

## **GOLD DINAR: AN ALTERNATIVE TO FIAT CURRENCY AND CENTRAL BANKING**

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### **ABSTRACT**

The most important factor for defining and bypassing capitalism is understanding the role and nature of money. For the last three hundred years the despotic domination of the British pound and then the US dollar have immorally corrupted our economy and trade. The demise of the US dollar as the world's reserve currency is the most important political event of the 21st century. What will replace the US dollar will define the political landscape of our time.

The Shariah currency is the gold dinar and the silver dirham. The present constitutional legal frame of our Muslims societies -a left over from the colonial days- sanctions the fundamental pillars of capitalism, namely: central bank, national debt and fiat money. The disruptive nature of new technologies such as blockchain (different from bitcoin) and the new geopolitical landscape created by the new China of Xi Jinping offers a new horizon to strategize the practical and viable return of a gold and silver currency. Together with the return of the dinar, new possibilities emerge to implement all the other aspects of muamalat, in particular, the public market and (non-banking) Islamic finance. This talk is a deliberation on the challenges and opportunities ahead of us and will define the best strategies at hand for the return of the Shariah currency and muamalat.

**Keywords: gold dinar, silver dirham, fractional reserve banking, central banking, fiat currency, blockchain technology, aql.**

Allah is the Light of the Heavens and the Earth. Everything originates from Him, everything returns to Him. He has power over everything. He has no partners, no equals; nothing can be compared with Him. And Muhammad, salallahu alaihi wa salam, is His Messenger. Rasulullah, salallahu alaihi wa salam, is the first of mankind. He, salallahu alaihi wa salam, is the perfect man, and the model for all mankind.

### **THE AGE OF REASON AND THE COMING AGE OF AQL**

Allah has given man a limited cognition to reason with which he formulates "opinions" about the world driven by his intentions and his sensory experience of the world. And Allah has also given man an immense heart with a unique power of cognition, which is "aql". "Aql comes from the

*Qalb*” –Allah says in the Qur’an. *Aql* is to know with his heart. This power of the heart dominates and shapes the reason. *Aql* is the source of “*basira*” comes from the heart, while opinions come from reason from the brain. The heart sees and within that seeing the brain reasons. Incidentally it is necessary to clarify that most translations in English of the word *aql* they say it is: reason or intellect. This is an incorrect translation and misunderstanding of the word *aql*. The real translation of *aql* would be the cognitive power of the heart.

Man worships with the heart not with the brain. With the heart, man worships those objects that he fears or he loves. Rumi writes: “Be aware of what you fear, because what you fear is what you worship”. The same can be said about love (passionate love). Be aware of what you love (the most) because what you love (the most) is what you worship”. The object of worship alters the meaning of things all around that object. Worship is not controlled with reason –although it alters reason-, is to do with the heart. Its by this capacity of the heart, mankind is able to worship Allah or worship other-than-Allah.

As Sufis say that fear of this world cannot be cured with reason; it can only be cured with the heart: fear is cured with fear (a greater fear). The same applies to love. To cure of fear of this world, the Sufis say, you need fear of Allah. To cure love of this world, you need love of Allah. Those who fear Allah, are free from any fear of other-than-Allah, and those are the people with the best capacity of *Aql*. The same applies to love. This visionary capacity of *Aql* increases in relation to your nearness to Allah, it can make you see beyond what is rationally obvious and frees you from your personal, cultural and historical conditioning. Freedom belongs to those who love Allah and fear Allah.

Love and fear dominate reason and is the affair of the heart. Thus someone who worships money will kill, rob, and lie to obtain that money. The famous Al Capone worshipped money and had no limit for his desire for money. Despite being a Roman Catholic and regular Churchgoer, his God was not the Christian God but money. He was a good worshipper but of money: money gave meaning to everything in his life.

Laws are very important to societies. Laws can liberate or oppress people. In the Laws what do we worship is at stake. Allah says in the Qur’an: “The *Hukm* (legislating, commanding) is for none but Allah”. Allah has given His Laws. Mankind has no authority to deny them. When these Commands of Allah are denied and replaced with man-made command, this destroys the society. This is defiance to the divine decree. This is what happened in the case of Riba. To allow Riba by Law is a sign of our defiance to Allah.

In our times, Riba has been endorsed by Law. The systematic legitimization of Riba through laws happened through Constitutions: Central banks, paper money and national debt. The Muslims were not given a choice but handed over to us; paradoxically in the event of becoming independent from the colonial masters. Ironically, the same event that declared the formation of our national States imprisoned us into the Riba system. Therefore economic independence never took place. Our national States were constitutionally entangled with the Riba system.

Many of us do not understand the movement and the origin of constitutionalism. Constitution was part of the liberal revolutions that shook off Christianity from their normative position and gave

way to rational creation of laws. The argument was that mankind no longer needed a father god to dictate what is wrong and right, mankind had grown up from infancy. Mankind now can decide what is right and wrong without a heavenly father. This humanistic approach to law was sometimes presented as “natural law”, even though there was nothing natural about man-made law. Constitutions, thus, emerged as the emancipation of man from god. Constitutionalism was the movement that represented that desire of emancipation from Church. In Muslim lands, constitutionalism was inherited from the colonial empires – constitutional monarchy like Britain or a constitutional republic like France.

The reformist Islam was designed in the shape of the protestant Christianity. This protestant Islam, mirroring protestant Christianity, was based on two factors: (1) a disproportionate personal morality (puritanism) that would practically eclipse social morality, (2) embracing capitalism by making usury legitimate. Just like Protestantism gave legality to usury in Europe, Islamic Reformism gave legality to *riba* in Islam. Exactly like the Protestants gave legality to banking in Europe, the Islamic reformers gave birth to Islamic banks in the lands of Islam. But with Islamic banking come a tacit endorsement of fractional reserve banking, central banking and paper money.

Our generation finds itself trapped between capitalist constitutions left by the colonial powers and a protestant Islam that endorses personal morality obsessively focused on sexual behaviour while ignoring the social morality (*Muamalat*) of Islam, and supports tacitly or explicitly Islamic banking and therefore *Riba*. The motto of the reformers was *ibada* cannot be changed, but *Muamalat* is the arena of reform. As a result our Islam today has no traces of *Muamalat*. Now the word *Muamalat* is used to name Islamic banks in Malaysia and Indonesia.

Our constitutions endorse capitalism and a large number of scholars are unable to resolve the issue of *Riba* or have ended up to “Islamize” *riba*. A great deal of the modern debate about *riba* taking place among Muslims is between open supporters of *Riba* and capitalism and those who support Islamic banking. This debate does not focus on other alternatives. In reality, the debate between banking and Islamic banking is superficial and cosmetic dissembling of capitalism without resolving the core issues. Islamic banking is still an extension of capitalism not a cure of capitalism. Islamic banking still operates within the domain of usury of central banking: fractional reserve banking and paper money.

## **WHAT IS MONEY IN ISLAM?**

Money is any merchandise commonly accepted as a medium of exchange. Money is a commodity and cannot be a debt or a promissory note, because there are restrictions on the use and transfers of debt in Islamic Law. Money in Madina consisted of several items, gold and silver coins were some of them. The fundamental matter governing the question of money is that people are free to choose. Muslims in the past have used gold, silver, cereal grains, salt etc. as means of payment. Money is part of trading, what regulates trading is mutual consent. Allah says in the Quran: trade with mutual consent. That is the fundamental principle. No group of people, or the government have the authority to impose what is the medium of exchange.

Some people confuse assaying a coin with establishing a monopoly on money. The government would regulate weights and measures. It is part of the function of the *Hisbah* to do so. Assaying a coin is part of establishing standards. It is conceivable that the government wants to be the authority to assay coins but the government cannot force the citizens to use those coins, even if they are assayed. On the other hand, the government can force the citizens not to use false coins, because it disrupts trading, and that is not imposing a monopoly, it simply imposes a standard of weights and measures.

The money of the Shariah is the gold Dinar and silver Dirham. As Ibn Khaldun argues, because they are both mentioned in Qur'an, they have a reality in terms of weight and measure. The gold dinar and the silver dirham used to measure the *nisab* of zakat, have a weight in relation to the *mithqal*. The *mithqal* is a weight measure equal to 4.25 grams. The weight of the dinar is 1 *mithqal* and the weight of the dirham is 7/10<sup>th</sup> of a *mithqal*.

In Islam it is obligatory to mint these coins and to make them available to people so that they can pay their zakat, and the value of the *nisab* can be calculated in terms of the market value of the coins. It is wrong today to calculate the zakat on the basis of the value of the gold or silver bullion (the material without minting), because the *nisab* is calculated on the basis of the minted coins and not in the value of the *tibr* (that is the value of unminted precious metals).

Today the minting of the dinar and dirham has been eliminated by the monopoly granted by the capitalist constitution to the fiat currency issued by the Central Bank. Currency has been forced and the freedom of choice given by Islam has been taken away by financial capitalism.

## **WHAT IS THE MONEY WE HAVE TODAY?**

Money is what we have in our pockets. If you open your wallet you will find those bills. They are promissory notes issued by a Central Bank. This type of fiat money has its origins in banking institutions. They are a deceptive form of the original bills of exchange, which in turn have their origin in the cheques, which comes from the Arabic *sak* (sukuk in plural). The *sak* have a function in Islamic trading and they are halal within the restrictions imposed by the Shariah. But the paper money of the banks was a fraudulent version of the bills of exchange in as much as they were based on fractional reserve banking.

The practice of fractional reserve banking is a system based on lending money you do not have through the use of promissory notes. Its mathematics is very clear. What are not often explained are the moral implications of this system: the amoral attitude of the transfer of wealth between people without prior agreement. Fractional reserve banking is the heart of banking and the principle upon which capitalism rests. Without fractional reserve banking there is no capitalism. In other words take away fractional reserve banking and there will be no banking, take away banking and capitalism becomes nonsensical but harmless.

The fiat money enforced as legal tender or compulsory money on the people came with the introduction of central banking. The purpose of the central bank is to protect the stability of the

banking system. The central bank is the lender of last resort to all the banks, and has the capacity to issue the currency of the country that the entire nation is obliged to use.

The first central bank, although not chronologically, is the Bank of England founded in 1694. It was so efficient in collecting money that soon the idea was exported to all the other countries of Europe. At the heart of this system is that governments can find almost unlimited means of finance, the only limitation being that excessive inflation can lead to revolt. But there is another greater beneficiary of the system that is the private commercial banks. The commercial banks can practice fractional reserve banking under the protection of the law and the central bank. The commercial banks issue most of the currency in circulation, in a proportion of a proximately 20 to 1 in relation to the total money in circulation. That is for every 20 pounds in circulation only one is issued by Bank of England, the other 19 are issued by private banks. The actual proportion is much more today, in excess of 50 to 1.

Therefore the commercial banks have the right to issue money that they do not have. The meaning of that is that people have to pay inflation costs to private banks (as result of their right to create new credit) on the money they possess. This is the same as saying the private banks tax people. This is rationalising to the people with simple words that denote the confidence banks have in their authority. Banks sit comfortably in their position because they know they cannot be challenged legally. This is nothing but legal theft.

At the beginning of the XX century it was argued by some people in the West, that since the banks do not have the authority to rob people by issue people's money, and since the people have to pay for the inflation that new paper money creates, the most logical conclusion would be that the banks have to be nationalised. It was commonly argued at the time, that the nationalisation of banking is the most logical first step to eliminate the banking monopoly on money. By the same logic, in the path to an Islamic system, the nationalisation of banking should be the first step. The argument is the following: the issuing of new money cannot be in the hands of private institutions; either these banking institutions are prevented from fractional reserve practices or the banks have to belong to the people who pay the inflation, that is, the nation. Islamic banks, of course, operate like commercial banks and practice fractional reserve banking which cannot be justified in any way to the injunctions of Islam.

## **FRACTIONAL RESERVE BANKING**

Once you understand how the banks can lend money that they do not have, then a whole set of further conclusions have to follow. First is the one explained before, that is, that the banks tax the population and that is unacceptable. The second is that they distribute the money accumulated at their own will, as if it is theirs, when in fact it belongs to the people. The money that is generated by issuing new credit does not belong to the creditor or to the credited, it belongs to the nation. The bank simply appropriates itself of that money and then makes profit from it. This is how this system works but it is immoral.

This second element is very important to understand because it leads to imbalance in the economy. Money is accumulated around the interest groups that gather around commercial banks. These grouping often affiliated by blood or religion become the money elite. What is important from the perspective of a non-capitalist society is that capital accumulation disrupts the natural order of society. That is how the factory system came to replace the traditional guilds. In the eyes of that elite it became perfectly rational that the organisation of labour will be now redesigned in terms of owners and employees and the system of wage slavery was perfectly natural. Guilds could have become the natural inheritors of the industrial revolutions, but mechanisation of all industries was redirected to private hands with the use of the bank accumulation of money.

Another third discussion worth having around the idea of fractional reserve banking is how the role of abused and abuser (which was so clearly defined in the classical texts against usury) become blurred. In the classical literature on usury they always define the lender as the criminal abuser of the poor borrower who is in need (the abused). Yet today the borrower is not someone desperately in need; the borrowers are not forced into the hands of the usurers because they have no other choice; the borrowers in fact they queue in the bank to be “abused”. The word abuse does not fit into the description, more likely they want to borrow because they see an advantage. Well, if the abuser and abused pattern does not apply does it mean the evil of usury has disappeared? This is what many propagandist of usury argued. They said the times have changed and usury is no longer an evil. In the defence of this argument they speak about the change in borrowing patterns of society from an agricultural society to the needs of an industrial society. Even some Muslims use this argument in order to justify usury.

The reality of this matter is that fractional reserve banking has changed the players that operate at usury, but has not eliminated the evil of it. For the first time in history because of the fact of lending money that they do not have, the banks were capable of lowering the interest rates from the abusive rates of the classical literature to the moderate ones of today. This is possible because in this “new usury” of the banks a third party enters the contract although unaware of it, which are the ordinary people. People absorb the evil of this usurious lending through inflation. Both lender and borrower abuse the people with inflation. People pay for something they have not agreed upon. This can only happen if the currency in their pockets is fiat money. Fractional reserve banking allowed lowering interest rates but people pay for it. In this new usury there are three parties, the lender, the borrower and the users of the currency. This is what makes it “new”.

There is another element to add to the discussion is how differently inflation affects people. The matter of inflation only became apparent to people during the XIX century and a discussion about money started there. Some saw that inflation if controlled by the government it will be a tax that will tax those who have more money and less to those who have less, but they were wrong. Most critical thinkers at the time did not realize that inflation has the veiled capacity to subsidise those in debt. While inflation removes value from each one who holds the paper, inflation also reduces the value of the debt of debtors. In other words, those who are in debt benefit from inflation. In an economy where the flow of money goes to those who have money (the condition of borrowing is to have collateral); the rich borrow more than the poor. Since the size of the financial economy is far larger than the real economy, it means debt is far larger than the total buying and selling. How much is “larger”? 97% of all money circulating is borrowed money. Inflation subsidizes all debts in the

debt economy. That is the reason why the capitalist propagandists always see deflation as the greatest evil of any economy. They are right if you consider that our economy is mostly debt, but this is not the complete story. In conclusion, inflation taxes the poor but subsidizes the rich. Inflation is the means to create imbalance and instability in the economy,

Nowadays a new concept has emerged: “too big to fail”. The idea is simple; the banks have to be protected at all costs because they are too big to fail. As a result of this philosophy the real economy is no longer supported by finance, but rather the real economy supports the financial economy. This is close to an end game story. But it will not be so as long as we keep bailing out the banks. The natural counter-argument against “to big to fail” is: if they are too big to fail, then they should belong to people. Again the nationalisation of banking is the natural next step to turn this economy around. The nationalisation of banking is the first step towards creating an end to riba.

Finally, fractional reserve banking forces the players to borrow or get punished. The result is that you have to borrow. It is impossible to consider purchasing a house on saved money you have to borrow. Any scheme that you might want to set up inside a paper money system has to consider that borrowing is subsidized while savings are punished. This is what makes fractional reserve banking so resilient. There is no escape. You have to borrow if you want to prosper.

## **NATIONALISATION OF BANKING**

Around 250 years ago the economy of Hindustan was the greatest in the world. It represented around 25% of the GDP of the world. Together with China they represented around 50% of the GDP of the world. Britain merely represented 2%. The province of Bengal, the richest province in the world represented 12% of the GDP of the world. Those were the figures. Then came a private British company called the East India Company. In the year of calamity of 1757, the battle of Plassey took place and the British took control of a province that was six times richer than their country. Up until then the outflow of gold and silver favoured Bengal, from then on gold and silver was sent to England.

Colonialism had been an expensive venture for the Spanish, because they had made the new territories provinces of Spain. To develop the new colonies was incredibly expensive to their treasury. Only the British, following their Dutch neighbour’s footsteps, learnt how to take benefit from the colonies. First the British had developed their own national central bank and like all central banks their desire was to expand the usage of their fiat currencies they needed not markets, but users of their currency. Unlike the Spaniards, the British had learnt to expand the usage of the currency and to export their inflation as a new way to tax people. Also it is important to notice that the East India Company was a private company not the State. They were only answerable to their shareholders, and their objective was only profit. To understand this we have to imagine Microsoft invading Mexico. The private company had no interest in the people they had just conquered. As a result 20 famines happened in the next 200 years of British rule in India that caused the death by starvation of millions of people.

We should remember that Hindustan was the richest country in the world. Hindustan was the environment for one of the largest transfers of wealth, that is, theft in the history of mankind. This

rich nation will turn into one of the poorest due to British Colonization. What was new in this affair was a new way of taxing people. Before, when a conquering nation wanted to excerpt taxes they had to go door-to-door and that was expensive. The British did something else. First took the gold and silver from the population and exchange it for promissory notes. You take the silver and gold rupees and you give them a voucher saying the bank “such and such” will pay the amount of 1, 5, 10 or 100 rupees. Once the people had the paper money in their pocket and only paper money to tax them became easier. No need to tax house by house, all you need to do is to print more paper rupees and the effect of the new supply of money will do the taxing by itself. This is taxing by inflation. The indigenous population had to believe that this is nothing but a natural way of progress.

The first step to eliminate riba will be the nationalisation of banking. This step will simply give the governments full control of the money supply and thus the people would be able to once more have control of their own money. The government will have to do the necessary changes in the economy to create full employment. The solution to the employment matter is industry and trading. The model of an Islamic economy is Madina.

Nationalisation of banking is the first step towards the elimination of banking. But before eliminating it all together two things will have to happen: the monetisation of gold and silver coins ideally using blockchain technology; and the transformation of the economy through mechanisation programs financed by government for agriculture in particular and the setting up of a trading infrastructure to build new cities using the CPEC and BRI as matrix. Chinese government exercises a complete control of its economy thanks to the practical nationalisation of banking.

## **THE MONETISATION OF GOLD AND SILVER**

The monetisation of a commodity seems to be the great difficulty in discussing gold and silver currency. The problem is not gold and silver the problem is with the monopolistic legislation of the Central Banks. But there are numerous strategists to go around that problem.

To monetise gold or silver the obvious first step is to mint coins. The second step is to system of exchange between paper money and commodities that is stable and easy to understand. The third step is to convince the shops that they can accept the gold and silver coins and they will be fully supported in their further usage. Fourth is the introduction of digital payment systems that facilitate the usage of transfers of gold and silver payments. Fifth is the introduction of digital market places that collaborate with physical market places. Sixth is the introduction of financial instruments based on dinar and dirham.

This is a quick overview of needs that are required to monetise dinar and dirham. Steps 1-3 are easy to understand. It has been done successfully in Kelantan, Malaysia. The case study of the Kelantan Gold Dinar proves that the people readily embraced gold and silver coins if given the opportunity. It also proved that from a small province in Northern Malaysia we could sell ten times more gold than the Central Bank of Malaysia. When the legality of the Gold Dinar and Silver Dirham was challenged, Kelantan responded with a new legislation that would introduce the gold Dinar and Silver Dirham into the payment of zakat. As a religious duty the Central Bank could not interfere in

the process. Like in Pakistan, in Malaysia Islam is the official religion in the country. To introduce this legislation in favour of dinar and dirham all that was required was to establish a reference to the nisab of zakat and the dinar and dirham would cease to be financial instruments and would become a religious affair. This gave us the freedom to use the coins in Kelantan.

There have been numerous other initiatives in USA, South Africa, Kazakhstan, Pakistan, Spain, China, Malaysia and Indonesia to introduce gold and silver payment systems. They are all based on an approach that is people to people, business to business. The key is to work within the existing legal frameworks of the countries we operate.

## **BLOCKCHAIN TECHNOLOGY AND IMPLEMENTING MUAMALAT**

Blockchain Technology or distributed ledger technology is a new way of storing and administering ledgers of unchangeable digitally recorded data in packages called blocks, which provides with highest security to date in the storage and management of information. The ledger accumulates blocks in a linear chain and stores them in a 'distributed database network' in which every database is synchronized with each other creating a singular virtual shared database. The ledger gathers and accumulates data in small blocks of information, which are linked with one another by encrypted links. The blocks can be added but not deleted, making it extremely robust against any attempt to tamper or modify the information without permission.

Blockchain disrupts the established security models that lock people out of networks by allowing more people access to a single ledger. It has proven its robustness as a platform in the last few years since bitcoin started. Nevertheless its applications from the perspective of adding value to society are still in their infancies.

### **Three Contentious Issues Concerning Blockchain**

1. **Crypto currencies.** Crypto currencies are pure speculative artificial values. They are very volatile. They grow on mathematical principles of hype demand, very similar, to the Tulip mania that originated our present financial markets. Without a base-value their fluctuation, could be arguably interesting as investment but useless as currency. It is important to understand that they do not add value to society, at best; they will add more inflation to the economy.
2. **Regulation.** In as much as blockchain wants to become part of the economy it will need regulation. Without regulation it will remain in the grey zone of the economy but unable to enter into the mainstream of regular economy. Regulation means many things to many people but what are important to contractual relations are jurisdiction, legality and enforcement. Unless regulation of the cyberspace extends to the physical individuals and to the physical assets, the cyberspace would encourage bad practices to persist and to grow.
3. **Validation.** Storing information in a secure manner means nothing if the information is not good in the first place. To allow every person to participate in the process of validation is problematic. Validation is foundational to the integrity of the information itself. Validation is not merely an operational procedure. Validation is everything. Validation must be legally

bound and must be consistent (include every little detail) in order to be of use. This questions whether the platforms must be open or closed, the degree of closeness, etc. In principle to allow information or players that are not properly validated increases the unreliability of the system.

### **A Strategic Start: A Closed Consortium**

A successful Blockchain strategy will require first answering the above questions about integrity in a satisfactory manner in order to build trust in the new technology. Creating trust is a long-term effort. We believe that it will become more acceptable to the main economic players if it is done first within a **closed consortium**, where it is easy to build trust. The best-case scenario in the world of successfully bringing a comprehensive consortium of economic players is Alastria in Spain. Their successful strategy consists on:

1. **No crypto currency.** Only tokens of legal tender money or real assets. The only room for crypto currencies will be those that they are defined by an underlying physical asset, such as oil, gold or silver. The present crypto currencies like bitcoin are like bullet trains (fast and convenient) but conditioned by the fact that they are not allowed to carry passengers. We contend that to represent value, they must represent a physical value, which would be like the train carrying passengers or cargo.
2. **Digital regulation must embrace Legal Regulation.** Complete integration with the legal requirements and regulations of the country in which they operate. This condition implies that The Alastria consortium is limited by the borders of Spain as the extent of the jurisdiction of Spanish Law. Even though the European Union offers an extended legal frame to commerce, it is important to understand to ascertain digitally all aspects of contractual law would require a complete integration of Law (which is unlikely to happen) including property rights, inheritance, taxation, donations, certification procedures, etc. All these issues must be included to achieve complete integration. This limitation also implies that further expansion beyond national boundaries will require the setting up of other similar national consortiums with which to establish common minimums of validation and co-responsibility. Following this argument, a global Blockchain technology platform will be defined as an international consortium of national consortiums
3. **Legal Validation.** Validation of the information cannot be done by the owner of the information (no self-validation, not even non-validated group validation) it will require to be validated by a legal body with the legal authority to validate. In the case of Spain this is done by the concurrence of State appointed notaries. Notaries are legally bound by Law. Alastria has created the first “digital notaries” drawn from the existing body of State notaries simply by extending their capacities to the digital world within extract application of the Law. Alastria is therefore a partly public, partly private network: to become a member requires procedure.



## **Smart Contracts, Tokenization and Digital ID**

Fundamental ideas:

### **Digital Identity**

In order to create a blockchain platform that can operate in the economy will have to create clear rules of participation. The first issue is the creation of common standards that will define the participant's **digital identity**. Digital identity is the starting point. That is to say, the establishment without a trace of doubt that the person who is operating in the platform is the person that declares to be. This is foundational to trading and to the credibility of the entire model.

### **Smart Contracts.**

One of the most exciting applications of blockchain technology is **smart contracts**. In our view this is also a starting point. Smart contracts can potentially add real value to society by improving the way in which contracts are done today. Blockchain offers security, transparency, full life-cycle transaction history, real-time, immutability, programming new attributes and cost efficiency.

### **Tokenization.**

All Contracts consists on at least two parties and at least two exchangeable values (typically one being money and the other a good of some kind). Four items. The process of transforming these items into digital data requires a technical process called tokenization and a validation before being admitted into the platform. The digital ID is one type of token. The **tokenization** of assets and money must follow a similar procedure with validation. In the validation is where other parties can be involved in.

### **Smartness.**

Once the validation is granted, the token will act as if they are deposited on a table in which all the four items are present. Because the validation is already done, the processing of the contract is fast. Fast means cost savings and possibly more activity.

### **Additional Functions.**

Additionally the token can be programmed with special functions, such as determining the time of payment, the conditions of payment, the direction of the payment, conditional usage of the tokens, and much more. These add value to the process because it saves time and allows for new and innovative forms of conducting trading.

### **Adaptability.**

Tokenization is not only for contracts but essentially any information can be tokenized: like a certificate, the content of a book, a will, or a property right. The list is large. The potential value of this technology to integrate government activities with property rights opens up for a new definition of what is white as opposed to black economy. Block technology makes transactions transparent and permanently recorded. Any cheating is recorded as it happened. Everything is open to scrutiny.

## Ownership of information

On the other hand, blockchain technology offers a true meaning to owning my own information. This is because encryption guarantees that my tokens and my ID are mine to administer with no other party except the one authorized by me being able to discover the actual information otherwise hidden being cryptography.

## How to Populate the Platform?

- Phase I: The **lawyers** community. They are the ones that make contracts. Smart contracts is only a continuity of what they are already doing. They should be the first to populate the platform.
- Phase II: The **technical** community. Although the software of blockchain technology is open source, we will require technical expertise to adapt the system to national necessities. To collaborate with Alastria will be of great help at this point.
- Phase III: The **banks**. They are the money managers. They are necessary. They need to be included in the platform without them the platform will be always incomplete.
- Phase IV: The **industry** leaders. The big companies must be invited after the major bank have already agreed.
- Phase V: The **Universities**. For them the opportunity is to participate in the Research and Development of the platform.
- Phase VI: Testing the system as an intranet from the first 200 members.
- Phase VII: **Launching** to the larger public.

## The Nodes

The nodes are the different synchronized databases that store and manage the ledger. There should be two types of nodes:

1. **Core nodes** which manage the ledger,
2. **Application nodes** dedicated to manage the applications.

Only the core nodes do mining. They get paid for their services by membership-tokenized fees. To become a core node should require more than ID. Being accepted to the core structure of the system would require stringent rules of acceptance, technical requirements in terms of hardware and software capabilities and finally the explicit approval of the existing members. This is in order to maintain integrity.

## The Islamic Dimension

Here are the basic ideas:

**The economy of Madina** does not contemplate the existence of paper money or banks. Usury, monopolies and unjust taxation are forbidden. This is how Blockchain can help to its development:

**Contracts are public** they require by law at least 2 witnesses, the more the merrier. The public nature of blockchain is not an issue.

**Money** is a commodity in Islam, that is, a tangible asset. Cryptovalues must be based on an asset. That makes present cryptocurrency as non-valid means of payment. The most common money in Islam, but not the only one was gold and silver: the dinar and dirham. The Islamic blockchain will operate tokenized dinars and dirhams.

**Islamic Finance** is not based on collateral but reputation. Reputation is difficult to handle in Internet, but blockchain technology is perfect to establish it. Reputation in Muslim communities was granted by your peers in your town, that is, those who know you and know your activity. Reputation is not given just verbally, but in Madina was expressed by vouching each other. Thus groups were created in which the members shared assets and liabilities. Everyone vouch of each other. These fraternities were called guilds. The guild of traders of Madina was called caravan. The Messenger of Islam, saw, was a caravan member.

**Caravans and guilds** can be created in blockchain technology and contribute to the revival of true Islamic finance independent from banking.

**Market places** can operate in blockchain technology that validates not only the ownership of goods, but also their possession. Islamic marketplaces will operate on the premises that the participants have in real-time possession of what they sell, as in accordance with Islamic Law.

Altogether blockchain technology could be a perfect technology to integrate the economy of Madina with the digital world.