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**Working Paper**

## Libra - Concept and Policy Implications

Wirtschaftswissenschaftliche Diskussionspapiere, No. 02-19

*Suggested Citation:* Groß, Jonas; Herz, Bernhard; Schiller, Jonathan (2019) : Libra - Concept and Policy Implications, Wirtschaftswissenschaftliche Diskussionspapiere, No. 02-19, Universität Bayreuth, Bayreuth,  
[http://www.fwiwi.uni-bayreuth.de/de/download/WP\\_02-19.pdf](http://www.fwiwi.uni-bayreuth.de/de/download/WP_02-19.pdf)

This Version is available at:

<https://hdl.handle.net/10419/205241>

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Wirtschaftswissenschaftliche Diskussionspapiere

## **Libra – Concept and Policy Implications**

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Diskussionspapier 02-19

Oktober 2019

ISSN 1611-3837

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# **Abstract**

## **Libra - Concept and Policy Implications**

The announcement of the Libra Association to issue a private global currency has triggered a heated debate about the concomitant advantages and risks. Proponents expect Libra to unfetter money from its "governmental chains" and liberalize and cheapen monetary transactions around the globe. Opponents argue that a private currency imposes unforeseeable risks for both individuals and the whole financial system. Furthermore, Libra could hamper monetary policies of national central banks. This paper contributes to the debate in two ways. First, we offer a comprehensive overview of the concept of Libra and its possible benefits and downsides to analyze its market potential. Second, we discuss potential implications that a private currency as Libra poses for monetary policy and financial regulation.

JEL-Classification: E42, E52, G28

Keywords: Cryptocurrency, Monetary Policy, Currency Regime, Libra

## The Vision

In June 2019, a Facebook-led consortium, the Libra Association, caused a worldwide flurry when it announced the introduction of the cryptocurrency "Libra" for the year 2020. This project aims to provide "a simple global currency and financial infrastructure that empowers billions of people".<sup>1</sup> In terms of better financial inclusion, "many more people should have access to financial services and to cheap capital".<sup>2</sup> This is to be achieved through a currency "built on a secure and stable open-source blockchain [Libra Blockchain], backed by a reserve of real assets [Libra Reserve], and governed by an independent association [Libra Association]".<sup>3</sup>

It is not surprising that the announcement of such a project has provoked many reactions. Advocates expect Libra to significantly improve the efficiency of international payment systems.<sup>4</sup> They also see the chance that this new private money will create currency competition in the sense of Hayek's denationalization of money and thus overcome the (politico-economic) issues of public money and the credit money system.<sup>5</sup> Critics, on the other hand, point to the risks related to financial stability - especially considering the great financial crisis of 2008. To back Libra, the Libra Association will create a sizeable international reserve fund, the so-called Libra Reserve, which could trigger substantial contagious effects and systemic risks in the event of a crisis. Accordingly, commentators call for a comprehensive, internationally coordinated regulation and in part even for the prohibition of the Libra project.<sup>6</sup>

The following discussion takes up these two views, which reflect the dual character of Libra - both as a currency and an investment certificate. As a first step, we discuss the concept of Libra. Do the known rules of the Libra currency regime allow us to expect a value-stable,

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<sup>1</sup> Libra Association: Introduction to Libra. White paper, from the Libra Association members, <https://libra.org/en-US/white-paper/https://libra.org/de-DE/white-paper/> (12.08.2019).

<sup>2</sup> Libra Association, loc.cit.

<sup>3</sup> Libra Association, loc.cit.

<sup>4</sup> See F. Bekemeier, J. Groß, P. Sandner: Facebook Coin: A Cryptocurrency Relevant for Hundreds of Millions of People in Developing and Emerging Countries, <https://medium.com/@jonas.ku1994/facebook-coin-a-cryptocurrency-relevant-for-hundreds-of-millions-of-people-in-developing-and-dc34d16f9311> (12.08.2019).

<sup>5</sup> See F. A. von Hayek: Denationalization of Money: An Analysis of the Theory and Practice of Competitive Means of Circulation, Mohr 1977.

<sup>6</sup> See P. Bofinger: Finger weg von Facebooks Währung, in: FAZ Ausgabe vom 30.06.2019, Issue 26, 26-27; K. Pistor: Facebooks Kryptowährung Libra muss verhindert werden, <https://www.project-syndicate.org/commentary/facebook-libra-must-be-stopped-by-katharina-pistor-2019-06/german> (13.08.2019); United States House of Representatives Committee on Financial Services: o.T., [https://financialservices.house.gov/uploadedfiles/07.02.2019\\_-\\_fb\\_ltr.pdf](https://financialservices.house.gov/uploadedfiles/07.02.2019_-_fb_ltr.pdf) (13.08.2019).

liquid means of payment? How is the Libra Reserve organized, which effectively invests the Libra currency reserves in a sizeable global money market fund? Then, the article addresses the following three questions: Does Libra have the enormous market potential that advocates hope for and critics fear? What are the consequences for financial stability and thus for regulation? What does a private global currency mean for national monetary policies?

## **The Concept**

Libra is designed to "bring together the attributes of the world's best currencies: stability, low inflation, wide global acceptance, and fungibility."<sup>7</sup> As a full-featured money, it should not only serve as a means of payment but also as a store of value and a unit of account.<sup>8</sup>

Financial service providers will be able to offer new products in the Libra environment. For example, smart contracts based on the Libra Blockchain could be developed to simplify and automate the processing of payments and loans. Applications in the "Internet of Things" and "Industry 4.0" are also conceivable. For example, flows of goods could be linked to machine-to-machine payments in Libra.<sup>9</sup> This could lead up to an independent, supranational, Libra-based financial sector.

As with other currency regimes, which until now have generally been of public nature, the quality of Libra, and thus its acceptance, is mostly determined by a series of fundamental institutional decisions, the "rules of the game".<sup>10</sup> These include the choice of an anchor currency, the target exchange rate, the degree of exchange rate stability, and the rules for adjusting the "rules of the game".

To ensure that Libra is perceived and accepted as value-stable money, it is designed as a stable coin, i.e., Libra is to be covered by government securities and bank deposits denominated in fiat currencies and thus has an intrinsic value.<sup>11</sup> The value of Libra will not be stabilized against a single anchor currency as common in fixed exchange rate systems.

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<sup>7</sup> Libra Association, loc.cit.

<sup>8</sup> On the characteristics of money see for example H. Gischer, B. Herz and L. Menkhoff: Geld, Kredit und Banken - Eine Einführung, Issue 4, Springer Berlin 2019.

<sup>9</sup> B. Holste, T. Mayer: Libra is a Challenge for Europe, in: Wirtschaftsdienst, Vol. 99 (2019), Issue 8, 567-569.

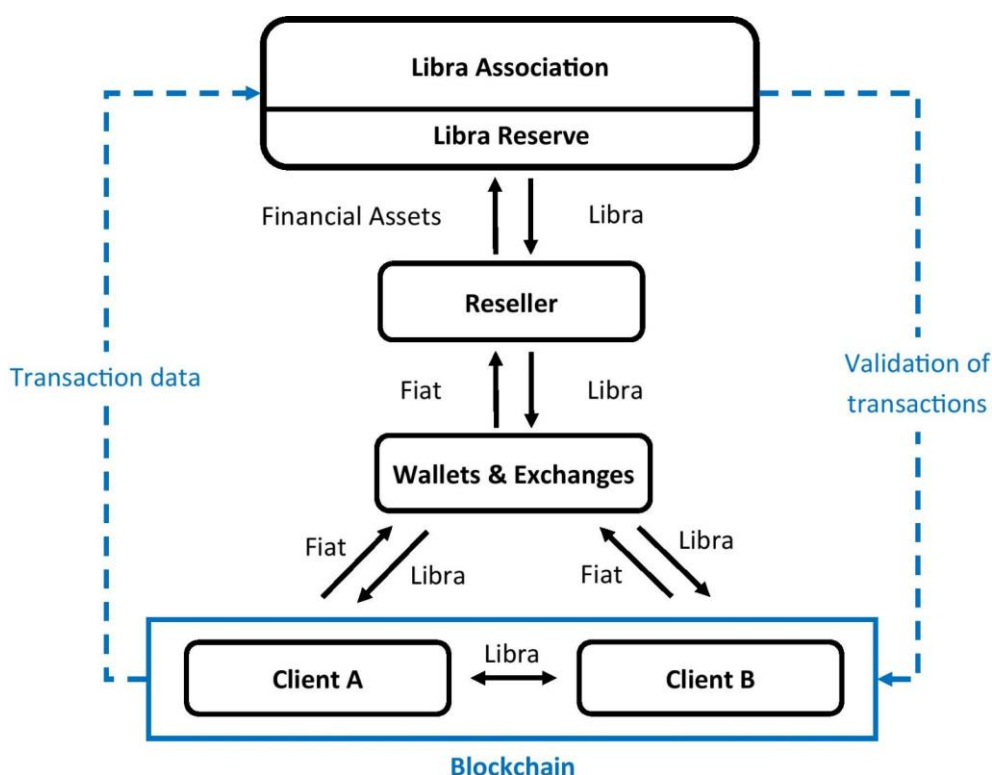
<sup>10</sup> See R. McKinnon: The Rules of the Game: International Money in Historical Perspective, in: Journal of Economic Literature, Vol. XXXI 1993.

<sup>11</sup> See C. Catalini et al.: The Libra Reserve, [https://libra.org/en-US/about-currency-reserve/#the\\_reserve](https://libra.org/en-US/about-currency-reserve/#the_reserve) (15.08.2019).

Instead, a basket of different fiat currencies is to be chosen, similar to the International Monetary Fund's Special Drawing Rights (SDR).

Institutionally, this concept is similar to a currency board. Hence, the Libra money supply will only increase if investors and private customers buy Libra against fiat currencies. The funds are then used to finance the build-up of currency reserves. Technically, the gateway between fiat currency and Libra is to be operated by "authorized resellers".

**Figure 1:** The Libra Ecosystem



Source: Own representation.

As shown in Figure 1, these come into play when customers seek to purchase Libra against fiat currency on exchanges or through a digital wallet for subsequent transfers with other customers via the Libra Blockchain. The resellers exchange Libra with the Libra Association for short-term government bonds and bank deposits (Libra Reserve) which they have acquired with the fiat currencies previously received.<sup>12</sup> Since the value of the Libra is to be backed by a basket of currencies<sup>13</sup> most likely consisting of the US dollar, euro, Japanese yen, and British

<sup>12</sup> See Libra Association, loc. cit. This process could also be integrated into the blockchain.

<sup>13</sup> See Senate Committee on Banking, Housing and Urban Affairs: Hearing Before the United States Senate Committee on Banking, Housing, and Urban Affairs - Testimony of David Marcus, <https://www.banking.senate.gov/imo/media/doc/Marcus%20Testimony%207-16-19.pdf>. (12.08.2019).

pound, it is reasonable to choose a corresponding currency structure for the currency reserves deposited at the Libra Association.

Since Libra is fully backed by value-stable financial assets, the Libra Reserve is, in fact, a large international money market fund with an investment focus on international bank deposits and short-term government securities. In fact, a Libra can also be perceived as an investment certificate. This certificate has the particular advantage that it can be used as an international means of payment by transferring shares directly between client A and client B based on the Libra Blockchain.<sup>14</sup>

From the perspective of Libra holders, the value of the portfolio deposited in the Libra Reserve is determined primarily by two factors: the development of the prices of the deposited assets and the exchange rates of the currencies in which these assets are denominated. Exchange rate risks arise from the fact that the performance of Libra depends on the basket of currencies underlying the Libra Reserve. These underlying currencies fluctuate against each other. Thus, the Libra exchange rate and the purchasing power of Libra will fluctuate against any fiat currency, even the basket currencies.

**Figure 2:** Euro and US dollar exchange rates of the Libra currency basket  
(1999 - 2019, 1999 = 100, GDP weighting of USD, EUR, JPY and GBP)



Source: Own calculations; data from Datastream.

<sup>14</sup> In contrast to conventional mutual funds, however, the claim does not exist directly against the holder of the Libra reserve, the Libra Association, or is legally binding according to the current status, but manifests itself solely in the promise of the Libra Association to exchange Libra for Libra reserve at any time by means of the resellers.

Figure 2 shows how the euro and US dollar exchange rates of an exemplary currency basket consisting of the four previously mentioned currencies, weighted by GDP, would have developed over the last two decades.<sup>15</sup>

In the long term, the value of this currency basket and thus of Libra would have been quite stable, measured both in US dollars and euros. In the short term, however, the US dollar and euro exchange rate of the Libra would have fluctuated in a band of approximately +/-30% around the initial value. Accordingly, there is a serious exchange rate risk for Libra holders, especially in the short term. For a specific fiat currency, the smaller its share in the currency basket and thus in the Libra Reserve, the higher is this associated risk.

In addition to this direct exchange rate risk, bank and government securities in the Libra Reserve are also subject to price and default risks. For example, a drop in bond prices or, in extreme cases, state insolvencies or bank defaults can decrease the value of the Libra Reserve and thus of Libra.

While these risks manifest themselves particularly in times of crisis, only minor value fluctuations are likely to occur in "normal times" due to investments in comparatively stable bonds and hard currencies. The Libra Association explicitly states that although it exchanges Libra for fiat currency at any time, the price of Libra in fiat currency may fluctuate with the value of the underlying assets, just like the price of any other investment certificate.<sup>16</sup> The value of Libra is, therefore, not fixed against the reference currency basket, but it changes in line with the price development of the reserve assets.

Overall, Libra has the potential to become a relatively stable, internationally fungible currency. It should be noted, however, that many essential organizational and institutional elements have not yet been decided or are unknown. On the other hand, for Libra, as for other currencies, the rules of the currency regime can be changed. For example, Libra could be actively devalued against the currency basket, the exchange into fiat currencies could be restricted in the sense of capital controls, or the management of the reserves could be altered.

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<sup>15</sup> One unit of the exemplary currency basket contains 1 EUR, 1.571 USD, 84.200 JPY and 0.165 GBP. The GDP weights of the individual currencies are 42% for the USD, 31% for the EUR, 20% for the JPY and 7% for the GBP.

<sup>16</sup> See C. Catalini et al., loc. cit.



## Technology

Libra is based on a distributed ledger technology (DLT), the so-called Libra Blockchain, which is a decentralized, distributed database system without a central authority.<sup>17</sup> A blockchain is generally relatively well protected against data manipulation through the use of cryptography and has a large automation potential through the integration of smart contracts. In the future, external developers will be given free access to the Libra Blockchain, so that they can create smart contracts by themselves and advance the development of Move, the programming language specifically designed for Libra.

Instead of intermediaries who determine which and when transactions are executed in the classical financial system, several parties exert this function in the blockchain network, so-called validator nodes. The Libra Blockchain is supposed to be permissioned in the beginning, such that the access to the blockchain is only open to the members of the Libra Association and only they can act as validator nodes. The system will become permissionless no later than five years after the introduction of Libra so that the blockchain is accessible to everyone and the validation of transactions is no longer carried out exclusively by the members of the Libra Association.<sup>18</sup>

How network participants agree to carry out transactions generally depends on the underlying blockchain protocol. While most cryptocurrencies, such as Bitcoin, use an energy-intensive proof-of-work consensus<sup>19</sup>, Libra applies a Byzantine Fault Tolerant (BFT) consensus.<sup>20</sup> This approach will combine high transaction throughput and low latency with high energy efficiency.<sup>21</sup>

Based on the BFT consensus, up to 1,000 transactions per second are possible. On the one hand, this represents noticeable progress compared to Bitcoin with 7 or Ethereum with 15

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<sup>17</sup> Unlike classic blockchain systems, the Libra Blockchain does not store data in blocks, but in a single data structure. This paper does not address the discussion whether the term "Blockchain" is appropriate in the context of Libra (discussion for example in J. Lopp: How Will Facebook's Libra "Blockchain" Really Work?, <https://onezero.medium.com/thoughts-on-libra-blockchain-49b8f6c26372> (18.08.2019)).

<sup>18</sup> See Libra Association, loc. cit.

<sup>19</sup> In a proof-of-work consensus, network participants must - put simply - solve a complex mathematical problem in order to confirm transactions. For the validation, the validator nodes are remunerated with the transaction fees and often a payout of the underlying cryptocurrency.

<sup>20</sup> A detailed description of the "Problem of the Byzantine Generals" can be found in L. Lamport, R. Shostak, and M. Pease: The Byzantine Generals Problem. in: ACM Transactions on Programming Languages and Systems (TOPLAS), Vol. 4.3 1982, p. 382-401. In the case of Libra, finding a consensus will also be ensured if up to one third of the nodes do not function properly or are malicious (cf. Libra Association, loc. cit.).

<sup>21</sup> Libra Association, loc. cit.

transactions per second, but still lags far behind traditional payment service providers such as Visa with up to 56,000 transactions per second.<sup>22</sup> In case Libra indeed becomes a popular means of payment, this maximum could prove insufficient and delay transactions.

### **The market potential of Libra**

Both national financial systems and access to financial services differ considerably worldwide. Accordingly, when analyzing the market potential of Libra, emerging and developing countries on the one hand and industrialized countries on the other have to be considered separately. The Libra Association cites the financial inclusion of 1.7 billion people worldwide as the primary goal, mainly in emerging and developing countries.<sup>23</sup> Two-thirds of these people already have mobile phones with internet access, which can be used as a gateway to the Libra network and for carrying out transactions.<sup>24</sup>

Libra seems to be particularly interesting in the market for remittances. Currently, the fees for such cross-border payments, both via cash and bank transfer, are, on average, 7% of the transferred amount.<sup>25</sup> Banks and alternative financial services providers such as Western Union and MoneyGram have long been criticized for high fees, unfavorable exchange rates, and long transaction durations.<sup>26</sup> Even for mobile cross-border payments, high charges are currently levied, averaging 4.9%.<sup>27</sup> If Libra transfers are offered at significantly lower prices, Libra could gain a significant market share for cross-border payments in emerging and developing countries. At present, however, the Libra Association does not provide any information on the intended fee structure.

The Libra Association can generate income from two sources: interest income from foreign reserve assets and transaction fees. Concerning interest income, we expect the securities in the Libra Reserve to provide an average interest rate of around 0.9 percent, as it consists

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<sup>22</sup> See C. Li et al.: Scaling Nakamoto Consensus to Thousands of Transactions per Second, in: ArXiv 2018; see J. Insigne: Vitalik Buterin Wants Ethereum to Scale from 15 to 100,000 Transactions per Second; <https://www.fxstreet.com/cryptocurrencies/news/vitalik-buterin-wants-ethereum-to-scale-from-15-to-100-000-transactions-per-second-201903211025> (16.08.2019).

<sup>23</sup> See Libra Association, loc. cit.

<sup>24</sup> See World Bank Group: The Global Findex Database - Measuring Financial Inclusion and the Fintech Revolution 2017, [https://globalfindex.worldbank.org/sites/globalfindex/files/2018-04/2017%20Findex%20full%20report\\_0.pdf](https://globalfindex.worldbank.org/sites/globalfindex/files/2018-04/2017%20Findex%20full%20report_0.pdf) (12.08.2019).

<sup>25</sup> See above: Geld für die Heimat, in: Handelsblatt issue of 26-28.07, 32-33.

<sup>26</sup> See for example C. Lobenstein, A. Storn: Western Union: Die Geldverschicker, in: DIE ZEIT No. 45/2015, 5 November 2015, <https://www.zeit.de/2015/45/western-union-bank-fluechtlinge-migranten> (13.08.2019).

<sup>27</sup> See o.V., loc.cit.

primarily of low-risk, short-term government bonds, and bank deposits from solid economies.<sup>28</sup> Hence, for every 100 billion US dollars invested, the Libra Association would generate around 900 million US dollars in interest income, which the Libra Association would mainly use to cover its operating costs.

Transaction fees could become much more crucial for Libra's business model. Assuming that the full potential of the Libra Blockchain is exploited for an average transaction volume of 100 euros with a one percent transaction fee, the Libra Association would receive approximately 31.5 billion US dollars per year. Due to comparative advantages, such as lower costs for personnel and infrastructure due to the Libra Blockchain, the fees should turn out moderate compared to competing products. However, in addition to payment fees, other costs need to be considered, such as bid-ask spreads for exchanging Libra and fiat currencies (see Figure 1).

For users in countries with volatile (soft) currencies, Libra would not only be an attractive means of payment but would also provide a quite stable store of value that would offer cost-effective protection against inflation and depreciation risks. Widespread use of the US dollar and euro as parallel currencies in many countries indicates the market potential of the Libra in such countries.

For industrialized countries, on the other hand, Libra's potential seems limited (for now). Here, the transaction costs for cross-border payments are already moderate, and transactions are mostly conducted rather quickly. In response to Libra and other financial innovations, both national and international efforts are being made to soon offer cross-border transfers in real time.<sup>29</sup> If it is possible to establish competitive solutions, this could severely limit the diffusion of Libra in industrialized countries due to network effects. Thanks to blockchain technology, Libra payments can also be processed outside traditional banks' opening hours.

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<sup>28</sup> The Libra Association mentions as a condition for the purchase of certain government bonds that they (a) have been issued by "stable economies" and (b) "are all traded in liquid markets that regularly accommodate daily trading volume in the tens or even hundreds of billions." (Libra Association, loc. cit.). For the purposes of this article, we define economies as "stable" if they have been rated by the rating agencies S&P, Moody's and Fitch in the "Prime", "High" and "Upper Medium" segments (according to [countryeconomy.com](https://countryeconomy.com/ratings): Sovereign Rating List, <https://countryeconomy.com/ratings> (12.08.2019)). The average yield was calculated as the weighted average of the one-year government bonds of these economies. The share of currently outstanding government bonds was used as the weighting factor.

<sup>29</sup> See European Commission: Banking and Finance Newsletter - Instant Payments, [https://ec.europa.eu/newsroom/fisma/item-detail.cfm?item\\_id=654172&utm\\_source=fisma\\_newsroom&utm\\_medium=Website&utm\\_campaign=fisma&utm\\_content=Instant%20payments%20&lang=en](https://ec.europa.eu/newsroom/fisma/item-detail.cfm?item_id=654172&utm_source=fisma_newsroom&utm_medium=Website&utm_campaign=fisma&utm_content=Instant%20payments%20&lang=en) (13.08.2019).

However, transactions can already be carried out around-the-clock by competitors such as PayPal, which is free of charge for users.

In addition, currency risks associated with Libra can be significant from the perspective of developed countries with hard currencies (see Figure 2). In industrialized countries, Libra can only become relevant if users can transfer and purchase it free of charge, easily and in a user-friendly way, and if markets accept it as a general means of payment - very demanding conditions overall.

### **Systemic risks and regulation**

The Libra Association classifies Libra as crisis-proof and considers it protected against runs, i.e., massive short-term exchanges of Libra against fiat currencies.<sup>30</sup> Runs, e.g. on banks, typically arise because deposits are only partially backed by liquid assets. In the event of a sudden loss of confidence, only some customers can, therefore, expect to fully withdraw their deposits. The earlier customers withdraw their deposits, the higher the chance that the financial institution is still liquid. As a result, a run can occur, and the institute goes bankrupt.

In order to prevent such a run, Libra owners should be able to rely on being able to exchange Libra for fiat currency at any time without any significant loss in value. This condition may be fulfilled in times of economic stability. In the event of financial, sovereign debt or other economic crises, however, it is to be expected that bank deposits will not always be available immediately. Additionally, government bonds of supposedly safe countries might be quoted below par due to default risk and limited liquidity.<sup>31</sup> This could decrease the value of Libra, the Libra Reserve could even “break the buck”, and trigger a run. However, especially in times of economic tension, the price of government bonds of safe countries, so-called “safe havens”, can increase as a result of higher demand. This could mitigate losses in the value of the Libra Reserve and, in extreme cases, could potentially lead to an increase in value.

A high risk is associated with a collective loss of confidence in the Libra Association. For example, if investors were to exchange sizeable quantities of Libra back into fiat currencies as a consequence of a data scandal, the Libra Association would be forced to sell great quantities

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<sup>30</sup> See C. Catalini et al., loc. cit.

<sup>31</sup> Between 1820 and 2004, there were 250 defaults on government bonds in 106 countries, see M. Tomz, M. Wright: Do Countries Default in “Bad Times”, in: Journal of the European Economic Association, Volume 5(2-3) 2007: pp. 352-360.

of government bonds in fire sales. Considering the financial crisis of 2008, this could provoke contagion effects and tremendous systemic risks. In the end, tax money might have to be used to stabilize the (conventional) financial system.

As for now, it is obviously unknown how successful Libra will be and how large Libra deposits and the associated systemic risks will turn out. Quite a large customer pool seems possible due to the very high user base of Libra Association companies such as Facebook (2.1 billion), Mastercard and Visa (1.6 billion).<sup>32</sup> According to initial estimates, Libra's market capitalization could be in the three-digit billion US dollar range.<sup>33</sup> Assuming the market value reached 250 billion US dollars and half of the Libra Reserve consisted of government bonds, the Libra Association would buy bonds worth 125 billion US dollars to back Libra. Currently, the stock of outstanding short-term government bonds that meet the purchase criteria of the Libra Association is likely to amount to around 8.5 trillion US dollars.<sup>34</sup> The Libra Association would thus hold just about 1.5% of such short-term government bonds.

In order to prevent a further growth of the shadow banking system, Libra has to be regulated as a "normal" financial product. However, it is yet undecided whether Libra is legally to be regarded as a currency or as an investment fund. Additionally, it is unclear who is responsible for a private cryptocurrency with global reach. The Libra Association, located in Switzerland, is subject to the Swiss Financial Market Supervisory Authority (FINMA) and endeavors to cooperate closely, particularly in fighting money laundering and terrorism financing.<sup>35</sup> However, it is questionable whether national regulations are sufficient for a global financial institution and whether regulatory guidelines are accepted consistently in all countries. Furthermore, data protection must be guaranteed. The considerable uncertainty and skepticism of regulatory authorities worldwide are reflected in the repeatedly discussed and partially enforced ban of cryptocurrencies in China and India, among others.<sup>36</sup>

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<sup>32</sup> See Facebook: Stats, <https://newsroom.fb.com/company-info/> (12.08.2019); T. Mayer: A Digital Euro to Compete with Libra, [https://www.flossbachvonstorch-researchinstitute.com/fileadmin/user\\_upload/RI/Studien/files/study-190702-a-digital-euro-to-compete-with-libra.pdf](https://www.flossbachvonstorch-researchinstitute.com/fileadmin/user_upload/RI/Studien/files/study-190702-a-digital-euro-to-compete-with-libra.pdf) (16.08.2019).

<sup>33</sup> See F. Bekemeier, J. Groß, P. Sandner, loc. cit.

<sup>34</sup> Currently, a total of USD 31 trillion in government bonds are outstanding that meet the selection criteria of the Libra Association. The calculation is based on a maturity structure for government bonds similar to that in the USA.

<sup>35</sup> See Senate Committee on Banking, Housing and Urban Affairs, loc. cit.

<sup>36</sup> See finanzen.ch: Bitcoin Owners in India: Will the Ban on Cryptocurrencies Come? <https://www.finanzen.ch/nachrichten/devisen/bitcoin-besitzer-in-indien-kommt-das-verbot-fuer-kryptowaehrungen-1028387555> (16.08.2019); J. Pospiech: After China's Ban: What's Next for Bitcoin? <https://www.merkur.de/leben/geld/nach-chinas-verbot-geht-weiter-bitcoin-handel-zr-8719673.html> (16.08.2019).

## Monetary policy

The Libra Association determines the rules of Libra's monetary regime, and thus de facto acts as a "Libra central bank". However, the Libra Association "decided not to develop its own monetary policy but to inherit the policies of the central banks represented in the basket".<sup>37</sup> As long as Libra is fully backed by a currency basket and the Libra Association passively increases the Libra money supply - for example by purchasing liquid financial assets in the event of a higher private demand for Libra - it, in fact, pursues an expansionary monetary policy with lower yields of financial assets. In line with the composition of the currency basket, this policy corresponds to a mix of monetary policy measures by the Federal Reserve, the European Central Bank, the Bank of Japan and the Bank of England, weighted by the shares of national currencies in the Libra Reserve. Accordingly, interest rates and inflation rates in the Libra currency area should reflect the weighted values of the US dollar, euro, yen, and British pound.

What consequences could be expected from such a policy? For example, if a customer buys Libra from the Libra Association against euro and the Libra Association acquires a German government bond from a non-bank with these funds, the amount of euro money in circulation does not change, while the amount of Libra money increases accordingly. The stock of liquid financial assets and the leverage of the financial system rise. Such a purchase of reserve assets also puts pressure on short-term interest rates. This expansionary effect could be intensified if financial institutions began to offer loans and other assets in Libra, thus "minting" Libra. The national central banks would have to take this expansionary effect into account in their policies.<sup>38</sup>

Monetary policy of national central banks would also likely be affected if Libra turned out to be another relatively stable, highly liquid asset. Depending on the transaction costs (see above), this could create a close substitute for existing national means of payment and reduce demand for these traditional means of payment subsequently. This could result in a (relative) loss of importance of the traditional national banking systems. Monetary policy measures, such as conventional monetary policy, could become less effective. The central banks would have to intensify their measures in order to achieve the same effects on economic

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<sup>37</sup> See C. Catalini et al., loc. cit.

<sup>38</sup> See also A. Hanl, J. Michaelis: Kryptowährungen - ein Problem für die Geldpolitik? in: Wirtschaftsdienst, Vol. 97 (2017), Issue 5, 363-370.

development, which could lead to further evasive reactions and migration of business out of the banking sector, with negative consequences for the effects of monetary policy.

National monetary policies could also become more complicated if the introduction of Libra and the associated reallocation processes were to reduce the informational content of monetary aggregates. Particularly in countries with unstable currencies, a significant proportion of the portfolios could be reallocated to the relatively stable, highly fungible Libra, especially if Libra were offered not only as a means of payment but also in the form of higher-interest products such as Libra term deposits.

It is also possible that the Libra Association will not stick to its previously announced passive monetary policy, but will pursue an independent (open market) policy, actively buying foreign currency assets against Libra, for example, to generate seigniorage profits. Changes in the composition of the Libra Reserve can also be classified as monetary policy measures. If the Libra Association were to change its investment strategy, this could have consequences for government bond yields and other assets with a short maturity. The white paper explicitly states that the Libra Association may change the composition and investment strategy of the Libra Reserve to respond to significant changes in market conditions (such as an economic crisis). This requires a two-thirds majority in the Council of the Libra Association, the decision-making body of the Libra Association.<sup>39</sup>

## **Conclusion**

Libra offers an innovative infrastructure to process payments cost-efficiently, securely and quickly through the use of blockchain technology, thus making a significant contribution to financial inclusion. In particular, its global reach could make Libra interesting for cross-border payments in developing and emerging countries. The market potential in industrial countries, on the other hand, is limited (for now). Most likely, there is too much competition from established payment service providers, too much uncertainty about exchange rate fluctuations relative to national currencies and, last but not least, too much fear of data abuse by the members of the Libra Association. If, however, a suitable regulatory framework is created to address these risks, Libra is exchanged free of charge and transferred and accepted

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<sup>39</sup> See C. Catalini et al., loc. cit.



as a means of payment by large merchants, Libra could also develop into a serious payment alternative in industrialized countries.

It is still unclear how possible systemic risks from the Libra project can be avoided. It cannot be ruled out that there will be a run on the Libra Reserve, with the risk of contagion effects for the conventional financial system. Given the many coordination issues between national regulatory authorities, there is still a considerable need for consistent rules.

The effects of Libra on other national currencies, and thus on national monetary policies, are currently difficult to assess, not least because many important institutional and organizational details of the Libra project are still unknown. However, if the Libra Association keeps its promise not to conduct its own monetary policy and to create Libra only within the framework of a currency board arrangement based on the inflow of fiat currencies, the macroeconomic consequences should ultimately be manageable.

It will be interesting to see how central banks react to a possible decline in demand for cash and central bank money. For example, a number of central banks are currently discussing issuing their own digital currencies, so-called central bank digital currencies (CBDC), in order to address payment inefficiencies in terms of security, speed, and transaction fees and to strengthen the demand for central bank money.<sup>40</sup> The race between private and public digital currencies has just started.

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<sup>40</sup> See A. Hanl, J. Michaelis: Digitales Zentralbankgeld als neues Instrument der Geldpolitik, in: Wirtschaftsdienst, Vol. 99 (2019), Issue 5, 340-347.



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