Building A Miniature Islamic Economy on the Blockchain

IBF Net: The Islamic Business and Finance Network is the maiden online community in the field created in the year 1999 for exchange of views among students, researchers, knowledge-seekers and professionals interested in this sunrise discipline. Two decades later, this Network is being moved to the blockchain with an expansion of its mandate – from a forum for exchange of "views" to a meeting place for exchange of "values" facilitated through a pair of native tokens – IBF Exchange (IBFX) and IBF Esteem (IBFS). Transformed into a membership-based virtual Network of individuals with verifiable identities, it provides for platforms in line with the trichotomy of an Islamic economy into philanthropy, not-for-profit and for-profit sectors. These platforms use smart contracts to facilitate the entire array of Islamic financial transactions within the Network amongst its members in a multitude of roles – donors, volunteers, lenders, borrowers, guarantors, beneficiaries, buyers, sellers, investors and what-have-you. As more and more platforms and use cases are added to the Network, it gets configured as a "replicable" miniature Islamic economy on the blockchain. This miniature economy is predominantly a "decentralized" one with no institutional intermediation and that facilitates person-to-person contracting or transactions involving small groups of individual members.

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Network Transformation

IBF Net: The Islamic Business and Finance Network is under a process of transformation and deployment on the blockchain. It witnesses a shift from exchange of "views" to exchange of "values" among its members. This is a landmark development for the oldest online community in the field,set up on Yahoo Groups in the year 1999 that metamorphosed later into a thinktank, the maiden provider of e-learning courses in Islamic banking, insurance and investments, and was given "the Global Excellence in Islamic Finance award at the prestigious International Islamic Finance Forum (IIFF) held in 2007. More recently, IBF Net expanded the range of e-learning programs and also set up a technology lab – the IBF DigiLabs for development of tech-based solutions for the IBF sector.

The process of transformation involves merging several informal online communities into a membership-based virtual Network of individuals and institutions with verifiable identities. This Network includes and replaces all existing online communities under the umbrella of IBF Net created on the social media from time to time(for instance, the oldest community on Yahoo Groups was created in 1999). The grantingof membership of the new Network demands minimal data – name, email and mobile contact with a two-stage authentication process. With IBF tokens as the mechanism for facilitation and incentivization, the Network is introducing various platforms for e-learning and capacity building, Islamic social finance and volunteering (sadaqah of assets and efforts), ecommerce in halal goods and services along with Islamic commercial finance in a phased manner. These will preclude transactions (such as, remittances, loans and investments) that require prior legal and regulatory compliance and that would be introduced only after such approvals and licenses are obtained.

Member Types:

1. Member
2. Donor - Beneficiary
3. Volunteer - Beneficiary
4. Seller - Buyer of goods/services
5. Sender - Receiver of money
6. Lender - Borrower of money
7. Guarantor – Beneficiary of loan
8. Investor - Investee of money

Transaction Types:

1. Gift > one-way flow of Value
2. Donation > one-way flow of Value (with/without milestones and monitoring)
3. Volunteering > one-way flow of Value (non-monetary) with option of monetary countervalue)
4. Exchange > two-way flow of Value (spot settlement; applies to commodities) – trade
5. Exchange > two-way flow of Value (spot settlement; applies to currencies) – remittance
6. Loan > two-way flow of Value (deferred repayment; with or without maturity; withwithout collateral; with or without guarantee)
7. Financing > two-way flow of Value (spot delivery; deferred payment & vice versa) –installment sale, leasing, sale against advance
8. Financing > two-way flow of Value (deferred payment and delivery)
9. Investment > two-way flow of Value (Value in future is uncertain and determined byterms contract)

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* Shaded bullet points (1-4) related to relevant member types and transaction types in the current phase of development. The remaining types will be developed in subsequent phases of development.

Cryptos Typology

IBFX (IBF-Exchange) and IBFS (IBF-Esteem) are designed as digital assets or crypto tokens to be used among the members of the Islamic Business and Finance Network. The IBF tokens will vary with respect to the rights and obligations for the members and the Network and are expected to perform multiple roles. While IBFX tokens are meant to perform the roles of (i) medium of intra-network exchange, (ii) unit of account and (ii) store of value, the IBFS tokens are meant to be collectibles with "esteem" value.

IBFX-1(Type I): These are fungible tokens; (i) are freely transferable among members; (ii) used for payments for transactions within the Network; (iii) exchangeable to fiat money at all times at rates set by the Network every week reflecting the underlying demand-supply balance. The Network will maintain a near-zero spread between its buy-sell rates, thus ensuring the ethics and efficiency of this mechanism. These can be purchased by any members at all times in any quantities[1].

IBFX-2 (Type II): These are fungible tokens; (i) are freely transferable among members; (ii) used for payments for transactions within the Network without the conversion-to-fiat feature. These are issued by the Network as incentive to newly joining members and to members for rendering various services towards strengthening the Network.

IBFX-3 (Type III): These are fungible tokens; (i) are freely transferable among members; and (ii) are exchangeable to fiat money at rates determined by the size of IBF Waqf Pool for Redemption and may be subject to varying lock-in periods. These are issued by the Network to volunteers (at their option).

IBFX-4 (Type IV): These are fungible tokens; are freely transferable among members; neither can be used for payments for transactions within the Network; nor are exchangeable to fiat money.

Note however, that IBFX Types II, III and IV are all exchangeable with IBFX Type I, thus indirectly to fiat money. The three exchange rates II:I; III:I and IV:I are determined freely by the community of members through interplay of demand and supply within the Network.

IBFS-1 (Type I): These are fungible tokens with "esteem value" only with neither of the three features (transferability, payment medium, exchangeability). These are issued by the Network as incentive to all benevolent contributors to the mission of the Network. These include cash donors, volunteers (opting against receiving Type III tokens), not-for-profit lenders and guarantors. Donors to the IBFWaqf Pool are allocated IBFS units at a higher rate (X1.5) than what applies to general

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[1] While IBFX Type I should be exchangeable at all times to fiat money through buy-back by the Network (buy-sell rate in a near-zero range); the Network may impose a cap on the maximum number of IBFX that can be bought or sold by a single member to minimize possibility of speculative attacks on the Network.

sadaqah donations to capture the multiplier impact of such donations.

IBFS-2 (Type II): These are non-fungible tokens (NFTs) with "esteem value" that are transferable and exchangeable to fiat money through NFT Exchange only. These are created from time to time to incentivize benevolent and social action making a significant contribution to the society.

Nature of Tokens

- IBF tokens are being designed as an Algorand Standardized Asset (ASA) that enjoy all the security, scale and economy associated with layer 1 Algorand protocol. IBFX Type I, II and III will use a single ASA. IBFS Type I will be minted as a separate ASA. IBFS Type II will be issued as a non-fungible token (NFT).
- All tokens are in the nature of utility tokens as distinct from security tokens, that give holders a right to use the network and benefit from resources free or at below-market prices.
- All tokens are free from security regulations, since they are not in the nature of security tokens.
- The tokens will have the following features as in table.

Token Type	Transferability among Members	Payments for Intra-network Transactions	Conversion to Fiat
IBFX Type I	Yes	Yes	Direct (Buy-Back)
IBFX Type II	Yes	Yes	Indirect
IBFX Type III	Yes	No	Direct (Buy-Back)
IBFX Type IV	Yes	No	Indirect
IBFS Type I	No	No	No
IBFS Type II	No	No	@ NFT Exchange only

Platforms

In line with the trichotomy of an Islamic economy into philanthropy, not-for-profit and for-profit sectors, three platforms are part of the Network. Indeed, many more platforms and use cases will be added to the IBF Network as an experimental miniature Islamic economy. The primary factor influencing the pace of introduction of new platforms and use cases is regulatory approval and compliance. The miniature Islamic economy, once in place, would facilitate replication of its models, tools and instruments elsewhere. It would also serve as a laboratory for testing ideas in decentralization, risk management, governance and various other policy issues.

Platform I (Benevolence) seeks to mainstream and institutionalize charitable and benevolent action (Sadaqah) – contribution of Efforts (SE) and of Assets (SA) – through its objective measurement and conversion into tokens of value or social cryptos. IBFS tokens are issued to contributors of cash donations or sadaqah (or zakat or waqf) of assets to approved projects listed on the platform as well as to the IBF Waqf Pool for redemption. Contributors of efforts or volunteers have the option of choice between IBFS or IBFX to be allocated by the Network based on the Fiat Equivalent Value (FEV) of their respective contribution. The tokens issued to volunteers opting for IBFX is of restricted nature, known as Type III IBFX tokens. As mentioned earlier, Type III IBFX tokens are exchangeable to fiat money at a rate determined by the size of the IBF Waqf Pool created for this purpose through charity inflows and may be subject to a lock-in period. Cash donors to the IBF Waqf Pool are allocated IBFS units at a higher rate than what applies to general sadaqah donations to capture the multiplier impact of such donations. An integrated platform for SA and SE is believed to enhance the efficiency and effectiveness of the twin processes of mobilization and allocation of the scarce sadaqah or philanthropy-driven resources.

Platform II (Microfinance) focuses on not-for-profit modes of Islamic finance, such as, interest-free or benevolent loans (qard). Targeted as a tool of Islamic microfinance to alleviate poverty among the ultra-poor, the platform can use either of the four models for managing risk of default (i) no guarantee (ii) 100 percent loan amount covered by personal guarantee (iii) 100 percent loan amount covered by physical guarantee and (iv) combination of personal and/or physical guarantees[2]. Since collateral-based micro loans are quite common in SE Asia the same may be linked to an NFT marketplace that can facilitate tokenization of physical assets, their valuation and liquidation to support provision of collateral-based financial services.

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[2] Personal guarantees and physical guarantees are covered under the Shariah framework of Kafala and Rahn respectively and are not-for-profit tools of risk management in Islamic finance.

Platform III (Essence) is a marketplace that seeks to bring together buyers and sellers of halal goods and services including for-profit halal financial services. Given the origins ofIBF Net as a think tank and a provider of learning resources as well as a developer of technology-based solutions for the IBF sector, the initial products at the marketplace cater to the student and the researcher community in the field of Islamic business, finance and technology. The range of products and services is expected to increase over time beyond education and technology to include major subsectors of the halal economy, such as, food, apparel, travel and tourism, pharma and what-have-you. Use of IBFX as the medium ofexchange would provide additional value to members of the Network primarily through (i) members-only discounts available on various products and services within the network and (ii) savings in cost related to conversion and remittance of fiat currencies. While the Network will accept all the three types of IBFX as payment against its own goods and services, sellers will have the option of quoting prices in either or all types of IBFX, and fiat money. Platform III will facilitate Shariah-compliant buy-now-pay-later or bai-bithaman-ajil transactions.

Platform IV (Confluence) is based on in-house research which indicates major areas of alignment between the SDGs and the goals (maqasid) of Shariah (MaS). The platform involves conversion of impact of a given project measured against specific metrics, for example, carbon savings/ ambulance miles/ kilowatt-hours etc. into social cryptos based on verified data. Projects can earn/ liquidate their cryptos at the Platform to alter their impact score and risk-return-impact profile. Essentially, it is a B2B solution enabling projects to maintain a balanced risk-return-impact profile in a transparent way.

Platform V (Affluence) is an NFT Exchange that facilitates conversion of various assets into digital assets in the form of NFT and their auction in a transparent environment along with ensuring the flow of royalties and other legal payments to original creators through smart contracts. It has a unique feature of buy-now-pay-later (BNPL) option along with collateralization.

More platforms and use cases will be added to the Network in future to bring it closer to the idea of a miniature Islamic economy.

Tokenomics

The value of IBFX like any other token is made up of its intrinsic or real or fundamental value and speculative value. The speculative value is what the token gains from speculative traders who expect its price to fluctuate in the near future. In conventional crypto space the speculative value is usually under focus as the following narrative clearly suggests.

> "For better or worse, speculation and fear of missing out (FOMO) are major culprits behind why people have been buying and trading utility tokens. Although you can't redeem a utility token for goods or services, a holder can go onto crypto exchanges (think of a thinly regulated NYSE or Nasdaq type of entity) to buy and sell utility tokens. A person purchases a utility token hoping that there will be positive sentiment towards the underlying project, which will entice someone else to want to pay a higher price for the same token. Another person sees how the utility token has been increasing in price, and fears that if he or she does not buy now, he or she will miss out on buying the utility token cheap enough (i.e. FOMO), and thus buys the utility token at the higher price. The price or value given to the utility token is derived mostly from speculation, and the merry-go-round of price appreciation continues as long as there is a third party willing to buy the utility token at a higher price. That being said, utility tokens have the potential to create and retain real value as well ."

While the presence of some speculative investors may improve the liquidity of the token, it is hazardous for it to be priced purely on its speculative value. Overall, it is grossly un-Islamic, though it may not be possible to label a specific transaction as prohibited, since intentions behind transactions are largely unobserved. In the Islamic framework the intrinsic value or the value that the token gains from the credibility and utility of IBF Net as a project is what governs the economics of tokenization.

So, how does the IBFX token get its intrinsic value? The intrinsic value is created by the underlying project and how much percentage of this value is captured by the token. This is one of the primary functions of tokenomics or "token economics." William Mougayar came up with the term and also came up with the three tenets behind a token's value. According to Mougayar, there are three tenets to token value and they are: Role, Features and Purpose. Each token role has its own set of features and purpose. Let's examine each of the roles that IBFX can take up:

- Rights (bootstrapping engagement): By taking possession of IBFX, the holder gets a certain number of rights within the ecosystem, e.g., partial access to e-library resources, right to undertake a survey, voting rights on membership privileges etc.
- Value Exchange (economy creation): IBFX aims to create an internal economic system within the confines of the IBF Net project itself. This helps the buyers and sellers to trade value within the ecosystem. This creation and maintenance of individual, internal economies are one of the most critical tasks of tokens.

- Toll: It can also act as a toll gateway for one to use certain functionalities of a particular system, e.g., you need to use IBFX tokens to gain access full e-library access and a few other premium services, preservation of documents on blockchain, free transfer of money within network.
- Function (enriching user experience): IBFX can also enable the holders to enrich the user experience inside the confines of the particular environment, e.g. holders of IBFX will get the rights to enrich the customer experience by adding advertisements or other attention-based services on the IBF platform.
- Currency (friction-less exchange and store of value): IBFX can be used as a medium of intra-network exchange transactions and as a store of value inside the IBF ecosystem.

IBFX tokens by having multiple properties will have more intrinsic value.

Network Effect on Value

There is a strong relationship between the size of the IBF network, the number of transactions on the network and the value of that network itself. This is captured in the Metcalfe's Law - a theory of network effect. Metcalfe's law states the effect of a telecommunications network is proportional to the square of the number of connected users of the system (n^2). For example, if there are two telephones in a network, then one can only make one connection. If there are 5 phones, then one can make 10 connections. However, if there are 12 phones in the network then one can make 66 connections, implying an exponential growth in value. Furthermore, note that networks tend to have a life of their own. As more and more people use them, they tend to attract more and more users. This is the reason why most successful networks tend to enjoy extreme exponential growth.

Since a large chunk of the initial members of IBF Network would largely come from the community of students, researchers and academia, the demand and supply for IBFX will reflect these factors. Some of the factors contributing to demand-supply for IBFX in Phase I are as follows:

Members can earn Type I IBFX tokens by (i) sharing of (priced) articles, books, reports (ii) reviewing submitted resources (iii) listing of courses (iv) providing research guidance (v) mentoring and coaching (vi) providing editorial assistance (vii) providing translation services (viii) developing a new design/ promotional banner/ video (ix) selling listed halal goods and services and what-have-you.

Members can earn Type II IBFX tokens by contributing to strengthening of the Network in various forms, e.g. (i) bringing a new member (ii) contributing an unpublished document/ article to E-Library (iii) posting a blog (iv) responding to forum discussions meaningfully and (v) responding to surveys etc. At the discretion of the Network Admin and Peer Review, each of these services (that traditionally are viewed as intellectual

pursuits and are offered at zero or minimal charge), will carry an award of certain IBFX Type II.

Members can earn Type III IBFX tokens by volunteering to contribute efforts/ hours for listed projects on Platform I and opting for this token instead of IBFS Type I tokens.

Members can spend IBFX Type I and II tokens for the following products and services offered by the Network

- Enroll for courses offered
- Buy articles, books, reports
- Gain access to resources
- Place adverts and promotional material
- Conducting voting among members
- Conducting surveys involving members
- Avail other membership privileges

However, they may need IBFX tokens Type I for products and services such as, the listed halal goods and services offered not by the Network itself, but by Sellers listed on the Network. Also Type III tokens when accompanied by a lock-in period for conversion to fiat money will have a lower discounted value as compared to Type I tokens. External sellers may still accept Type II tokens if they have avenues to spend the same within the Network.

Other than the transactions demand for IBFX tokens, there may be a speculative demand for them, if they prove to be good stores of value in the face of steadily appreciating IBFX values vis-à-vis fiat money. The so-called economic merits of speculation (providing liquidity to the tokens) would not be relevant any longer for members in the presence of the buy-back facility offered by the Network. However, the presence of modest speculative demand would make it easy for the Network to maintain the conversion peg or even effect a steady increase in the same - in the exchange rate of IBFX against fiat money. It would however, be in the interest of the Network to bring this about through influencing other fundamental determinants of intrinsic value, and not through encouraging speculation as this may induce volatility in rates. This would be a source of risk and unIslamic at the same time.

As far as supply of IBFX is concerned, a total of 10 million IBFX have been minted with an initial USD equivalent of 1 million. IBFX Type I tokens will be directly held in user's balance while the Type II and III tokens will be held in escrow smart contracts. If we estimate the share of Type I tokens to be 30 percent, of Type II at 30 percent, of Type III at 30 percent and of Type IV at 10 percent and if we assume that a maximum of 80 percent of holders of the tokens I and III would opt for instantaneous conversion to fiat, one may estimate that a maximum of 24 percent [0.8 * 0.3] of the IBFX tokens (initial value estimated at USD 1 million) may need to be backed by collateral of corresponding

value to avoid any probability of systemic failure arising out of inability on the part of the Network to meet the demand for conversion of IBFX into USD. There is no need for collateral for IBFX Type III, as it is fully backed by IBF Waqf Pool. However, if a lesser percentage opt for instantaneous conversion, which will happen as the token will prove to be a good store of value with zero downside price risk and liquidity risk, then the collateralization requirement would steadily come down. with steady appreciation in exchange rate over time, the speculative demand for IBFX may further push down the percentage of holders opting for instantaneous conversion of IBFX into USD.

Token Type	Conversion to Fiat	% of holders opting for instant conversion of IBFX into USD	Collateral value required (in USD mill)*	Expected share in total volume of tokens
IBFX Type I	Yes	80	0.24	30%
IBFX Type II	No	NA	-	30%
IBFX Type III	Yes	80	-	30%
IBFX Type IV	No	NA	-	10%
A total of 10 million IBFX minted with initial value estimated at USD 1 million				

* In case full-collateralization is needed as a regulatory requirement or good practice

Appendix I: Integration of SA and SE @ Platform I

1. Defining Variables

Define
- Rate of conversion between (a dollar of) sadaqah (S) and (one) IBFS = r1
- Rate of conversion between qard (Q) and IBFS = r2
- Rate of conversion between temporary waqf (TW) and IBFS = r3
- Rate of conversion between perpetual waqf (PW) and IBFS = r4
- Rate of conversion between (one dollar of) sadaqah (S1) to IBF Waqf Pool (IBFWP) and (one) IBFS = r5; must be highest among all rates to encourage flow (may indeed have a Shariah basis, as it is the mother pool for triggering human action and to pay the needy volunteers

We can express all rates in a narrow range.
- Ratio of S1 to SA = k
- Rate of reverse-conversion between IBFX Type III tokens to USD or fiat = r6 (initially it can be pegged at inverse of r1)
- Proportion of SE where volunteers opt for IBFX Type III tokens and offer for conversion to fiat = p

2. Dynamic Relationship between Variables

To maintain stability of the system, the dynamic relationship between p, r1-r5, S1, SA, SE needs to be understood and managed.

Assumption I: SA and SE flows are expected to rise and fall together (with growing religious fervor/ awareness/ popularity of platform/ economic prosperity/ depression)
If SA = f(t); dSA/dt = g1 and SE = v(t); dSE/dt = g2
Then g1=g2 -------- (1)

Assumption II: If the ratio S1 to total SA (S1/SA = k) is stable over time; dS1/dt = g3
Then g1=g2=g3 ------------ (2)

If p = percentage of (dollar equivalent) of SE where volunteers opt for IBFX Type III tokens and offer for conversion to fiat over time period (t=1)

Then g1= g2= g3 must be equal to p <u>for a state of stable equilibrium</u>.

Of the pool (S1), what is depleted through extinguishing will be replenished by compensating inflows.

3. **The Uncertainty Factor:**

   a. What if g1 > g2 => No cause for concern
      Trigger: May imply more attention to SE-inducing programs and activities

   b. What if g1 < g2 => Cause for concern; if induced by a high p and if persistent, may lead to system failure
      Trigger: May imply more attention to SA-inducing programs and activities, and/or need to revisit the SE-inducing programs and activities

   c. What if k is not stable and g3 > g1 (and/or g2) => No cause for concern
      Trigger: May consider reducing the rate differential (r5 relative to r1-4)

   d. What if g3 < g1 (and/or g2) => Cause for concern, may imply imbalance in generation of SA
      Trigger: More attention to S1-inducing programs and activities including (i) raising the rate differential (r5 relative to r1-4)

   e. What if g3 (and/or g2 and/or g1) > p => No cause for concern
      Trigger: May consider reducing the rate differential (r5 relative to r1-4)

   f. What if g3 (and/or g2 and/or g1) < p => Cause for concern, may imply faster depletion of Waqf Pool compared to flows into the Pool; a persistent high value of p may lead to system failure
      Trigger: More attention to S1-inducing programs and activities including (i) raise the rate differential (r5 relative to r1-4); (ii) impose/increase the lock-in period (L) for conversion of IBFX (Type III) tokens into fiat; (iii) impose/increase minimum holding of value before conversion and maximum percentage of value eligible for conversion; (iv) reduce r6 - the rate at which IBFX Type III token is converted to fiat (as a last resort)

   - Critical factor: Volatility in p; any sharp increase must be avoided by mitigating and addressing the underlying reasons.
   - Flag a Warning: when the p is increasing and crosses an upper barrier; when k is declining and crosses a lower barrier; g3 is declining and crosses a lower barrier

4. **Valuation of SE:**

   - Project assignment to be well-defined in terms of number of hours; expected competencies (profession) with performance rating (PR) by beneficiary/ project sponsor
   - On a five-point scale, we use a PR factor in the range of 1.00-1.80, since it will be multiplied by the minimum wage rate that needs to be scaled up when one operates above minimum level of efficiency,
   - Dollar value of SE = Hours * PR factor * MW per hour applicable to profession and country

- MW per hour is obtained from ILO database that compiles wage rates, both country-wise and profession-wise. The structure of the rates is expected to be stable over time within a country, even while absolute levels may change with general economic conditions (a given society's reward structure across professions remains stable and changes only in long-run)
- Dollar value of SE is converted to IBFX using the same conversion rate as ordinary sadaqah S and are allocated to the SE contributor.
- The SE contributor may exercise the option of conversion of IBFX into fiat any time after a lock-in period of L since the date of allocation and convert the same at the reverse conversion rate r6 for sadaqah, which is initially it is pegged at the inverse of r1; but may be managed.

Simulation Results

5. We develop the following model to simulate the flow of SA (sadaqah of funds) and SE (sadaqah of efforts) using Simulink of Matlab.

   SE is valued with quality and quantity measures (ILO minimum wage indices scaled up by quality factors)

   <u>Objective of simulation is to assess the probability that the stock of Pool (for liquidating IBFX Type III tokens) is non-negative</u>

   Control variables or triggers tested in the model:

   (i) Differential growth in SA and SE (randomized within 1.00 and -0.5)

   (ii) Lock-in period for conversion of SE into cryptos

   We develop the following probability distribution with 1000 runs under alternative assumptions about lock-in periods and growth rate of SE being more than the growth rate of SA.

   It follows from the simulation runs that:

   1. The probability of the Pool being negative increases as the growth rate in SE surpasses the growth in SA. This should trigger an artificial contraction in SE-related projects on the platform.
   2. The probability of the Pool being negative decreases as the lock-in period is increased. The simulation shows the effectiveness of the lock-in period as a control tool.
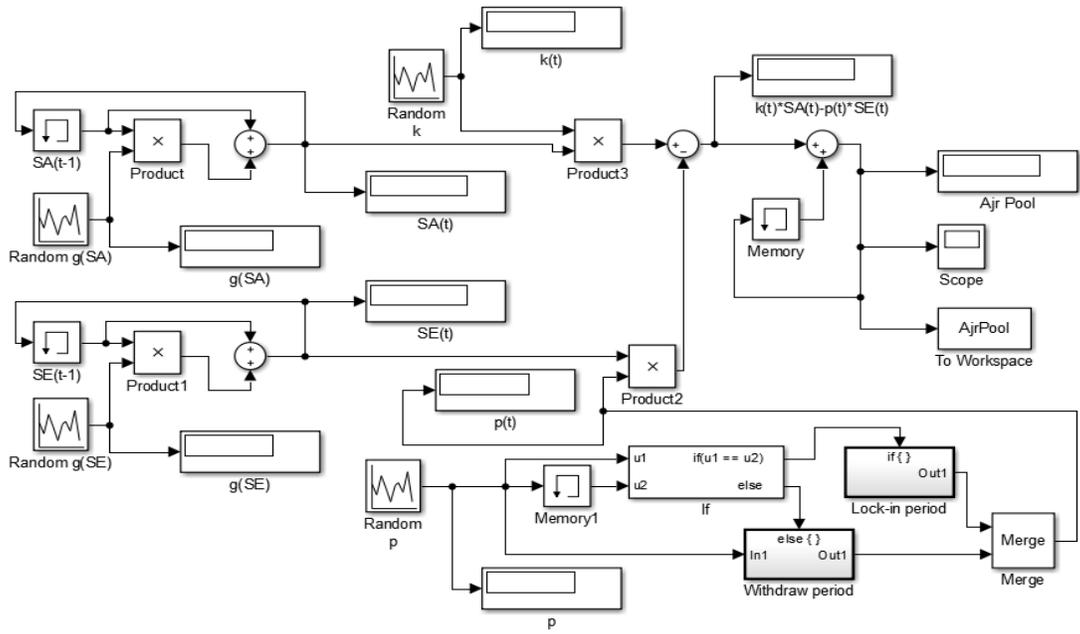
Lock-in Period						
	0	1	2	3	4	5
1	0.054945	0.052947	0.032967	0.015984	0.004995	0.002997
1.02	0.637363	0.583417	0.471528	0.426573	0.251748	0.086913
1.04	0.988012	0.851149	0.651349	0.407592	0.413586	0.093906
1.06	0.932068	0.816184	0.808192	0.534466	0.355644	0.208791
1.08	0.921079	0.766234	0.559441	0.491508	0.441558	0.32967
1.1	1	0.942058	0.831169	0.698302	0.461538	0.401598

Upper Limit of SE Growth

Appendix II: Regulatory Framework for Cryptos in Ireland

The Central Bank of Ireland, as the authority responsible for the regulation of financial services in Ireland, has issued consumer warnings in 2018 on the risks of buying or investing in virtual currencies and initial coin offerings (ICOs). The key risk factors highlighted include extreme price volatility, absence of regulation, inadequate or misleading information being provided by the currency issuer. Risks specifically associated with ICOs include vulnerability to fraud or illicit activities, lack of exit options, extreme price volatility, inadequate information and exposure to flaws in the technology. It indicated its support for warnings issued by the European Securities and Markets Authority (ESMA) where it underlined the risks that the unregulated crypto-assets pose to investor protection and market integrity. ESMA identified the most significant risks as fraud, cyber-attacks, money laundering and market manipulation.

Beyond the above warnings, there is currently no blanket prohibition or ban on crypto assets in Ireland. However, the country has not implemented a bespoke financial regulatory regime for crypto assets and there are currently no plans to do so at a local level.

The question of whether and how crypto assets are regulated under the Irish law turns primarily on whether activities carried on in relation to those crypto-assets are regulated under existing legislation in Ireland which implements certain EU Single Market Directives, such as:

- the Markets in Financial Instruments Directive 2014/65/EU (MiFID)
- the Electronic Money Directive 2009/110/EU (E-Money Directive) and
- the Payment Services Directive 2015/2366/EU (PSD2) and

various EU regulations, which have direct force in Ireland, such as
- the Prospectus Regulation 2017/1129/EU
- the Market Abuse Regulation 506/2014/EU and
- the Central Securities Depositories Regulation 909/2014/EU.

The Central Bank is generally of the view that a harmonized taxonomy at EU level would facilitate a feature driven case-by-case assessment by market participants and, as appropriate national competent authorities, given the evolving nature of crypto-assets.

1. Bitcoins and other similar crypto currencies give no rights or entitlements to holders and fall outside the scope of regulatory regime in Ireland.[3]
2. Stable-coins raise some regulatory concerns related to financial stability, monetary policy, consumer and investor protection, legal certainty and compliance with AML/CFT. Where the reach or other features of stable-coins risk it being perceived as

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[3] https://www.centralbank.ie/consumer-hub/consumer-notices/consumer-warning-on-virtual-currencies

a currency, then it should be prohibited, since the issuing of currency should firmly remain under the remit of the central bank.

3. With respect to utility tokens (that can be redeemed for access to a specific product or service), the CB feels that "it is not readily apparent to us that most utility tokens are, or should be, treated as financial products or instrument (transferable security or e-money) and, in that case, it should be clear that it should fall within the regulatory perimeter. Cases where crypto assets start as, or claim to be, one thing but morph into the provision of financial services directly or indirectly should be closely monitored. In the absence of clear Irish or EU legislative guidance, a case-by-case analysis is required in order to determine if a utility token falls outside of the parameters of a transferable security for the purposes of MiFID.

4. In relation security tokens (which may provide rights such as, ownership, repayment of a specific sum of money, or entitlement to a share in future profits), the CB expressed the view that it would be beneficial to have a harmonized taxonomy at EU level in relation of crypto-assets including a harmonized definition of a security token as a transferable security. Hence, where these security tokens are closer to conventional debt instruments and equity instruments, the CB has called for them to be "consistently regulated, while allowing genuine utility token outside the regulatory perimeter."[4]

It should be clear from the above discussion that:

IBFX or IBFS tokens in all their variants fall neither under the definition of unregulated currencies (such as, bitcoins, litecoins, dogecoins), nor under that of stable-coins (such as, USDC).

Neither of them is in the nature of a financial instrument or security ruling out the possibility of being classified as a security token.

These are strictly in the nature of utility tokens. IBFX provides a right to the member of the IBF Network to buy and sell goods and services offered within the network. IBFS provides for esteem value alone.

At the same time the risks associated with the ICOs or cryptos and the regulatory concerns as highlighted above, about adequacy and accuracy of information shared between the parties, investor protection and market integrity, freedom from too much uncertainty, excessive price volatility are all sought to be addressed by the Network via its emphasis on Islamic norms of prohibition of riba (interest), gharar (fraud and deceit, undue complexity, inaccurate and inadequate information) and others. Further, wherever such tokens can be used for money transfer and other regulated activities, the Network plans to obtain the required prior approval/ license from the authorities.

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[4] Speech by Gerry Cross, Director of Financial Regulation, Policy and Risk on May 14, 2020