

Brühl, Volker

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Volker Brühl

Libra – A Differentiated View on Facebook’s Virtual Currency Project

Libra – a global virtual currency project initiated by Facebook – has been the subject of many controversial discussions since its announcement in June 2019. This paper provides a differentiated view on Libra, recognising that different development scenarios of Libra are conceivable. Libra could serve purely as an alternative payment system in combination with a dedicated payment token, the Libra coin. Alternatively, the Libra project could develop into a broader financial infrastructure for advanced financial services such as savings and loan products operating on the Libra Blockchain. Based on a comparison of the Libra architecture with other cryptocurrencies, the opportunities and challenges for the development of the respective Libra ecosystems are investigated from a commercial, regulatory and monetary policy perspective.

On 18 June 2019, Facebook announced its ambitious ‘Libra’ project, which aims to transform the existing financial system by establishing a global virtual currency (Libra coin) operating on an innovative financial infrastructure (Libra Blockchain). The grand vision of Facebook and the other founding members is to empower billions of people in emerging economies who very often have no access to banking or other financial services. Libra will develop a new ecosystem that enables worldwide monetary transactions in a stable digital currency at close to zero marginal costs. This could – so the line of argument – foster financial inclusion by providing better access to financial services and capital, especially in less developed countries. At the same time, the Libra project aims to enable huge efficiency gains in developed economies, which would trigger additional economic growth globally.

The envisaged launch date of Libra is early 2020; the current state of the technical and conceptual framework development is documented in the Libra White Paper¹ and additional technical documents.² On 15 October 2019, the

21 founding members formally established the Libra Association, although some prominent partners of the project, including PayPal, Mastercard and eBay, decided to withdraw from the project at short notice.

Since the announcement, there have been many voices from representatives of central banks and regulatory authorities raising concerns about potential risks of the Libra project.³ The Financial Services Committee of the House of Representatives has even called for an immediate stop to the Libra project.⁴ Moreover, the Swiss Financial Supervisory Authority FINMA has confirmed a request from the Libra Association for an assessment of the regulatory requirements for Libra.⁵ Subject to a formal application by the Libra Association, FINMA clearly stated that the Libra initiative would fall under the financial market infrastructure regulation according to Swiss law. The project would require a payment system licence from FINMA on the basis of the Swiss Financial Market Infrastructure Act, which is based on the internationally accepted Principles for Financial Market Infrastructures. In addition, a Swiss payment system is automatically subject to the Swiss Anti-Money Laundering Act. Depending on other financial services it offers, Libra could be subject to additional regulatory requirements. Consequently, if a launch in Switzerland has substantial regulatory hurdles to overcome, Libra’s global introduction may be expected

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1 See Libra Association: An Introduction to Libra, White Paper, Geneva 2019.

2 See Libra Association: The Libra Blockchain, Geneva 2019.

3 See N. Popper, M. Isaac, J. Smialek: Fed Chair Raises ‘Serious Concerns’ About Facebook’s Cryptocurrency Project, in: The New York Times, 7 October 2019; or Y. Mersch: Money and private currencies: reflections on Libra, Frankfurt, 2 September 2019.

4 See https://financialservices.house.gov/uploadedfiles/7.2.2019_fb_ltr.pdf.

5 FINMA: FINMA publishes ‘stable coin’ guidelines, Bern, 11 September 2019.

Volker Brühl, Center for Financial Studies, Frankfurt, Germany.

to pose even more challenges. It currently remains unclear what development trajectory the Libra project will ultimately pursue. The long-term strategy of Libra has not yet been communicated.

However, it seems apparent that profit-oriented enterprises like Facebook and Libra's other founding members, including venture capital firms, are only willing to invest in such an undertaking if the commercial rationale behind this large-scale project is convincing. Multiple scenarios are plausible depending on the future design of the Libra project and the corresponding response of regulatory and supervisory authorities.

Therefore, it seems worthwhile to take a closer look at this project in order to improve the basic understanding of the economic logic behind this endeavour and point out associated opportunities and risks for the financial sector. This begins with an analysis of the key elements of the Libra project, including the basic architecture, i.e. the Libra Blockchain, the Libra coin, the execution of transactions on the blockchain and eventually the governance of the Libra system. A brief comparison of Libra with Bitcoin, Ethereum and selected stablecoins is also provided. Subsequently, the Libra project is discussed along its potential development lines, which can be summarised as follows: First, Libra could serve purely as an alternative payment system in combination with a dedicated payment token, the Libra coin. Second, the Libra project could develop into a broader financial infrastructure enabling advanced financial services such as savings and loan products provided on the Libra Blockchain. Finally, the question must be addressed as to whether and to what extent Libra could interfere with monetary policy actions in fiat currencies, e.g. by the Federal Reserve or the European Central Bank (ECB). Any discussion of these aspects can only be preliminary, given the early stage of the Libra project.

The concept of Libra

Figure 1 illustrates the core components of the envisaged Libra architecture. The governing body is a non-profit organisation (the Libra Association) based in Geneva, founded according to Swiss law. The Libra Association exhibits a heterogeneous membership base, including technology firms (e.g. Facebook/Calibra, Spotify, Uber), telecommunication companies (e.g. Vodafone), blockchain companies (Coinbase, Anchorage), Venture Capitalists and non-profit-organisations. All founding members have invested at least 10 million dollars and are acting as validators on the blockchain.

The Libra Association develops and operates the Libra Blockchain and manages the reserves that are designed to

back any issuance of Libra coins, thereby ensuring that, in contrast to other popular cryptocurrencies, the Libra coin is equipped with an intrinsic value. As only bank deposits and short-term government bonds in stable currencies are eligible for Libra reserves, the Libra coin is expected to become a stablecoin itself. A stablecoin is a special form of cryptocurrency as its value is derived from the value of a single asset (e.g. a commodity, a fiat currency) or a basket of different assets with low volatility. For example, Tether (USDT) is backed by US dollars and has a stable value of one dollar for each Tether token.⁶ Holders of commodity-backed stablecoins can redeem them for real assets at a specific conversion rate, e.g. one Digix Gold Token (DGX) represents one gram of gold.⁷

The Libra reserve

The reserve is the key instrument for preserving value, as each Libra coin will be fully backed by a diversified basket of low-volatility and liquid assets such as short-term government bonds and deposits in stable fiat currencies like the US dollar, the euro, the British pound and the Japanese yen.⁸ As the value of Libra is linked to a basket of fiat currencies and the reserve will not be actively managed, volatility of the Libra exchange rate is directly dependent on the volatility of the underlying assets and the respective exchange rates.

The composition of deposits and government securities from low-inflation countries shall limit the volatility of the calculated Libra price expressed in a given fiat currency. Furthermore, the Libra Association has announced that it would not pursue any kind of 'currency' policy but would rather follow a rule-based approach in the sense that the circulating supply of Libra coins only depends on the fluctuating demand for Libra, which might grow or shrink over time. The design of the Libra system is expected to contribute to the credibility of the Libra coin as a unit of account, a stable medium of exchange and finally as a store of value. Hence, Libra shall fulfil the basic functions of money. Users will not have any direct access to the Libra reserve but will have to purchase and sell Libra coins through authorised resellers so that new coins are minted when demand increases and destroyed when demand contracts. Authorised resellers may include regulated electronic exchanges, cryptocurrency platforms or financial institutions.⁹

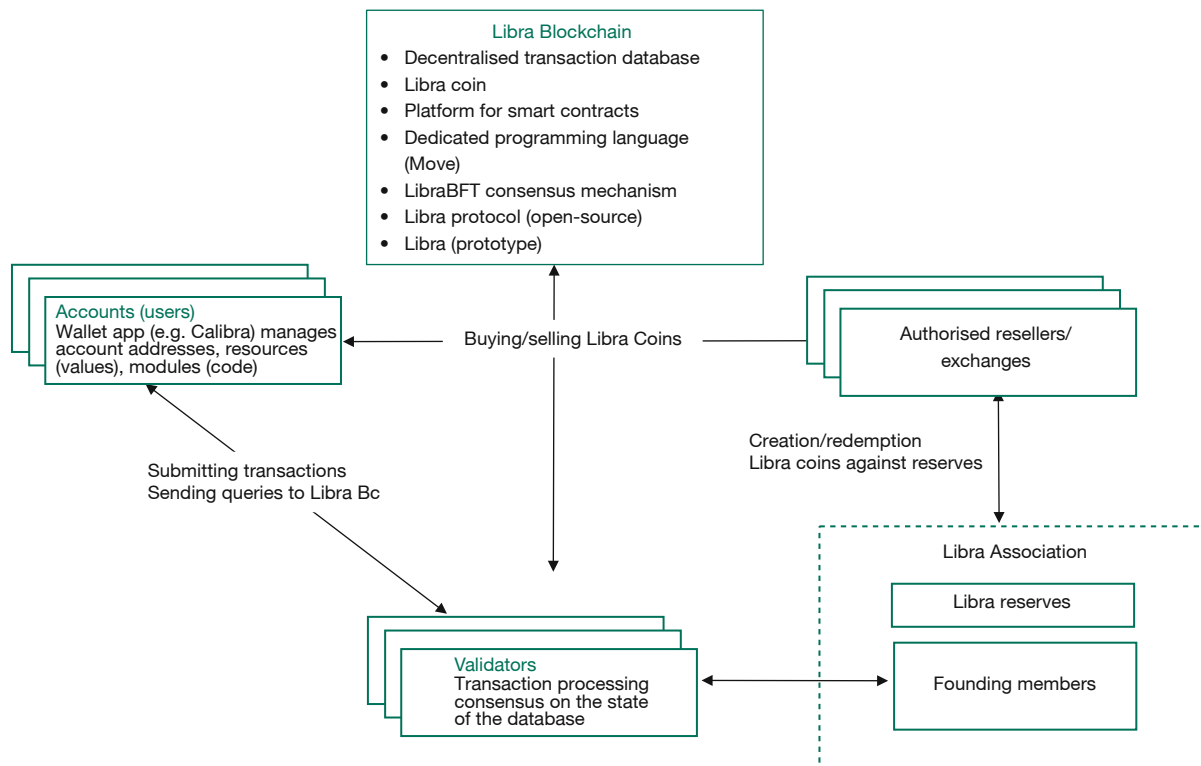
6 See Tether: White Paper, Fiat currencies on the Bitcoin blockchain, June 2016.

7 See A.C. Eufemio, K.C. Chang, S. Djie: Digix's Whitepaper: The Gold Standard in Crypto-Assets, July 2018, Version 2.0.

8 Testimony of David Marcus Head of Calibra, Facebook, Hearing before the United States Senate Committee on Banking, Housing, and Urban Affairs, 16 July 2019, available at <https://www.banking.senate.gov/imo/media/doc/Marcus%20Testimony%207-16-19.pdf>.

9 See Libra Association: An Introduction to Libra, op. cit.

Figure 1

The basic architecture of the Libra ecosystem

Source: Author's own illustration.

The Libra Blockchain

A blockchain is a form of distributed ledger that allows transactions to be executed quickly and securely by using cryptographic technologies in combination with an algorithm ensuring consensus among the nodes of the network as to the validity of the transaction.¹⁰ The general idea since the introduction of the Bitcoin protocol is to design a distributed ledger that enables transactions without the need for financial intermediaries or central banks. Such systems continuously update and check themselves by using intelligent execution verification algorithms in order to reach consensus on the respective status of the database in which all transactions are recorded. Maintaining the integrity of the system by preventing double spending of monetary units, manipulation attacks from outside the system or theft of private keys are common challenges of distributed ledger systems.

Furthermore, the Libra Blockchain is at least for the time being a 'permissioned' blockchain, as validators require

specific permission from the Association, rather than automatically receiving the status of a validator if certain predefined technical requirements are met. Nevertheless, the Libra Blockchain is designed as an open source system that allows developers and users to build their own products and services on the blockchain. The scalability of the system in terms of processing capacity is a problem all blockchain solutions have to solve in case of growing demand for computational power or high volatility of capacity utilisation. The Libra project intends to apply a concept similar to the one introduced by Ethereum. Ethereum has implemented a fee concept that requires a 'gas value' to be attached to any transaction. The 'gas' is basically a fee payable in Ether to the validators. Therefore, the price sensitivity of users has an impact on the timing and speed of transactions. However, the Libra system is expected to only charge very low fees during periods of normal transaction density, while the fee-based mechanism is designed to help allocate system capacity according to user price sensitivity during peak periods. Rising fees will mitigate high demand for transactions and help to shift them to off-peak periods when fees are lower. Transaction execution on the Libra Blockchain ensures that no Libra coin will be duplicated, lost or transferred without authorisation.

¹⁰ See e.g. V. Brühl: Bitcoins, Blockchain und Distributed Ledgers, in: Wirtschaftsdienst, Vol. 97, No. 2, 2017, pp. 135-142; or R. Wattenhofer: Distributed Ledger Technology: The Science of the Blockchain, Zurich 2017.

Consensus mechanisms

In distributed computer networks, an algorithm-based consensus mechanism ensures that an agreement on the correct state of the ledger among nodes is achieved and shared throughout the network. The most common consensus mechanism is the proof-of-work (POW) concept applied by Bitcoin and other cryptocurrencies such as Ethereum. POW relies on the solution of a mathematical problem, upon which the successful miner is rewarded with a specific number of cryptocurrency units.

The POW consensus mechanism requires new transactions to be broadcast to all nodes of the network. Each node collects new transactions into a block and works on finding a cryptographic hash value for the respective block that fulfils certain requirements, i.e. regarding a target hash value of the block. As the blocks are linked together to form an ever growing blockchain, solving such a problem requires an increasing number of iterations and hence greater CPU power and electricity over time. After a node has solved the hash problem and thus fulfilled the proof-of-work condition, the block is broadcast to the whole network, whereby the nodes check the validity of the new block and the transactions contained therein. Nodes express their acceptance of the block by working on creating the next block in the chain, using the hash of the accepted block as the previous hash.¹¹ The nodes that validate and update the distributed ledger are called miners, as they are rewarded with a number of bitcoins once they have found a new block. The mining reward on the Bitcoin blockchain is currently set at 12.5 bitcoins per block and is halved every 210,000 blocks. The generation and acceptance of a new block currently takes about ten minutes on average.

The structural disadvantage of the POW approach is its lack of scalability, as demand for CPU time and energy increases with the size of the blockchain. There is also the risk of concentrating mining capacity over time, as large mining pools benefit from economies of scale and cheaper access to electricity supply. In a worst-case scenario, someone who controls 51% of the computing power of the Bitcoin network would be able to influence transaction processing and even reorganise the history of network transactions.

For this reason, the proof-of-stake (POS) approach is posited as an interesting alternative that avoids the cost- and energy-intensive mining process, as the validator of a block is selected based on its economic stake in the

network. Hence the creator of the next block may be selected according to the size or age of its deposit, usually in combination with a random component. The selected validator must then verify all transactions contained in the block, which involves checking that it was signed with the correct private key and auditing the entire history of the wallet to prevent double spending. Finally, the validator is rewarded with the fees associated with every transaction contained in the block. Cryptocurrencies working on a POS principle include Navcoin and Neo. Ethereum also intends to switch from POW to a POS consensus mechanism in the foreseeable future to overcome scalability issues and foster growth of its platform.

The consensus mechanism integrated in the Libra protocol is a modified version of the 'HotStuff protocol', a very recent form of POS approach.¹² The so-called LibraBFT is a consensus protocol that progresses in rounds, where in each round a node is elected that takes the lead in achieving consensus with other nodes in the network and eventually validates and executes the transaction.¹³ BFT stands for Byzantine Fault Tolerance, which describes the characteristic of a distributed computing system that will continue to work properly even if some components of the system fail and where there is imperfect information on whether a component has failed.¹⁴ In the case of the Libra Blockchain, the LibraBFT protocol guarantees consensus on the history of transactions among honest validators and remains secure even if a certain number of nodes in the network are not trustworthy.

Libra compared to other cryptocurrencies

Table 1 gives a brief overview of the major commonalities and distinctions between the Libra concept, on the one hand, and Bitcoin, Ether and other stablecoins on the other. Visa has been included in the table to allow for a direct comparison with the current largest payment infrastructure in the credit card business, which operates with a centralised database rather than some kind of distributed ledger. Bitcoin is by far the largest virtual currency platform in terms of market capitalisation, though it remains far behind the Visa Group even more than ten years after its introduction. This could be different in the case of Libra, as Facebook currently has some 2.4 billion unique users per month on its social media platforms, which is close to the number of cards issued by Visa (3.3 billion)

11 See S. Nakamoto: Bitcoin: A Peer-to-Peer Electronic Cash System, White Paper, 2008.

12 M. Yin, D. Malkhi, M. Reiter, G. Gueta, A. Ittai: HotStuff: BFT-Consensus in the Lens of Blockchain, Cornell University, 23 July 2019.

13 See Libra Association: The Libra Blockchain, op. cit.

14 K. Driscoll, B. Hall, H. Sivicrona, P. Zumsteg: Byzantine Fault Tolerance, From Theory To Reality, 22nd International Conference on Computer Safety, Reliability and Security, Edinburgh 2003.

Table 1
Libra in comparison with other cryptocurrencies and Visa

	Libra	Bitcoin	Ethereum	Visa	Digix	Tether
Market cap (5/9/2019, USD)	n.a.	189.5 bn	18.5 bn	413.9 bn	5.13 m	4.04 bn
Number of transactions per year (bn)	n.a.	0.126*	0.306**	124.3***	n.a.	0.07****
Network architecture	DLT	DLT	DLT	Centralised	DLT (Ethereum)	DLT (Ethereum)
Consensus mechanism	BFT	POW	POW/POS	n.a.	POP	POW
Smart contract functionality	Yes	No	Yes	No	Yes	Yes
Mining reward	No	12.5 bitcoins	5 Ether token	n.a.	No	No
Cap on currency supply	No	21 m bitcoins	No	n.a.	No	No
Stablecoin	Yes	No	No	No	Gold (1 token = 1 g)	USD (1 token = 1 \$)

Notes: * Estimate based on 350,000 transactions per day, ** Estimate based on 850,000 transactions per day, *** Visa annual report 2018, **** Based on 20,000 transactions per day. DLT stands for Distributed Ledger Technologies.

Source: Own estimates, company information, coinmarketcap.com.

and even higher than the number of cards issued by Mastercard (1.9 billion).¹⁵

In terms of supporting smart contracts, Ethereum has become the most popular blockchain, whereas Bitcoin was designed first and foremost as a digital currency platform. Although smart contracts can also theoretically be implemented on the Bitcoin blockchain, the functionalities and programme design of Ethereum and other blockchains such as Ripple prove to be more suitable in that regard.

Libra is designed as a stablecoin, with each Libra being covered by Libra reserves. Stablecoins have so far been backed by various types of assets, including commodities, fiat money and other cryptocurrencies. Prominent examples, although still negligible in terms of a market cap, include the gold-backed Digix token and the US dollar-backed Tether. Libra pursues a different strategy, as

it intends to build a diversified Libra reserve comprised of bank deposits and short-term bonds denominated in low-inflation fiat currencies. In essence, the Libra concept primarily differs from existing virtual currencies and stablecoins in the design of the Libra reserve, the presumably faster and more cost-efficient design of the Libra Blockchain (yet to be proven) and finally by the potentially large global user base to be recruited from the Facebook platform and other payment solution providers.

Preliminary assessment of Libra

In order to analyse the potential opportunities, risks and possible regulatory concerns, one needs to take into account the potential fields of application. Therefore, we look briefly into the need for a new and more global medium of exchange – proclaimed by the Libra initiators – that will bring global payment systems to a new level and enhance financial inclusion in emerging economies.

Libra as an innovative payment platform

The efficiency of payment systems in developed countries has advanced so far over the last ten years that real-time transactions without the use of distributed ledger technologies (DLT) will become standard in the foreseeable future for business-to-business but also for business-to-consumer or consumer-to-consumer transactions. For instance, SEPA Instant Payments are available for payments in euros for the EU28 member states. Alternative payment systems such as PayPal, Apple Pay or AliPay cannot be classified as real-time payment systems at this stage, as users receive immediate notification of the transaction, but funds are usually transferred on the next business day. In addition, the Eurosystem launched the TARGET Instant Payment Settlement service as an amendment of Target 2 in November 2018.

The situation is very different for cross-border payments to or between emerging economies. Global remittances reached 689 billion US dollars in 2018 and are projected to grow further, as they are an important financial resource in developing countries.¹⁶ Today, most individual remittances are executed through money transfer operators (MTOs) such as Western Union or MoneyGram, which cooperate with numerous correspondent banks in the respective countries. Average costs per transaction are about 9% of the payment volume. MTOs have been subject to severe criticism in the past with regard to the lack of transparency and traceability of transfers as well as insufficient know-your-customer (KYC) and anti-mon-

¹⁵ See Visa, Annual Report 2018, San Francisco 2019, available at https://s1.q4cdn.com/050606653/files/doc_financials/annual/2018/Visa-2018-Annual-Report-FINAL.pdf; Mastercard, Annual Report, New York 2019.

¹⁶ World Bank: Migration and Development Brief 31, Washington DC, 4/2019.

ey-laundering (AML) procedures. DLT could therefore be a cost-efficient alternative and also improve regulatory compliance in the international payment sector.

xRapid and Circle Pay are two examples of DLT-based cross-border payment solutions that have been introduced recently but still have a limited geographical reach. Libra might therefore tap this unexploited market potential with its new Libra platform. However, it currently remains unclear whether DLT-based technical solutions will be superior to ongoing initiatives aiming to introduce real-time cross-border payment solutions (e.g. SWIFT gpi).

Demand for Libra could soar due to low transaction costs and the network effects associated with the growing use of Libra among Facebook users. A key prerequisite for an accelerated diffusion of Libra would be a high degree of credibility and trust in the stability of the Libra coin, which the founders intend to achieve through a number of instruments such as the Libra reserve, the involvement of global payment service providers and finally the proactive approach of becoming a regulated financial services provider. This is intended to apply both to Libra as a payment services infrastructure – regulated by Swiss law – and the respective financial services offered on the Libra Blockchain. Therefore, Calibra, a subsidiary of Facebook offering a Libra wallet, has been registered with the U.S. Financial Crimes Enforcement Network as a money services business. However, this is just the beginning of an extensive process of applying for licenses needed for specific service offerings and subsequent supervision of the competent authorities in question. For instance, Calibra will most likely need to obtain additional money transmission licenses in each of the US states it operates in. Furthermore, depending on the type and scope of other financial services offered, Calibra or other users of the Libra Blockchain will need to meet relevant legal requirements such as banking regulations.

Provided that Facebook, together with its co-initiators, manages to market the benefits of Libra successfully through its global user base, and assuming that Libra limits itself to the function of a (regulated) payment platform, demand for Libra coins could grow very rapidly and eventually exceed the geographic reach of the US dollar or the eurozone. In fact, Libra could advance to a kind of parallel digital currency used at least partially alongside the respective national fiat currency. As long as the Libra coin is only a unit of account in a clearly defined (although very large) multilateral payment network of Libra users, such a payment infrastructure could promote financial inclusion and increase global payment efficiency. Ultimately, in such a limited scope scenario, Libra would be merely one more alternative payment system that would have to

demonstrate its superiority in a competitive market environment. Like any other payment infrastructure, Libra would have to be considered as a critical infrastructure that needs to be regulated and supervised like any other payment system or clearing and settlement system in the securities business.

Libra as a global platform for financial services

It appears that Libra's goal is to create a fundamentally new financial ecosystem, whereby payments form only the foundation for other value-added financial services operating on the blockchain. This is very clear, as the payment platform itself would hardly generate the kind of profitability the founding members of the Libra Association expect. But if other financial services such as savings and loans products or even securities denominated in Libra are offered on the Libra platform, financial risks such as market risks, credit risks, operational risks and even liquidity risks will be generated within the Libra system or transferred from existing regulated markets to the Libra system. In order to rule out regulatory arbitrage, all financial services offered on the Libra Blockchain would have to be subject to existing regulatory frameworks such as Basel III/IV, which means they would be subject to the corresponding supervisory and review procedures of the competent authorities.

It is questionable whether Libra, as a fully regulated financial institution, really does have a sustainable competitive advantage over existing financial infrastructures, given that instant payment solutions will be available in the foreseeable future and distributed ledger technologies are already being implemented as a backbone for various financial products.¹⁷

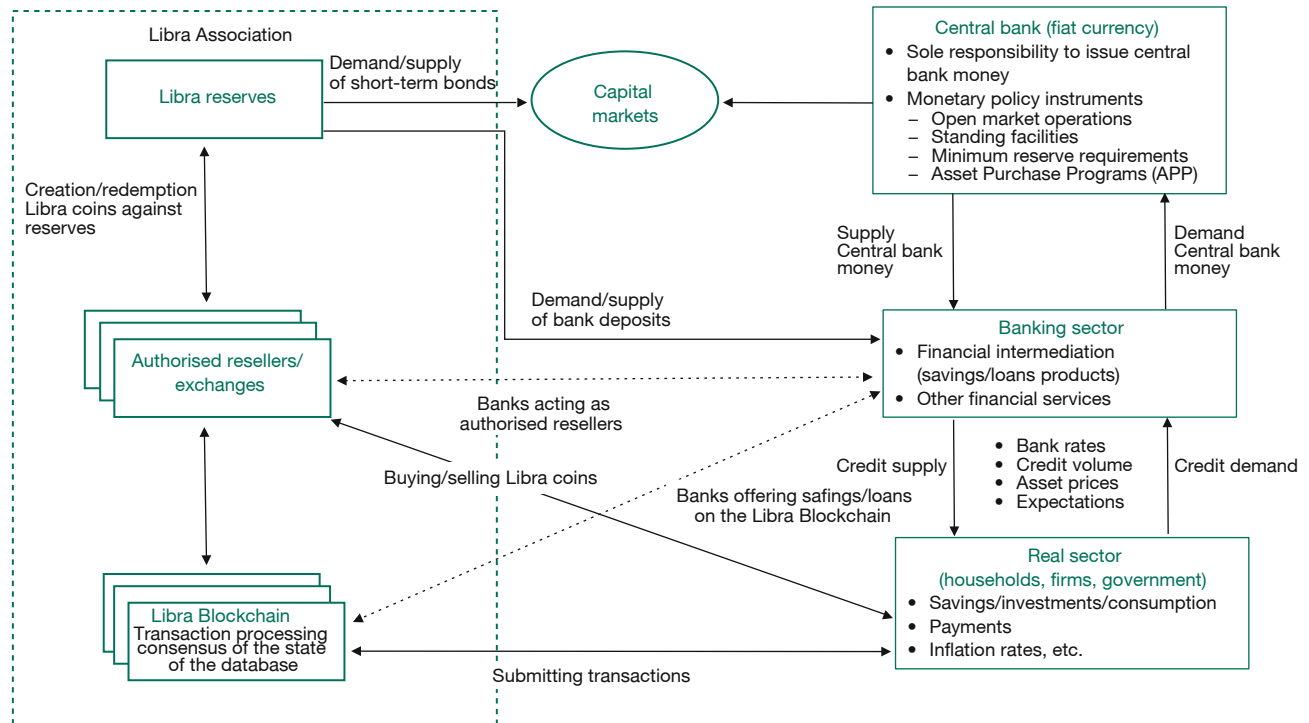
The impact of Libra on monetary policy

Another important question to be answered is whether or not a global virtual currency like Libra could impact transmission channels and effectiveness of monetary policy actions by central banks. This is a rather complex topic that goes beyond the scope of this article. Far more research on the interaction between fiat and cryptocurrencies is needed to cover the manifold aspects of this topic. Nevertheless, I would like to share some thoughts that should clearly be understood as preliminary hypotheses to be tested through additional research.

17 See e.g. V. Brühl: Virtual Currencies, Distributed Ledgers and the Future of Financial Services, in: *Intereconomics*, Vol. 52, No. 6, 2017, pp. 370-378, available at <https://www.intereconomics.eu/contents/year/2017/number/6/article/virtual-currencies-distributed-ledgers-and-the-future-of-financial-services.html>.

Figure 2

Potential transmission channels between Libra and central bank policy



Source: Author's own illustration.

Because Libra coins are backed by financial assets like short-term government bonds or deposits, a link between the creation and destruction of Libra and the global capital markets comes into play that does not exist in the case of pure payment systems or other cryptocurrencies such as Bitcoin. A number of transmission channels are imaginable. Figure 2 shows a simplified illustration with possible interdependencies between the Libra ecosystem (box marked with dotted lines) and a typical two-tier banking system like that of the eurozone.

A successful development of Libra could trigger a huge demand for deposits and government bonds denominated in various fiat currencies compatible with the Libra reserve. It is likely that demand will be focused on the most relevant reserve currencies like the US dollar and (to a minor degree) the euro. As a result, the Libra reserve could quickly become a major player in the global bond, money and foreign exchange markets. As the supply mechanism of Libra is, so to speak, 'rule-based', i.e. is fully tied to the fluctuating demand for Libra, the Libra reserve would collect an increasing volume of fixed-income assets and bank deposits in case of growing user acceptance. In such a world, the current financial system would be overlaid by a global virtual currency (Libra). Combined with a huge money market fund (Libra reserve), various implica-

tions for the effectiveness of monetary policy measures are conceivable.

Firstly, the ability of central banks to influence short-term interest rates rests upon its monopoly on generating central bank money, e.g. through open market operations with the banking sector. If the introduction of Libra is accompanied by substitution effects, e.g. because a substantial part of bank refinancing occurs via Libra in the future, the effectiveness of monetary policy actions could be jeopardised. This would ultimately undermine the status of a central bank as lender of last resort and could weaken its ability to achieve its primary objective, i.e. to maintain price stability or to pursue an accommodating monetary policy.

Secondly, if Libra is really successful, the Libra Association will develop over time into one of the largest money market funds acting upon a rule-based expansion mechanism. This goes hand in hand with a growing demand for short-term government bonds from the Libra Association, which could inflate respective asset prices and depress bond yields, especially if the market in short-term government securities is getting thinner. This can be demonstrated with a simple calculation. Let us assume that 25% of the current 2.41 billion monthly active users

on Facebook (as of June 30, 2019) can be converted to Libra users over a period of five years after the launch of Libra. If the average demand for Libra is only about 1,000 Libra per year, this would result in a yearly Libra demand of approximately 600 billion Libra. If we assume, for the sake of this example, a Libra-to-dollar exchange rate of 1:1, the yearly Libra demand of 600 billion would translate into a monthly asset purchase of approximately 55 billion US dollars. This figure is big enough to be comparable with the net asset purchases during the asset purchase programme by the ECB, which ranged from 60 billion to 80 billion euros per month and ended in December 2018.¹⁸

Thirdly, the Libra could attract speculative investors such as hedge funds, which might abuse the Libra platform for speculative attacks against fiat currencies or Libra itself. In the Libra model, the exchange rate, for example to the dollar, is fluctuating and is a function of both the price of the underlying assets and the relative exchange rate movements of fiat currencies in which the assets are denominated. For instance, monetary policy actions by the Federal Reserve may trigger Libra/US dollar movements simply because of the basket effect. Hence, a devaluation of the US dollar relative to other basket currencies like the euro corresponds to a revaluation of Libra. If investors bet on a further appreciation of Libra, large-scale investment flows into the Libra could reinforce the demand driven by speculators. This may result in a Libra bubble that, due to the rule-based backing of Libra, would almost automatically boost demand for assets that are eligible for the Libra reserve, leading to adverse inflationary effects on these asset classes as well. Vice versa, if speculators bet against the stability of Libra, e.g. because of eroding credibility of the Libra coin, the Libra reserve would have to liquidate assets rather quickly to accommodate the contracting demand for Libra. This, in turn, could trigger substantial capital losses in the broader financial sector. In any of those cases the Libra Association could be forced to give up its passive currency policy in order to stabilise the Libra currency. It has occurred that fiat currencies have become a target of speculative attacks for similar reasons, if investors believe that a fixed exchange rate does not reflect market fundamentals and that the central bank does not hold enough foreign reserves to defend the fixed exchange rate.

Conclusions

Since the final design of Libra and the long-term strategy of its promoters is not yet fully clear, any conclusions are

preliminary and need further analysis as the project advances and more information becomes available, especially as different use cases and development lines of the Libra system are feasible. Therefore, a differentiated view on this ambitious project seems appropriate. If Libra acts only as an alternative payment platform using a dedicated coin with global reach, the Libra project could allow for efficiency gains, especially in the global remittance business to emerging economies. Libra clearly has to comply with all KYC and AML requirements and has to get the corresponding regulatory approvals. It remains an open question whether the currently rather rough design of Libra is able to obtain those approvals. If so, Libra could accelerate the innovation rate in the global marketplace for payment solutions.

However, the current concept of the Libra reserve has to be redesigned in order to avoid systemic risks and to exclude any interference with monetary policy measures, as the current proposal would establish a direct link between the Libra reserve and global money markets. Hence, the influence of central banks on short-term interest rates and liquidity in the banking sector would decrease and Libra could ultimately undermine the credibility of the respective central bank and its role as an independent public institution committed to price level stability. Therefore, regulatory authorities and policymakers should prevent any initiatives by Libra that could endanger the fundamental role of central banks as lenders of last resort and sole issuer of legal tenders.

This is not to say that a Libra platform could not develop into an advanced financial services infrastructure on which more complex financial services than payments could be offered. If such an advanced ecosystem for Libra evolves over time, a level playing field in terms of regulatory framework for participating financial institutions needs to be ensured. For instance, banks would most likely enter the Libra platform if transaction processes other than payment services turn out to be more efficient than those offered on existing platforms. Again, whether such a Libra-based financial architecture is superior to the existing complex, multi-platform environment remains to be seen and will ultimately be decided by market participants in a competitive process. In light of the different aspects and potential development scenarios of Libra, a differentiated view on the project seems to be appropriate in order to prevent the possibility of a private currency from destabilising the global financial system, on the one hand, but also to accompany less critical aspects of the project in a constructive way, as innovative infrastructures could contribute to a more profitable and hence more stable financial services sector.

¹⁸ See ECB: Asset Purchase Programs, available at <https://www.ecb.europa.eu/mopo/implement/omt/html/index.en.html>.