



UGC APPROVED JOURNAL NO: 48991

ISSN 2349-8684



23498684



Hosted by

The Madura College (Autonomous)
Madurai, Tamil Nadu

ISSN: 2349-8684

VOLUME 4

MARCH 2018

SPECIAL ISSUE 10

JOURNAL WITH
IMPACT FACTOR 3.487

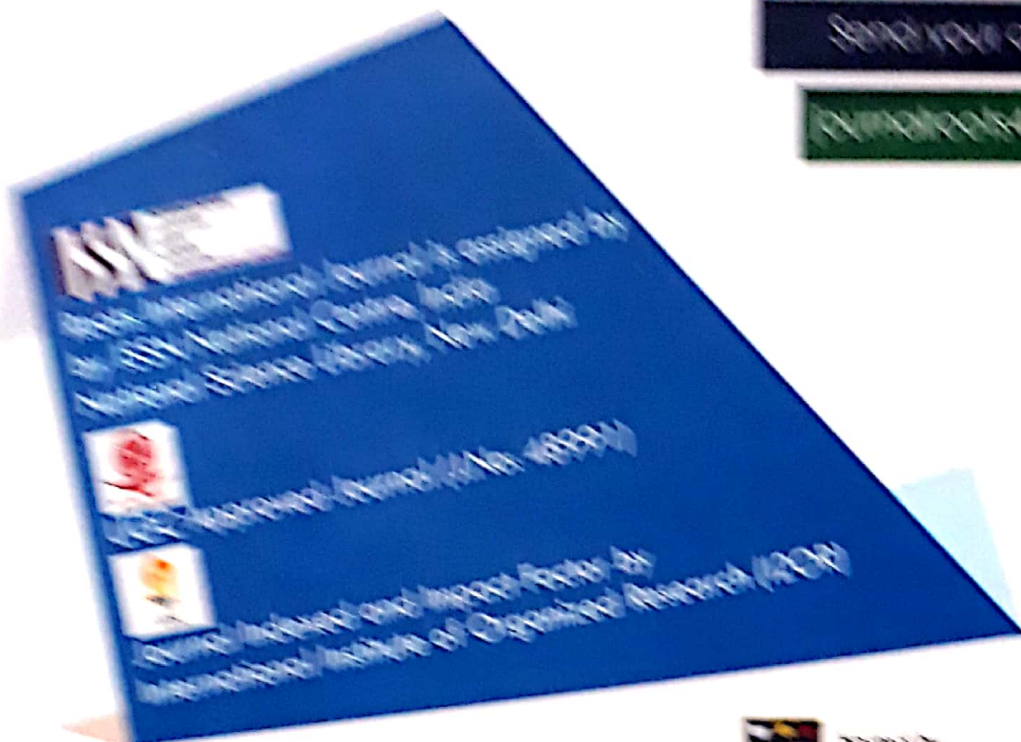
A PEER REVIEWED, REFEREED &
QUARTERLY JOURNAL WITH IMPACT FACTOR

ROOTS

INTERNATIONAL JOURNAL OF
MULTIDISCIPLINARY RESEARCHES

Special Issue on
"Business Analytics & Block Chain"

Special Issue Editor
Dr. A. Mayil Murugan



Send your article to

ijmr@iioir.com

Instructions to Authors

The International Journal of Multidisciplinary Researches is A Peer Reviewed, Refereed & Quarterly Journal. Journal invites Research papers in the field of Agricultural and Biological Sciences, Arts and Humanities, Botany, Business, Management and Accounting, Chemistry, Computer Science, Dentistry, Earth and Planetary Sciences, Energy and Power, Engineering and Technology, Environmental Sciences, Life and Materials Sciences, Mathematics, Medicine, Microbiology and Virology, Physics, Social Sciences, Veterinary Science, Zoology and Others... (All Other Multidisciplinary Fields)



Hosted by
The Nature College (Autonomous)
Madurai, Tamil Nadu



IMPACT FACTOR 3.487

By
International Institute of Organized Research (IIOIR)
<http://www.iioir.com/journal.html>

INDEXED BY



ROOTS
International Journal of
Multidisciplinary Researches
www.rootsjournal.com



Powered & Published by
Center for Resource,
Research and Publication
Services (CRRPS) India.
www.crrps.in

13	Bitcoin and Cryptocurrency Dr.P.Prabha	38	28	Business Analytic Models Dr.E.B.Gnaneswaran & G.Rajamani	86
14	New GST ERA and its Impact on Small Businesses Entrepreneurs Dr.R.Vennila & Dr.K.Hema Malini	40	29	GST Network in India – An Overview A.T.Ramasamy & Dr.G.Ilankumaran	
15	Big Data Application in Business Enterprises Dr.S.Benita	43	30	Revolution of Bitcoin in The Changing Global Economy – A Study Mrs.S.Saranya & Dr.V.Balachandran	92
16	Role of Banks in the Promotion of Financial Inclusion – A Sentimental Analytics Approach Dr.S.Shankari & Er.R.Deepa	46	31	Banking on the Block Chain S.Thowfeek Khan	96
17	Bitcoin and Cryptocurrency in India Dr.V.Devika	51	32	Bit Coin Crypto Currency Dr.R.R.Vishnu Priya & Dr.S.S.Suganthi	99
18	Basic Concepts and Features of Good and Service tax in India Dr.V.Muruganandam	54	33	Segment Reporting Dr.R.R.Vishnu Priya & Dr.T.P.Ram Prasad	101
19	Impact of GST on Hospitality Industry S.Ramachandran & Dr.Y.Natarajan	58	34	Perception of Farm Fruit Entrepreneurs to Entrepreneurial Traits R.Kumaresan	105
20	Embedded Problems of Segment Reporting: An Overview I.M.Karthikeyan	61	35	Business Valuation Models in Theoretical and Practical Proceedings S.Sivaranjani & R.Balamurugan	108
21	A Study on New Challenges and Innovative Ideas for Human Resource Development in Indian Railways M.Jegan	65	36	Bitcoin, Cryptocurrency V.Philip Morris & S.Rishi	112
22	Bitcoins and India- A Primer Dr.R.Krishnan & Dr.A.Mayilmurugan	68			115
23	Benefits of Blockchain Mrs.M.Aakina Barveen	71			
24	Cryptocurrencies: A Paradigm Shift Dr.M.Jayalakshmi & Dr.S.Grahalakshmi	74			
25	GST –Impact on Supply Chain Management- A Review M.Nayas	78			
26	Positive and Negative Impact of GST on Indian Economy Adv.G.Jayasree & Prof.G.Sreedevi	80			
27	GST: Impact on Retailers M.Muthu Vadivoo & P.Dhanalakshmi	83			

BENEFITS OF BLOCKCHAIN

Mrs.M. Aakina Barveen

Research Scholar, J.A.College, Periyakulam

Introduction

Block chains came to prominence in the popular media recently. Articles ranged from cynicism that block chains are nothing more than shared databases hyped up by venture capitalists, to amazement and wonder about a new technology that has the potential to create social, societal, and economic change.

So far, the focus of the discussion around this technology has centred on block chains used as a tool for financial services to improve transparency and efficiency, and reduce cost within the industry. In response, block chain technology providers are being created all over the world, incubated independently or by innovation labs sponsored by banks and other entities. The start-ups are enthusiastically experimenting on applications of this technology to problems within the financial services domain.

While a lot of the discussion comes from Western Europe and the US, tinted with region-specific issues and perspective, we believe that the potential of block chains can have the most impact to the Southeast Asian economic community. The major determinant of success in unlocking the potential of this technology will be the ability for entities to collaborate closely, whether the entities are commercial companies, financial institutions, or governments.

A block chain is just a file. A block chain by itself is just a data structure. That is, how data is logically put together and stored.

Other data structures are databases (rows, columns, tables), text files, comma separated values (csv), images, lists, and so on. You can think of a block chain competing most closely with a database.

Blocks in a Chain = Pages in a Book

For analogy, a book is a chain of pages. Each page in a book contains

We believe that the potential of block chains can have the most impact where it achieves joint implementation of a number of benefitted parties. This is a collaborative challenge rather than a technical one and is not unique to block chains

Benefits of Block chains

Efficiency

Block chain technology could improve efficiency when financial entities are reconciling trades. Typically a bank will nominate one of its systems as the golden source of trade data for any particular security. That golden source could be an in-house built system or an off-the-shelf solution. Reconciling this against an external party (whether that's the trading counterpart or an industry third party) has drag and inefficiencies due to system incompatibilities and processes. This leads to reconciling using the "best common technology" – typically end-of-day batch files. A block chain will mean that the agreed trade data is already in-house, removing the need to reconcile externally, as the block chain has already done that in real time.

The use of block chains could also help speed up payments between financial entities. As block chains can store data, they can also include code snippets that automate messages and one-day payments, using the "if-this-then-that" logic. If parties can agree upfront on the payoffs (usually this is agreed in term sheets written in dry legal language) and can encode the payoff terms into the trade details itself, then there can be efficiencies when trade lifecycle events take place, including error reduction and speed increases. These code snippets saved onto block chains are called "smart contracts".

Transparency

With trade data published to a common platform, regulators or other interested parties can plug into this and get a real time view of the trades. This gives regulators oversight into one common source, rather than receiving reports in different formats at different times from each institution. The transparency offered by block chains could help regulators detect systemic risks sooner.

Traditionally for trade payoffs, entities had to rely on heavy legal documentation, such as International Swaps and Derivatives Association (ISDA) master agreements.

Resilience

Storing data over a large number of nodes benefits the resilience of the data – the larger the number of block chain participants, the more robust the data, with longer life. In this respect, a block chain system is similar to a massively replicated database.

Governance and Trust

In a block chain system, a majority of participants need to agree on data being added before it becomes part of the definitive block chain. This is very different to central, often secretive ledgers held and controlled centrally. When multiple parties have a say over what data is written, the ability to alter data, or remove dubious data, it creates a more honest system.

An example would be land registry systems. When held centrally, a database administrator can easily make a change to records and cover their tracks without others knowing. If a land registry were held on a block chain system with multiple participants (for example local government, regional government, perhaps other government branches and even NGOs), then the other parties would need to agree to make a change to a record, and any questionable changes would immediately be detected and not added without a majority consensus.

How block chains can benefit financial services

Take for example a centrally cleared, over the counter trade like an interest rate swap. For the entire lifecycle of a trade, which could last many years, the two parties to the trade and the clearing house keep track of events, including:

- Initial booking of the trade
 - Calculation of the premium paid
 - Payment of the premium
 - Calculations of accrued interest for the fixed and floating legs of the trade on each coupon date
 - Payment of interest on each coupon date
 - Foreign exchange revaluation entries during the course of the trade
 - Termination of the trade
 - Each of these events are calculated multiple times in multiple systems and recorded in multiple ledgers.
- The current methods of reconciling separate ledgers are prone to breaks, missing information, and calculation differences. This leads to different versions of the events in different bank systems,

increasing risk and associated time wasted investigating the source of these discrepancies.

Transaction Ledgers

Bit coin is a digital token whose ownership can be passed from user to user. This token has no real-life tangible representation, and as such is referred to as an 'on-chain' asset. That means, it exists on its block chain, and owning the token reflects nothing else except that you own the token. The role of on-chain assets in traditional financial services is currently uncertain, and remains so unless or until on-chain assets can legally represent sovereign currencies, shares, or other dematerialised assets.

'Off-chain' assets, by contrast, are real-world items (such as gold, shares, currency) that are digitally represented on a ledger by a token or tokens issued by an issuer. The issuer will safe-keep the real-world item and issue tokens on a ledger against them. The token represents a title deed for that asset and can be passed from user to user. Ultimately a user will return the digital token to the issuer and make a claim on the real-world asset. One current idea for block chains-as-asset-ledgers is to facilitate faster and more efficient settlement of off-chain assets.

Event Recording

Moving away from the term 'ledger', with its financial connotations, events can also be recorded. An event could take the form of any sort of data and can be recorded in plain view or encrypted. Events in financial services could be anything from messages between entities to documents, meeting minutes to shareholder votes, counterparty data (e.g. mapping of legal entities to nostro accounts) to industry-agreed FX settlement holidays. The protection gained from using a block chain is that the data can not be edited once written, and has a trusted timestamp, without relying on an independent trusted third party.

Public Versus Private Block chains

One of the breakthroughs of bit coin was the ability to maintain a consensus view of transactions in a system, where anyone can create and send transactions, and where anyone can write blocks of transactions to the ledger – all without needing the permission of higher authority. The bit coin block chain is the grandfather of public, or 'permission less' block chains – anyone can write data to it just by running some free software, and without signing up.

Conversely, private block chains limit the participants using traditional methods, such as private networks with domains and IP white listing. A private block chain can be used so that known entities can add data to the block chain without letting external entities read or write access. In finance and trade, in general, we have a set of known entities who are trying to legitimately do business with each other and who don't have a problem with verifying their identity. The issue before block chains is that they may struggle to reach a common understanding of events. To solve that, they have always used third parties, such as banks and escrow services, which then involve a high amount of risk, or avoid the situation altogether.

Improve National and Corporate Governance

Block chain systems have a lot more potential between entities, i.e. where entities need to work with other entities to achieve a common goal. This is due to governance: within an entity, bosses and the traditional hierarchy can manage a golden source of truth and resolve conflict. However where entities interact, there needs to be another

method for conflict resolution. The potential for block chains to add value is higher if used collaboratively across an industry or a workflow.

Conclusion

Much of the thought leadership regarding block chains in financial services has focused on the context of Western Europe and the US but little has been explored within Asia. This is ironic given in the US, trust across state lines is high and uniform; in Europe, the market is more closely aligned by regulation. But Asia is still behind in terms of levels of trust enabling greater economic activity. Asia's geopolitical context is unique globally – the region consists of loosely coupled countries who want to trade with each other, yet levels of trust between countries are disparate, preventing the region from realising its potential.

We believe that the most transformative block chains will be those that can work across geopolitical boundaries. Southeast Asia has the most potential that can be unlocked with this technology, but we acknowledge that it may also be the hardest block chains to implement.