

A Report on Guest Lecture titled
“Cryptocurrency- Significance Impact on emerging Economies, Recent Developments and Future Challenges”

Organised by Department of Management Studies

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Department of Management Studies has conducted a Guest Lecture on 28th June 2024, on **“Cryptocurrency- Significance Impact on emerging Economies, Recent Developments and Future Challenges”** by Dr. Mohammad Shafi, Associate Professor, Department of Management Studies NIT Calicut. This session was inaugurated by Professor Pradeep Kumar and Dr. K. V. Geetha Devi, Head Department of Management Studies. Mr. B. Roja Kiran, Asst. Professor, Department of Management Studies, MITS, he read Guest Profile, after that session handover to Dr. Shafi.

Dr. Shafi covered the Following components

- What is Money
- Why do we have Money?
- Medium of Exchange
 - Liquidity
 - Transportable.
- A Unit of Account
 - Divisible
 - Fungible
 - Precisely Measurable
- A Store of Value
 - Durable
 - Stable Value
 - Scarce
 - Difficult Counterfeit
- Best forms of Money
 - Historically, gold & silver coins and bars
- **Gold as money**
 - Widely accepted
 - Divisible
 - Easy to measure
 - Easy to carry
 - Non-perishable (although it wears out)
 - Impossible to forge
- **Fiat Currency**
 - Currency that has value only because of government regulation or law
 - Has no value other than what government declares
 - Not backed by gold or silver

- The term derives from the Latin fiat, meaning "let it be done"
- Originated in 11th century China, and its use became widespread during the Yuan and Ming dynasties.
- Spread to Europe gradually
- Outlawed in the USA until 1933
- The Nixon Shock of 1971 ended the direct convertibility of the United States dollar to gold
 - Broken promise to pay
- Since 1971, all reserve currencies have been fiat currencies
- Competitive devaluation.

Evolution of Fiat Money:

- Goldsmiths store gold and become banks
- Banks lend gold that's theirs
- Banks lend others' gold
- Banks lend with no gold backing (fractional reserve concept)
- Money is debt; no gold backing

Paper money:

- was initially a claim on gold
- has no natural (intrinsic value), hence acceptance is backed by guarantees from a central authority
- during tumultuous economic periods, drove gold out of circulation

Introduction to Cryptocurrencies:

- Definition of cryptocurrencies: Digital or virtual currencies secured by cryptography, operating independently of central authority.
- Brief history: Originating with Bitcoin in 2009, followed by the creation of thousands of cryptocurrencies.
- Importance and relevance: Offering decentralized, borderless transactions, financial inclusivity, and innovative applications like DeFi and NFTs.

Cryptocurrency Concepts:

- Decentralization: Operating on decentralized networks, eliminating the need for intermediaries.
- Peer-to-peer transactions: Direct transactions without third-party involvement.
- Transparency and immutability: Transparent, unalterable transaction records on the block chain.
- Consensus mechanisms: Mechanisms like PoW and PoS ensure agreement on the block chain state.

Block chain Technology:

- What is block chain? Distributed ledger technology recording transactions across multiple computers.
- How does block chain work? Transactions grouped into blocks, forming a permanent, chronological chain.
- Features and benefits: Offers transparency, security, and immutability, eliminating the need for trust in centralized authorities.
- Applications beyond finance: Utilized in supply chain management, voting systems, and identity verification.

Cryptocurrency Mining:

- Explanation of mining process: Validating and adding transactions to the blockchain through computational power.
- Role of miners: Securing the network, confirming transactions, and rewarded with new coins and transaction fees.
- Energy consumption concerns: Mining's significant energy consumption, particularly in PoW cryptocurrencies.
- Evolution of mining: Advancements in algorithms and hardware from CPU to ASICs.

Cryptocurrency Wallets:

- Types of wallets: Store public and private keys for managing digital assets.
- How wallets store private keys: Secure storage within software, hardware, or paper.
- Security considerations: Importance of protecting against hacking and theft.
- Address formats: Different formats like legacy, SegWit, and Bech32 determine transaction structure.

Types of Cryptocurrencies:

- Currency Coins: Designed for digital payments (e.g., BTC, LTC, BCH).
- Utility Tokens: Provide access to specific products or services within blockchain ecosystems (e.g., ETH).
- Security Tokens: Represent ownership of assets subject to securities regulations.
- Stable coins: Pegged to stable assets, offering stability (e.g., USDC, Tether).

What is Bitcoin? (Introduction):

- Bitcoin is software-based online payment system described by Satoshi Nakamoto in 2008. and introduced as open-source software in 2009.
- Payments are recorded in a public ledger using its own unit of account (Bitcoin).
- It is a form of digital currency (physical form is absent), created and held electronically. It can be used to buy things electronically and in that sense it is no different than conventional dollars.
- Bitcoin is commonly referred to as cryptocurrency and it can be divided into smaller unit called Satoshi (one hundred millionth of a BTC).

• Why bitcoin has value?

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- Currencies have value because they can function as a store of value and a unit of exchange. They also demonstrate six key attributes to enable their use in an economy.
- The definition of value in a currency has changed over centuries from physical attributes to the velocity of its use in an economy.
- Bitcoin demonstrates some attributes for a currency, but its main source of value lies in its restricted supply and increasing demand.
- If the price of one bitcoin were to reach \$70,000, Bitcoin's market capitalization would reach approximately 15% of the global currency market.

• How are Bitcoins created - Mining process:

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- Miners use special software to solve math problems (Bitcoin algorithm), and upon completing the task they receive certain amount of coins.
- They are created each time a user discovers new block (finds hash value).
- Software is creating new units until it reaches amount of 21 million unites (currency with Finite Supply).
- The rate of block creation is approximately consistent over time (6 per hour) with 50 % reduction every four years.
- Halving (in theory) continues until 2110-2140 when 21 million BTC have been issued.

Cryptocurrency Formats:

- Explanation of different formats: Token standards facilitating interoperability (e.g., ERC-20, BEP-2).
- Examples: Standards like ERC-20 for Ethereum-based tokens.
- Importance of standards: Promote innovation and ease of use in the cryptocurrency ecosystem.

• Regulatory Landscape:

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- Global regulatory approaches to cryptocurrencies: Governments and regulatory bodies worldwide developing frameworks to regulate cryptocurrencies.
- Challenges and opportunities: Regulatory uncertainty poses challenges but clear regulations can foster innovation.

- Compliance and legal considerations: Importance of complying with regulations and implementing KYC and AML procedures.
- Impact on innovation: Regulatory clarity can encourage innovation and investment in the cryptocurrency ecosystem.
- **Future Trends:**
 - Potential future developments in cryptocurrency space: Increased institutional adoption, scalability solutions, interoperability, and regulatory clarity.
 - Adoption trends: Growth driven by economic instability, technological advancements, and evolving preferences.
 - Technological advancements: Research aiming to address scalability, privacy, and usability challenges.
 - Social and economic impact: Potential to reshape financial systems, empower individuals, and foster economic inclusion.
- **Cryptocurrency Exchanges:**
 - Introduction to cryptocurrency exchanges: Online platforms facilitating buying, selling, and trading of digital assets.
 - Types of exchanges: Centralized (CEX) vs. Decentralized (DEX).
 - Features and functionalities: Order types, trading pairs, liquidity, fees, and security measures.
 - Importance of exchanges: Vital infrastructure providing liquidity, price discovery, and access to digital assets.
- **Centralized Exchanges (CEX):**
 - Overview of centralized exchanges: Operated by a central authority with user funds deposited into exchange wallets.
 - Examples of CEXs: Binance, Coinbase, Kraken, Bitfinex, etc.
 - Pros and cons: High liquidity and user-friendly interfaces but susceptible to hacking and regulatory scrutiny.
 - Trading experience: Offering a wide range of trading pairs, advanced order types, and trading tools.
- **Decentralized Exchanges (DEX):**
 - Overview of decentralized exchanges: Enable peer-to-peer trading without intermediaries using smart contracts and blockchain technology.
 - Examples of DEXs: Uniswap, Sushi Swap, Pancake Swap, etc.
 - Pros and cons: Greater privacy, security, and censorship resistance but may have lower liquidity and usability.
 - Trading experience: Permissionless trading, maintaining control of funds without reliance on a central authority.
- **Trading on Cryptocurrency Exchanges:**
 - Process of trading on exchanges: Registering an account, depositing funds, placing orders, executing trades, and withdrawing funds.
 - Explanation of market orders, limit orders, stop-loss orders, and other advanced trading features.
 - Risk management: Strategies including portfolio diversification, setting stop-loss orders, and technical analysis.
 - Trading psychology: Understanding market sentiment, managing emotions, and maintaining discipline for successful trading.



After his lecture he clarifies students raised doubts on Cryptocurrency. Mr. Venkata Rao, Asst. Professor, Department of Management Students. He has proposed vote of thanks and concluded the event.