CCs upending "terror-funding, smuggling, drug-trafficking, and money-laundering" were also highlighted.
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- Despite these factors, CCs and the "Block-Chain Technology" on which they are based, have proliferated and do indeed have massive disruptive potential.
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- This article is an analysis of the opportunities and challenges that have arisen in this context.
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What is currently the most significant impact of CCs?

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- The "Bitcoin phenomenon" has shown promise of becoming the most potent challenge ever to the monopoly of states (or central banks) over currency.
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- While still in its nascence, on the fringes of the monetary system, CCs have already triggered the realisation that actions on controlling them is futile.
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- Significantly, central banks have themselves come out with their own "Central Bank Digital Currency" (CBDC) as a counter.
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- While CBDC is a complex tool whose functionality is still being researched, the inherent contradiction with it is its centralising tendency unlike other CCs.
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- On the other hand, the Block-Chain on which all kinds of CCs are based is

essentially a decentralised peer-to-peer module.
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- In fact, the rise of CCs, inherently owe it to the “distrust of bankers” as central authorities in monetary transactions.
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- This was accentuated in the serious of banking collapses that occurred during the “Sub-Prime Crisis” of 2008-09.
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How does the “Block-Chain Ledger” work?

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- In order to be functional, a virtual currency must not allow double spending of the same money by copying or cyber-theft.
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- Conventional cashless transations are accounted through “centralised ledgers”, who act as ‘trusted intermediaries”, which is often a bank.
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- But Block-Chain Modules are based on decentralised ledgers stored across thousands of computers, and transaction data is continuously updated.
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- Blockchains also uses economic incentives to motivate members of the network to do the work of validating every transactions.
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- This hence makes the central trustee reudndent and thereby eliminated banks.
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What could be the larger monetary implications of the CCs?

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- Bitcoins, unlike a stock or a bond, are a purely speculative asset untethered to a material basis of value.
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- A major reason seasoned speculators find bitcoins irresistible is its deflationary nature, which makes it inflation-proof.
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- Since there can only ever be 21 million bitcoins, unlike a fiat currency, it cannot suffer a loss in value due to inflation.
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- In this regard, cryptocurrencies may herald the next stage of neo-liberal economics, which is the privatisation of currency .
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- Significantly, this means that the significance of fiat currencies would reduce.
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- Consequently, the state will have to become more fianancially disciplined as "**Quantitative Easing**" initiatives might become difficult.
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What is the true potential of "Block-chain Technology"?

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- While crypto-currencies have dominated discussions about the new block-chain technology, it is but just one application of it.
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- In some ways, the present moment is analogous to the early days of the Internet, when internet was synonymous with e-mail.
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- Significantly, in a block-chain platform called Ethereum, an application that enables people to rent out idle storage space on their laptop can be setup.
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- This means that someone who needs cloud storage can directly pay the renter, instead of paying cloud storage intermediaries like Amazon.
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- This opens up a potentially monetisable resource that we didn't even realise.
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- Also, two domains that would gain immensely from blockchain applications and CCs are Artificial Intelligence (AI) and Internet of Things (IoT).
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- Notably, IoT would require thousands of devices to rapidly and seamlessly transact without manual operator interference, which CCs would aid.
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- Also, enormous scope of block-chains for increased efficiency and cost-saving, is a serious threat to conventional "Fiance and Digital space businesses".
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Can block-chains be seen as liberating?

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- Some argue that the decentralised nature block-chains are potentially liberating both politically and economically.
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- While the technology’s peer-to-peer orientation renders it more democratic, it is important to realise that even internet faced the same euphoria initially.
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- Now, with internet maturing to the masses, albeit its insurmountable benefits, it is increasingly turning out to an unequal arena.
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- Hence, despite its enormous potential, some of the current claims being made about block-chain are plain silly.
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- Clearly, technological innovations can’t substitute actual ground work for reducing socio-economic disparities and ushering in equality.
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Quick Facts

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- **Ponzi Scam -** A business model where an entity doesn’t generate any actual profit but paying its existing investors by getting money from new investors.
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- This is basically a bubble, which collapses when no investments dry up.
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- **Quantitative Easing –** Is an expansionary monetary policy adopted by central bank to boost the economy which is reeling under stress.
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- In this process, money is pumped into the economy through the purchase of government securities.
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- This is done when the economy is unable to recover on its own and inherently runs the risk of triggering inflation.
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Source: The Hindu

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