Afternoon guys, we are group C consisting of me, Keegan, Francis, Jodie, Eddie.

Today, Keegan and I will do a short skit on the topic Does Bitcoin Threaten Economic Stability?

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(Two NTU engineering students went to America for their exchange program. After exploring the city the whole afternoon, they felt hungry and happen to see a subway stall across the street)

K : Man, I am soooo hungry, Do you want to get some Subway for lunch?

H : Yeah sure, that is a great idea, but…I forgot to bring my wallet and there is no Paylah or Paynow service available here in America.

K : That's a problem. Hm…do you happen to have Bitcoin? I saw a poster on the front door that this subway stall accepts bitcoin transactions!

H : Really? That is so cool! Bitcoin is getting more relevant these days, Do you know anything about bitcoin, Keegan?

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K :Yes. To start off, Bitcoin is a digital currency that was first released on 3 January 2009. It was invented by the mysterious and pseudonymous Satoshi Nakamoto whose identity is still a mystery till this day. Despite it not being accepted as a payment option in most parts of the world, Bitcoin is very popular and has triggered the launch of hundreds of other cryptocurrencies.

It works on a decentralised digital currency system which operates free of any central control or the oversight of banks and governments. Instead it relies on peer-to-peer software to facilitate instant payments. All the processing power needed to process these transactions are provided by bitcoin miners, motivated by the transaction fees paid in bitcoin. Bitcoin also integrates blockchain technology in its network. In blockchain technology, data isn’t stored in a central server, but across a huge network of computers, which is constantly checking and verifying if the records are accurate, making it difficult for hackers to hack.

H: So what justifies the switch from normal flat currency to Bitcoin?

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K: There are a few advantages of using Bitcoins over normal flat currency.

1. Lower transaction fees

* cost of transactions are generally lower than bank transfers as no government involvement
* users only pay for Bitcoin’s blockchain network fees when conducting transactions

2. Bitcoin offers Speedier processing

it eliminates the inconvenience of typical authorisation requirements and wait periods

* Personal information is also unnecessary to complete any internet payment transaction (as compared to credit cards)

3. Bitcoin transaction is not regulated by central authority

* Immune to sovereign censorship, shutdown and confiscation
* Immune to unnatural inflation when the government print more money

4. Bitcoin payment are mobile

* Users can make payment using Bitcoins anywhere as long as there is internet access

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H : You are right, Bitcoin is convenient in a lot of ways, However Bitcoin does come with risks. For example, it can be used to hide the illicit origin or destination of funds, thus facilitating money laundering which can be used for terrorist financing or Evasion of sanctions. There have already been a number of serious and well-known cases of criminal activity involving cryptocurrency schemes.

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For example, Bitcoin was used as the currency of choice in ‘Silk Road’, a ‘dark web’ marketplace for illegal goods that was shut down by US law enforcement authorities in 2013 and caused economic instability.

K : How did the shutdown of the Silk Road cause economic instability?

H : Because of the Silk Road incident, Bitcoin value Plummets and federal law enforcement agents seized a total of 174 thousand Bitcoins. I know the value of bitcoin is around $44k USD now but back then the price of bitcoin in April 2013 was only $266 and after that incident, it dropped to $70 which was a 74% decrease which caused everyone holding bitcoin at that time to lose a lot of money at that time and this is a sign that bitcoin could affect global economy especially when there are a lot more people using it now.

K : Wow, A lot of people must have been devastated when they saw their money they have placed in bitcoin disappear overnight.

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H : Yes, and going forward, who knows what kind of incident could cause the bitcoin to drop or rise. A single tweet from Elon Musk could cause the Bitcoin value to change.

On Feb 8, 2021, Tesla announced its purchase of $1.5 billion worth of BTC, and BTC price skyrocketed, increasing around 20% within a day, the amount of BTC bought by tesla and used to purchase its vehicles was relatively small compared to the daily trading volume of nearly $1 trillion assets yet it controlled the narrative for months.

Few months after that

On May 12, 2021, Elon tweeted and announced Tesla would no longer accept BTC as its payment and the tweet causes BTC to suffers drop of around 13% decrease.

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There was also a period where BTC go up and down due to his tweet during the aftermath

The same thing happens to dogecoin, another blockchain coin just like BTC.

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Another example of bitcoin being economic instability,

Mt. Gox was a bitcoin exchange company based in Tokyo, Japan. Launched in 2010.

in 2013, it was handling over 70% of all bitcoin (BTC) transactions worldwide, as the largest bitcoin intermediary and the world's leading bitcoin exchange.

However, In February 2014, Mt. Gox suspended trading, closed its website and exchange service, and filed for bankruptcy protection from creditors.

Mt. Gox announced that approximately 850,000 bitcoins belonged to customers and the company was missing an amount valued at more than $450 million at the time.

the reasons for the disappearance of the bitcoin was unclear, and was speculated that the exchange had been subject to several hacks. The company stated that A bug in the bitcoin software makes it possible for someone to use the bitcoin network to alter transaction details to make it seem like a sending of bitcoins to a bitcoin wallet did not occur when in fact it did occur.

more than 24,000 customers around the world lost access to hundreds of millions of dollars worth of cryptocurrency and cash.

K: Whoa, its quite risky to own a company running on BTC. Especially when we cannot predict what could happen with this kind of technology.

H: Exactly, technology is getting more and more advanced these days but at the same time the harder we can control it.

These examples proves that BTC could be a factor that causes economic instability, because of how easy it is to be able to control and manipulate the value of BTC.

K: I agree with you, not only that, but also a lot of people find opportunities in between these chaos that is happening. I think most of the cases that you mentioned relates to how unprecedented these occasions are, that still cause people to lose a lot of their money.

H: Yeap, do u know any cases where people actually commit fraudulent acts?

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K: I’ve heard of this one case called the Africrypt scam. Around 2021, a currency exchange firm founded in 2019 by two African brothers aged 18 and 21 had been investigated for a BTC scam. Their firm had a couple of investors who trusted the company in handling their BTC. However, they suddenly disappeared and stole the bitcoins worthed at approximately $3.6 billion

The lawyers from the victims found out that the system running for the firm had been shut down a week before the hack was done. Even their chief operating officer could not access their client accounts’ data. The law firm said the missing Bitcoin had been "dissipated in its entirety" and cannot be recovered.

The investigation on where the bitcoins went had been made more difficult due to them transferring their clients’ wallets to various dark web tumblers and mixers which is a system where the bitcoins are combined into la rge pools which makes them untraceable.

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Concluding the example of Africrypt,

There are many other factors that can make bitcoin a threat to economic stability:

* Unlike official money, bitcoin have no corresponding liability, meaning that there is no institution like a central bank or government with a vested interest in sustaining their value. Therefore when the bitcoin value collapse there is no one that is liable for the lost.

Bitcoin is also something that is very different from the existing financial system for which country regulators have experience regulating. The innovative use of Bitcoin may be disruptive to the current financial and payment market. For example, bitcoins could eventually scale up to replace money transmission, card payment services or even stock exchanges, which renders these service providers obsolete. If these changes were to occur rapidly, there is a risk that this will destabilise the financial and payment markets.

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* Also, despite its use for buying goods and services, there are still no uniform international laws that regulate Bitcoin.
* Additionally due to lax reporting requirements, Countries are unable to trace bitcoin transactions and may be blind to some of them which make it hard to tax those transactions.
* The lax reporting of Bitcoin also allowed companies and individuals to evade income and corporate taxes. All of these factors makes bitcoin a threat to economic stability.

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H : I see…., so what do you think we can do as engineers?

K :

For bitcoin, we definitely need to be aware of the risks involved before utilising these technologies. Bitcoin is still in its infancy stage and it would need time before banks, governments and big institutes come up with the appropriate regulations when dealing with cryptocurrency.

Like bitcoin, all new technologies that we engineers create would inevitably come with their own set of problems. It is part of the engineer's job to solve and overcome the challenges that surfaced.

H : I agree. Speaking of which, are we going to buy Subway? I think we have talked long enough and I’m getting hungry.

K : ok sure, u are right, lets eat! do you have some bitcoin with you?

H : No….., but you can borrow me some cash right?

K : ……………!!!

Possible questions

What can CB do to mitigate any adverse impact caused by such volatility and frenzy?

Bitcoin also uses a lot of energy

It estimates that Bitcoin uses 135 terawatt-hours (TWh) of electricity per year, more than many countries

and contributes around 0.62 percent of worldwide electricity consumption.

These are due to the number of computers needed to mine bitcoin and facilitate bitcoin transactions.

This Electricity consumption can promote economic growth, economic growth can, in turn, increase the demand for electricity consumption.

The demand for electricity consumption can lead to the creation of new markets, businesses, and job openings, which provide more opportunities for individuals to earn an income and lift themselves.

* Launched in 2009, Bitcoin is the world's largest cryptocurrency by market capitalization.
* Unlike fiat currency, Bitcoin is created, distributed, traded, and stored with the use of a decentralized ledger system, known as a blockchain.
* Bitcoin's history as a store of value has been turbulent; it has gone through several cycles of boom and bust over its relatively short lifespan.
* As the earliest virtual currency to meet widespread popularity and success, Bitcoin has inspired a host of other cryptocurrencies in its wake.