

## The ABC of Economics, Blockchains, VCs Virtual Currencies Crypto-Currencies, in the 2020s

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- Multilateral Trade Agreements, price fixing, VL/VO
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- Public Private Partnership(PPP), Rating agencies
- Derivatives and the GlassSteagall in the 2020s

**Libra see(libra.org)** will make its entrance in 2020, Libra is a real Payment Method unlike bitcoins which are more an investment strategy than a Payment Method.

Historically we have to look back at the emergence of Crypto currencies to understand where we are today why and how did we get there.

**At the beginning was cash or the lack of it depending on the chosen perspective.**

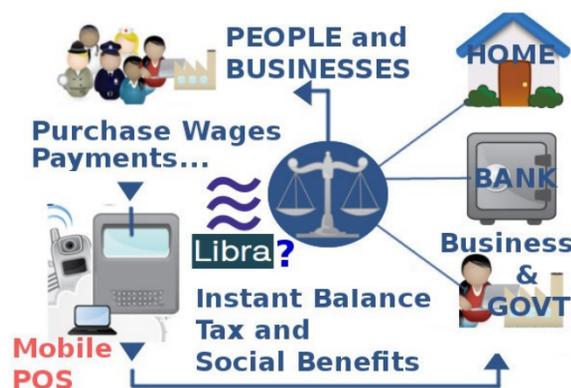
Payments by Cash in Australia have decreased in ten years from 70% to 37% according to the RBA Governor, Philippe Lowe, December 2017, one can assume that in ten years from now given the increasing trend towards electronic payments, and the popularity of smartphones and plastic cards, the amount of Cash transactions will fall to a level between 10 to 15% and below, and at that point be getting very close to Sweden, the most cashless society today, that implemented an interactive pro-active taxation and social benefits system(see below).

Given that reaching a cashless society was 90% of the difficulty to implement a government totally interactive tax system for households and businesses including social benefits, such as in Sweden, strategic planning in this area has now become critical around tax systems and delays could cost up to a quarter of the budget's revenue within ten years. **However that does not mean getting rid totally of Cash** specially if there is no fall back from possible looming internet and power crashes, then it could become a case of choosing between cash and carry or crash and buried.

Law enforcement agencies can access the traditional banking system and its logs(see diagram) but private currencies or eMoney based on distributed ledgers(Blockchains) will soon become a headache for governments, currently bitcoins and some current crypto-currencies are not real exchange money for consumers but other forms of technologies with eMoney for payments /transactions appear everyday including on coming Libra and will be a new challenge for current policy makers and their unadapted taxation systems in regard to new technologies including Derivatives, blockchains and new methods of payment.

**Libra** in itself will challenge both the plastic credit cards society and the cash and carry.

A higher volume/ extension of the current plastic cards anyone can purchase in supermarkets and rechargeable on smartphone already presents some challenge for law enforcement agencies and the ATO/ Centrelink in Australia but **Libra** will be a much bigger challenge albeit other governments more savvy in Technology will like the interactive access to all encrypted transactions and at the other end consumers in countries with little banking facilities will benefit from this new method of payment which does not remove the usage of cash.



In Sweden it is the Govt that is central to all transactions on smartphones etc, interfacing with banks therefor interacting with Libra should be easy.

## Flat Money and the Money Supply, Quantitative Easing(QE)

Money may not grow on Trees and yet it keeps growing today, it literally multiplies like the world population.

IMF countries until 1971 agreed to keep their exchange rates (the value of their currencies in terms of the U.S. dollar and, in the case of the United States, the value of the dollar in terms of gold) pegged at rates that could be adjusted only to correct a "fundamental disequilibrium" in the balance of payments, and only with the IMF's agreement. This par value system, also known as the Bretton Woods system prevailed until 1971, when the U.S. government suspended the convertibility of the dollar (and dollar reserves held by other governments) into gold.

Today the 5 main central banks(US China Euro UK Japan) are printing money(QE) like a drunken camel, increasing the money supply beyond the scarcity created by the population growth sharing it, such an approach is always inflationary, but...

There is however one inflation exception when ever increasing the money supply, mentioned by John Maynard Keynes, when new working hands are absorbing instantly this excess created.

In our new world of the global economy, new hands are found easily almost instantly in developing countries through offshoring and outsourcing.

### 3 Ways of increasing the Money supply

#### 1- Directly with the Banking Money Multiplier

According to BIS last **Banking Regulations, see BIS and Basle Agreement**, banks can print up to 17 time the amount of their deposits, though excess above may be difficult to control, the money often feeds customer borrowings/ loans with the Banks securing assets, hopefully not derivatives.

#### 2- Directly through Stimulus-Helicoptere Money

That is when you find an unexpected Govt cheque in the mail or an unexpected amount of money on your bank account paid by the Govt for you to spend in a hurry to stimulate a dormant economy.

#### 3- Indirectly through Govt spending and issuing Securities/ Bonds to cover debt

A government debt obligation backed by credit and taxing power of a country certifies a contract between the borrower (bill/ bond issuer) and lender (bondholder). The issuer pledges to pay the loan principal (par value of the bond) to the bondholder on a fixed date (maturity date) as well as a fixed rate of interest for the life of the bond.

The Bond Market is close to \$100trillion(BIS estimates) a third are US issued bonds, some held by China.

A sovereign Bond is issued by a government within a given country and denominated in a foreign currency unlike some bonds issued by Treasury in \$A, Non resident Issuers/ Kangaroos and Australian Dollar Eurobonds For more detail see The Australian Bond Market in 2011 and Beyond, Guy Debelle Assistant Governor (Financial Markets), RBA,2011.

Kangaroo bonds issued in Aussie dollar held by investors gave some resilience to the Australian dollar to downward pressure.

There is a glut of Govt issued securities world wide, some have argued that this glut combined with low interest rates is one cause of excessive speculative prices in real estate in the search of solid assets world wide.

The emergence of bitcoins based on scarcity, another concept of economics, is another reminder of the abundance of the current money supply.

### Velocity of Money

That is when the money sleep under the bed or the same coin is exchanged so many times in the day.

See M1 M2 Money supply and Velocity of Money it is expected that Libra Velocity will be extremely high when compared to Bitcoins.

## Bitcoins investment and Money Scarcity

Bitcoins are based on the concept of scarcity to counter the money printing press, the number of Bitcoins to be issued is a fixed number that can never be expended that is unless competition arise with new crypto currencies such as green coins and red coins etc...

### So how do we check and control crypto-currency transactions?

**According to the IMF virtual currencies and blockchains document sdn1603**, as on the diagram below, which reflects only some part of this initial documentation from IMF Internal Discussions:

a - Copies of transaction records(ledgers) are kept in multiple computers in the network and visible to anyone and a transaction is settled by a multitude of individual nodes(miners), providing computing resources to the network.

b - Miners solve a Cryptographic puzzle as part of the validation process. Miners need to show proof of doing this work to the network(called a "proof of work" system), which is costly in computing and energy resources.

c- Only the miner who finds the solution faster than any others receives newly minted Bitcoins as reward for their service.

d- Trust is created by making tampering attempts prohibitively expensive. If a miner wants to record a false transaction, she needs to compete against other miners who are acting honestly(or trying to fake a different transaction).

But what happens when a miner takes an unexpected disproportional share of the network? Can it dictates who has a priority for business? For more on these issues consult Monetary and Capital Markets, Legal, and Strategy and Policy Review Departments Virtual Currencies and Beyond: Initial Considerations Prepared by an IMF Staff Team for discussions... refer to sdn1603, the diagram below is not an exact copy from the discussions.

**Libra** See [Libra.org https://libra.org/](https://libra.org/)

**Libra** is completely different to Bitcoins, it is a Payment Method which is developed with the concept of concurrency in mind using "RUST" programming approach with "Move" to smooth any problem of concurrency that could be inherent when millions of users are involved to share resources and blockchains.

Unlike the Bitcoin crypto currency an asset mainly based on a fixed unmutable issued number, making it an investment system with wide fluctuations in the value of the unit rather than a high concurrency Payment Method such as Libra with potentially several hundred million users at a single given time.

The value of Libra is based on the 5 main Central Bank's currency: \$US, China, €Euro, £ Sterling, Japan ¥, making the value of the unit very stable.

Talking of Libra in term of Asset or speculative value makes no sens either given Libra is an instrument not an asset, there is no specific issued number as it is like an "Auberge Espagnole" that is, you only find what you bring in, with your smartphone, and or cash conversion for example.

**Libra** cannot be compared to other electronic payment systems or Credit cards using EFTPOS either but it can also use them and convert cash.

All transactions with **Libra** will be secured with blockchains and encrypted payments. Libra transactions though will not need to be linked to a bank account or credit card, thus limiting risks.

Transactions will be electronically tracable by law enforcement agencies and logged,

**Libra is not** another one of these crypto currencies having found investment popularity to balance abundance in money supply linked with flat moneys.

**Libra** competes with electronic purses and/or credit card payments without being locked into the banking and/or credit card system.

## Cryptos, C.D.O.s New non-Bank Payment Methods. The New Challenge for Law enforcement agencies and taxes:

1 - From an internal viewpoint Derivatives / C.D.O.s, and Virtual Currencies new payment methods are both a technology challenge for Law Enforcement Agencies, the ATO, and Treasury but banning Cash is not going to solve the problem!

Taxation based on Reporting and post evaluation becomes a thing of the past needing to be complemented by an interactive and pro active technology capable of dealing with new technologies such as Libra Bitcoins Blockchains Encrypted logs outside of the banking system in the diagram beside, Libra.org is outside this diagram and look more like the Sweden diagram above.

2 - Traders mainly in Wall St(30%) and Canary Wharf(60%) dealing with Derivatives are communicating with clients from the banks and bank accounts which are traceable, that is, for the one dealing with the "normal" Banking system or have electronic reporting requirement obligations the new Question is will traders also trade in Libra?

3 - Trading floors themselves in places such as Wall St and Canary Wharf have sophisticated computer systems, with "mirroring", which duplicates data and processes so that if one processor fails another takes over simultaneously protecting from trading halt, logs enable to track all transactions from the beginning of the trading floor session and are restored when a new session starts and can be analysed by law enforcement agencies.

4 - Payments made by clients from the Banks benefit from a reliable and safe transaction system which also stores all transactions on a log, that is credit card and ATM transactions are stored on a log with mirroring for 24h, at the end of which, the mnemopost file is purged just after the Bank ledger update 5, hence there is a check and balance mechanism or is there if derivatives have escaped the radar through non-OTC or rogue traders overseas or encrypted payments in Blockchains in Libra.org are outside the system?

5-6 - A process similar to the former clearing house control and clear the transactions between Banks but government agencies around the world are still discussing derivatives clearing and this is not mentioning payment transactions outside the banking system such as the new ones coming with Libra.

Existing clearing mechanisms for derivatives are as much distributed as block chains around the world, in private hands and not necessary linked with major banks through a formal mechanism that law enforcement agencies can supervise!

The relationship with the Govt and the format of Libra's logs has probably yet to be defined.

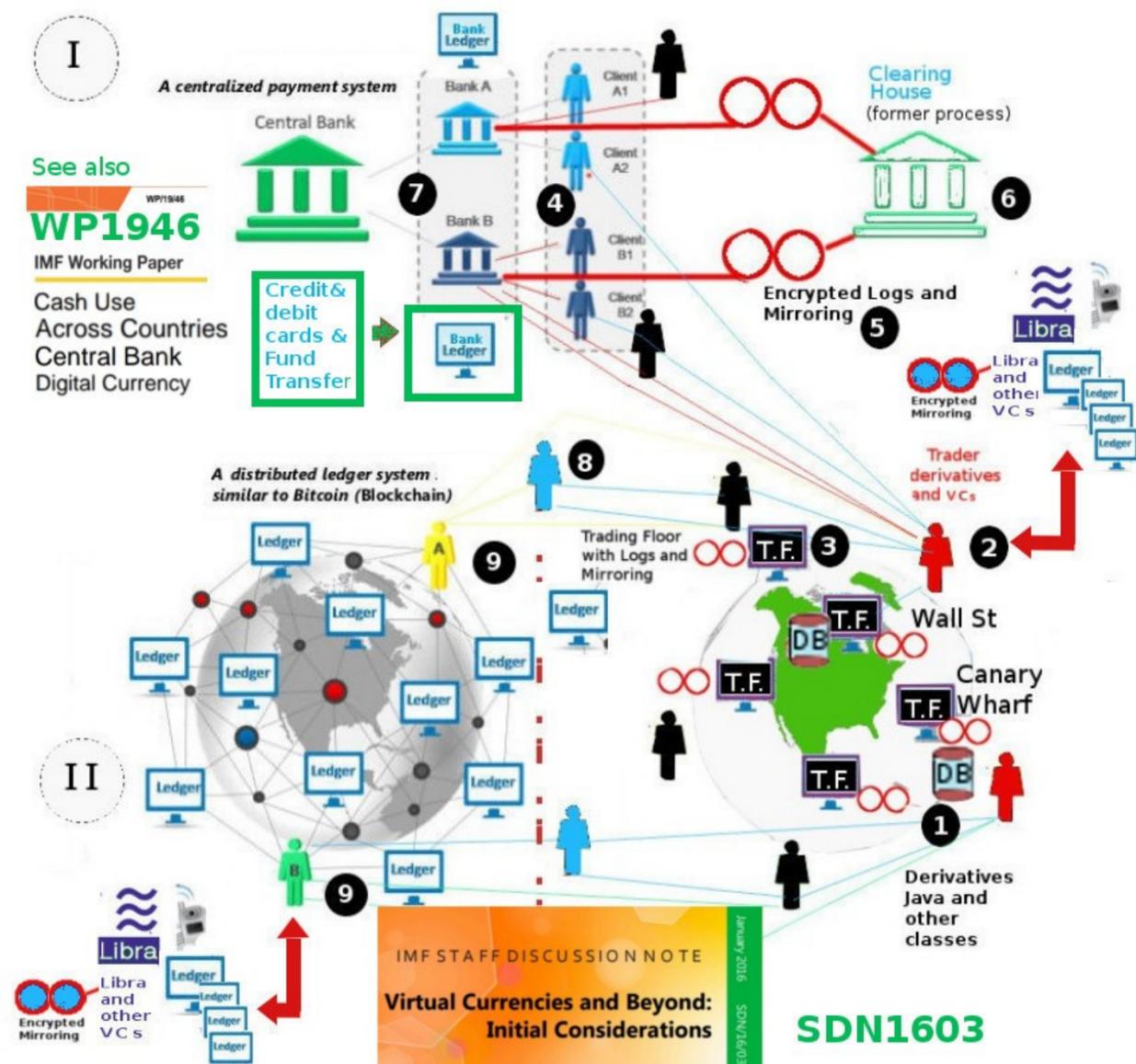
7- The central Bank overviewed and supervised the process during the old days when cheques were issued between customers of different banks, the bar-codes at the bottom of the cheque were used to sort them before they were recorded on a file to be processed by the clearing house, today with the internet the mechanism is more straight forward albeit contracts between parties in derivatives often in different countries have no mandatory electronic formal formatted log available to law enforcement agencies to evaluate automatically the clearing process from any trading platform if any were to exist, replacing or complementing current reporting!

From a banking point of view all transactions balanced to "THE" ledger before update and, most importantly, are traceable (apart from some derivatives) as to who issued what financial transaction/ payment.

What happens with payments made outside the Banking system, is there any check and balance?

8- But what's happen to law enforcement agencies when Traders instead of dealing with the Traditional Banking System are involved with Blockchains with or without Crypto currencies(9) and/ or payments from clients are functioning with a different mechanism to that of central banks(7) or are not clients of the banks but clients of Libra.org which is by the way a not for profit Organisation?

See Libra.org <https://libra.org/>



### I versus II : Trading and Payment systems have now two sides (numbers in the diagram above are referenced also on the left of this page),

I - Where one deals with data logs scrutinized by law enforcement agencies and agencies fighting fraud and money laundering in the traditional Banking system, but with limited control and tax ability on Derivatives.

II - Where the control is kept at arm length from law enforcement agencies, either for technical reasons beyond the level of skills developed by BIS and Government agencies, or because these are facing blockchains with a different level of scrutiny, because they are dispersed in a peer to peer system of ledgers (8-9) have multiple dispersed logs or no log at all depending on the situation Libra/ VCs, Derivatives etc etc

Ultimately the ATO and other Tax Offices around the world will have to bite the bullet and move to a more interactive taxation adapted to modern technologies and their new methods of payment, and will need some control over VC(virtual currencies) and blockchains, so is the ATO and the MIBs at the RBA and APRA doing their job or are they living in a world that is quickly vanishing. Ultimately the ATO will have to absorb Centrelink in Australia and supply interactive/ pro-active ways to submit taxes for all citizens, new ways that are integrated with social benefits like in Sweden specially with the increasing size of the GIG economy and abandon the idea of chasing people ten years down the track.

It does not mean abandoning checking files and logs it just mean do it "now", through an interactive pro-active checking system with modern technologies and new payment methods, not in a post evaluation 18<sup>th</sup> century mode.

The Australian Taxation Office has to recognise that self employment and mature age employment is becoming the growing sector of business jobs and the economy, given our "Aging" population, albeit the population is still growing, thanks to successful migration, but our Super is starting to smooth the burden of Pensions on the Budget.

The OECD has been speaking for the last ten years of the shrinking of Government Revenue Base in many OECD Countries and the IMF has been warning OECD Governments of the importance to be aware of change in Payment Methods. Hopefully the Australian Tax Office will adapt more quickly to interactive taxation than it did for the GST and the internet/ eSales, it took 20 years, possibly \$500billion of losses and the loss of many local jobs!,, though I am curious to see how it will unfold without looking beyond the GST and looking at having the whole or at least most of the taxation being based on the internet coupled with the latest POS Technology and cyber capture of all transactions between banks, trading floors, and businesses, including non Bank Libra.org.

Is the ban on large Cash transactions proposed by the Australian Government law enforcement agencies necessary?... One would have to be cynical to believe it is necessary,

1 people attempting tax fraud don't rely on large cash transactions and with the current system of GST in and out payments businesses do not gain anything by moving to Cash Remember it is the same politicians arguing for ten years that the GST on eCommerce was in the too hard basket killing local business unfairly and not capable of collecting a \$25-50Billion of yearly revenue from a small 0.1% levy from successful derivative contracts.

2 the global economy has created multiple ways to escape tax for corporations and this has nothing to do with cash see VL/ VO, Private Equity Funds, price fixing and Multi Lateral Trade agreements that our Politicians in the Main Political Parties were so keen on but will be a feast for lawyers and large corporations escaping tax.

3 the Australian Government does not offer a more pro active and integrated social benefits and taxation by demanding limiting Cash transactions, it only offers more of the deep State and more paper work and volume of data for law enforcement agencies without any proof of more success in catching fraud.

4 Questions remain whether the Government is actually attempting to limit the impact of Libra and new method of payments on the bank profits, or simply attempting to delay required inevitable changes to computer systems in law enforcement agencies and the ATO/ Centrelink that will have to be made one day, anyway, with new technologies.

5 Will the coming National Payment Platform be operated by an independent statutory body capable of controlling virtual currencies and all payments interactively? That is operating on I and II in the diagram above, see also IMF SDN 1603 & IMF WP1946 for detail. Will we have also a platform to control interactively derivatives to raise a small levy(up to \$50billion a year) on this massive gambling(\$trillions a year downunder) albeit legitimate hedging for 80 to 90% but which have gloriously avoided even the smallest of tax!!! see this link!