

MODERN MONEY

BITCOIN, BLOCKCHAINS & THE DIGITAL ECONOMY

PRESENTED AT **IDECS** KUCHING 2017 BY



neuroware

SARAWAKIAN AT HEART - BRITISH BY DEFAULT



Mark Smalley

Founder & CEO

Living in Malaysia for 20 Years

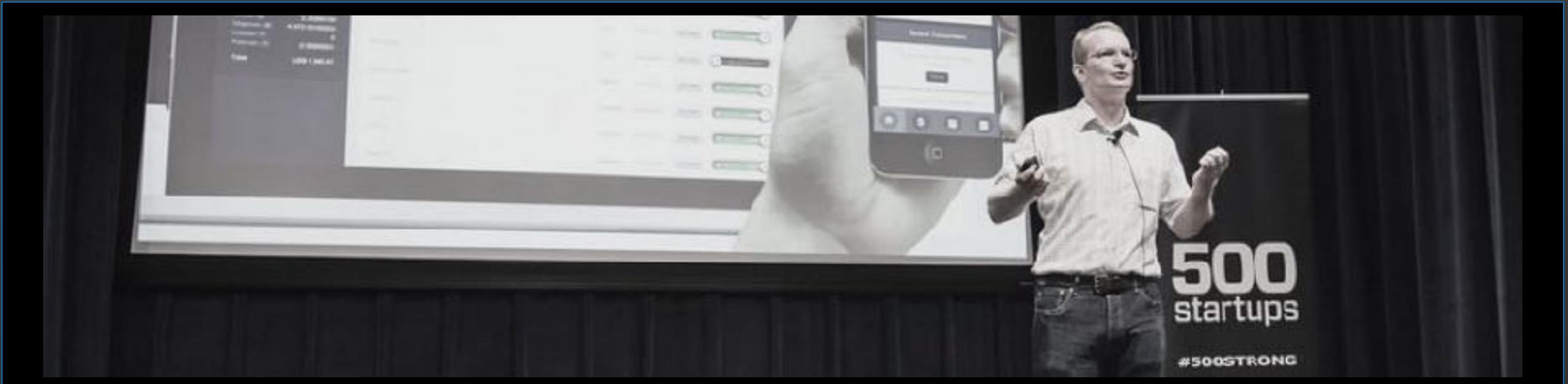
Building Web Applications for 15 Years

Building Tech Communities for 10 Years

Building Blockchain Apps for 5 Years

Working with Banks & Regulators for 3 Years

EXPERIENCED INNOVATORS IN AN EARLY ECOSYSTEM



- **Only Malaysian Company** to Graduate from 500 Startups in Silicon Valley
- **1st Company in Asia** Providing Public Blockchain APIs & Developer Toolkits
- **1st in The World** to Develop Non-Financial Blockchain Agnostic Protocols
- Helped Organize World's 1st Bank-Backed Blockchain Hackathon (DBS)
- Over 15 Years of Collective Blockchain Development Experience

RECENTLY LAUNCHED CORTEX - WORLD'S 1ST BLOCKCHAIN O/S

(not the only one - but it is the only one that works on any blockchain)

The screenshot shows the Cortex web application interface. On the left is a sidebar with icons for CORTEX, DASHBOARD, DOMAINS, USERS, DATABASES, API, EXPLORER, WALLET, and SETTINGS. The main content area has a header with 'dashboard' and other navigation links like 'add domain', 'add user', 'add database', 'add api key', and 'help'. It also shows 'credits : 11.00000000', a 'flush' button, and a 'logout' button.

In the center, there's a 'YOUR PROFILE' section with a photo of a man (Mark Smalley), his name, title, and company information. Below that is a 'CURRENT USAGE' section with progress bars for Domains (3/10), Sub-Domains (64/100), User Accounts (5/10), Databases (72/100), Active Modules (2/7), and Active Protocols (3/8).

To the right is a 'RECENT ACTIVITY' log showing the following events:

- Updated DNKey on mark.neuroware.io 12 seconds ago by Mark Smalley
- Added new user johnny.neuroware.io 1 minute ago by Mark Smalley
- New Everstore db at team.neuroware.io 3 minutes ago by Mark Smalley
- New wallet for mark.neuroware.io 1 hour ago by Mark Smalley
- Added new user johnny.neuroware.io 2 days ago by Mark Smalley
- New Everstore db at team.neuroware.io 3 weeks ago by Mark Smalley
- New DNKey on keys.neuroware.io 3 month ago by Mark Smalley

A BRIEF HISTORY OF MODERN MONEY

WHERE NO IDEA IS A NEW IDEA

IT ALL STARTS HERE - ON THE ISLAND OF YAP



SHOPPING WAS NOT EASY



SO THEY CREATED THE WORLD'S FIRST PUBLIC LEDGER



WHERE UPDATES REQUIRED GROUP CONSENSUS

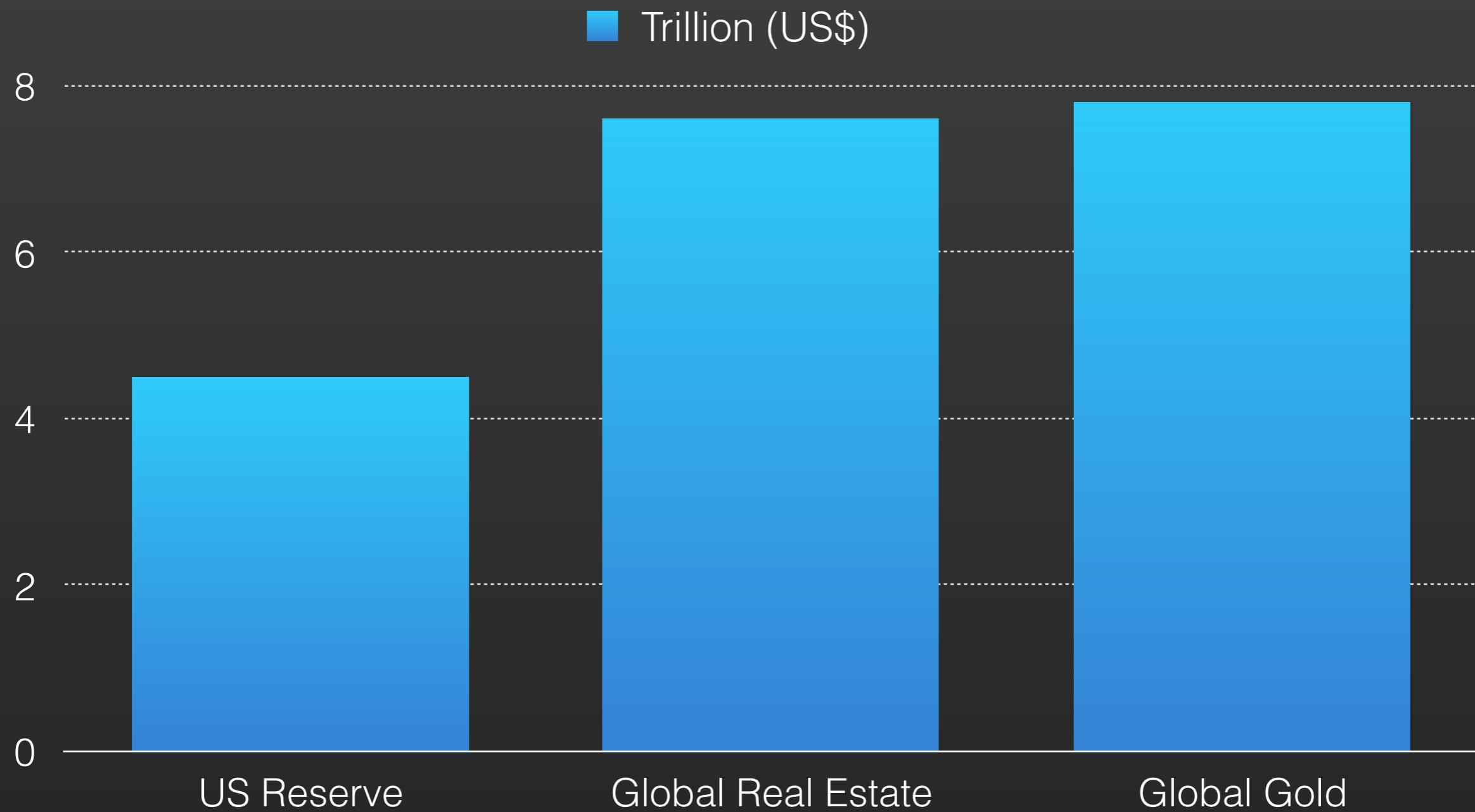


- Size wasn't everything
- The history of each stone determined it's individual value
- Conducting transactions quite literally involved a song & dance
- This required the majority of people from the village to be present

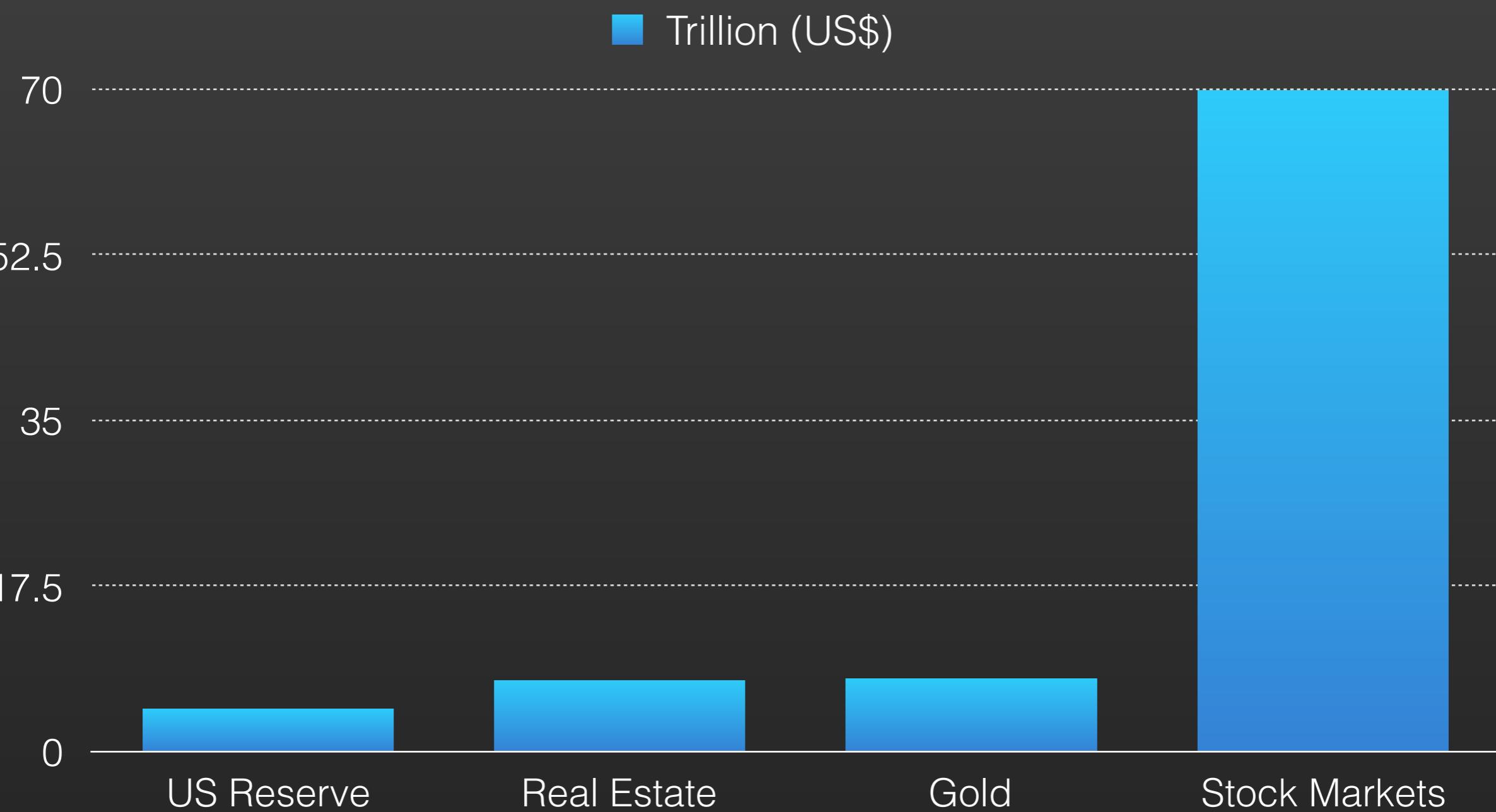
BUT IT COULD NOT SCALE - THEY EVENTUALLY SWITCHED TO US\$



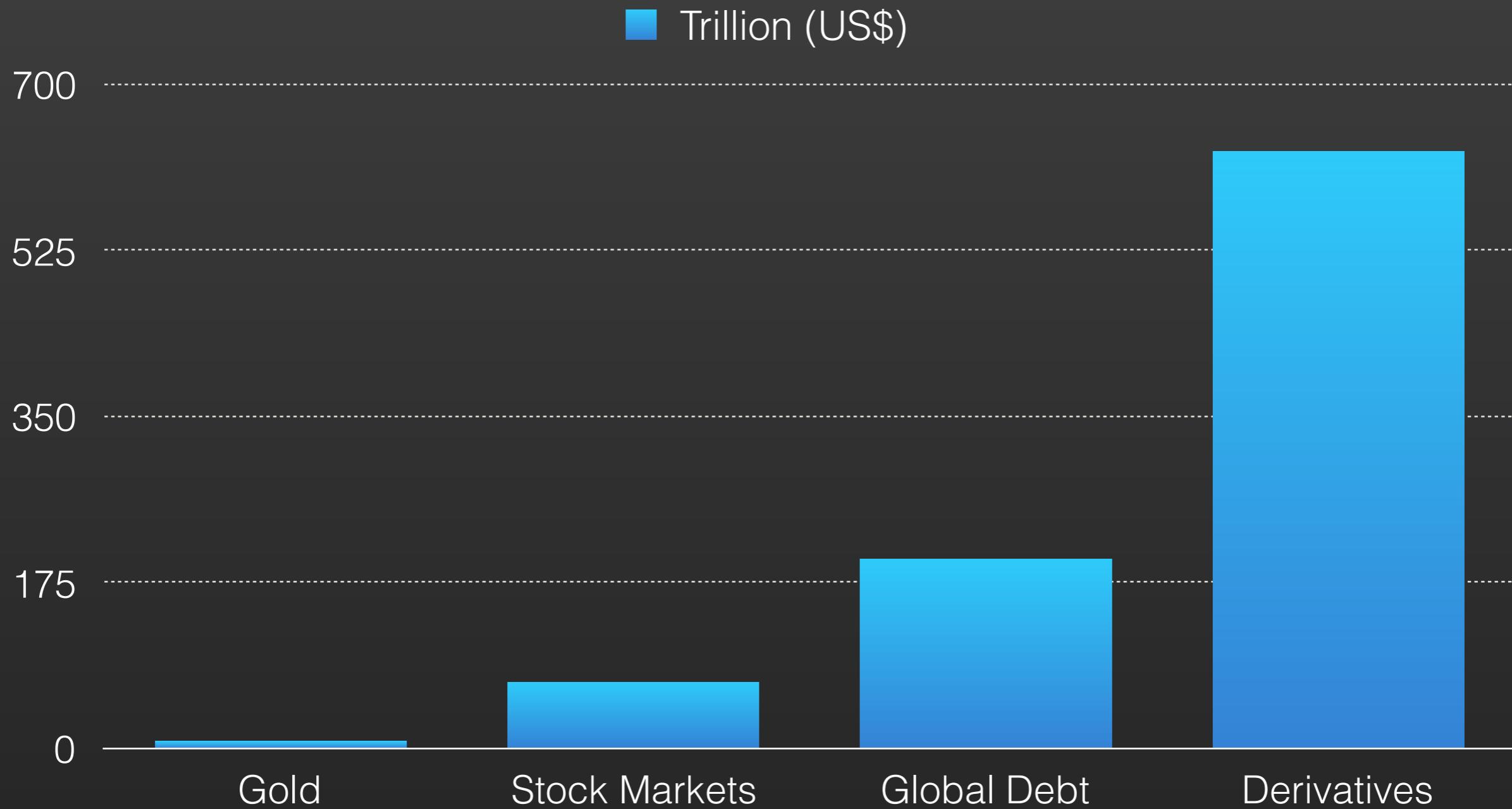
WHEN WE THINK OF THE US DOLLAR WE THINK OF **REAL MONEY**



AND THEN CAME DIGITAL CENTRALIZED ASSETS



AND WITH IT CAME THE RE-CREATION OF ~~MONEY~~ DEBT



IT ALL ENDS IN TEARS (512 US BANKS CLOSED SINCE 2008)



World War 2
US\$3 Trillion

2008 Bailout
US\$8.5 Trillion

All other US
Wars Ever

This really annoyed
Satoshi Nakamoto

A TIP-TOE INTO BITCOIN

MAGIC INTERNET MONEY

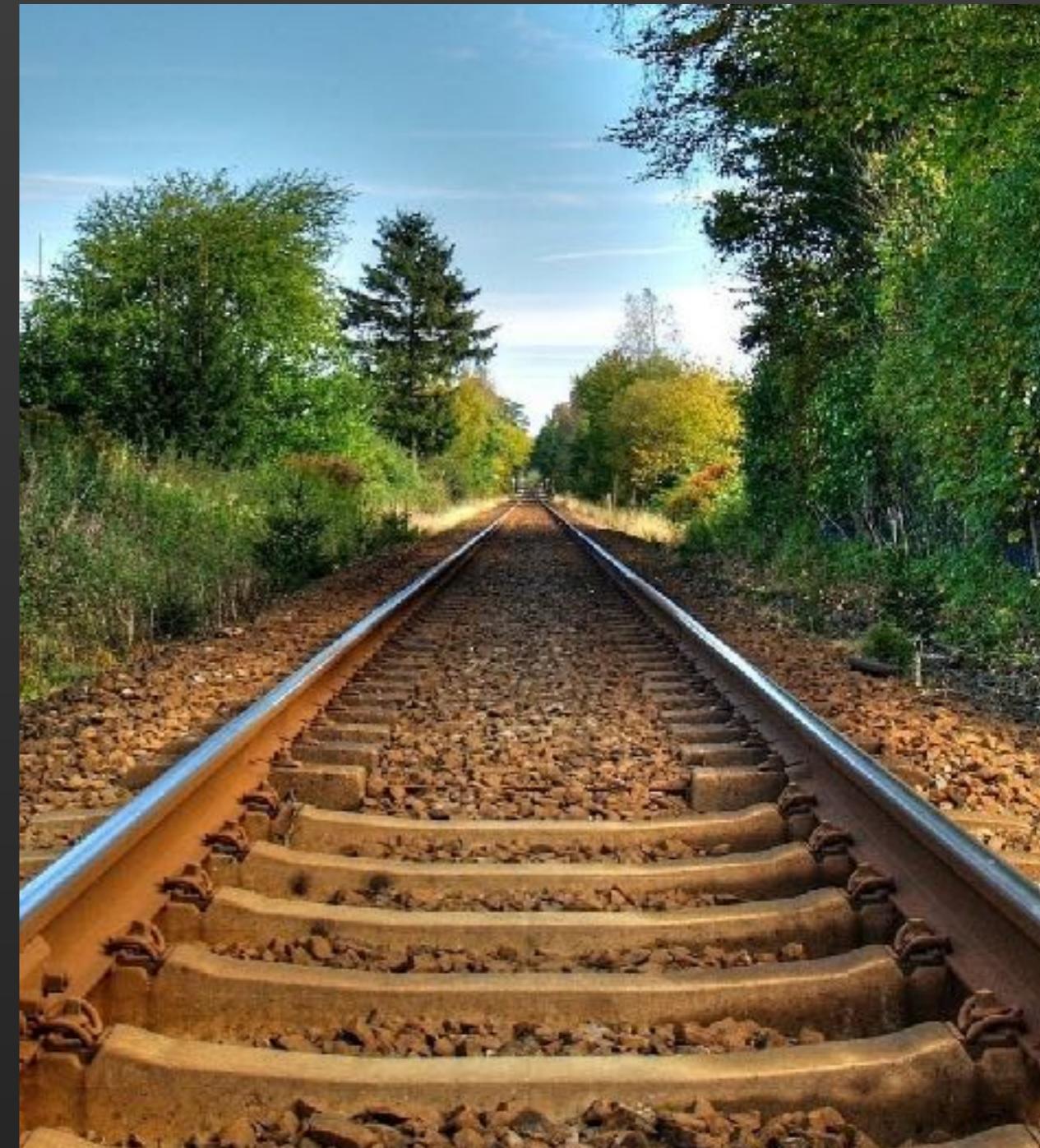
BITCOIN

(the first application / popular digital asset)

vs

BLOCKCHAINS

(the underlying tech / shared public ledger)



PUBLIC BLOCKCHAINS

(battle tested, secure and able to go anywhere)

vs

DISTRIBUTED LEDGERS

(missing blocks is also missing the point)



PUBLIC NETWORKS

(built from the ground-up to be secure)

vs

PRIVATE NETWORKS

(very similar to traditional databases)



WHAT ARE THE BENEFITS OF DISTRIBUTED **PUBLIC** LEDGERS?

- They provide an **immutable** tamper-proof audit-trail of the truth
- Data can be easily **shared** and independently verified by third-parties
- Vastly increased **security** that is much less vulnerable to attack or outage
- Programmable **contracts** that can radically reduce human errors and costs



“While Fintech Disrupts Banks,
the Blockchains Disrupt Fintech”

INTERESTING BITCOIN BLOCKCHAIN FACTS TO REMEMBER

- Bitcoin blockchain released in January 2009 by Satoshi Nakamoto
- We do not know who Satoshi is, or what their religion or political views are
- However, the bailout of 2008 was cited as primary catalyst for its creation
- RM50 per coin in 2013 (when we bought) - now over RM5,000 per coin
- The Bitcoin network is currently processing over 250,000 daily transactions
- The network's market capitalization is currently around RM60+ billion
- 21 million maximum finite supply, decreasingly dispersed every 10 minutes
- **But most importantly of all is the technology behind it...**

BITCOIN AND BLOCKCHAINS HAVE NO NEW TECHNOLOGY



- HASH - Theorized in the 1800s - Coined by IBM in the 1950s
- SHA - Encryption method first introduced by US Navy in 1993
- P2P - Peer to peer protocol popularized by Napster in 1999

BITCOIN ISN'T EVERYTHING

BILLIONS INVESTED IN BLOCKCHAINS

BANKS ARE MOVING FAST DUE TO ECOSYSTEM MATURITY

In 2016, over 100 banks and leading financial institutions started blockchain projects, with more than US\$1 billion dollars being invested into the ecosystem - in just one year!



BLOCKTECH in FINANCIAL SERVICES Landscape

APPLICATIONS & SOLUTIONS

Exchanges



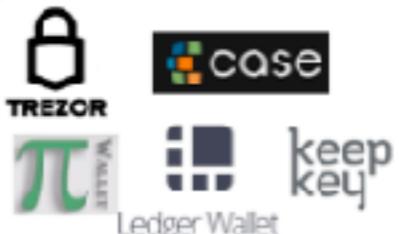
Brokerage



Soft Wallets



Hard Wallets



Investments



Merchants



Compliance



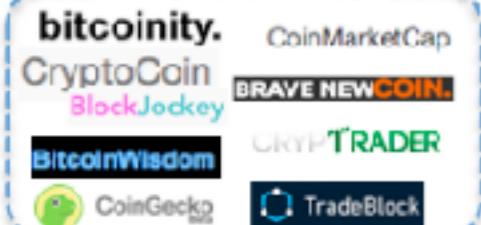
ATMs



Capital Markets



Financial Data



Payments



Payroll



Trading



Supply Chain



Banks



Services



Software Development



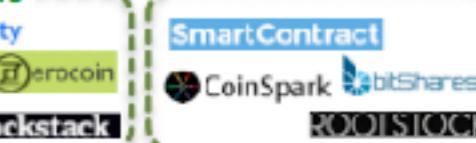
General APIs



Special APIs



Smart Contracts



INFRASTRUCTURE & BASE PROTOCOLS

Public



Special



Payment



Miners



BIG EXPECTATIONS NOW SET

- Accenture claim investment banks can save US\$12 billion a year
 - McKinsey believes financial services will save US\$110 billion in 3 years
 - White & Case say banks can reduce infrastructure by \$20 billion a year
 - Bank of England says DLT could add 3% to a country's economic output
-
- 80% of top banks to launch DLT projects by 2017 - World Economic Forum
 - IBM reports that 15% of big banks will be using blockchains by 2017
 - **IBM reports 65% of top banks will have blockchain trials by 2020**

SOME OF THE INSTITUTIONS LEADING THE WAY



Custom blockchain
for settlements



Blockchain based
trade finance platform



Blockchain based
loyalty platform



Blockchain based
remittance platform



multiple blockchains for cross-
border payments and loyalty



1st Bank in ASEAN to join an
Asian Blockchain Consortium



Patented a blockchain
based wire transfer system



NOW OVER 35 BLOCKCHAIN CONSORTIUMS WORLDWIDE



BLOCKCHAINS IN MALAYSIA

SUNNAH MONEY AND CRYPTO-CURRENCY SUCH AS BITCOIN

Bank Negara

Bitcoin is not legal tender in Malaysia and must be used at investors own risk

— This is the same as gold, diamonds US\$ and plutonium

Sunnah Money is money with **intrinsic value** that isn't debt-based and is also inflation proof - referred to as **Real Money** it has the following properties:

- Is there an abundance within the market place?
- Is it recognized and accepted by merchants?
- Is it divisible?
- Does it have a self life?
- Was it created by Allah?

WHERE DO WE (**MALAYSIA**) STAND ...?

from the coindesk.com most recent quarterly report

MOST INCREASED INTEREST IN BITCOIN



THE BLOCKCHAIN EMBASSY OF ASIA - MADE IN MALAYSIA

<http://bce.asia>



BlockChain Embassy Asia

AMBASSADORS

USE CASES

CONTACT EMBASSY

TOOLBOX

NEWS

**our mission is to educate organizations throughout asia in both
the legal and technical implications of distributed ledgers**

We are a non-profit digitally distributed organization that is using and promoting blockchain governance as a method for collaboration between various business entities and existing community efforts across Asia

REQUEST MEMBERSHIP

9 FOUNDING MEMBERS FORM THE STEERING COMMITTEE



banking ambassador

LIM JOYAN & CO.
ADVOCATES | SOLICITORS

legal ambassador



banking ambassador



education ambassador



media ambassador



IoT ambassador



finch ambassador

CapitalBay

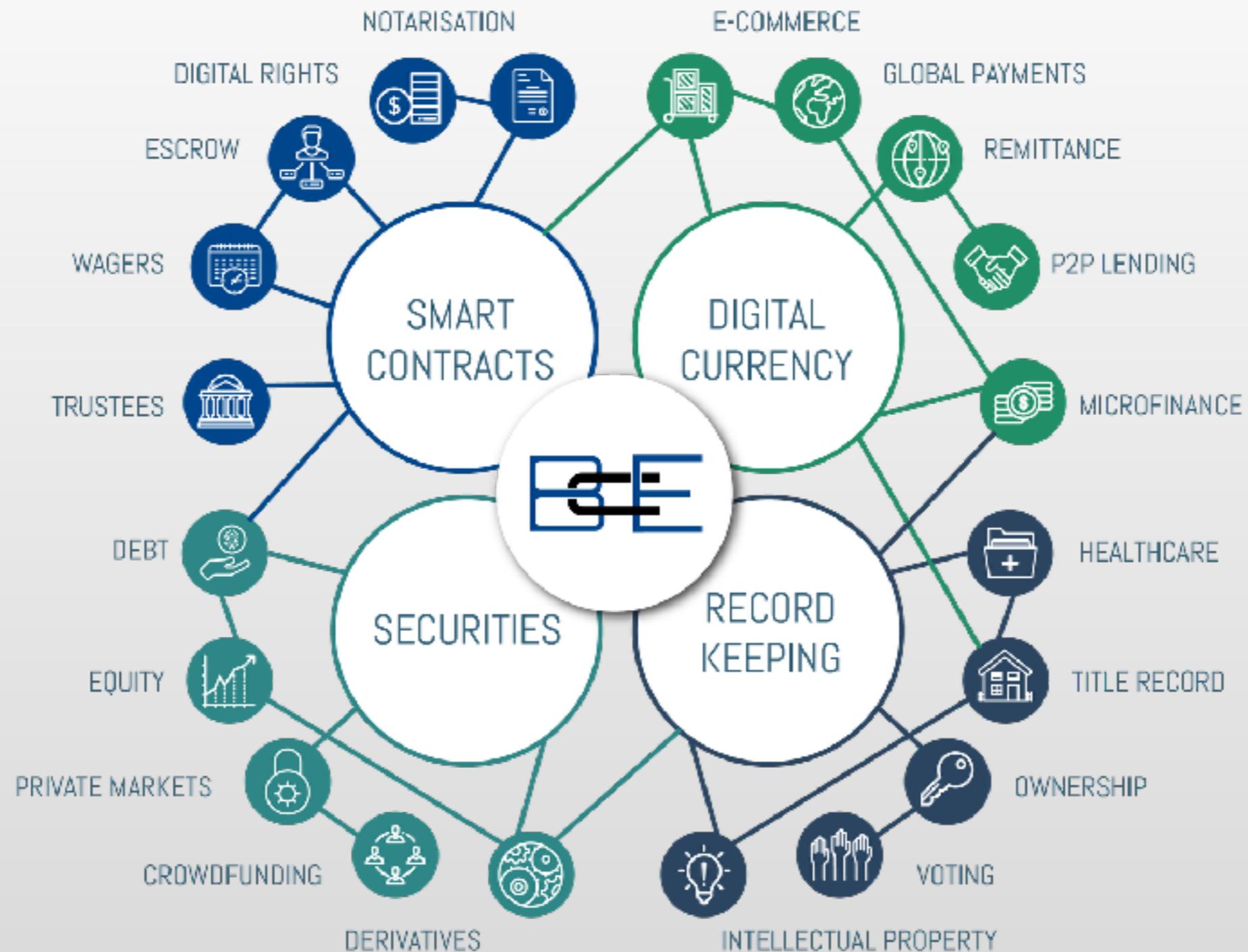
invoice ambassador



tech ambassador

BIG PROBLEMS INVOLVE MULTIPLE PARTNERS & MOVING PARTS

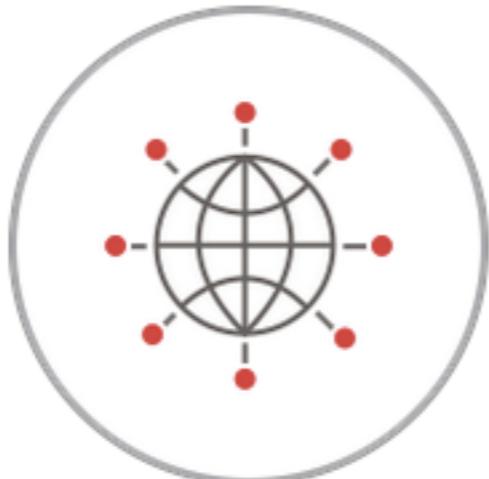
(BEYOND FINTECH LIES IoT, BIG DATA & HEALTHCARE - WHICH IS WHY WE ARE REGIONAL)



THE FOUR PILLARS OF MDEC (CURRENT AREAS OF FOCUS)



BIG DATA ANALYTICS



INTERNET OF THINGS (IOT)



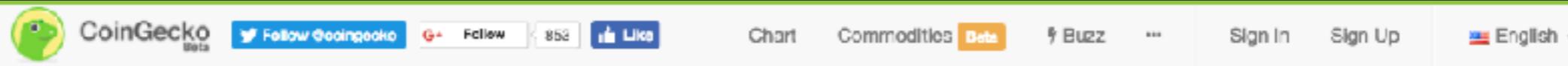
E-COMMERCE



DATA CENTRE & CLOUD

- IoT has the most use for blockchains, which can provide a communication platform that would allow machines to securely talk to and trust each other
- E-Commerce will obviously be affected significantly by digital-currencies
- BIG Data can not only utilize blockchains for authenticating data-lake transactions but will also have LOTS of new public data to be analyzed
- New forms of data-centers and cloud-based products will be required

COINGECKO - TRACKING THE TOP 500 CRYPTO-CURRENCIES



Search Coins

| # - BTC | | All Hashing Algorithms | Total | MktCap | Liquidity | Developer | Community | Public Interest | Last 7 Days | | | |
|---------|----------|------------------------|-------|-------------------------|-----------|-----------|--|---------------------------------|--|--|--|--|
| Rank | Coin | | % | Value | Value | % | Score | % | Value | | | |
| 1 | Bitcoin | BTC | 96 | \$16,246.112 +2.540% | 116109.00 | 98 | 11974 17783 1364 3372 2808 | 94 4075 393 132 010 | 210604 23627 501 2.23 169012 | 87 9,001,000 10539 \$1.00000000 | | Buy Sell |
| 2 | Ethereum | ETH | 85 | \$4,161.003 +1.004% | 76444.15 | 93 | 3373 1173 463 1284 1775 | 72 751 184 29.0 65 | 32579 30008 184 61075 | 56 392,000 24497 \$0.04631585 | | Buy Sell |
| 3 | Litecoin | LTG | 75 | \$0.16383 -0.009% | 62212.63 | 85 | 1199 988 249 148 144 | 62 66 59 1.17 10 | 22437 42749 59 23327 | 42 403,000 174781 \$0.00825351 | | Buy Sell |
| 4 | Ripple | XRP | 74 | \$0.63.055 +3.121% | 70280.88 | 87 | 1259 357 251 247 199 | 49 262 21 12.3 38 | 2281 4334 20 23406 | 54 122,000 63256 \$0.0002014 | | Buy Sell |
| 5 | Dash | DASH | 71 | \$0.73.613 -0.421% | 18847.81 | 82 | 410 228 119 208 150 | 53 1003 31 14.8 23 | 4220 13764 31 15935 | 47 205,000 46914 \$0.06579709 | | Buy Sell |
| 6 | Monero | XMR | 70 | \$0.65.592 -1.464% | 4801.59 | 85 | 514 307 143 | 54 1214 52 0.8 | 2793 3022 52 10.8 | 44 318,000 318,000 \$0.06579709 | | Buy Sell |

MONEY MATCH FIRST IN MALAYSIA TO USE RIPPLE

Malaysia: MoneyMatch raises \$150k seed from Australia's Kosciuszko for forex platform



Enter Your Email Go

[Subscribe to our newsletter](#)



(L-R) Naysan Munusamy, Damien Santer and Fazil Fuad

ETHERSCAN FOUNDED BY A MALAYSIAN - FUNDED BY DCG

Etherscan
The Ethereum Block Explorer

HOME BLOCKCHAIN ACCOUNT TOKEN CHART MISC

Search by Address / TxHash / Block / Token GO LANGUAGE

TOTAL SUPPLY OF 88,464,230.97 ETHER
\$10.56 @ 0.01085 BTC/ETH

LAST BLOCK 3104622 (14.40s Avg)
Hash Rate 7,768.31 GH/s

TRANSACTIONS 16160931
Network Difficulty 111.68 TH

14 day Ethereum Transaction History

Blocks

View All

Block 3104622 Mined By Ethpool_2 >15 secs ago
3 txns IN 12 secs
Block Reward 5.00015 Ether

Block 3104621 Mined By Ethermine >27 secs ago
5 txns IN 13 secs
Block Reward 5.00409 Ether

Block 3104620 Mined By 0x9633B149e9f6c26... >40 secs ago
4 txns IN 4 secs
Block Reward 5.00187 Ether

Block 3104619 Mined By DwarfPool! >44 secs ago
0 txns IN 20 secs
Block Reward 5 Ether

Transactions

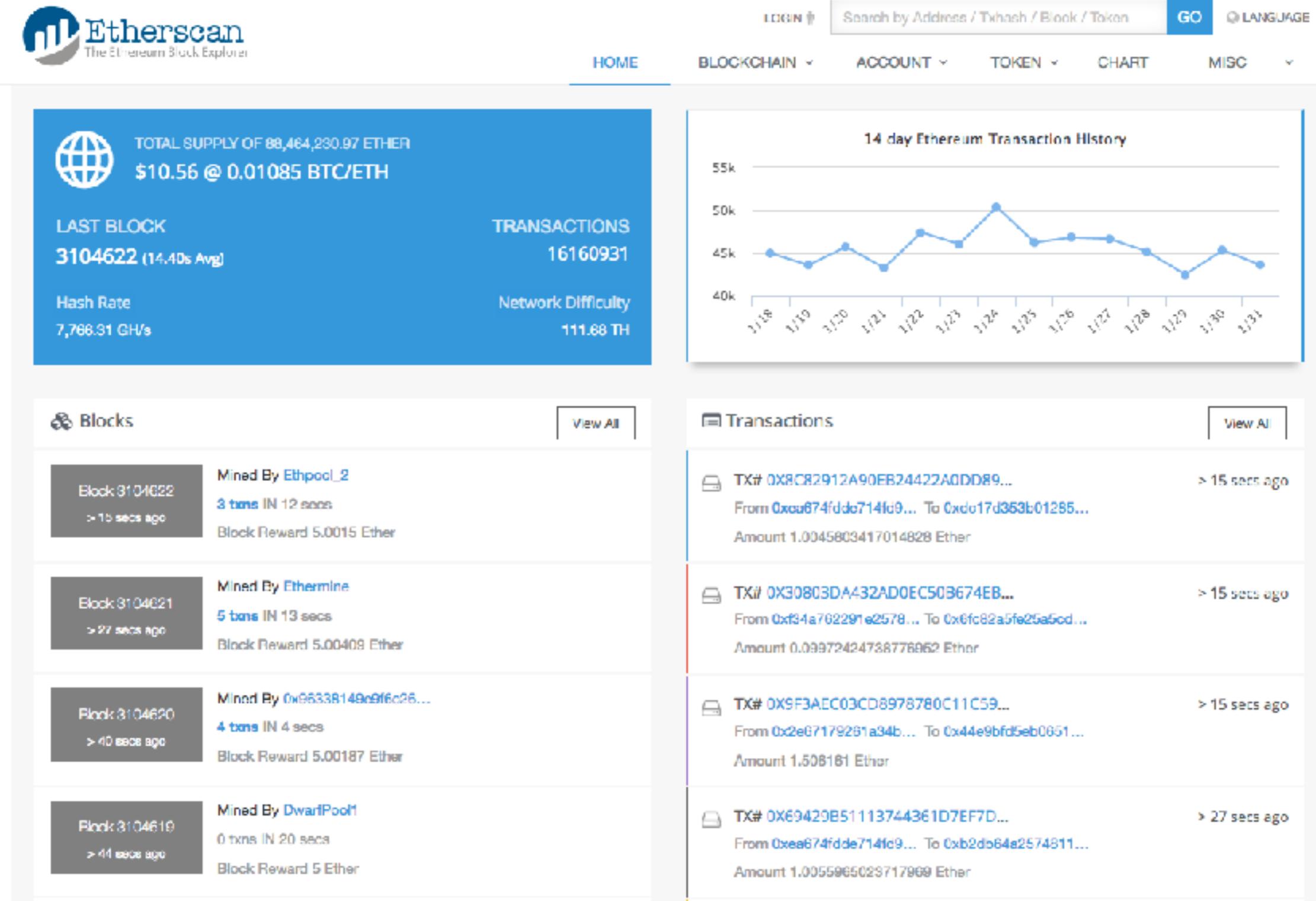
View All

TX# 0X8C82912A90EB24422A0DD89... > 15 secs ago
From 0xea674fdde714fc9... To 0xd017d353b01285...
Amount 1.0045803417014828 Ether

TX# 0X30803DA432AD0EC50B674EB... > 15 secs ago
From 0xf34a702291e2578... To 0x6fc82a5fe25a6cd...
Amount 0.09972424738776962 Ether

TX# 0X9F3AEC03CD8978780C11C59... > 15 secs ago
From 0x2e07179281a34b... To 0x44e9bfd5eb0051...
Amount 1.508181 Ether

TX# 0X69420B51113744361D7EF7D... > 27 secs ago
From 0xea674fdde714fc9... To 0xb2db64a2574811...
Amount 1.0055965029717969 Ether



CORTEX IN PRODUCTION WITH 1 OF 6 LICENSED ECF OPERATORS

ataplus

Dogecoin (Testnet) Blockchain / ATA-Plus V0.0.1 / Datastores / Investments

Credits: 264.0000000 FLUSH LOGOUT

COMMITTS

DATASTORES

ISSUERS

COMPANIES

INVESTORS

INVESTMENTS

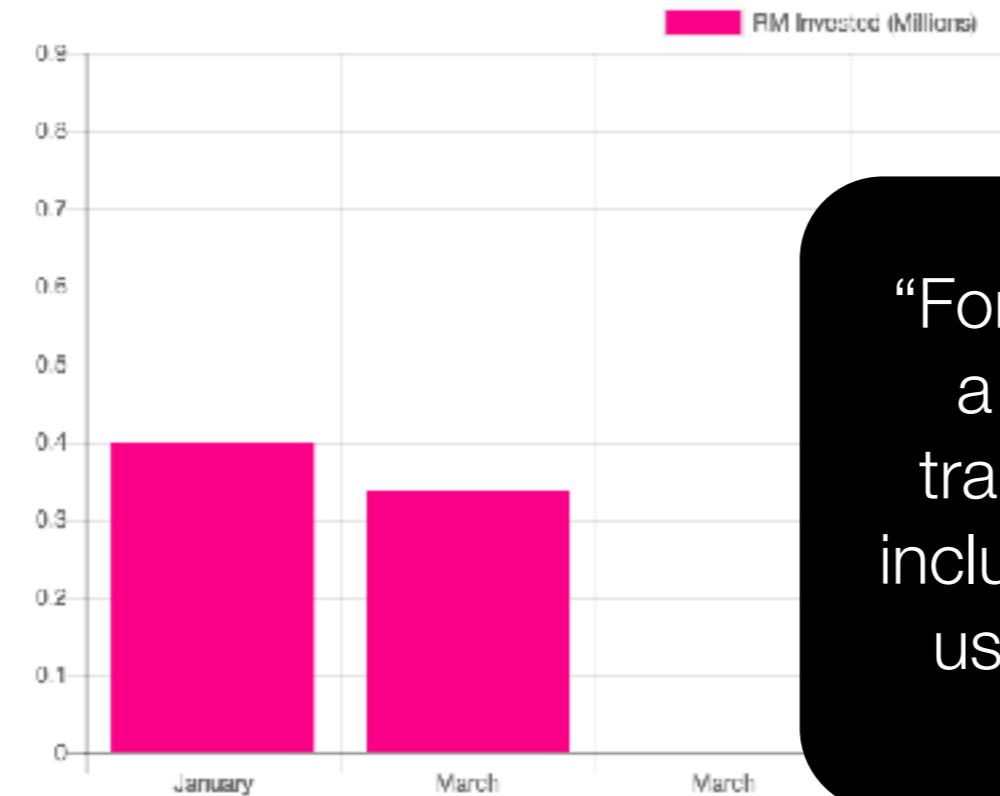
SECTORS

ADD NEW

SCHEMA

DOCUMENTATION

6 Months Sitewide Total Investments



“For ECF to flourish, there must be a deep depository of trust and transparency that is frictionless & inclusive. Neuoware’s tech enables us to provide all that and more!”

sort by

Most Recent

search investments

f2583c4bbbc1d7f70fe776ef8de24e3e9131884de2be5ed3365fe72e53fa2177

EDIT

DELETE

SCHEMA

Key

Value

Index: Investment ID [auto]

bf28617205e695439c0dd2285a76d7c1

powered by neuoware



Kyri - Co-Founder & Director
of Licensed ECF Platform

OTHER ORGANIZATIONS WE HAVE WORKED WITH

REGULATORS WE HAVE TRAINED



BANK NEGARA MALAYSIA
CENTRAL BANK OF MALAYSIA



Suruhanjaya Sekuriti
Securities Commission
Malaysia

INSTITUTIONS INVESTED IN US

500 startups

coinsilium

INSTITUTIONS WE HAVE DONE BUSINESS WITH

DBS

ataplus

axiata

Maybank

THANK YOU

NOW IS THE TIME TO QUESTION THINGS

LEARN MORE ABOUT



neuroware

<http://neuroware.io>