sikoba

Report on Peer to Peer Marketplaces

A look at P2P payments, P2P lending, blockchain and cryptocurrencies

- draft -

by Jennifer DuBois

4/4/2017

Contents

Executive Summary 2
Objective 2
Key Points 2
Background 3
Peer to Peer Payments 3
P2P Payment Competitors 4
The Future of P2P Payments 5
Peer to Peer Lending Networks 5
P2P Lending Business Model 5
P2P Lending Market Potential 6
Challenges to Market Potential 7
Major P2P Lending Competitors 7
The Future of P2P Lending 8
Blockchain - The Great Disruptor 9
Cryptocurrencies 11
Benefits and Uses of Cryptocurrencies 11
The Future of Cryptocurrencies 12
Peer to Peer "IOU" Networks 12

Executive Summary

Objective

The objective of this report is to provide an overview of emerging to Peer (P2P) financial networks and marketplaces and to explore factors contributing to their growth.

Key Points

A number of economical, technological and consumer/investor changes have given rise to the legitimacy of Peer to Peer (P2P) networks and marketplaces over the last few years. Starting with the 2008 global financial crisis, and subsequent regional financial crises, global banks retracted credit, particularly to SMEs and borderline credit-worthy consumers. At the same time, digital technologies have advanced tremendously. The resultant time consuming, lengthy and rigid procedures of credit 'exposed' banks, along with technological progress in payment systems, made way for innovative P2P payment, lending and borrowing options. The result has been the rise of peer-to-peer (P2P) payments and marketplace lending. P2P online and mobile solutions offer simplified, lower cost and quick payments. P2P lending networks off faster and streamlined credit approval procedures and lending decisions, lower costs and better interest rate deals for borrowers and lenders, with more transparency.

The volume of global P2P payments and remittances is eclipsing $1 trillion yearly. With eCommerce (and mCommerce) growing tremendously in unbanked economies such as Southeast Asia and Africa, the P2P payments economy shows real opportunities for growth. Of particular importance will be mobile P2P payments.

Though many P2P lending platforms were established before the 2008 financial crisis, few thrived until its aftermath. The wave of P2P lending disruption in the financial sector gained strength after banks who suffered heavy losses became strict about loan disbursements. Per annum growth rates in P2P lending volumes in various markets have reached the likes of 50%-80% p.a. during the past few years, with China reaching $100bn in 2017. While the US, UK and China are the most significant P2P lending markets, other European countries are following suit. Peer to Peer volumes have become so large and have grown at such a fast rate that large financial institutions are taking notice and considering entering the P2P lending market, either through investing in and collaborating with these marketplaces, or like Goldman Sachs, creating their own P2P platform.

The appearance of digital technologies, the most important of which is arguably blockchain, and subsequent digitized currencies such as Bitcoin, has also facilitated consumer and investor adoption of online marketplaces.

Finally, with the rise of these P2P networks and digital economies, some are considering that "credit" as a monetary tool might also be migrated to an online P2P marketplace. The concept of P2P "IOUs" is emerging and is the focus of the Sikoba platform.

Background

The financial services industry is undergoing a significant evolutionary stage driven by macroeconomic forces, deregulation, technological innovation, and evolving consumer demands. Financial Technology (FinTech) represents "new solutions which demonstrate an incremental or radical/disruptive innovation, development of applications, processes, products or business models in the financial services industry"[i]. FinTech is an emerging, but high growth financial sector driven by the increased use of technology which is rapidly filling the void of inaccessibility to and high cost of access to financial services. The FinTech revolution differs from traditional banking or capital market finance in that it uses technology-enabled disintermediation, using 3rd party capital to connect borrowers directly with lenders. The result constitutes a highly disruptive challenge for incumbent financial institutions and a transformational opportunity for new market entrants as well as entrenched constituents. P2P payments and lending networks fall under the FinTech and Alternative Finance umbrellas.

Along with FinTtech, cryptocurrencies such as Bitcoin, as well as SME mini-bonds, social impact bonds, community shares, private placements and other 'shadow banking' mechanisms have also come onto the financial services scene. Cryptocurrencies have grown into a considerable global industry in recent years following the 2008 and recent financial crises.

Many terms and phrases have been coined to describe this transformation of monetary and financial systems including "From the people, For the People", "Bank of You" "Financial Democracy" "The Democratization of Finance" and "Social Finance" to name a few. The general sentiment behind these catch phrases is one of improving access to financial services for everyone by decentralizing monetary and credit system control.

Peer to Peer Payments

Ever since money was invented in the 7th century BC, the exchange of hard currency has generally been the most convenient way to pay in real-time for every day purchases. However, cash is an expensive instrument, requiring printing storage, circulation logistics and costs, making it difficult to store and transport. Moreover, many transactions no longer occur in person, and require other methods of payment. The growing ubiquity of smart devices and online retail commerce in markets outside of the US is driving the rapid adoption of real-time payments. Increasingly, consumers are turning to their smartphones when they need to make payments. Peer-to-peer payment apps have been around since the early 2000s but they have only established a foothold in recent years. P2P payment apps make transferring money faster, less expensive, and more precise. Drivers of their adoption are greatly improved ease of use, the rapid adoption of smartphones, and more sophisticated app technology. Key characteristics of P2P payments are:

- **Personal & trust-based** – payments are meant to be made between trusted friends and family. Many P2P services prohibit users from using apps for commercial transactions and most lack buyer and seller protection.
- **Funding source**– most require funding from a bank account, others allow debit/credit card funding.

- **Fees** – most transactions funded from bank accounts are free, however use of a debit/credit card incurs a fee of around 3% or a flat fee per transaction.
- **Payment limits** – some apps limit the amount given over a time period.
- **Payment delay** – although transactions appear to happen instantly, they typically do not settle for 3-4 days during which time a payment can be cancelled by the sender.
- **Social component** – some apps allow sharing of transactions on social media.

With the volume of global P2P payments and remittances eclipsing $1 trillion yearly, the P2P payments economy has huge opportunities for growth. Moreover, only a small portion of those transactions — just $5 billion in the U.S., for example — are currently conducted via mobile phones, but it is estimated is that total *mobile* P2P transactions volume could reach $86 billion in the U.S. by 2018[ii].

P2P Payment Competitors

Web-based P2P money transfer applications promise to deliver the same basic service: a fast, free, simple way to transfer money to another person. However, all of these apps have limitations. Many P2P payment apps allow transfers only within a particular geographic region. Further, because they require users to provide personal financial information over the internet, they are all vulnerable to hackers.

Square and Venmo (Paypal), Alphabet Inc. (Google), Facebook Messenger, Paypal and ClearExchange are the main P2P payment players in the US, but there are dozens more. Venmo, Square and Google have entered the *mobile* payments market.

Comparison of Mobile P2P Payment Competitors

	Pros	Cons
Venmo (Paypal / Braintree)	• Instant payment making • Better social capabilities than other P2P apps • No fees if you use a bank or major debit card	• Transfer limits - $299.99 for users with unconfirmed identity; $2999.99 for confirmed identity. • US transfers only; US residents only • 3% fee for credit card transfer • Requires manual transfer by user from Venmo to bank account. • Lacks a major ecosystem.
Square Cash	• Free for users • After linking a debit card, everything else is as easy as emailing the money.	• Weekly limit is $250 unless the mobile phone number is linked to Facebook account • When linked and verified the weekly limit is $2,500 • Available in 48 U.S. states only. • Does not support credit card use.
Google/Gmail	• With the Android app, sending money as a Gmail attachment is very simple • High limit of $10,000 per transaction and $50,000 per five-day period.	• Users need a Google account or app for transfers • Only U.S. money transfers allowed • 2.9% fee for debit/credit card transactions • Money is deposited in a Google Wallet account, which then has to be withdrawn to the bank account.

The Future of P2P Payments

As consumers continue to embrace digital alternatives to payments by cash and check, user confidence in the security of P2P payments and in each other will increase. Moreover, emerging markets which lack banking infrastructure and "wired" technologies, will drive the adoption of mobile P2P payment systems, specifically in the realm of remittances. For example, the Philippines has continuously recorded growth in remittances, which, as of 2014, stood at US$28bn. Another example, Kenyan telecom's M-Pesa platform, allows its users to transfer money to one another via text message. As a result an impressive 92% of Kenyans say they have used mobile P2P payments. We can also expect to see the rise of social media platforms such as Facebook and Snapchat offering P2P payment options. According to the World Bank, 90% of money transfers happen between friends and family[iii]. Their connection on social media presents huge opportunities for social media platforms to monetize their customer base.

Peer to Peer Lending Networks

Though many P2P lenders were established before the 2008 financial crisis, few thrived until its aftermath. The wave of P2P disruption in the financial sector gained strength after banks who suffered heavy losses became strict about loan disbursements. The subsequent chaos and fragility in the financial system caused dissatisfaction with commercial banks among borrowers and created unmet demand for loans. P2P lending stepped into the vacuum that the banking and monetary systems left worldwide.

Moreover, those who could still borrow from conventional sources soon found that peer-to-peer providers offered better deals. Credit-card rates in the US and in the UK, which tend to remain stable through economic cycles, looked especially uncompetitive as central banks pushed interest rates to record lows. Creditworthy borrowers paying 18%-21% on their credit-card balance found they could take out a peer-to-peer loan charging 14% instead. On the other side of the equation, low interest rates meant savers were open to new investment opportunities, including lending their money to perfect strangers on the internet. By 2014 according to US bank regulatory filings, the 10 largest banks lent $44.7bn, down 38% a peak of $72.5bn in 2006. In the meantime, in 2015 the top two P2P platforms, Lending Club and Prosper recorded loan volumes of $8bn and $3.7Bn respectively.

P2P Lending Business Model

P2P lending platforms are online marketplaces that match borrowers with lenders (investors) directly. Lenders purchase "notes" issued directly by the P2P marketplace. Borrowers can fill out an easy online application, be approved and informed of the (often lower) interest rate in minutes and follow the status of their loan application 24/7. Individual and professional investors benefit by being able to lend money at a range of interest rates based on proprietary credit scores assigned by each platform. Since investors typically fund only a portion of a loan and spread the amount they loan across many buyers, investors can potentially receive steady, attractive returns while spreading risk across multiple borrowers. P2P platforms generate revenue from origination fees charged to borrowers, from taking a portion of interest charged to investors, plus additional charges such as late fees.

A key differentiator of P2P lending platforms versus banks and the reason for their rise to legitimacy is their innovation in credit modelling and underwriting versus financial institutions. Most platforms incorporate a wide variety of data beyond traditional credit scores to reach a broader spectrum of borrowers. For example Kreditech, a German startup which makes short-term loans in countries from Peru to Poland, says it uses 20,000 data points to extend high-interest credit at a rate of $120m a year. Beyond using Facebook data, it says it can "triangulate the truth" about a customer's creditworthiness by using behavioral data such as the way its online application form is filled in. Others use more intuitive credit-scoring. SoFi has carved out a niche pitching credit to what the industry calls HENRYs: high income, not rich yet. Sofi has built a franchise refinancing student loans for asset-poor but high-potential graduates of top universities, whom it sees as good credit risks. Its loans run to around $75,000, much higher amounts than the $10,000-$15,000 typical on other platforms.

These platforms' risk-based pricing, return-seeking investors, and investors seeking diversified portfolios are driving the acceptance of lower credit tiers. Those who lend money through P2P platforms explicitly accept that they may suffer losses. Unlike bank deposits, their investments are not guaranteed by the state.

P2P Lending Market Potential

Estimated Size / Growth of P2P lending market [iv]
(excluding China)

	2014	2015	2020	2024
Market Size (loan volume)	$9bn	$26bn	$150 - $490bn	$898bn
CAGR (from 2016)			53%	48.2%

In general, market researchers estimates put P2P lending's 5 year CAGR from 2016 around the 50% p.a. mark. The predicted rapid growth in P2P lending is in part due to the fact that it is a *global* phenomenon:

- P2P lending in the U.S. is growing at a faster pace in comparison to other financial services and is predicted to grab about 45% of global market share by 2020[v]. The total amount of money lent through P2P platforms grew more than 80% per quarter from 2007 through 2014, according to the Federal Reserve Bank of Cleveland. PWC predicts the US market will reach $150bn by 2025.
- China's P2P lending market is the largest in the world with more than 4,000 providers. Current 2017 estimates put the market at around $100Bn.
- In Europe, although the vast majority of the P2P lending activity is concentrated in the UK – which accounts for over 84% of the European market - Germany, France and Nordic countries are experiencing strong growth and development in the P2P lending space with a number of homegrown startups starting to emerge as regional leaders. Europe's alternative finance market, a

mix of crowdfunding, P2P lending and other activities, grew by 92% in 2015 to €5.4bn. The UK represented 81% of this.[vi]

Challenges to Market Potential

Despite growth predictions a number of significant issues present challenges to growth.

- **Fraud** – A major challenge of P2P lending is managing fraudulent activities and malpractices which result in loss of investor confidence and trust. Statistics by the Chinese Banking Regulatory Commission showed that out of the 4,127 P2P lending platforms (end of June 2016), 1,778 were suffering from problems such as poor management, capital constraints or were a Ponzi scheme.
- **Regulation -** In Europe, several countries have introduced changes as an attempt to regulate the activities of these emerging platforms. In the United Kingdom, the Financial Conduct Authority (FCA) regulates loan-based and investment-based crowdfunding platforms. In August 2016, regulators in China issued an aggressive set of measures to restrain the spread of problematic online lending platforms. In the U.S., P2P lending platforms need to be in compliance with SEC regulations and further have to be in sync with the respective state laws. In Australia, providers of marketplace lending products and related services need to hold an Australian financial services license and a credit license and need to comply with National Consumer Credit Protection Act (for consumer loans) or Australian Securities and Investments Commission Act 2001 (ASIC Act) for other loans.
- **Default rates** - All platforms flaunt their superior underwriting skills and boast of having "prime" borrowers, but they are also under pressure to show rapid growth in their loans. The temptation is to relax their rules and make loans to those at the lower end of the credit spectrum. This may be encouraged by apparently low default rates, but these are masked by the rapid growth in lending: a 10% default rate will become 5% if a loan book has doubled in the meantime.

Major P2P Lending Competitors

Lending Club is the most significant P2P lending player with 45% market share in the US**.** It reports that 62% of borrowers use loans to refinance existing loans are to pay off credit cards. Lending Club and rival Prosper are the only services open to retail investors. Since 2006, Prosper has paid more than $140mn to their investors, with average ROI ranging between 5-9%, although it is not yet profitable. A relative newcomer to the scene, Upstart, founded in 2014 has the lowest default rates in the industry with over 94% of loans on track to be repaid. Upstart operates differently from other P2P lenders. Investors do not pay fees and if a loan defaults, Upstart refunds the investors using the borrower origination fee. Loan selection also differs in that investors cannot cherry-pick individual loans. Instead, they choose to invest in a specific grade or loans with set criteria. Following is a comparison of key competitors.

	Loan Volume (as of YE 2016)	Customers	Loan Amounts/Terms	Fees	Credit Scoring
Lending Club (US)	$20Bn	• consumers • SMEs	• Individuals: $1,000-$35,000 • Businesses: $15,000 - $300,000 • 36 or 60 months • Minimum investment: $25	• 1-5% borrower origination fee • 1% of borrower payments • 18%-30% of defaulted loan amounts collected	Proprietary scoring model, FICO, other credit features
Upstart (US)	$300Mn	• young professionals • small business start-ups	• $3,000 - $35,000 • 3 to 5 years • Minimum investment : $100	• 1% - 6% borrower origination fee • No investor fee • ~4%-26% interest rates	FICO plus other factors such as education level
Prosper (US)	$6Bn	• consumer only	• $2,000 - $35,000 • Minimum investment: $25	• Borrower closing fee 0.5%-5% • 1% annual fee on outstanding loan principal	Prosper Score proprietary system, i.e. D/E ratio, credit score
Funding Circle (UK)	$3Bn	• businesses only	• $25,000 - $500,000 • Minimum investment: $50,000	• 1% monthly service fee on all payments • ~5.5% - 27.8% interest rate	
Zopa (UK)	£2.4Bn	• UK consumers • UK non-lending businesses	• No maximum lending amount • Minimum investment: Zopa Classic: GBP10 Zopa Plus: GBP 1,000 • 5 years	• No investor fee • ~3.2% - 34.9% interest rate	Has 3 credit grades: A, C, D/E.

The Future of P2P Lending

Analysts have made several predictions for P2P lending in 2017:

1. **New Investors** - While P2P lending started out providing simple person to person loans, these models now include institutional investors as lenders. Big-money institutions such as insurance companies and pension funds seek better returns, and have long-term liabilities they are keen to match with long-term assets such as mortgages. If unsecured consumer loans perform well in a

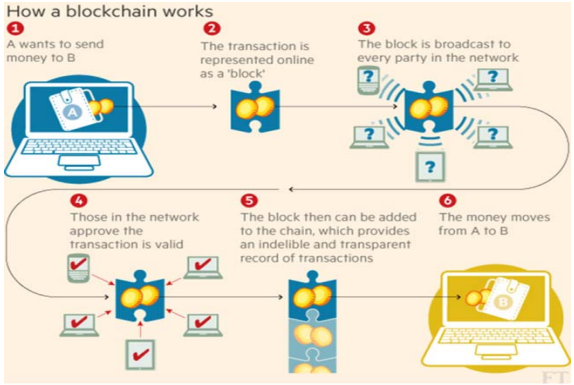
downturn, some investment institutions will be tempted to buy paper from peer-to-peer platforms directly, dwarfing the hedge funds that are already there. A few might buy pools of mortgages from peer-to-peer lenders instead of tapping Wall Street for complex securities whose performance tracks the performance of those same pools of mortgages. Additionally, in 2016 investor demand for Prosper and Lending Club began slipping. Prosper recently announced that it has quadruple net losses since money managers cooled on P2P loans. US platforms are now seeking to re-prioritize their retail investor bases, away from overreliance no hedge funds and small asset managers.

2. **New Asset Classes** - Whereas most platforms currently provide mortgages and secured loans they are expected to continue expanding into different asset classes such as invoice lending.
3. **New entrants** - Banks are starting to take notice, concerned that their "bread and butter" business is being poached by P2P lenders. Banks have two courses of action: collaborate with P2P platforms, or compete. Some banks such as Citibank have begun making strategic moves by purchasing blocks of P2P loans to add to their portfolio. P2P platforms are also forming alliances with banks to refer customers and create credit products for both companies. Goldman Sachs became to first bank to launch its own P2P lending platform called Marcus in March 2017.
4. **Continued or increased regulatory scrutiny -** The FCA recently stated that it will be necessary to strengthen investor protections across both the equity and debt based varieties of crowdfunding, with standards of disclosure needing improvement. The UK regulator has said that it might consider new rules for the space in 2017.
5. **Banking licenses?** - In the US, top regulator Thomas Curry said at the end of 2016 that he will consider granting licenses to FinTech firms, allowing them to operate independently of the banks. Zopa, declared in November 2016 that it will pursue a banking license. This move by the world's original peer-to-peer lending platform raises questions about the ongoing feasibility of the pure marketplace lending model and begs the question: will others follow suit?

Blockchain - The Great Disruptor

Perhaps the greatest disruptor, or enabler, of the financial sector does not come from new lenders or new payments systems, but from the technology that allows for the digitization of much of a bank's function – blockchain. As defined by Bettina Warburg, co-founder of Animal Ventures blockchain is:

> *a decentralized database that stores a registry of assets and transactions across a peer-to-peer network. It's basically a public registry of who owns what and who transacts what. The transactions are secured through cryptography. Over time, that transaction history gets locked in blocks of data that are then cryptographically linked together and secured. This creates an immutable, unforgettable record of all of the transactions across this network. This record is replicated on every computer that uses the network.*



Blockchain has the potential to transform banking, settlement and clearing functions and change the nature of some intermediary functions such as:

1. Trust - Intermediaries such as banks earn money serving as a third party that establishes "trust" between parties unknown to each other. Blockchain replaces these middlemen by offering a vast global distribution ledger on which every type of asset can be stored, managed, and exchanged. The distributed apps that run on a blockchain ("Dapps") provide immutability, security, privacy, and efficiency.

2. Cross border transactions - Blockchain is a global solution. It has no geographical limitations or associated costs.

3. Contracts - Paper contracts, such as those banks use, present all manner of problems. People often don't really understand what they are reading, signatures can be forged and contracts can be lost or subject to human error. Blockchain company Ethereum has created self-executing "smart contracts." Smart contracts handle enforcement, management, performance, and most importantly, payments. They are written in code and signed digitally by the parties. In theory, there is no need for "trusted" middlemen to manage paper contracts and payments. However the 2016 "Dao Heist", Ether (a digital currency) was stolen when someone found a loophole in a smart contract. Thus, contrary to current widespread belief and media reports, smart contracts have not yet been provento be 100% secure.

4. Back office administration (costs) - Banks are essentially secure storehouses and transfer hubs for money. Blockchain's secure, decentralized, and tamper-proof ledger performs this function at a fraction of the cost. As every type of asset can be exchanged securely on the distributed ledger, blockchain has the potential to greatly reduce the cost of international money transfer.

Thought Machine has already created a "blockchain bank." Its Vault OS kernel runs the core functions of the bank. It uses a centralized, permissioned cryptographic ledger as a single source of truth for all transactions. This ensures the highest degree of security, while allowing the bank to retain ownership and control. All of its banking products (deposit accounts, savings, mortgages, loans, credit card accounts) use smart contracts.

The world's largest financial firms are now investing in blockchain. Both alternative financial services companies and about 80% of leading incumbent banks are in various stages of development, testing, and deployment of blockchain technology to enhance various applications and services. They are trying to become the disruptor, not the disrupted. In September 2016, Barclays carried out the world's first

trade transaction using Blockchain. In doing so, they cut a process that normally takes 7–10 days down to less than four hours. Additionally Sweden's Central Bank is considering issuing a digital currency on the blockchain due to the decline of domestic cash use. Others considering such a move include Bank of England and China's Central bank.

As Harvard Business Review points out, blockchain is a foundational technology like the Internet. It is a big system on top of which anyone can build applications. Therefore blockchain's applications beyond financial services are boundless as new projects like Ethereum illustrate, blockchain is applicable for various applications. The decentralized power of the blockchain, if harnessed properly, may provide users and communities with the opportunity to create tools for collaboration on a large scale without mediation by either the government or private for-profit entities. All the power lays with the users. So the question is, who else will utilize this technology, and for what means?

Cryptocurrencies

Since the 2008 financial crisis, interest in a new, innovative type of financial asset known as cryptocurrency has surged. Cryptocurrency is a decentralized digital currency that uses encryption to generate financial assets and to verify transactions. In simpler terms, it's an alternative to traditional currencies which are backed by a centralized government. Cryptocurrencies take advantage of the architecture of the internet. Instead of relying on a standard financial institution to guarantee and verify transactions, cryptocurrency transactions are checked, or "confirmed," by the computers of the users on the currency's network. The most commonly-used cryptocurrency is, by far, Bitcoin. However, other cryptocurrencies such as Ethereum, Dash, Monero, and Litecoin are growing in both public acceptance and value.

Benefits and Uses of Cryptocurrencies

Because cryptocurrencies are digitized, they can be used in ways that ordinary currencies can't. Primarily, they are used like the digital equivalent of cash. Unlike credit or debit cards that are issued by banks, consumers don't need an account or good credit to use cryptocurrencies. They can use them to buy goods and services from an increasingly diverse selection of retailers and individuals such as Overstock.com and Microsoft. There is typically a very small fee for almost every transaction, but it's typically much lower than credit card processing fees and interest, and the fees support the network.

Although there are technically over 1000 cryptocurrencies, only a handful are being actively traded. According to www.coinmarketcap.com there are 754 cryptocurrencies being traded with a total market cap of over $23Bn, 67% of which is Bitcoin market cap. Bitcoin was first introduced as an open software that enables the circulation of alternative currencies by utilizing peer-to-peer networks, hence circumventing banks. Instead of distributing the currency through a centralized network controlled by a central bank, Bitcoins are distributed by nodes participating in a peer-to-peer network. This feature is, arguably, the main innovation of Bitcoin.

Cryptocurrencies can be converted at lightning speed or used to represent things that aren't normally currencies, such as domain names or consumer goods. Depending on the currency being used, it is also possible to anonymize transactions, turning cryptocurrencies into a form of discreet online cash. Most importantly, cryptocurrencies can be sent anywhere in the world, almost instantaneously, enabling users to deal directly with each other over the internet, rather than through a third-party financial institution, paying currency conversion fees or waiting for a bank to release funds.

Small amounts of cryptocurrencies can be used to "tip" people on IRC chat, social media and blogs. Independent developers have designed "tipbots" for Reddit, Twitter and other social platforms that allow anyone to send money to a friend or anybody they feel has made a tip-worthy comment. The amounts that can be sent range from very small, like fractions of a penny, or quite substantial.

In addition to cryptocurrencies, “community currencies” have appeared on the blockchain. Community currencies may be designed as printed vouchers or as digital credit. They can be focused on a specific group of users, such as patients in a physician’s office, or be open to stimulating economic activity across an entire town or region. Examples are:

- “Time credit” currencies such as the Makkie and the UK’s Spice Time Credits
- “Business currencies” such as TradeQoin and SoNantes which provide interest-free credit and alternative networking platforms outside of the corporate world.
- Local currencies such as the Brixton Pound which offer an easy interface for businesses and local authorities to bring identity and place back into everyday connections.

The Future of Cryptocurrencies

It can be said that Bitcoin is a currency that reflects a new type of capitalism – a “distributed” one. This new capitalism is one which adapts to the characteristics of the network era, and uses the peer-to-peer infrastructures to achieve capital accumulation.

Cryptocurrencies are an exciting new development in the world of finance. No one is quite sure yet where the technology will lead, but the fact remains that these new currencies offer possibilities that traditional cash can't. These new currencies provide an important supplement to conventional money. A growing body of global evidence supports the idea that they can meet the needs of local areas and economies in ways that fiat monies cannot.

While good technical design is essential most successful cryptocurrency schemes have fully integrated a currency into existing communities or economies, often designed in partnership with their potential users because their future prospects depend on widespread user acceptance.

Peer to Peer “IOU” Networks

Every peer-to-peer initiative (P2P) on offer today is really representative of a move towards a private sector version of full-reserve banking, whether the P2P ventures are equity-based, reward-focused,

donations-based or even if they focus on traditional interest-based lending. That is because most P2P lenders operate almost exclusively in the world of existing money. They do not, unlike conventional lenders, get involved in the business of money creation. They simply redirect what's already available.

But the rapid rise of both peer to peer payments and lending, blockchain and global acceptance and use of cryptocurrencies has sparked the notion that it's time for a Peer to Peer credit marketplace that replicates the banking credit system - a marketplace based on "credit conversion" or "IOUs", but without dependence on banks, governments or fiat monies and the associated monetary and lending policies. The logical next step in the evolution of Peer to Peer networks would be to put actual money of any kind on an "IOU" P2P credit platform supported by blockchain: credit would be created on the blockchain, live on the blockchain and finally get cancelled on the blockchain.

In Peer to Peer "IOU" platforms, every participant, be it an individual, a group or a corporation, could issue debt (IOUs) in the system, using a choice of non-fiat and fiat-based currencies, and act as a bank by granting credit lines using "smart" (customized) contracts. The result is that users actively co-create money based on an IOU system that resembles how banks create money in the real world. Creating such a system on the blockchain, in the most generic way possible, is the goal of the Sikoba platform.

The Sikoba platform features will reflect the complexity of real-world monetary and financial systems. Sikob and other P2P IOU networks will be based on the concept of "ripple", a monetary system based on "trust" (much like the banking system is) that already exists between people in real-world social networks. The network of all credit lines in the platform will mirror the social graph where a path of people trusting each other can be found between any two non-trusting participants. This allows one to issue money between friends or business partners, and facilitate secure payments between strangers, by rippling payments along a chain of trusting participants. The participants accept each other's credit according to rules they set themselves (smart contracts). These rules will be enforced in the system.

A "ripple-based" system cuts the banks out of the picture by allowing anyone to act as a bank and grant credit within the system to anyone they know. The system keeps track of the source of all IOUs, so that whenever a person wants to make a payment to another, the platform finds a chain of intermediaries connecting that person to the person they want to pay, and records the payment in each intermediary's account all the way down the chain. By exploiting overlaps between "trust networks", a platform's algorithm can identify connections between payer and payee by finding overlaps among both participants' personal networks, resulting in swaps of bilateral IOUs.

By cutting out the institutional middlemen, a P2P IOU platform can be both more community-oriented and more efficient as a means of exchange.

List of Sources

- "The Rise of Peer to Peer Lending" Bajpai, P. (2016, September, 27)
- "Special Report: International Banking: Peer to Peer lending", as retrieved from www.theeconomist.com
- "Enter the Blockchain" (2017, March 17), as retrieved from www.garretgalland.com
- "Peer to Peer Lending: Seven Things Investor Should Know" Gomstyn, A (2016, November 14) as retrieved from www.thealertinvestor.com.
- "The Best Cryptocurrencies of 2017" as retrieved from www.toptenreviews.com
- "The 4 Best P2P Lending Platforms For Investors in 2017" Garrett, O. (2017, January 29), as retrieved from www.forbes.com.
- "Europe's Top 11 Peer to Peer Platforms" Fintechnews Switzerland, (2016, July 1), as retrieved from www.fintechnews.ch.
- "Alternative Finance in 2016: Good Growth in a Tumultuous Year" Fekete, A. (2017, January), as retrieved from www.altfi.com.
- "What is Blockchain Technology? A Step by Step Guide for Beginners", as retrieved from www.blockgeeks.com
- "All you need to know about Blockchain, explained simply" (2016, June), as retrieved from www.weforum.org
- "Alternative Finance's 2016 Year in Review" Week, R. (2016, December 30), as retrieved from www.altfi.com.
- "Goldman Sachs Offers New Online Lending Platform" Garrison, M. (2017, March 20), as retrieved from www.marketplace.org.
- "The Peer to Peer Payments Report" Heggestuen, J. (2015, May 11), as retrieved from www.uk.businessinsider.com.
- "The Rapid Growth of Alternative Finance" Barnes, S. (2016, December 1), as retrieved from www.internationalbanker.com.
- "P2P as Full Reserve Banking" (2013, May 14) as retrieved from www.ftalphaville.ft.com
- "Sweden's Central Bank Considers Digital Currency Use" Rizzo, P. (2015, November 15), as retrieved from www.coindesk.com.
- www.P2P-banking.com
- www.upstart.com
- www.lendingclub.com Wikipedia
- Investopedia

---

[i] www.themarketingeye.com, May 3, 2016

[ii] [iii]"Growth in Peer to Peer Payments Apps Report" (2015, April) , as retrieved from www.businessinsider.com

[iii] Perspectives: Key Trends in the Money Transfer Industry in 2016", as retrieved from www.infosys.com

[iv] Research and Markets 2015, Transparency Research, Morgan Stanley 2015, Statista 2015, Allied Market Research 2015, Technavio 2016

[v] Technavio July 27, 2016

[vi] "The Rapid Growth of Alternative Finance" Barnes, S. (2016, December 1), as retrieved from www.internationalbanker.com.