

MOBILE MONEY REMITTANCE SYSTEM



White Paper
January 2018

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Crowdfunding

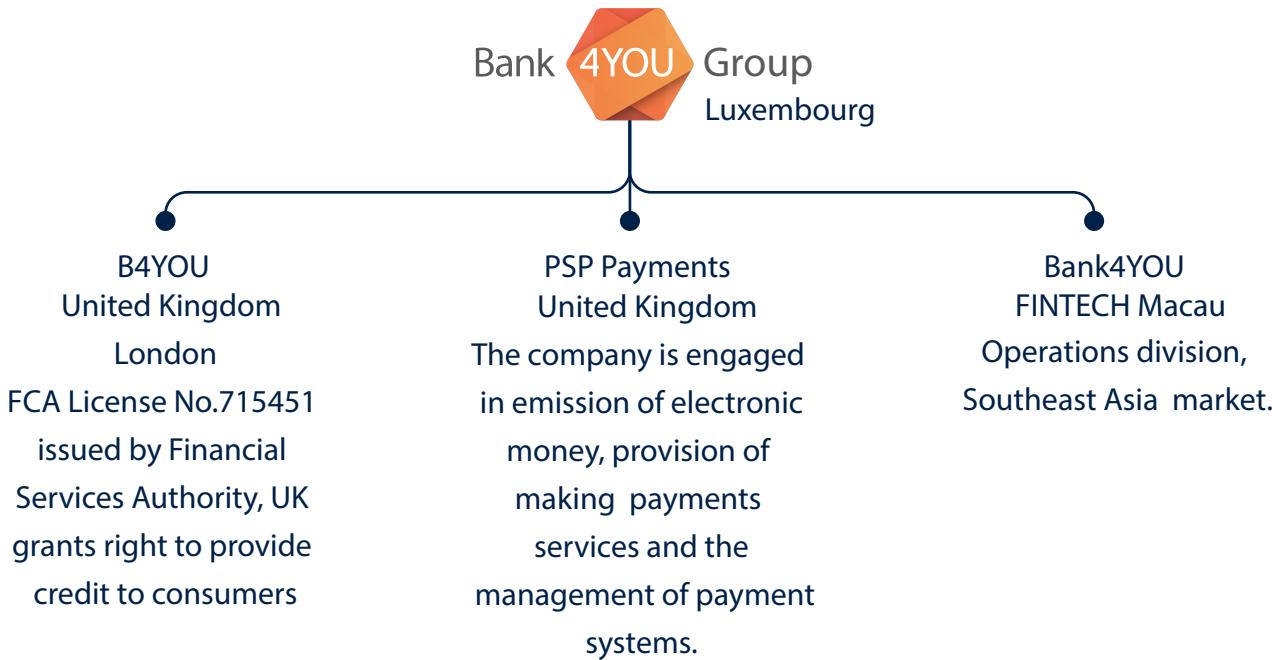
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Bank4YOU Group

About

Established in 2013 and headquartered in London, UK, in 2016 Bank4YOU transformed into Bank4YOU Group, an international consortium of fin-tech service companies operating within the electronic mobile payment services arena. FCA License No715451, issued by the UK's Financial Conduct Authority authorizes Bank4YOU to provide credit.



Bank4YOU Group provides customers with a wide range of pre-paid card options as well as other financial solutions. State of the art fin-tech products are developed for people with active lifestyles, such as students, tourists, migrant workers, and frequent travellers.

One of the biggest concerns for most people travelling to another country for extended periods is how to obtain access to banking services without the need to be a resident of that country. Bank4You Group makes it really easy for visitors to make in-country as well as cross-border payments, without the need for proof of residency or a local bank account. Its secure money transfer is based on use of state-of-the-art mobile app.

Bank4You Group now intends to launch its own ICO in order to accelerate the goal of scaling its service rollout across Africa, Asia, and Latin America. Based on current Bitcoin pricing and investments achieved by other similarly sized projects in the same sector, an indicative estimate for the total funding requirement is \$10 million. This funding is required to support the company's expansion into new markets and to develop enhanced services (including consumer micro-loans and the incorporation of Bitcoin and other crypto currencies within its money transfer services). It is expected to drive exponential customer growth, and the company believes it will have a significant positive impact on its market value.

Bank4YOU Group

Products

Bank4YOU customers no longer need to depend on bureaucratic procedures associated with traditional banking. Its service has been created to ensure time-efficiency, convenience and secure transactions. Bank4You already works with a number of blue-chip organizations, delivering state-of-the-art prepaid card programs that target different user groups. Its customers are able to choose their ideal product from a wide range of pre-paid card options including Bank4You Group's Corporate card and Premium card, along with mobile banking services.

One of Bank4YOU Group's core services is TaxFree4U, a VAT refund mobile app available to non-EU customers shopping in Europe. An international network of local offices supports this service, provided on behalf of seven major partners in Europe, Middle East, and Asia. It offers the highest VAT refunds on purchases made within Europe, with the money credited into the customer's account within 48-hours of presenting the necessary documentation.

Mobile Bank4YOU

Best fin-tech specialists have been developing our app. Bank4YOU app can be downloaded in App Store (Apple) and Play Market (Google).

Thanks to the careful application testing on different target groups we created the application, which can be effortlessly used by customers of all age categories.



Bank4YOU Card



The card has been designed for individuals, who don't want or don't have a possibility to obtain a foreign bank account. The card can be used to withdraw funds globally. Ideal option for frequent travellers and students.

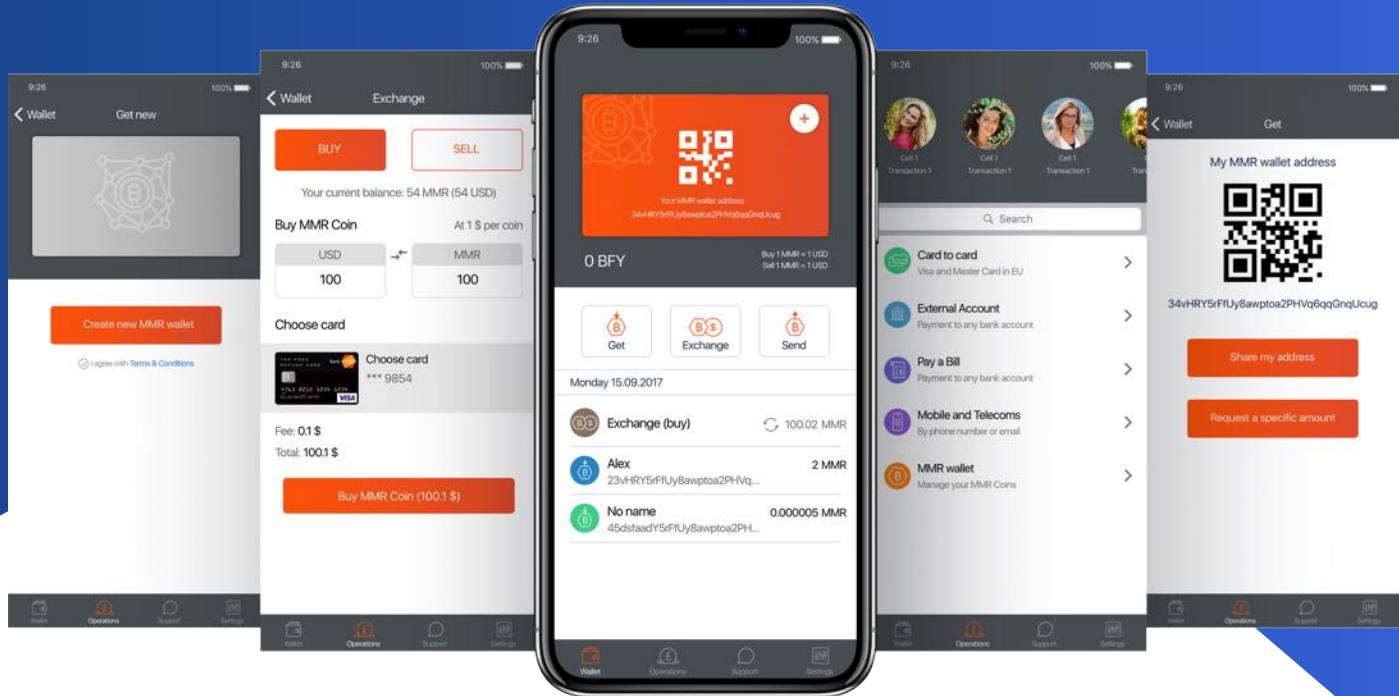
Bank4YOU Card Premium



Perfect card for exceptional customer experience. Best set of features capable to satisfy most demanding clients along with premium VAT refunding option.

Mobile Money Remittance System

Description



Mobile money transfer or remittance is 'a peer-to-peer (P2P) application making use of a mobile device to send money to family or friends, primarily across international borders'². Usually, mobile money is a term used to describe services that allow electronic money transactions over a mobile device. It is also referred to as mobile financial services, mobile wallets, and mobile payments. For the purpose of this white paper, we shall consider mobile money to be a system of electronic payments that allows cross-border money transfers to any country. It also includes the withdrawal of funds in local currency (cash out) via the mobile money service or mobile airtime.

Bank4You Group is an innovative consortium, acting as solution provider operating in the dynamic mobile payments sector. It aims to integrate crypto currency convergence with the convenience of mobile money solutions.

The company has also created its own crypto currency, the 'MMR' currency, which underpins its Blockchain system for mobile money transfers. Remittances will be executed via mutual agreements between customers and partners regardless of their respective locations.

The main component of the MMRS is a system of internal digital currency (MMR) tied to local currencies of the countries of system user's countries, which enables fast, reliable and cheap remittance of values across the borders of states and continents. Operating such currency makes it possible to increase the user trust in the system providing the simplest and the most understandable mechanism for converting fiat currencies into electronic ones. The issue of tokens occurs only on condition of the fiat money being brought into the system, which is intended to ensure the stability of the exchange rate.

²MOBILE MONEY. AN OVERVIEW FOR GLOBAL TELECOMMUNICATIONS OPERATORS.

[https://webforms.ey.com/Publication/vwLUAssets/Mobile_Money_/\\$FILE/Ernst%20&%20Young%20-%20Mobile%20Money%20-%202015.10.09%20single%20view%29.pdf](https://webforms.ey.com/Publication/vwLUAssets/Mobile_Money_/$FILE/Ernst%20&%20Young%20-%20Mobile%20Money%20-%202015.10.09%20single%20view%29.pdf)

Bank4YOU Group

Description

The system is transparent and allows auditing by independent assessors who are not affiliated with Bank4YOU Group. Each user of Bank4YOU's mobile wallet will have an account where currencies can be stored in local ones as well as BFY tokens. Users can use available MMR for money remittances, to exchange them for other tokens, or exchange them for local fiat currencies through an agent system or use as payment for goods and services. Access to the account management system can be carried out through a web interface to manage available funds efficiently.

You can create
a transaction
request



Mobile app
prototype

Exchange mobile
or card balance
on MMR



Send
remittance

Bank4YOU Group

Workflow

Unlike traditional banks, who are typically permitted to invest most of the funds received from customers into loans and other less liquid investments, non-bank mobile money providers are required to hold funds equivalent to 100 per cent of outstanding mobile money liabilities in safe, liquid investments such as commercial bank deposits and low-risk government securities³.

Bank4YOU Group plans to open wholesale accounts with mobile network operators negotiating maximum discounts against guaranteed airtime purchases of \$200,000 to \$500,000. Operators will also benefit from increased subscriber activity as new customers join as a result of Bank4YOU Group's local marketing activities. The service will support intra-operator transfers so individuals on different networks can still engage with each other using their Bank4YOU mobile wallets. Customers would be able to transfer money to other countries with minimal commission fees and without being at the mercy of restricted opening hours or the challenges faced when dealing with traditional financial institutions. Business users will also have the opportunity to reduce their transaction costs and potentially execute free payments to their suppliers.

In most developing countries remittances are now the largest source of external financing and, for some, this can account for as much as a third of GDP⁴. More than one-third of global respondents in this report said they are highly likely to transfer money to, and/or receive money from, another person using their mobile device in the next six months. Bank4You Group's sophisticated platform is capable of supporting an unlimited volume of remittance flows between countries. In a move away from traditional remittance channels, the service would allow under-served consumers to benefit from a much more affordable, convenient and secure mobile money remittance service.

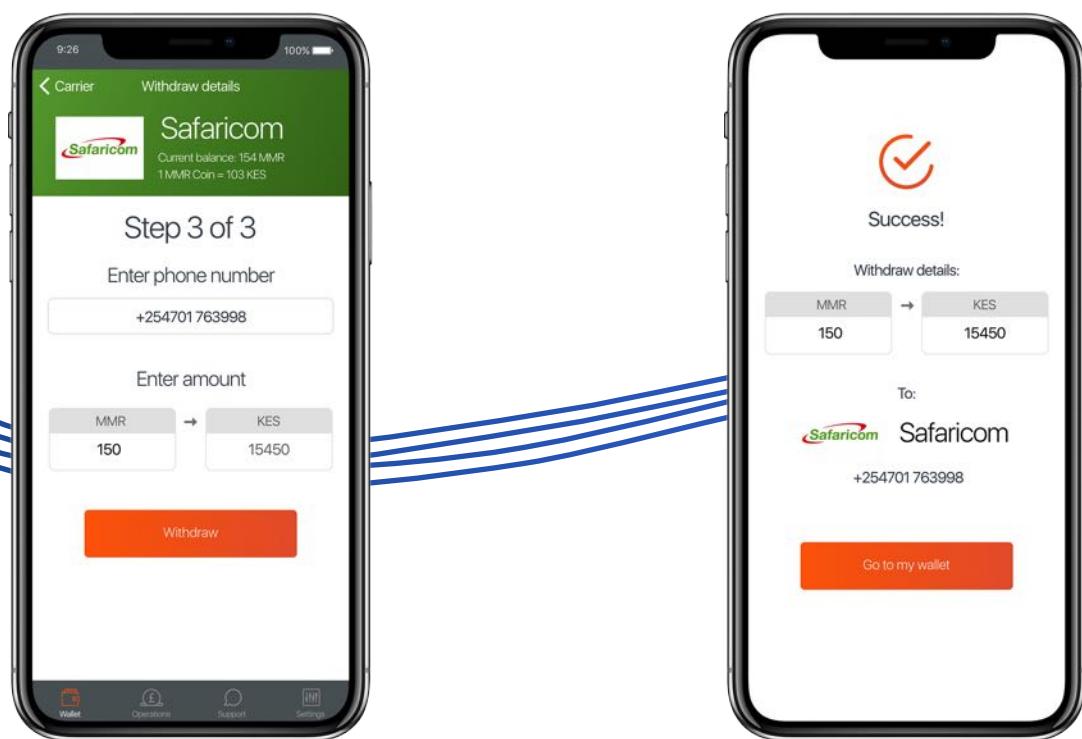
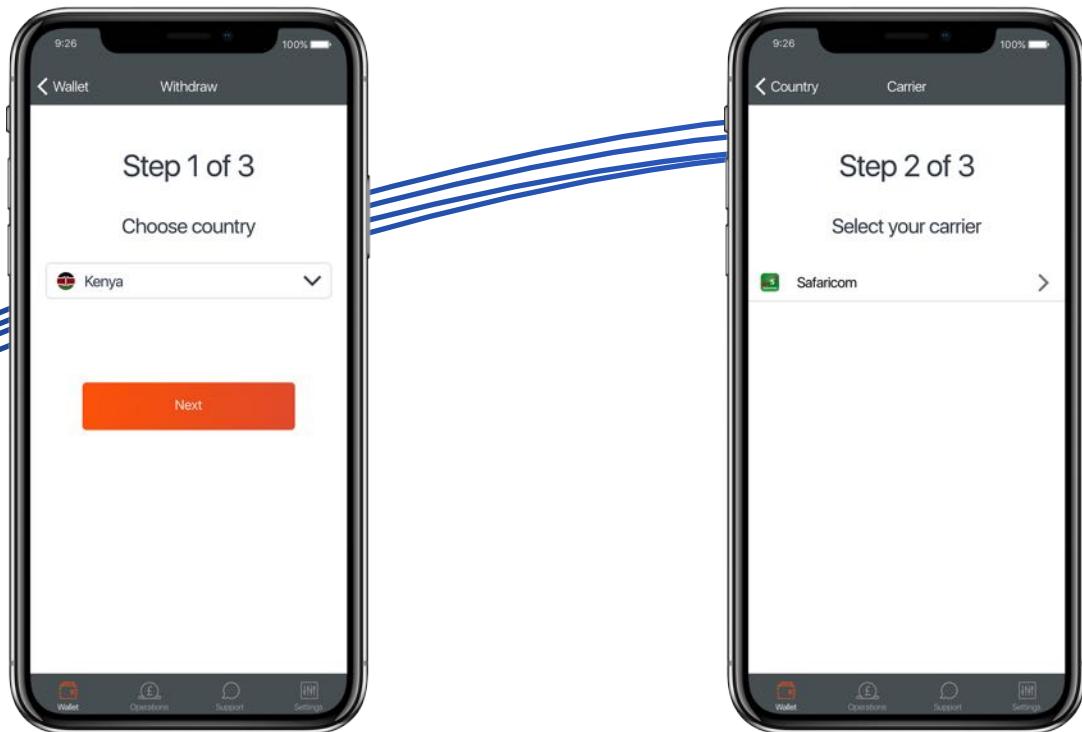
³SAFEGUARDING MOBILE MONEY: HOW PROVIDERS AND REGULATORS CAN ENSURE THAT CUSTOMER FUNDS ARE PROTECTED.
https://www.gsma.com/mobilefordevelopment/wp-content/uploads/2016/01/2016_GSMA_Safeguarding-Mobile-Money_How-providers-and-regulators-can-ensure-that-customer-funds-are-protected.pdf

⁴COMMITTEE ON PAYMENT AND SETTLEMENT SYSTEMS, THE WORLD BANK, GENERAL PRINCIPLES FOR INTERNATIONAL REMITTANCE SERVICES. <http://www.bis.org/cpmi/publ/d76.pdf>

Bank4YOU Group

Workflow

Key Functionality: Mobile account balance funds withdrawal in local currency of partnering mobile network operator or in MMR.



Mobile Money Remittance System

Project goals

Bank4YOU Group's 'Mobile Money Remittance System' will set a new trend in international money transfers and will contribute to the creation of fast, convenient, and secure money transfers worldwide.

The mobile app will also enable financial inclusion for people who are in desperate need of easy access to financial services in countries across Africa, Asia, and Latin America. It would also lead to new opportunities for businesses, financial institutions, and mobile network operators to use crypto currencies.

"ACCORDING TO THE WORLD BANK, TWO BILLION PEOPLE ARE WITHOUT ACCESS TO FORMAL FINANCIAL SERVICES WITH MORE THAN 50% OF ADULTS IN THE POOREST HOUSEHOLDS BEING UNBANKED.

BANK4YOU GROUP AGREES THAT FINANCIAL INCLUSION IS A KEY ENABLER TO REDUCING POVERTY AND BOOSTING PROSPERITY. WITH OUR NEW BLOCKCHAIN ENABLED MOBILE MONEY SERVICE WE INTEND TO PLAY A VERY ACTIVE PART IN MAKING THIS HAPPEN!"

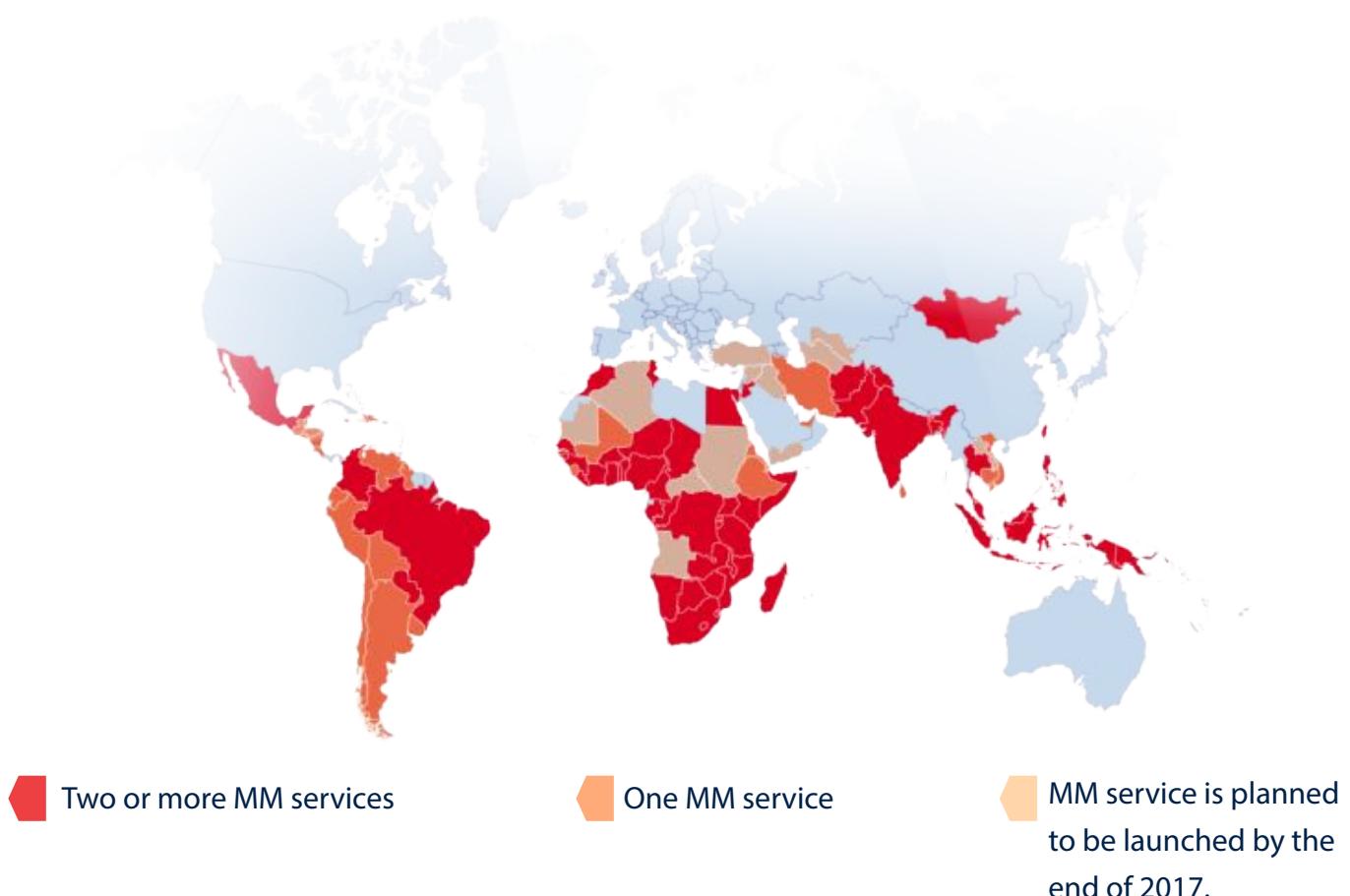
DAVID AGAR
CEO
BANK4YOU GROUP.

Mobile Money Remittance System

Market overview

The market associated with convergence of crypto currencies and mobile accounts is poised to grow at a compound annual growth rate (CAGR) of 38.9 per cent in the next decade and is forecasted to reach approximately \$405 billion by 2025⁵.

With more than 271 services in 93 countries⁶, mobile money represents a considerable breakthrough for the financial services. Compared to global money transfer operators, the cost of sending international remittances through mobile money is, on average, 50 per cent less expensive. Billions of underserved consumers can look to benefit from the more accessible, reachable, and assured money transfer services employed by mobile money.



⁵GLOBAL MOBILE MONEY MARKET ANALYSIS & TRENDS - INDUSTRY FORECAST TO 2025. https://www.researchandmarkets.com/research/mjzc2h/global_mobile

⁶MOBILE MONEY. FROM SHOPPING TO BANKING TO PAYMENTS, HOW MOBILE IS TRANSFORMING COMMERCE AROUND THE WORLD. <http://www.nielsen.com/content/dam/nielsenglobal/eu/docs/reports/nielsen-global-mobile-money-report-oct-2016.pdf>

Mobile Money Remittance System

Market overview

According to a GSMA report, one in seven Africans (120 million) are recipients of remittances from friends and family abroad, with the total figure amounting to \$60 billion, which makes as much as a third of total GDP in some African markets⁷. Despite the fact that the bulk of remittance flows are 'North-South', one in three remittances is sent from Africa.

In 2012, almost half of Asia's population – 690 million – subscribed to mobile services. By 2020, the figure would see the addition of another 460 million bringing the global total to over 3.1 billion⁸. On average, 46 per cent of subscribers in India and 45 per cent in China prefer using their mobile money wallets at bars, restaurants and retail shops⁹.

According to a McKinsey Global Institute report¹⁰ by 2020, the global payments industry would have generated, as a result of an average five per cent growth rate, an estimated \$2.2 trillion in revenue, which would be over \$400 billion more than in 2015 (\$1.8 trillion).

The GSMA Mobile Economy report draws attention to the fact that between September 2015 and June 2016 the volume of flows to and from bank accounts grew more than +120% Crypto currencies (mainly Bitcoin and Etherium) nowadays represent an active ecosystem for transactions, just like an existing banking system. The solution based on convergence of crypto currencies and mobile network operator's balances is estimated to show the same growth as from mobile accounts and bank accounts – 120% per year.

⁷MOBILE MONEY CROSSES BORDERS: NEW REMITTANCE MODELS IN WEST AFRICA. https://www.gsma.com/mobilefordevelopment/wp-content/uploads/2015/04/2015_MMU_Mobile-money-crosses-borders_New-remittance-models-in-West-Africa.pdf

⁸THE MOBILE ECONOMY ASIA PACIFIC 2017. <https://www.gsma.com/mobileeconomy/asiapacific/>

⁹see p.6.

¹⁰GLOBAL PAYMENTS 2016: STRONG FUNDAMENTALS DESPITE UNCERTAIN TIMES. https://www.smefinanceforum.org/sites/default/files/post/files/McKinsey_Global_Payments_Report_2016.pdf

Technical information

Introduction

Two billion people and 200 million businesses¹¹ in countries with underdeveloped economies today remain unbanked and, as such, remain financially excluded. Even those with access to financial services are forced to pay extra-high fees for a limited range of available products.

The widespread availability of digital technologies has enabled individuals to receive financial services at reduced existing costs. It has also provided stimulation to general financial activity and labor productivity. The benefits of financial services conducted using mobile apps are becoming clear to millions of customers worldwide.

Mobile money will enable unbanked individuals to access financial services. Factors influencing the popularity of mobile money as the next authoritative instrument are¹²:

- Economic attractiveness due to low remittance charges (compared like Western Union Postepay, the Post Office's Postepay, or the local bus companies) and easy flat fee system
- Simplicity and convenience. You only need a mobile phone to use the service
- Easily convertible to cash and vice versa by agents commissioned by mobile network operators
- The opportunity to offer microloans
- Easy registration procedure for agents (basic information and small deposit required as a starting point)
- To establish an agent network, agents need to benefit financially in the same way as it is done within the M-PESA¹³ system.

¹¹ACCESS TO CASH: THE FIRST STEP TOWARD FINANCIAL INCLUSION: <http://www.cashrepository.com/wp-content/uploads/2017/04/Cash-and-Financial-Inclusion-31-MAR-2017.pdf>

¹²MOBILE MONEY AND FINANCIAL DEVELOPMENT: THE CASE OF M-PESA IN KENYA.
https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2688585

¹³ MOBILE PAYMENTS GO VIRAL M-PESA IN KENYA http://siteresources.worldbank.org/AFRICAEXT/Resources/258643-1271798012256/YAC_chpt_20.pdf

Technical information

Introduction

GSMA report findings state that "The average cost of sending \$200 using mobile money is 2.7 percent across the 45 corridors surveyed, compared to 6.0 percent using global MTOs, suggesting that mobile money is driving a price revolution in international remittances."¹⁴

Average remittances cost for global MTOs and mobile money providers
(in percent; August 2016)

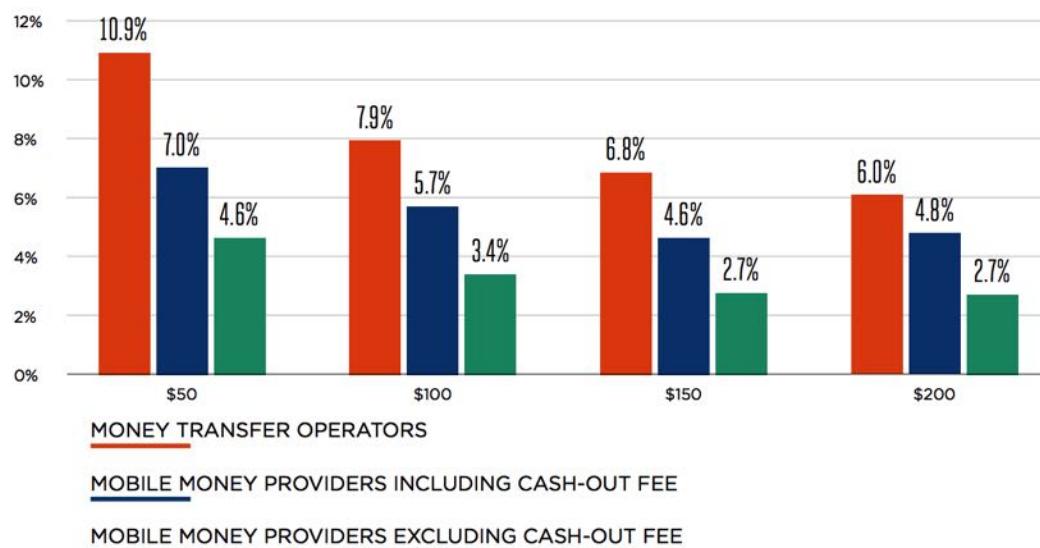


Fig.1 Average remittances cost for global MTOs and mobile money providers (in percent; August 2016)

Distribution of country corridors by average remittance cost for mobile money providers and global MTOs (August 2016)

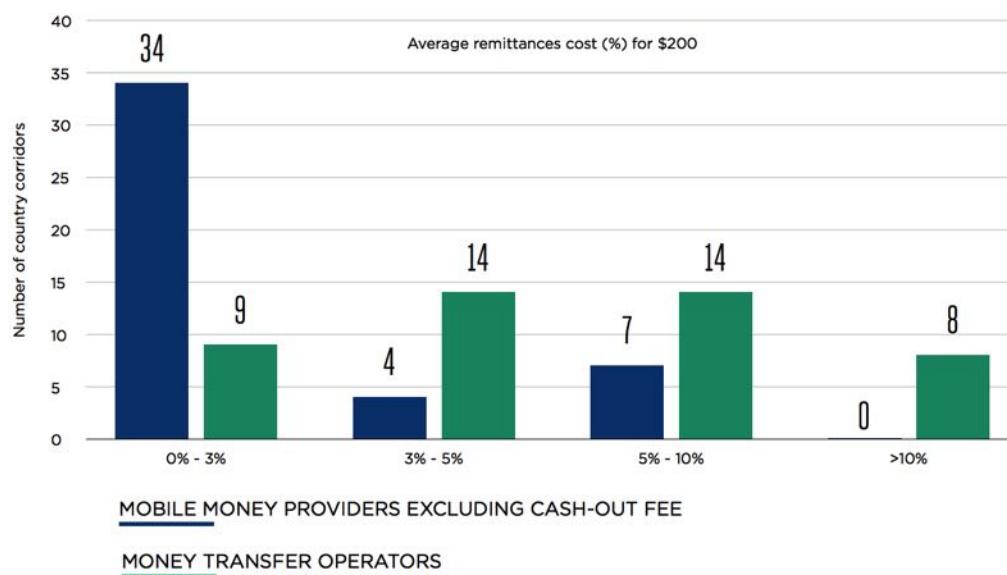


Fig. 2 Distribution of country corridors by average remittance cost for mobile money providers and global MTOs (August 2016)

¹⁴ DRIVING A PRICE REVOLUTION MOBILE MONEY IN INTERNATIONAL REMITTANCES. FIG.1 AND FIG.2 ARE TAKEN FROM THE REPORT: <https://www.gsmaintelligence.com/research/?file=8F31B31705C20A63A41DB9711BF84C25&download>

Technical information

Introduction

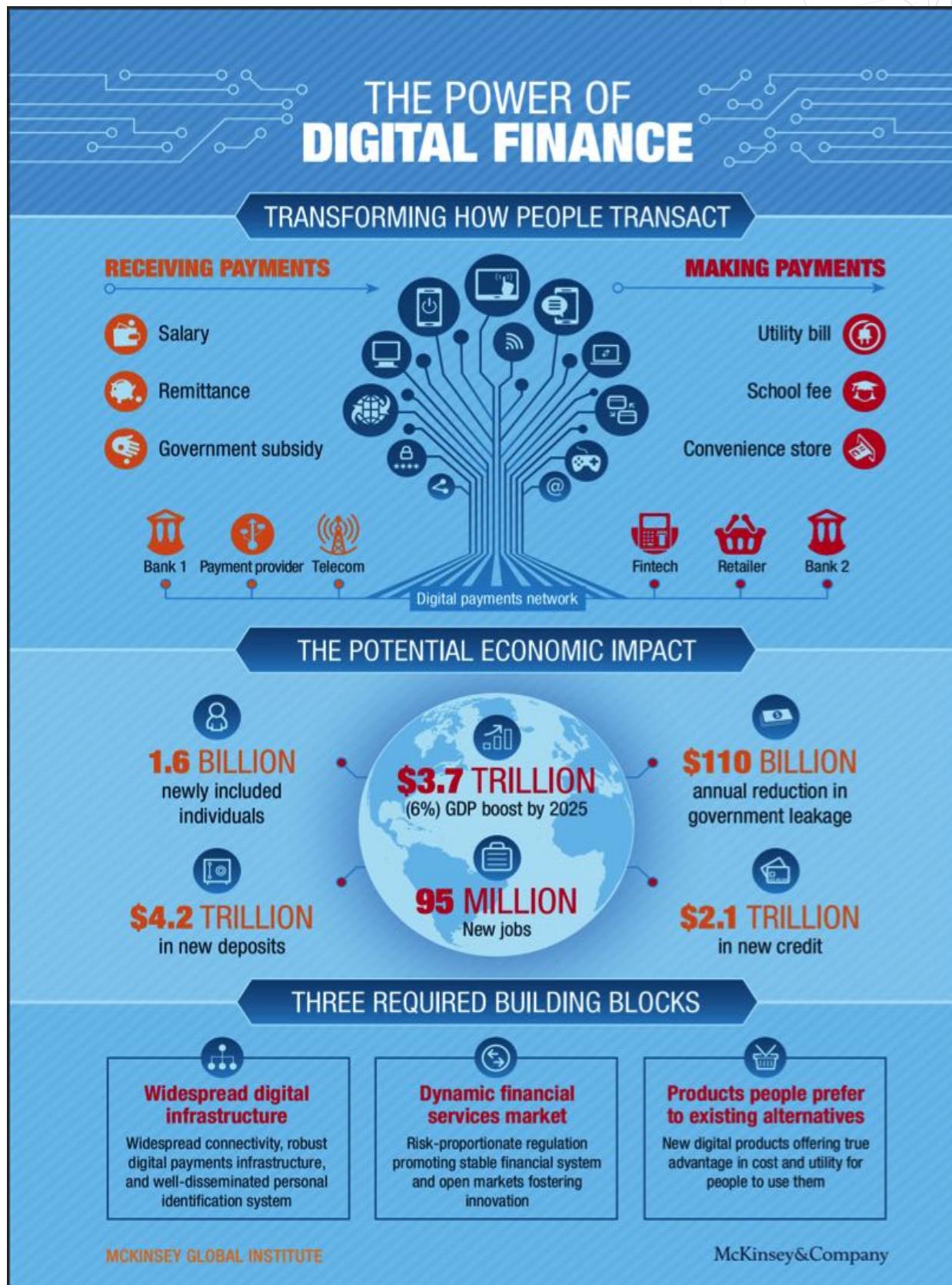


Fig.3 The Power of Digital Finance.¹⁵

¹⁵ GLOBAL PAYMENTS 2016: STRONG FUNDAMENTALS DESPITE UNCERTAIN TIMES. https://www.smefinanceforum.org/sites/default/files/post/files/McKinsey_Global_Payments_Report_2016.pdf

Technical information

Introduction

On the other hand the technology has a serious problem with Cross-border interoperability. Cross-border remittances require interoperability between mobile money schemes. As with domestic mobile money interoperability, cross-border remittances depend on operators transacting across platforms and settling funds directly between each other.

Beyond domestic interoperability, mobile money providers have demonstrated a strong appetite for cross-border interoperability, with 46 remittance corridors now active. These corridors continue to drive the price of sending remittances down, providing users increasingly competitive options for sending money internationally.

Finally, discussions around regional interoperability projects are aiming to create payment systems that connect all mobile money services and banks across a number of countries. For instance, the Southern African Development Community Bankers Association is currently in the early stages of planning to allow for mobile money connection to a central transaction hub. This could enable users to transact across all services and banks spanning 15 markets.

Similar discussions are also taking place in the West African Economic and Monetary Union, as well as the East African Community. Interoperability continues to play a significant role in increasing the adoption of mobile money by providing customers the opportunity to transact with more users across more use cases, services, and markets.

"An important question for both the mobile money industry and the broader financial system is how mobile money will be integrated into existing payments infrastructure going forward. Full interoperability across all services and country corridors remains a long-term goal of the mobile money industry."¹⁶

¹⁶ STATE OF THE INDUSTRY REPORT ON MOBILE MONEY DECADE EDITION: 2006 – 2016 https://www.gsma.com/mobilefordevelopment/wp-content/uploads/2017/03/GSMA_State-of-the-Industry-Report-on-Mobile-Money_2016.pdf

Technical information

Introduction

The director of strategic investments and fin-tech innovations, UBS, Haider Geoffrey, spoke about the importance of the [unified bank coin issue] project in the future: «It can be an indication of how central banks intend to develop in the field of the Blockchain technology. We view this project as the first step towards a future in which central banks will sooner or later issue their own cryptocurrencies.»¹⁸

Blockchain technology makes it possible to create payment tools that carry the advantages of fiat currencies and mobile money not only within a country but also around the world.

The purpose of this research is to suggest an optimum mechanism for cross-border remittances as well as to study the usage of Blockchain technology to solve that problem.

REMITTANCE RECEIVING COUNTRY	BENIN	BURKINA FASO	CONGO, DEMOCRATIC REPUBLIC OF	CÔTE D'IVOIRE	KENYA	MALAWI	MALI	NIGER	PHILIPPINES	RWANDA	SENEGAL	TANZANIA	TOGO	UGANDA	ZAMBIA	ZIMBABWE
REMITTANCE SENDING COUNTRY																
BENIN				✓				✓						✓		
BURKINA FASO					✓											
CÔTE D'IVOIRE	✓	✓					✓	✓			✓		✓			
FRANCE				✓			✓					✓				
KENYA										✓		✓		✓		
MALAYSIA									✓							
MALI					✓							✓				
NIGER	✓		✓	✓		✓				✓				✓		
QATAR						✓				✓						
RWANDA				✓		✓	✓						✓		✓	✓
SENEGAL					✓			✓								
SINGAPORE									✓							
SOUTH AFRICA															✓	
TANZANIA						✓						✓				
TOGO	✓			✓				✓								
ZAMBIA				✓								✓				

Fig. 4¹⁷ Distribution of country corridors by average remittance cost for money providers and global MTOs (August 2016).

However, at the same time, the development of Blockchain technology and its exposure with leading banks - such as Barclays, CIBC, Credit Suisse, HSBC, MUFG, State Street - has allowed banking experts to consider this kind of technology very promising for the development of innovative banking products:

¹⁷ DRIVING A PRICE REVOLUTION MOBILE MONEY IN INTERNATIONAL REMITTANCES. FIG.3.IS TAKEN FROM THE REPORT:
<https://www.gsmaintelligence.com/research/?file=8F31B31705C20A63A41DB9711BF84C25&download>

¹⁸ LARGE BANKS ARE PREPARING TO ISSUE OWN CRYPTO CURRENCY. ARTICLE. <https://etherdirect/2017/09/01/large-banks-are-preparing-to-issue-own-crypto-currency/>

Technical information

Challenges

The proposed system will have all the advantages of the existing systems i.e. solving problems they deal with, as well as offering users an additional convenience or an economic advantage.

Challenge 1

According to the McKinsey Global Institute report ¹⁹, for the free functioning of the remittance system both within and outside a country, there is a strong need for the absence of restrictions on part of the financial regulator of that particular country (the central bank), along with the availability of open markets.

Solution

The technological advantage of the Blockchain network solutions lies in the fact that they do not require a representation in a country, or the availability of a legal framework for their presence in order to function as a means of payment in that country. Restrictions in the form of a ban will create a black market for other electronic payment means, which is likely to complicate their use, but will not stop it completely. Technologically, a blockchain solution can only be banned by completely banning network communications at the transport level. Such advantages of that technology provide a huge potential for creating open markets without borders.

Challenge 2

The McKinsey report ²⁰ states that for banking services to function properly, a large amount of digital infrastructure and user identification tools are needed.

Solution

Similar to mobile money systems, usage of the existing hardware base is proposed. Smartphones with a fingerprint scanner and a camera provide both Internet access for carrying out transactions of various types and possibility for user's biometric identification. In fact, this paradigm shift addresses the problem of user access to traditional banking services not by building new offices in inaccessible/sparsely-populated areas but by bringing banking services to the user's mobile phones.

¹⁹ GLOBAL PAYMENTS 2016: STRONG FUNDAMENTALS DESPITE UNCERTAIN TIMES. https://www.smefinanceforum.org/sites/default/files/post/files/McKinsey_Global_Payments_Report_2016.pdf

Technical information

Challenges

Challenge 3

The McKinsey report ²¹ further points out that users have to choose a solution that exists in the market but would be more expensive and will not be cross-border.

To respond to these challenges, users need to be provided with:

- Lower money remittance fees than what compatible services offer.
- As low volatility as possible of the means of payment.
- Simplicity of conversion into other means of payment and B2C interaction, which implies:
 - Wide network of existing agents capable of cashing out a payment tool or, conversely, accepting cash in exchange for electronic money (more convenient to handle and/or to transport) Bank4YOU Group plans to develop the business in the countries with already formed market of mobile money, hence the expenses connected with creation of dealer and agency networks won't incur.
 - Possibility of automatically converting one payment tool into another means of payment – mobile money and fiat electronic money.
 - Possibility of buying/selling goods and services using a means of payment
 - Micro-crediting system

Since that problem is the most complicated and comprehensive of all mentioned, the following section is devoted to its solution mechanisms, which also describes the design of the proposed system.

²¹IBID

Technical information

Proposed solution to challenges

It is proposed to implement a payment facility based on the blockchain technology (digital tokens), which will be freely convertible into a fiat currency and mobile money, first in individual countries and then around the world.

Lowering fees

According to the aforementioned report on international remittances using mobile money²², the average fee for country-to-country remittance is 2.7 per cent excluding cashing out of funds for amounts higher than \$200 (amounts below \$200 are, on average, more expensive to remit; the smaller the amount, the more expensive it is to remit).

Thanks to the technological advantages of the blockchain technology, a lower remittance price is ensured than with the alternative services. The remittance fees in the Ethereum network, for example, are regulated in a special way so that they are always low regardless of the price of the Ethereum.



Fig.5 The median transaction fees (percentage) in Ethereum network, from the network launch up to writing of this whitepaper²³.

This makes it possible to offer lower fees, even when compared to the mobile money technology (for example, M-PESA charges a flat fee of \$0.40 for P2P remittances and a withdrawal fee of \$0.33 for withdrawals under \$33), especially if there is no need for an instant execution of the transaction. In the event of increasing the transaction confirmation time to five minutes, the fee is significantly reduced. As can be seen, the remittance price in a public Blockchain Ethereum is much lower than that of any of the systems under consideration.

It is proposed to set up a consortium of mobile operators. All mobile operators that have concluded partnership agreements will be able to give their subscribers the opportunity to receive or send cross-border payments to subscribers of all other partner mobile operators.

²² DRIVING A PRICE REVOLUTION MOBILE MONEY IN INTERNATIONAL REMITTANCES: <https://www.gsmaintelligence.com/research/?file=8F31B31705C20A63A41DB9711BF84C25&download>

²³ ETHEREUM MEDIAN TRANSACTION FEE HISTORICAL CHART https://bitinfocharts.com/comparison/ethereum-median_transaction_fee.html

Technical information

Proposed solution to challenges



Thus, each of the operators needs to conclude only one partner agreement, which is with the Bank4YOU Group consortium, instead of entering into an individual partnership agreement with each of the operators participating in the consortium. This will give the operator's subscribers the opportunity to send international remittances to subscribers of all other partner operators. The proposed solution also gives the opportunity to integrate a new payment facility (crypto-currency) with the existing mobile banking and card remittance systems, which will provide multiple points of contact for the users, convenience, and guarantees on the reliability of use.

Fig.6 - A consortium of the Bank4YOU Group mobile operators



Technical information

Proposed solution to challenges

The arrangement of a private Blockchain system may even still further (in comparison with a public Blockchain one) lower the remittance fees within the network²⁴

It is proposed to organize a private Blockchain system as follows: the virtual Bank4YOU Group's divisions (private nodes) will serve as nodes for transaction verification within the consortium of Organizations participating in the system of international payment transfers. They will provide fast and cheap validation of transactions made by other network members. It is assumed that as the popularity of the system grows, mobile operators will have an economic incentive for placing the peer-to-peer nodes of the system in their data centers. This can significantly reduce the transaction costs associated with money circulation.

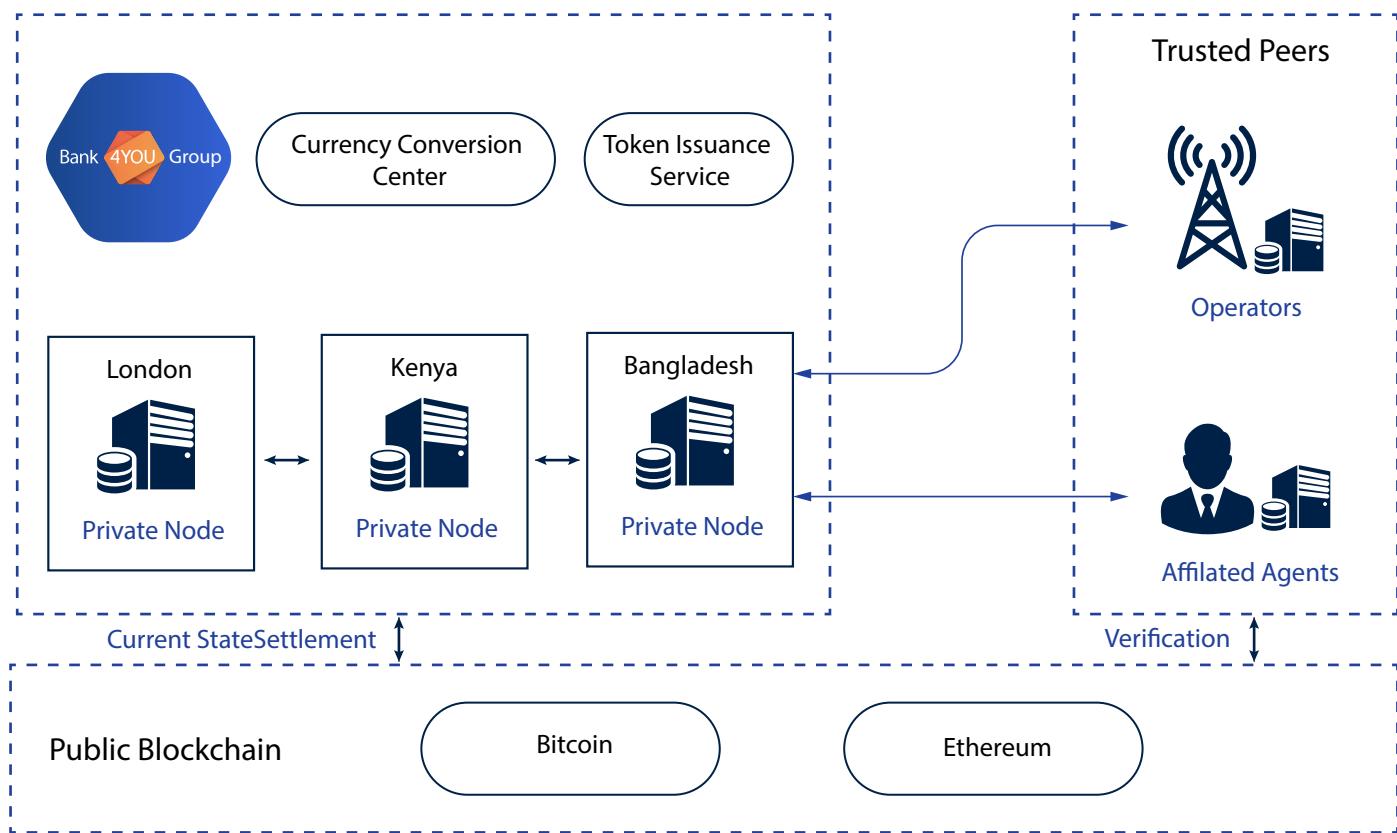


Fig.7 – Design of private blockchain system

²⁴VITALIK BUTERIN'S BLOGPOST ON PUBLIC AND PRIVATE BLOCKCHAINS: https://blog.ethereum.org/2015/08/07/on-public-and-private-blockchains-Money_2016.pdf

Technical information

Proposed solution to challenges

In order for participating peers to be convinced of the unfalsifiable nature of the data inside the private Blockchain system, it is proposed to record reference points into the public Blockchain systems (Bitcoin, Ethereum). Any member of the system will therefore be able to verify at any time the data stored in the system. A private Blockchain system makes it possible to renounce the deployment of an expensive IT infrastructure for financial transfers while ensuring the necessary level of trust between the consortium entities.

Hence, a private Blockchain system ensures:

- Cutting costs and opportunity thereof to provide users with even cheaper international money remittance services
- Improving scalability of system by not having to deploy expensive infrastructure
- Sufficient level of trust between members of the consortium for fast and reliable work on processing of user transactions (due to cryptographic mechanisms of transaction validation)

Lowering the Volatility of Payment Means

The volatility of payments means intended for remittances is obviously undesirable. To deal with such volatility, solutions similar to those are used: NuBits, LHT, Minex, Digix, dai, Steem, USDT, BitShares, all of which boil down to trying to tie a digital token to some other asset and a liquidity provider mechanism implemented as a price floor repurchase by the central banking authority or a fund organized as a reserve one in state-run economies.

The proposed solution is to link the internal digital currency (MMR) to a payment facility freely convertible in the target economies and make it freely convertible into a fiat electronic currency and cash one as well as into mobile money.

Considering the preferences of the project's target audiences it is decided to use MMR provision with mobile money and minutes of operator's cellular communications.

The internal digital currency of the system, called Mobile Money Remittance or MMR, payment capability enables payment with fiat money stored on Bank 4YOU Group's account at mobile network operators with deposits (see Fig.7) mainly in US dollars. The MMR is issued once fiat money is placed and can be freely converted into several means of payment in various countries: fiat currencies, mobile money, airtime minutes depending user needs and local market specifics.

Technical information

Lowering the Volatility of Payment Means

Bank4YOU Group determines the conversion rate in partnership with mobile operators with exchanges made via mobile application. The volatility of the MMR is protected by a fixed exchange rate.

The Bank4YOU Group (BFY) ICO token on the Ethereum platform will be implemented for those keen on long-term profit from system activities. The BFY token will allow profit on transactions and through other financial operations in the system. Besides, the BFY token holder will be allowed to purchase MMR on discounted price, which means cheaper services on cross-border transfers.

The revenue generated through the sales revenue of Bank4YOU Group's credit products will provide for financial transaction profit. Transactions reporting will be provided by the independent auditing organisations controlling the income generation of Bank4YOU Group. Equitable distribution of a part of this income to users will be enabled.

MMR purchase in return for BFY tokens is possible on the floating rate, but with a fixed 2.5 per cent discount. This provides BFY holders with exclusive access to the system of cross-border money transfers. In order the participants got profit from the functioning of money transfer system, a special fund is formed by one per cent of all MMR transfers' amount inside the system. These means are then distributed among all participants of the system (both MMR, and BFY token holders). Thus the system rewards users for supporting it. The dividend payout will be received quarterly (on condition that the payment amount excesses a commission amount necessary for making a payment). Thus, a purchase of a tokens constitutes a passive income.

MMR holders will be paid by automatic accrued payment system. Availability of audit trail of a private Blockchain in public Ethereum/Bitcoin Blockchain will provide for a transparent and fair accrued dividend scheme.

If necessary, each participant of the system can check the fairness of own share charges or that of any other user. As payments are made once in a payment period, it is necessary to consider balance changes in one's account during this payment period so it is distributed equally between all holders. Calculation of the user's award will be estimated according to the next formula:

Technical information

Lowering the Volatility of Payment Means

$$R_u = \sum_{n=1}^k (R_p * t^n * MMR_u^n) / (t_p * MMR_t)$$

Where:

R_u is holder's award during payment period;

$n = 1..k$ is quantity of user's account (address) statuses in the current payment period;

R_p is total quantity of funds distributed between users in current payment period;

MMR_u^n is quantity of MMR on the user's account at the current moment (between transactions);

t^n is time interval between changes of user's account status;

t_p is a payment period;

MMR_t is a general quantity of issued MMR;

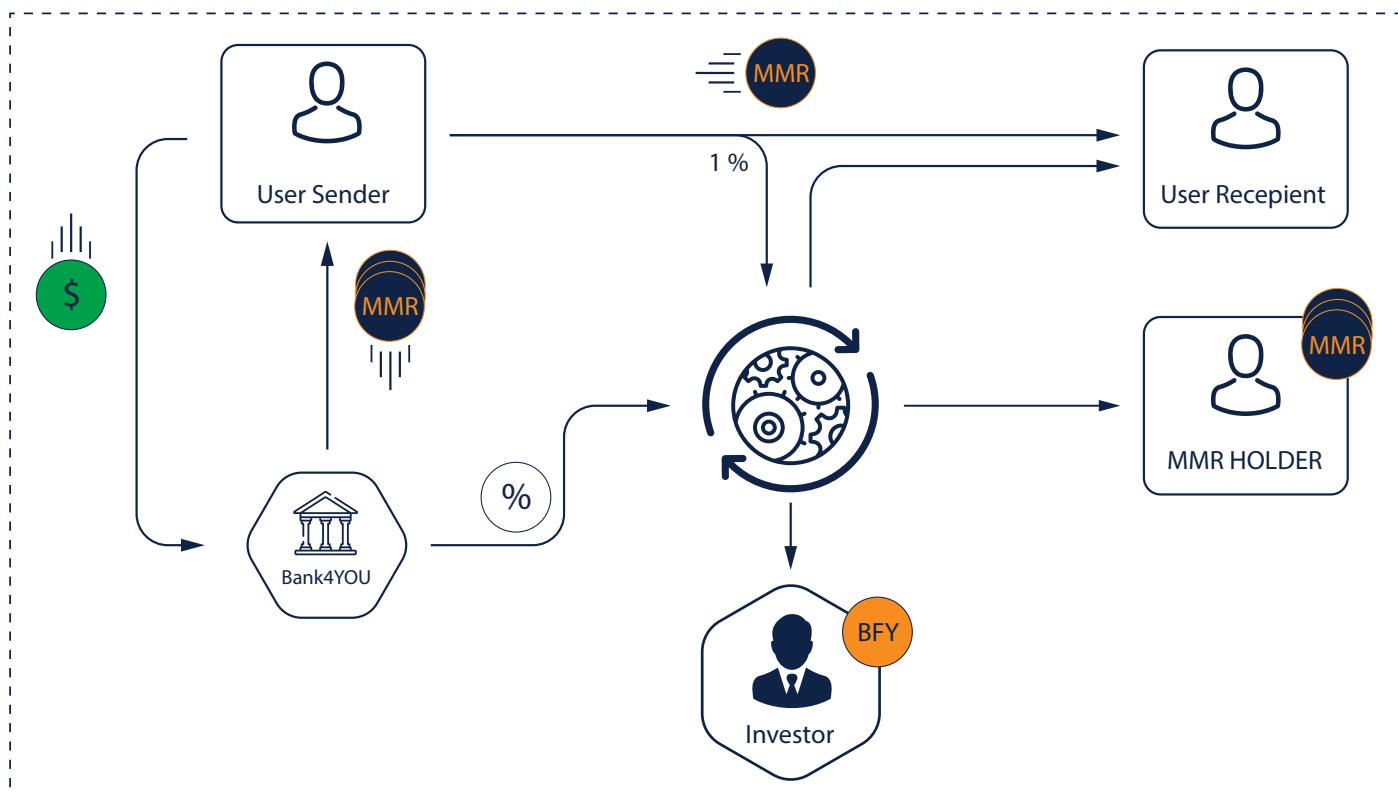


Fig.8 Financial flow scheme in the system

Therefore, BFY token grants the right to receive:

1. Part of income gained from Bank4YOU Group bank activities.
2. Discounts for purchasing MMR.
3. Part of total system turnover of international money transfers.

Integration with existing systems

It is planned to provide as many points of contact with existing payment and monetary systems as possible facilitated by a verified network of affiliated and economically motivated agents.

Technical information

Credit granting system and know your customer

Intending to provide convenient and fast mechanism for providing consumer credit financing based on money transfer platform, we give customers an opportunity to arrange smartphone credit for friends and family.

For evaluation of demand on this service, our group specialists held an opinion survey in UK and France. Ten thousand respondents (mostly migrants from Asia and Africa) were surveyed with 78.8 per cent showing strong interest in service. They agreed that they are ready to take a loan for purchasing the latest smartphone model under their personal guarantee for friends and family. They confirmed that they were ready to pay from five to 10 euros per month for the smartphone (e.g. Great Wall Smart 12 model with retail price of 40 euros was offered, with proposed credit set for a period of 12 months).

To provide customers with accurate lending mechanism it is offered to transfer the mechanism of credit history on Blockchain. In order to avoid disclosure of private data no personal user's information will be stored in the Blockchain, just the biometric information protected by cryptographic means. The user will voluntarily provide it in order to receive lending assets or access transaction history connected with the digital identity of the real person. The benefit of the system is knowing it is impossible to obtain any information on the transaction history of a specific person without possessing their biometric data, thus protecting users against any malefactors. It is indeed very difficult to counterfeit biological identifiers.

There is a plan to create a Blockchain that would store the crypto currency loan credit history of those who voluntarily provide this information. Bank4YOU Group's affiliated agents/ partnering organizations will be able to make records on Blockchain. In other words, an initiation of the smart contract in which the next information will be specified.

- Amount of loan
- Address of creditor
- Credit interest rates
- Series of loan charges
- Unique biometric indicator of borrower

The smart contract checks whether payments are made fully and in time to the creditor. If payments are made according to stipulated conditions, the borrower's credit score is automatically raised or in the opposite case it is reduced. In case the borrower attempts to apply for new credit, they would be refused. Provided biometric data allows to unambiguously identify the person's credit history, the reverse procedure is impossible. Credit history cannot be associated with a person due to the realization of unique biometric identifier.

Technical information

Unique biometric identifier

The unique biometric identifier consists of a person's scanned eye retina and scanned fingerprints. These indicators allow for quick and reliable identification of each person in the world. This feature does not require provision of any passport data as it is subject to just minor mistakes. The only problem lies in the compatibility with the existing standards of know your customer procedure.

The professional team of specialists hired by Bank4YOU Group has provided the statistical analysis of the predicted performance revenues of above-mentioned operations. Data with planned profitability over the next three year is given in table below:

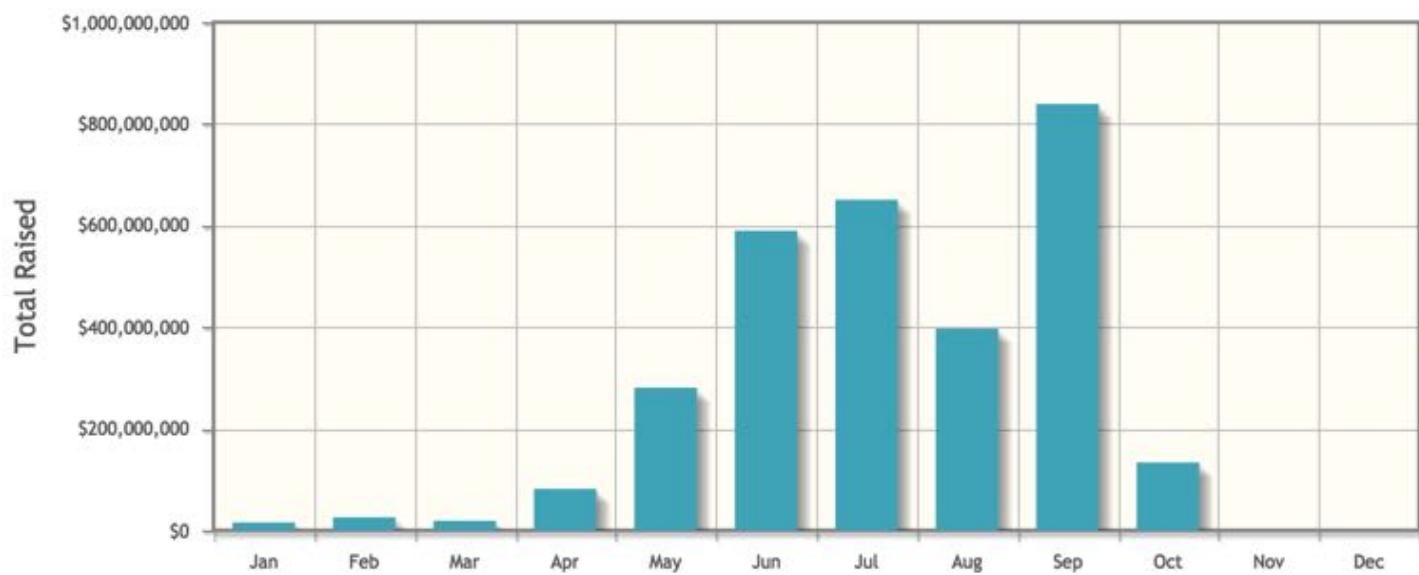
Project realization, in mln, USD.				
YEAR 1 Project Implementation - Regional Project Extention				
ASIA	AFRICA	EUROPE	Total	
Outreach regional percentage				
90	90	20	64	
YEAR 2 Project Implementation - Regional Project Extention. Volume growth in market transfers = 10%				
ASIA	AFRICA	EUROPE	Total	
Outreach regional percentage				
90	90	20	64	
YEAR 3 Project Implementation - Regional Project Extention. Volume growth in market transfers = 10%				
ASIA	AFRICA	EUROPE	Total	
Outreach regional percentage				
90	90	20	64	
Mobile Money Remittances - Income source - Income from exchange difference				
Year 1(1 month -1%, 2-6 months - 3%, 7-12 months - 4% of total transfer amount)				
ASIA	AFRICA	EUROPE	Total	
Income from the exchange difference				
52.48	57.56	13.30	123.34	
Quantity of mobile network operators in regions				
12	52	6	70	
ASIA	AFRICA	EUROPE	Total	
Year 2 project implementation (8% of total transfer amount)				
ASIA	AFRICA	EUROPE	Total	
Income from the exchange difference				
56.58	74.07	17.63	148.28	
ASIA	AFRICA	EUROPE	Total	
Year 3 project implementation (12% of total transfer amount)				
ASIA	AFRICA	EUROPE	Total	
Income from the exchange difference				
93.36	122.22	29.10	244.67	
ASIA	AFRICA	EUROPE	Total	
Quantity of mobile network operators in regions				
14	63	7	84	
Phone Credit Sales				
Year 1 project implementation				
ASIA	AFRICA	EUROPE	Total	
Total income from sales from mobile phone (cost value and logistics deducted)				
1.71	1.64	0.41	3.76	
ASIA	AFRICA	EUROPE	Total	
Year 2 project implementation				
ASIA	AFRICA	EUROPE	Total	
Total income from sales from mobile phone (cost value and logistics deducted)				
2.01	1.93	0.48	4.42	
ASIA	AFRICA	EUROPE	Total	
Year 3 project implementation				
ASIA	AFRICA	EUROPE	Total	
Total income from sales from mobile phone (cost value and logistics deducted))				
2.28	2.19	0.55	5.02	
CREDITING (CONSUMER LOANS)				
Year 1 project implementation				
ASIA	AFRICA	EUROPE	Total	
Income on a consumer loans				
8.14	7.80	1.96	17.89	
ASIA	AFRICA	EUROPE	Total	
Year 2 project implementation				
ASIA	AFRICA	EUROPE	Total	
Income on a consumer loans				
17.41	16.69	4.19	38.29	
ASIA	AFRICA	EUROPE	Total	
Year 3 project implementation				
ASIA	AFRICA	EUROPE	Total	
Income on a consumer loans				
18.55	17.78	4.46	40.79	
TOTAL PROJECT INCOMES				
144.99				
Total Expenses				
14.87				
Profit before tax				
144.51				
Taxes and fees				
36.13				
After-tax profit				
108.38				
ACCRUED PROFIT				
108.38				
TOTAL PROJECT INCOMES				
191.00				
Total Expenses				
15.10				
Profit before tax				
175.89				
Taxes and fees				
43.97				
After-tax profit				
131.92				
ACCRUED PROFIT				
240.30				
TOTAL PROJECT INCOMES				
290.48				
Total Expenses				
17.61				
Profit before tax				
272.87				
Taxes and fees				
68.22				
After-tax profit				
204.65				
ACCRUED PROFIT				
444.96				

Crowdfunding

ICO

CNBC cites²⁵ that in the first half of 2017 alone, startups have raised an enormous sum of \$1.27 billion through ICOs, surpassing the amount invested in fin-tech startups with venture capital.

ICO or initial coin offering (primary coins placement) is a mechanism to raise funds for a crypto currency venture. It is also a model of crowd funding 3.0, which helps participants to finance the development of the company in order to benefit from such investments in future.



Totals raised are grouped by the ICO closing date and are valued using BTC exchange rate at that time. Data correct on 16th October 2017 14:00 UTC

Fig.8 Totals raised are grouped by the ICO closing date and are valued using BTC exchange rate at that time.
Data correct on 16th October 2017

The ICO means will be distributed as per the development of the project. Bank4YOU Group plans to spend crowd funded means on elaboration of its system of mobile money, development of new software, incorporation of microcrediting system, and new financial services based on Blockchain.

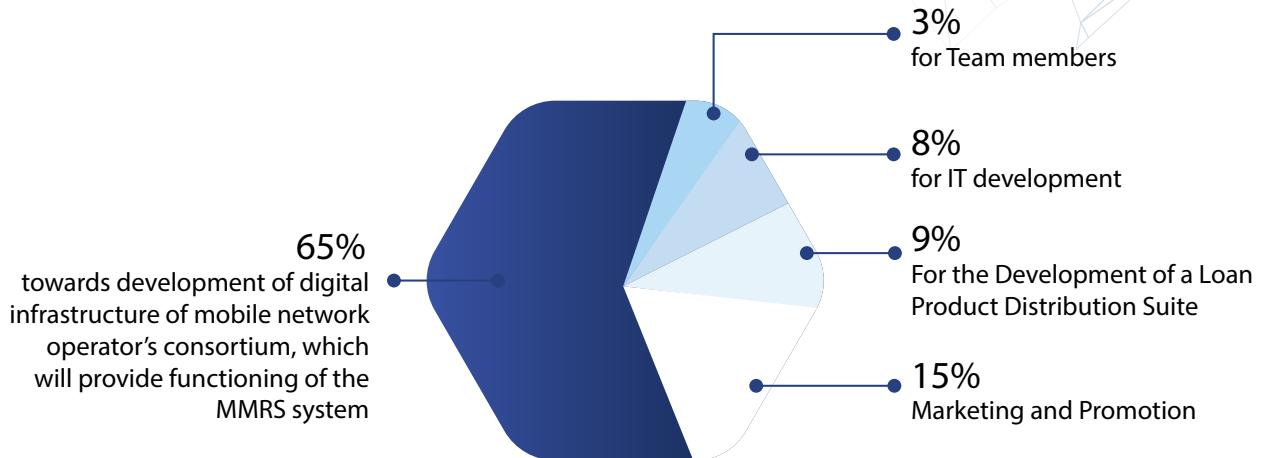
²⁵ Article: <https://www.cnbc.com/2017/07/18/startups-raise-record-1-point-27-billion-selling-bitcoin-other-cryptocoins.html>

²⁶ Picture taken from the Article: <http://dailycoin.info/1-6-billion-all-time-ico-funding-climbs-as-record-500-million-invested-in-july/>

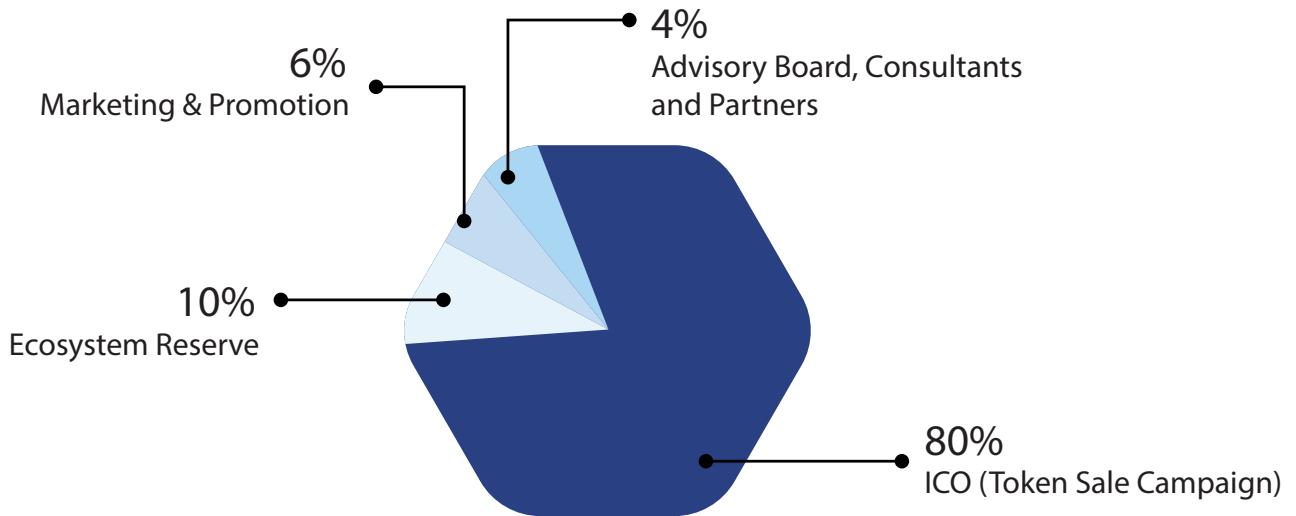
Mobile Money Remittance System

Crowdfunding - ICO

Use of ICO Funding



BFY Token Allocation



NOTE. Distribution depends on the crowd funded sums.

Tokens will be issued in equivalent of \$50 million, when the ICO will reach this hard cap it will be stopped ahead of scheduled dates. The scheduled duration of ICO is 145 days. The general amount of BFY tokens is 300.000.000.

Mobile Money Remittance System

Crowdfunding - ICO

18.000.000 (6% of the whole amount) is reserved for bonus payments for users. Bonuses will be stopped sharing when the planned amount will be exceeded. In case if one wishes to purchase BFY via fiat money, there'll be provided an additional 5% bonus. These currencies are accepted during the ICO: BTC, ETH, GBP, USD, EUR.

Special Packages have been designed for those purchasing 5000 tokens (Standard Package) and 15000 tokens (Premium Package). Corporate card and Premium card respectively will become our gifts to devoted investors.

Pre -sale 7 days	ICO Sale 1 round 14 days	ICO Sale 2 round 21 days	ICO Sale 3 round 103 days
Bonus +20%	Bonus +15%	Bonus +10%	Without Bonus

5000 tokens	15000 tokens
Standard Package	Premium Package
B4U Group Card	Premium Card B4U Group

Referral program

The referral program works by means of distribution of a referral code and provides fixed remuneration at a rate of 40 BFY. The main condition should be followed such as there should be BFY tokens purchased during the ICO campaign on the user's account. The one who sent and the one who activated the referral BFY code will receive bonus at a rate of 20 BFY each and referral tokens will be granted after the end of ICO only to those who made an investment and will be sent to the user's Bank4YOU wallet.

Mobile Money Remittance System

Roadmap

