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# **‘Central bank digital currency (CBDC) and its impact on the operations of Islamic Banks: Central Asian perspective’**

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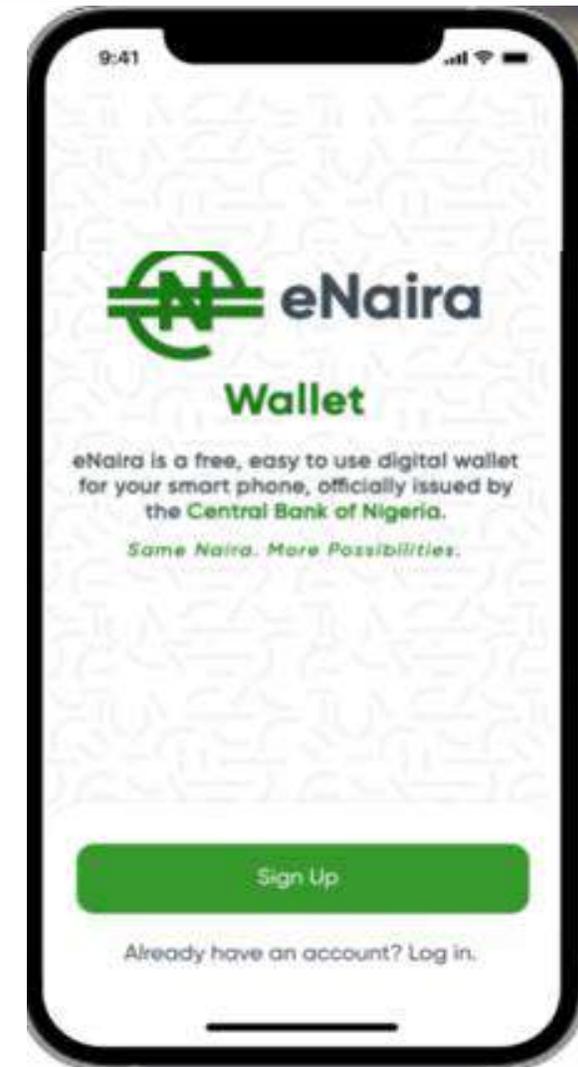
## Central Bank Digital Currency (CBDC)

- CBDC is a digital money (Brunnermeyer et al, 2019).
- “CBDC is a global innovation which will revolutionize the international payments in the way that the first Atlantic Cable did for capital flows and international payment in 1866” (Bordo,2021).
- A Central Bank Digital Currency (CBDC) is the digital form of a country’s fiat currency that is also a claim on the central bank. Instead of printing money, the central bank issues electronic coins or accounts backed by the full faith and credit of the government (AC, 2021).
- A CBDC is a digital payment instrument, dominated in the national unit of account, that is a direct liability of the central bank” (BIS, 2020).

# 1. Research Background and Literature Review

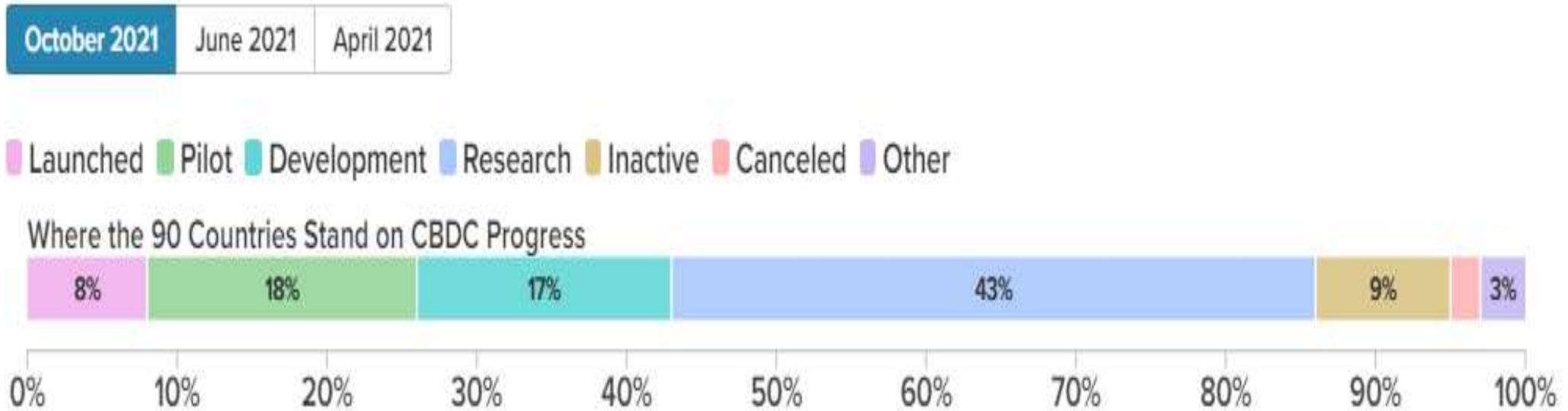
## Central Bank Digital Currency (CBDC)

- The major difference between cryptocurrencies (or cryptoassets) and CBDC is, former one is privately issued and not backed by any central party whereas later one is backed by central bank.
- **7** countries have now fully launched a digital currency. **Nigeria** is the latest country to launch a CBDC (eNaira), the first outside the Caribbean. **17** other countries, including major economies like China and South Korea, are now in the pilot stage with their CBDCs and preparing a possible full launch. (AC, 2021)



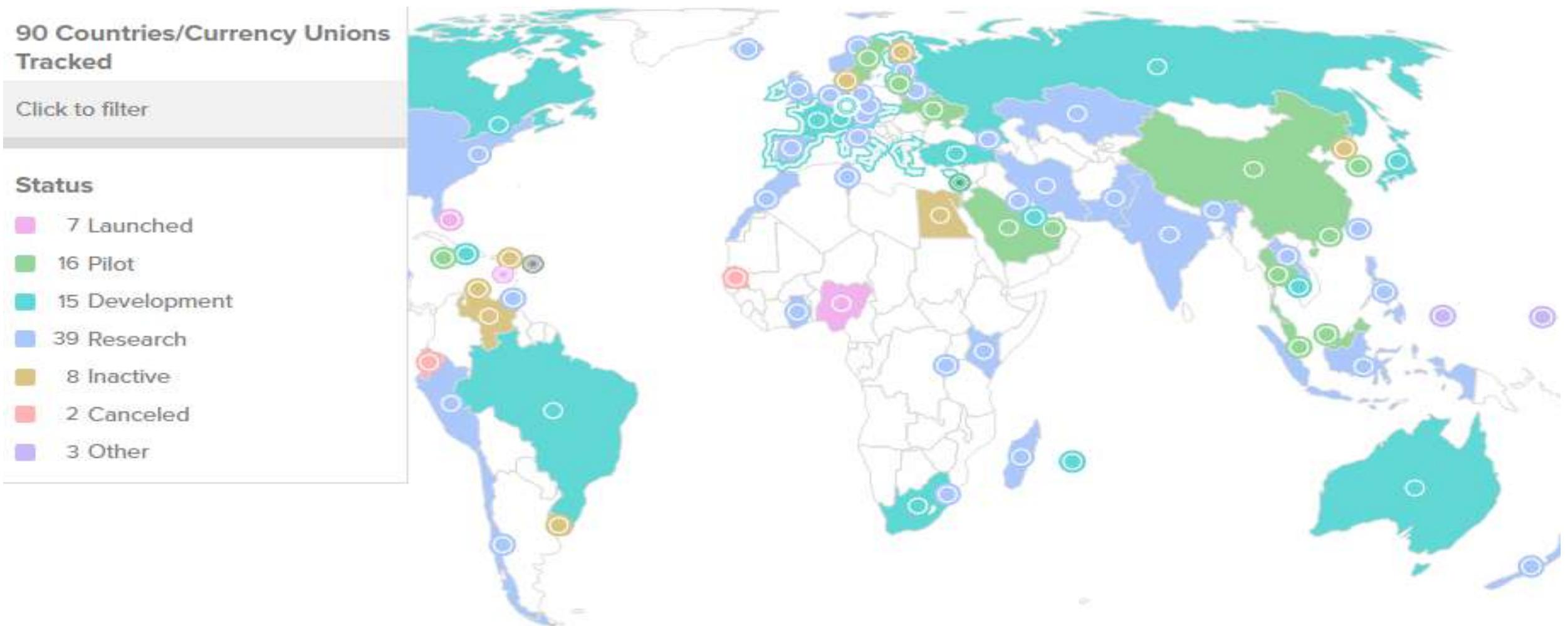
# 1. Research Background and Literature Review

## Race for the future of money



Source: AC (2021)

# 1. Research Background and Literature Review



Sources: Atlantic Council Research, Bank of International Settlements, International Monetary Fund, John Kiff Database

Source: AC (2021)

## Islamic Finance

Islamic finance or *Shari'ah*-compliant financing is a financial system that operates in compliance with Islamic law, and is subject to the following fundamental principles:

- ❖ **Prohibition of interest** - Instead of imposing interest, Islamic banking utilizes profit and loss sharing (PLS) as a method of resource allocation and financial intermediation.
  - ❖ Fair and transparent dealings / **avoidance of speculation and uncertainty** - Islam prohibits uncertain or ambiguous transactions, gambling and speculative behavior. Consequently, Islamic banking principles require that parties to a transaction should have asymmetric information to guard against exploitation of the weak.
  - ❖ Real economic activity with **underlying assets** - Making money out of money is unacceptable; financial transactions must have a direct link to an economic transaction with underlying assets.
  - ❖ **Ethical investments** - Investments in industries considered to be detrimental to the welfare of the community, such as weapons and armaments, alcohol, gambling and pornography, are prohibited.
- (ADB, 2015)

## Salient features of Islamic Financial System

- ❖ Interest-based lending and the financing of unethical goods and services are prohibited.
- ❖ Returns on investments must be based on real economic activities and/or underlying assets, performance.
- ❖ Islamic finance discourages hoarding and prohibits transactions with extreme uncertainties, and gambling and related activities.
- ❖ Equity participation, temporary equities, credit sales, leasing, and other suitably designed modes replace interest-based finance, thus promoting the practice of risk sharing.
- ❖ Financial engineering to design new products and instruments must comply with the *Sharī`ah* requirements.
- ❖ Private property and free markets are basic to the economic system; any transaction leading to injustice and exploitation is prohibited.
- ❖ Islamic finance upholds contractual obligations and the disclosure of information, which in turn reduces the risk of asymmetric information and moral hazard.

(Grewal, 2015)

# 1. Research Background and Literature Review

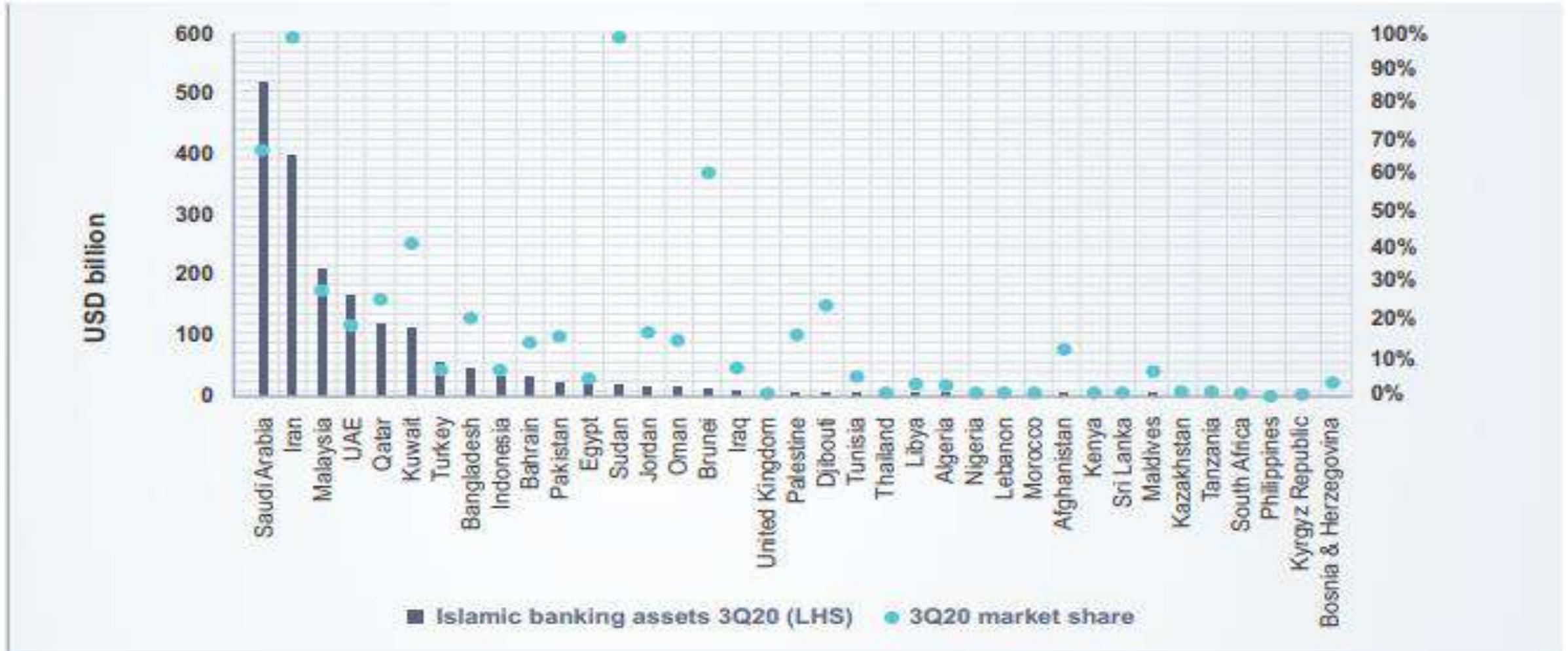
## Breakdown of the Global IFSI by sector and region in 2020 (USD billion)

Region	Islamic Banking Assets	Sukūk Outstanding	Islamic Funds Assets	Takāful Contributions	Total	Share %
GCC	979.7	280.4	46.3	12.3	1,318.7	48.9
South-East Asia (SEA)	258.2	366.4	41.9	4.1	670.6	24.9
Middle East and South Asia (MESA)	499.0	18.9	22.8	5.5	546.2	20.3
Africa	43.1	1.7	1.5	0.6	46.9	1.7
Others	61.8	22.1	31.3	0.6	115.8	4.3
Total	1,841.8	689.5	143.8	23.1	2,698.2	100.0
Share%	68.3	25.6	5.3	0.9	100.0	

Source: IFSB (2021)

# 1. Research Background and Literature Review

## Islamic Banking assets (in USD billion) and Market Share (%) (3Q2020)



Source: IFSB (2021)

## State of Islamic Banking assets in Central Asia in 2020

Within the Central Asia region, the Islamic banking sector in Kazakhstan constitutes 70% of the region's total Islamic banking assets. However, domestically (and as in 2019), Islamic banking assets still account for less than 1% of the total Kazakhstan banking industry as at end-3Q2020. Digitalisation is providing a major boost to Islamic banking, as well as strong government support. Attention to the development of a regulatory framework for Islamic banking has also been a key focus in the Kyrgyz Republic. Improvements in the legal and regulatory frameworks, such as in areas of risk management and corporate governance, have endeavoured to support the growth of Islamic banking assets. Such developments contribute to a positive outlook in the Republic for stable growth of the Islamic banking sector to improve its existing 1.5% market share. (IFSB, 2021)

## Contemporary debate on CBDC

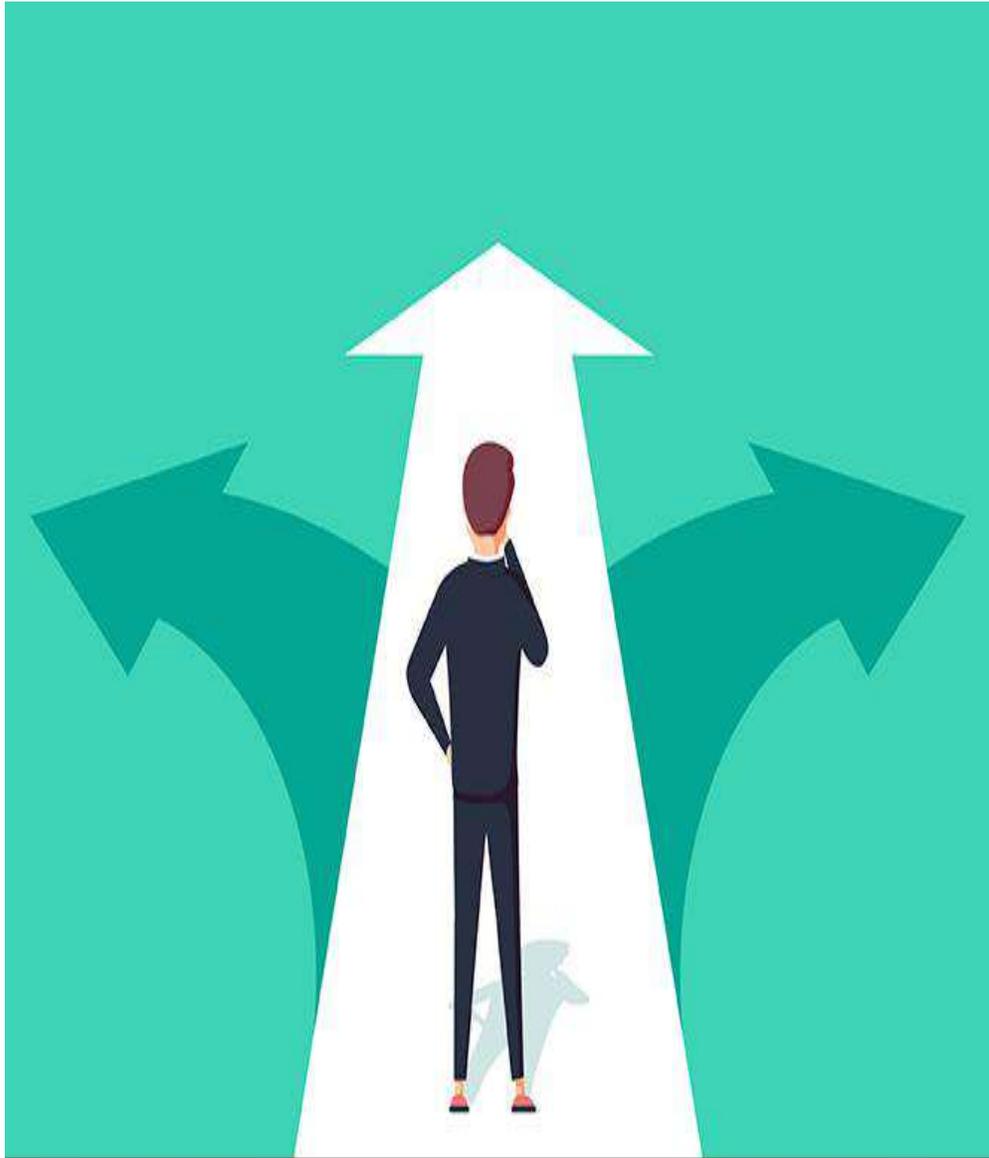
- CBDC still on progress and G7 economies still follow 'wait & see' approach. It's a big issue what is the impact of CBDC on financial intermediation and inter CBDC transaction.
- Islamic finance experts have mixed opinions on *Shariah* views regarding CBDC mainly due to *Gharar* issue.
- Introducing an Islamic CBDC for Islamic Financial Institutions.

?

## 2. Research questions and research methods

### Research questions

1. What is the framework of CDBC?
2. Is there any *Gharar* issues related with CDBC?
3. How to deal with the issues arises in q.2.
4. State of CDBC and its impact on Central Asia perspective.



## 2. Research questions and research methods



### Methods

- ◆ Qualitative approach
- ◆ Case studies

### Data Collection Method

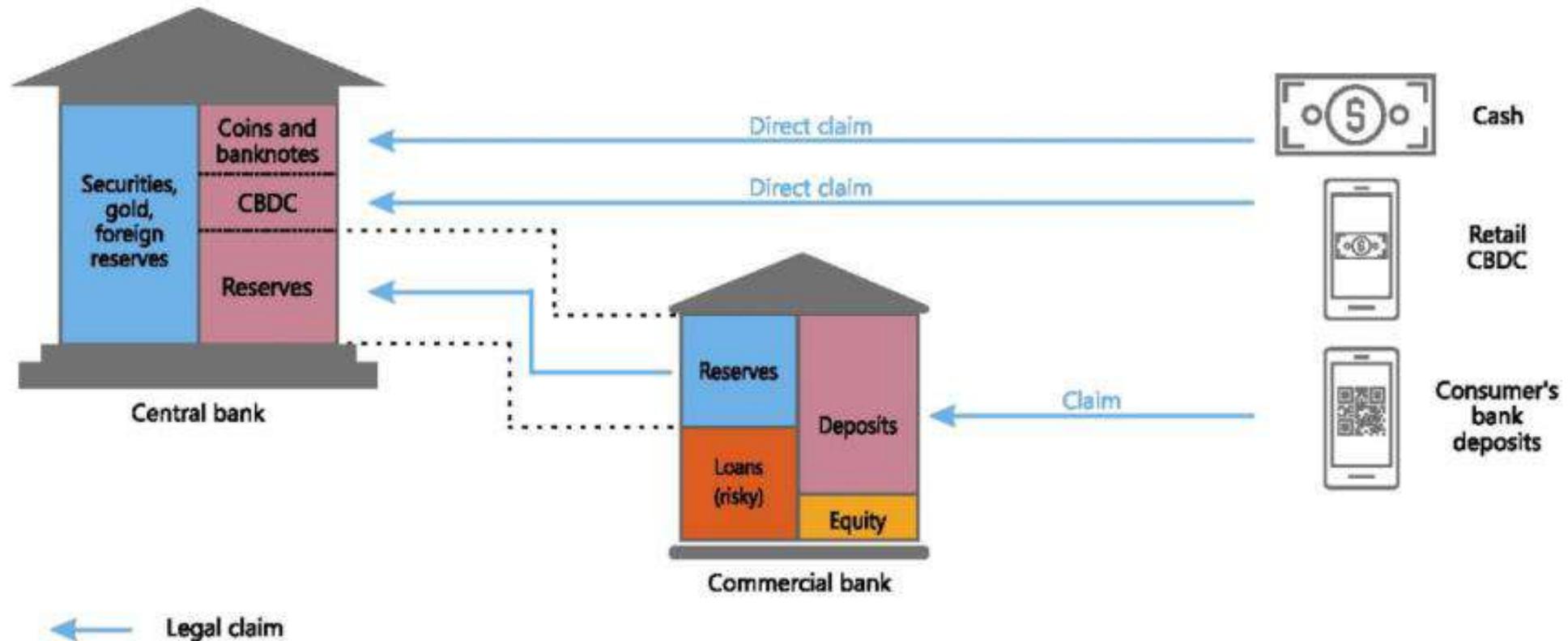
Secondary data and other information were retrieved from related web portal.

### Core features of CDBC

Sl no	Categories of features	Features
1	Instrumental features	Convertible, Convenient, Accepted and available, Low cost
2	System features	Secure, Instant, Resilient, Available, Throughout, Scalable, Interoperable, Flexible and adaptable
3	Institutional features	Robust legal framework, Standards

### 3. Findings

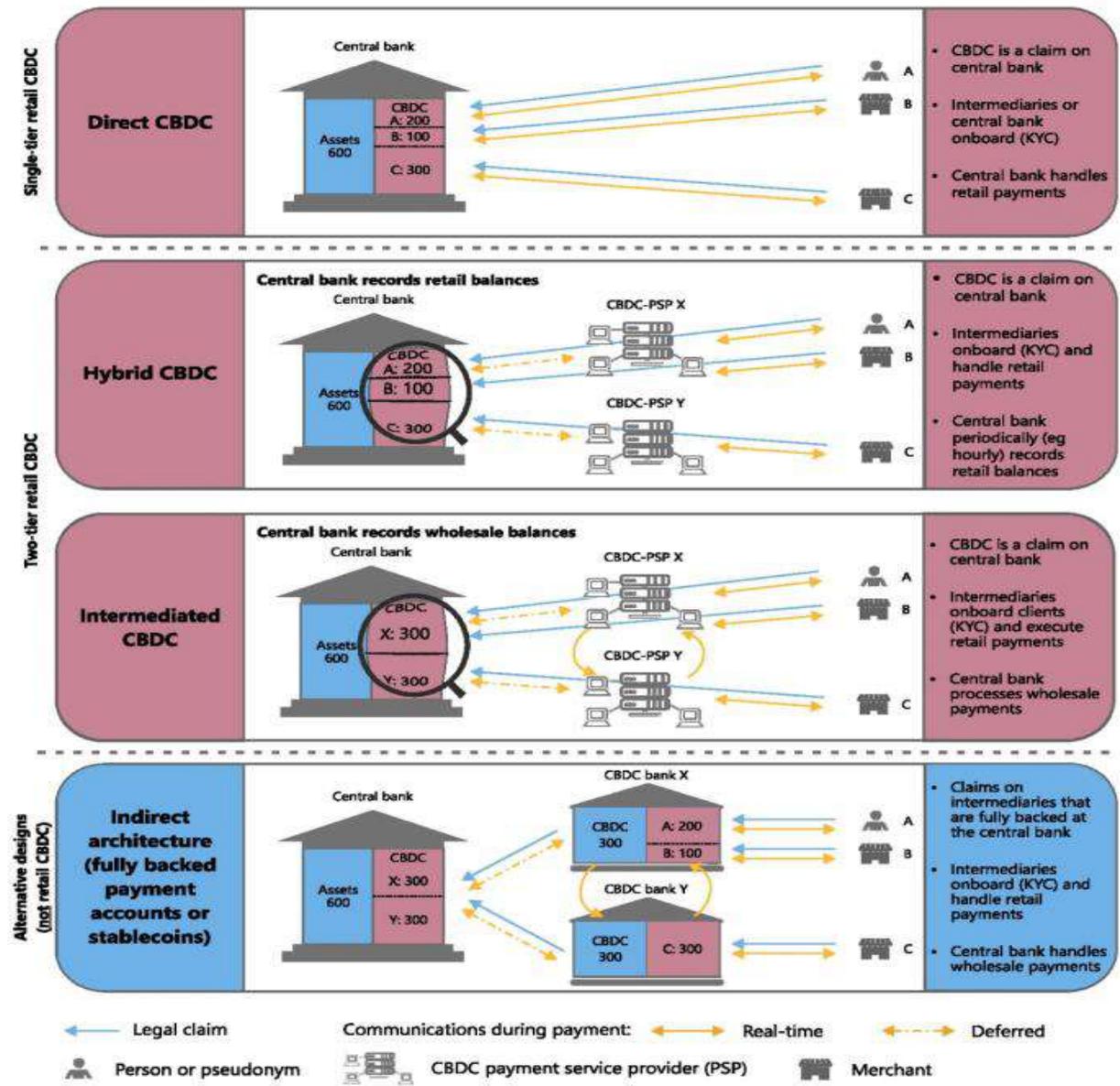
## Core payment features of a retail CBDC



Cash is a direct claim on the central bank, while deposit accounts are claims on the commercial bank. Commercial banks back some of these claims by holding reserves at the central bank and have equity, but the value backing is never full. A CBDC that is unaffected by financial crisis must be a cash-like direct claim on the central bank.

# 3. Findings

- ❑ Retail CBDC architectures and fully backed alternatives.
- ❑ CBDC could be single-tier (direct), Two-tier (indirect and hybrid) and wholesale.
- ❑ It is the central bank's discretion considering the local context that which form it will prefer to adopt.



➤ *Gharar* (uncertainty) originates from the Arabic verb *gharra*, which means to deceive. Various classifications of *gharar* (uncertainty) include pure speculation where the outcome depends on chance or gambling, uncertain outcome where the counter-value is uncertain or not realized, inexactitude of object, and unknown future of object (Paldi, 2014). Speculation according to Kamali (2000, p.147) is the purchase and sale of an asset in the expectation of a gain from changes in the price of that asset.

### 3. Findings

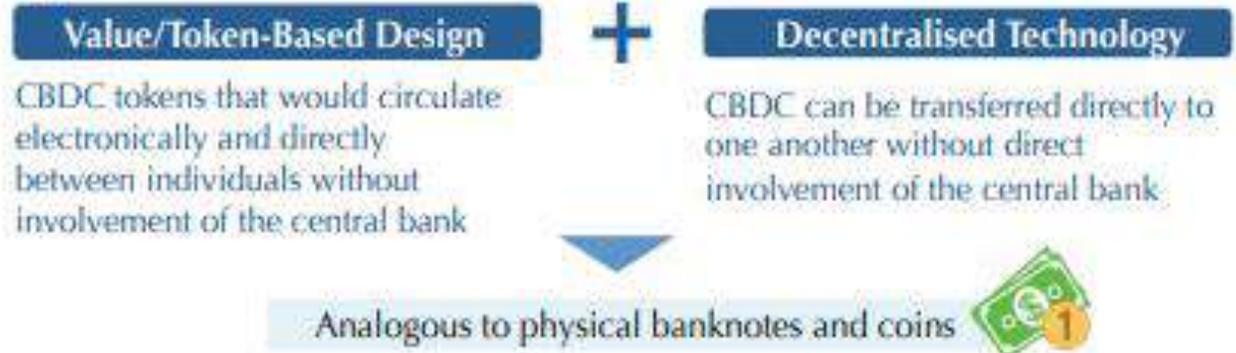
- The speculative nature of cryptocurrencies has triggered debate among Islamic scholars over whether cryptocurrencies are religiously permissible or not. Some scholars argued that **gold-backed** crypto currency is permissible.
- Some argue that the crypto assets are vulnerable to manipulation.
- Some argue that if it is socially acceptable and commonly used then it could be permissible.
- Some are also concern about the *Zakat* payment and inheritance of crypto assets.

**In a word, Digital currency is not permissible if,**

- There is no underlying asset on it.
- No central authority/government backing it.

# 3. Findings

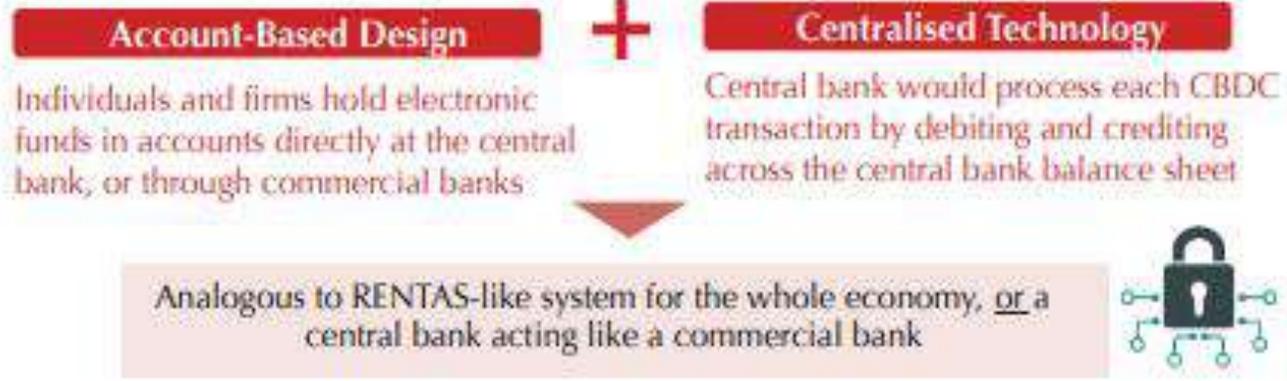
## Option 1



### Remuneration alternatives Interest-bearing vs Non-interest bearing



## Option 2



### Pre-requisites for CBDC

- Central bank controls the money supply
- The CBDC system uses the distributed ledger technology, potentially between a group of participants (e.g. banks)

Note: By design, a value/token-based CBDC would imply a decentralised system, while an account-based CBDC would imply a centralised system

Note: Based on Bank for International Settlements (2018), Fung and Huber (2016), Hirsch (2017), and Fung (2016)

### Existence of *Gharar* in different forms of CDBC

Fiat Money based CDBC	Real Asset based CDBC	Gold based CDBC
<b>YES</b>	<b>NO</b>	<b>NO</b>

### **CBDC and Islamic banking in Central Asia**

- As the market share of the Islamic banking (IB) is not significant in Central Asia, we can say that the impact of CBDC will not be so high on overall IB industry. Besides, Islamic bank can invest in CBDC if it does not carry any interest otherwise it would be treated as T-Bill of conventional system in which IB generally not invest.

### Way out

- As there are a very few research on the Islamic version of CDBC, it demands an in-depth research. IFSB, AAOFI and other global Islamic Financial Services regulatory bodies should come forward immediately to dig the issue.
- Gold backed Islamic CDBC could resolve the *shariah* concern on *Gharar*.
- There are a potentials for Islamic finance services in Central Asia which can be explore by the central banks of this region.

### Conclusion

In this study, we attempt to analyse the CDBC, a contemporary issue in banking & finance literature. Most importantly all the central banks of the developed economies are get involved in this current trend. However, CDBC is too young to judge its efficiency.

Our research further focus on Islamic CDBC. We found that CDBC without backing real assets could be close to the *Gharar*. Our research is a noble in the sense that we focus on *Gharar* issue within the CDBC structure. Besides, we have discussed the impact of CDBC on Islamic financial sector in Central Asia.

# References:

- Ahmat, N. & Bashir, S. (2017). *Central Bank Digital Currency: A Monetary Policy Perspective*. *Staff Insights 2017/11*. Bank Negara Malaysia. Kuala Lumpur: Malaysia.
- Asian Development Bank (ADB). (2015). *Islamic Finance for Asia: Development, Prospects, and Inclusive Growth*. Asian Development Bank and Islamic Financial Services Board. Metro Manila: Philippines
- Atlantic Council (2021). *Central Bank Digital Currency Tracker*. <https://www.atlanticcouncil.org/cbdctracker/>
- Auer, R., & Böhme, R. (2021). *Central bank digital currency: the quest for minimally invasive technology*. *BIS Working papers: No 948*. Monetary and Economic Department, BIS.
- Bank for International Settlements (2020). *Central bank digital currencies: foundational principles and core features: Report 1 in a series of collaborations from a group of central banks*. Basel: Switzerland.
- Bordo, (2021) Bordo, M.D. (2021). *Central Bank Digital Currency in Historical Perspective: Another Crossroad in Monetary History*. NBER Working Paper No. 29171, August 2021.
- Brunnermeier, M.K., James, H., Landau, J.-P. (2019). *The Digitalization of Money*. *NBER Working Paper No. 26300*. National Bureau of Economic Research. Cambridge: MA.
- Grewal, B. K. (2015). *Islamic Finance for Asia: Innovation, Inclusion, and Growth*. In ADB-IFSB on Islamic Finance for Asia: Development, Prospects and Inclusive Growth. Metro Manila: Philippines.
- Islamic Financial Services Board (IFSB) (2021). *Islamic Financial Services Industry Stability Report 2021*. Islamic Financial Services Board. Kuala Lumpur: Malaysia.
- Kamali, M. H.(2000). *Islamic Commercial Law*. Cambridge: Islamic Texts Society.
- Paldi, C. (2014). Understanding Riba and Gharar in Islamic Finance. *Journal of Islamic Banking and Finance*, 2 (1), 249-259.

Thank You

# Q & A