HW & SW Acquisition, Audit of Crypto Exchange, CBDC, IoT, MCQ (Module - 5 : DISSA Course)

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- **1. Client acceptance considerations**
- thorough "know your client" by audit firms prior to engagement acceptance
- **2. Existence**
- When entity uses BC to support occurrence/existence of crypto-asset transactions/balances recorded in its FS , auditors need to evidence their understanding of how transactions are recorded on applicable BC ledger
- IS auditors not to rely on blockchain ledgers *without* first evaluating reliability of BC that are relevant for audit
- **3. Use of Experts**
- IS auditors may have to engage blockchain & cryptography specialists to assist in understanding & evaluating BC that support amounts recorded in an entity's books & records & there is a risk of material misstatement

- An entity's FS may include material cryptocurrency items.

- **4. Matters to consider**

- ✓ integrity of the client,

- ✓ business purpose for which entity is entering into cryptocurrency transactions (e.g., that transactions <u>do not involve money laundering</u> or other illegal acts)

- ✓ <u>management's level of understanding of cryptocurrency risks & internal control</u> over cryptocurrency transactions & balances

- ✓ Whether engagement partner is satisfed that IS Audit team members have appropriate competence & capabilities in ITGC , BC & CC to perform engagement in accordance with professional standards.

- 5. Obtaining an Understanding of Entity's Information System for Cryptocurrency Transactions

- Use ISA 315

- Conduct top-down Risk assessment

- 9 Major risks

CBDC = Discussion

- RBI stand – Crypto
- CBDC- intro
- Operation
- RBI proposed roadmap
- Cryptocurrency Bill, 2021
- Benefits – CBDC
- Risks – CBDC
- MCA Notification -CC
- International developments – BIS

Crypto = emerging Fraud risk ?

- RBI Governor sounded alarm on cryptocurrencies, <u>cautioning investors on the potential pitfalls of the digital currency.</u>

- After Hon'ble SC overturned RBI's order, <u>which effectively lifted the ban on cryptocurrency trading in India,</u> craze in India has grown at a furious rate.

- The Union Government <u>not yet enacted a law on cryptocurrencies</u>

- Consultation on with industry experts

- After several rounds of caution, Govt may largely want to set severe limits on the trading of cryptocurrencies in India <u>in the larger public interest</u>

- *'' Cryptocurrencies are a very serious concern from a macro economic and financial stability point of view … Numbers on crypto market participants highly exaggerated*: ''

-     - RBI Governor , 10th November 2021

- Finance Bill 2022 – 30 % tax on Crypto gains, no set off

Background & need – CBDC

1. <u>Declining use</u> of physical cash / paper currency

2. trend further reinforced by <u>Covid19 pandemic.</u>

3. = resulted in central banks & governments – explore = digital version of fiat currency / electronic form of currency (eg Sweden);

4. Jurisdictions with <u>significant physical cash usage</u> seeking to make issuance more efficient (Denmark, Germany, Japan, US);

5. Central banks = to meet <u>public's need for digital currencies,</u> increasing use of private virtual currencies (PVC), & avoid <u>damages</u> of PVC

6. CBDCs = more <u>real-time & cost-effective</u> globalization of payment systems

7. India's **high currency to GDP ratio** = large cash usage replaced by CBDCs, = <u>cost of printing, transporting, storing & distributing currency can be reduced.</u>

GoI ; Plans of using BC Tech, no clear stance on CC

RBI – 'Currency' & CBDC Definition

- *In modern economies, <u>currency is a form of money that is issued exclusively by the sovereign (or a central bank as its representative).</u>*

- *It is a <u>liability of the issuing central bank</u> (and sovereign) <u>and an asset of the holding public</u>. Currency is fiat, it is legal tender.*

- *Currency is usually <u>issued in paper (or polymer)</u> form, but **the form of currency is not its defining characteristic.***

CBDC

- *CBDC = the legal tender <u>issued by a central bank in a digital form</u>.*

- *It is the <u>same as a fiat currency</u> &*

- *is <u>exchangeable one-to-one with the fiat currency.</u>*

- *Only its form is different*

CBDC features

- CBDC = legal tender issued by RBI,

- same <u>functional capabilities</u> as a fiat currency

- <u>considered exchangeable in nature</u> with said fiat currency in a one-to-one form.

- **Notable difference** = digital form.

- **Differences with existing private digital currencies** - Bitcoin & Ethereum.

- Private crypto assets = have <u>no legal issuers</u>

- they <u>cannot be considered as money</u> or currency, CBDC can be.

RBI- countdown to CBDC launch?

- Moving towards : **Central Bank Digital Currency (CBDC)**

- <u>pilot test in process</u> , Deployment <u>phase-wise</u> : Dy Governor, RBI

- CBDC being introduced **in lieu of** private digital assets
  = cryptocurrency

- CBDC ends up on <u>RBI's balance sheet as a currency</u> in circulation.

- RBI : plan to launch the digital asset for general purposes on mass population scale.

- **Proposed changes in legal frameworks:**

- sections 24, 25 and 26 of RBI Act

- Coinage Act of 2011,

- FEMA 1999

- IT Act 2008

MCA Notification- 24.03.2021

- **Mandating disclosures in relation to virtual currency transactions undertaken by companies during a financial year**

- inter alia make certain disclosures = virtual Currency/CC transactions undertaken by them during a financial year.

- MCA Notification requires companies to make disclosures in their financial statements **with effect from 1-4-2021**, pertaining to:

- (*a*) the <u>profit earned/loss incurred during a financial year</u> on transactions involving virtual currencies/ cryptocurrencies;

- (*b*) <u>amount of virtual currencies/cryptocurrencies</u> held as on reporting date;

- (*c*) the <u>deposits or advances received by companies</u> from any person for the purpose of trading or investing in virtual currencies/cryptocurrencies.

IT Hardware & Software acquisition

	Advantages	Disadvantages
Buying	• Cheaper than leasing or renting over the long run. • Ability to change system. • Provides tax advantages of accelerated depreciation. • Full control.	• Initial cost is high. • Risk of obsolescence. • Risk of being stuck if choice was wrong. • Full responsibility.
Leasing	• No capital is tied up. • No financing is required. • Leases are lower than rental payments.	• Company doesn't own the system when lease expires. • Usually, a heavy penalty for terminating the lease. • Leases are more expensive than buying.
Renting	• No capital is tied up. • No financing is required. • Easy to change systems • Maintenance and insurance are usually included.	• Company doesn't own the computer. • Cost is very high because vendor assumes the risk (most expensive option).

Vendor support

Vendor Services	Specifics Vendors Typically Offer
Hardware Support	• Full line of hardware. • Quality products. • Warranty.
Software Support	• Complete software needs. • Custom programming. • Warranty.
Installation and Training	• Commitment to schedule. • In-house training. • Technical assistance.
Maintenance	• Routine maintenance procedures. • Specified response time in emergencies. • Equipment loan while repair is being done.

Data Analytics

- DA = *examining the data available to draw conclusions*
- **Data analytics : Ability**
- to <u>identify new opportunities,</u>
- to harness <u>costs savings</u>
- to enable <u>faster more effective</u> decision making
- to identify <u>potential for new products & services</u>
- to detect <u>potential loss of clients</u> - in order to direct efforts to encourage them to stay

Data Sources

- both <u>internal & external</u>

- Include <u>quantitative & qualitative data.</u>

- aided by <u>specialised software</u> developed

- enable <u>information from many different sources</u> & formats to be **<u>combined & analysed</u>**

Benefits of Data Analytics

- Increased business understanding through a more thorough analysis of a client's data

- Use of visual output

- Better focus on risk

- Increased consistency across group audits

- Increased fraud detection

IoT

- system of interrelated computing devices, mechanical & digital machines, objects, animals or people provided with unique identifiers (UIDs) & ability to transfer data over network without human-to-human or human-to-computer interaction.

- *Thing* - can be:

✓ person with heart monitor implant,

✓ farm animal with a biochip transponder,

✓ automobile with built-in sensors to alert driver – low tire pressure

- **IoT ecosystem** - web-enabled smart devices use embedded systems - processors, sensors & communication hardware to collect, send & act on data they acquire from their environments

- IoT use AI & ML aid - make data collecting process easier

IoT: Wearable Devices – IS Security

- The wearables in use :

❏ smart watches,

❏ smart glasses,

❏ hearables,

❏ fitness and health trackers,

❏ smart jewellery , smart clothing

- offer convenient and fun platforms with displaying notifications,

- controlling media libraries,

- accessing personal verbal assistants, track workouts,

- check emails, etc. - powered by microprocessors & ability to send & receive data via Internet.

- 1. ____ is the apex regulatory body regarding cyber – related matters and IT in India

- A. SFIO

- B. CBI

- C. CERT-In

- D. ED

- Answer –c

- 2. Scope limitations , if any, and restriction on distribution and usage of IS Audit report should be mentioned in :

- A. Internal Audit charter

- B. IT Policy

- c. IS Audit Report

- D. all of the above

- Answer – c

- 3. IT Vendor support should be sought in :
- A. hardware
- B. software
- C. installation & testing
- D all the above
- Answer= d
- 4. ____ technology enables a system of interrelated computing devices, mechanical & digital machines, objects, animals or people provided with unique identifiers (UIDs) & ability to transfer data over network without human-to-human or human-to-computer interaction.
- A. Intranet of things
- B. Internet of things
- C. VOIP
- D. TCP
- Answer- b

- 5.RPA Ecosystem consists of :
- A. process developers & users
- B. business users
- C. Robot controllers
- D. all the above
- Answer – d

- 6. Cognitive Automation has which of the following capabilities
- A. Natural Language Generation & understanding
- B. processes structured data only
- C. basic Pattern recognition
- D. none of the above
- Answer = a

- 7. Which of the following is true ?
- A. ML is a subset of DL
- B. AI is a subset of DL
- C. ML is the super-set of AI
- D. ML is a subset of AI
- Answer = d

- 8. In conducting IS Audit of RPA and AI Systems, a very critical area to review is :

- A. check IT policy

- B. examine SOD for RPA use

- C. evaluate enterprise technolgy expertise

- D. review how instructions scheduled in RPA tool, and perform testing of edit, validation check, error check, etc., configured in RPA

- Answer – d

- 9. Which one of the following is NOT a known AI type ?

- A. Prescriptive

- B. Descriptive

- C. predictive

- D. prognostic

- Answer- b

- 10.Blockchain depends on which technology ?
- A. CLT
- B. Cryptography
- C. Steganography
- D. DLT
- Answer – d
- 11. Automated contracts , embedded in block chain in the nature of self-executing contracts with terms of agreement between buyer & seller directly written into lines of code is called _____
- A. Block contract
- B. Chain contract
- C. Digital contract
- D.. Smart contract
- Answer - d

- 12. Only authorised & known participants can write and commit in a _____ blockchain
- A. permissioned –public
- B. private – permissioned
- C. public – permissionless
- D. private – permissionless
- Answer – a
- 13. Cryptocurrency (PVC) are issued by _____
- A. central bank
- B. Sovereign / government
- C. commercial banks
- D. private players
- Answer – d
- 14. RBI is planning a phased launch of :
- A. Private Crypto-currency
- B. new currency notes
- C. E-currency
- D. CBDC
- Answer - d