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What is Libra?

Björn Segendorf, Hanna Eklööf, Peter Gustafsson, Ann Landelius and Siniša Cicović[1]
The authors work in the Payments Department, the Financial Stability Department, the Monetary Policy Department and the Corporate Services Department of the Riksbank.

A number of companies have taken the initiative for the launch, in 2020, of what they call a global currency – Libra. Libra, if realised, will be a means of payment with its own technical infrastructure to enable global payments. Today, in many cases, there lacks a suitable infrastructure for cross-border payments, a problem that Libra may help to solve. Libra could also offer payment services to people who currently lack or have difficulty in obtaining access to these. In the short term, Libra will probably not have any great impact on the Swedish payment market, even though it could become established in some segments, primarily payments between private persons and some on-line shopping. However, there is a risk, over the longer term, that Libra may be used to a larger extent, which could affect the financial stability and the Riksbank's ability to conduct monetary policy.

The financial system is in a state of transformation. On the payment market, new technology is making it possible to introduce new payment solutions and new actors want to participate. The transformation is being eased by the current demand for new payment services that established payment service providers such as banks and central banks have been unable to meet so far, above all for cross-border payments. Companies such as TransferWise and Ripple are examples of two such actors, as are cryptocurrencies such as Bitcoin.[2] The latest and largest initiative is Libra, which has gained much attention in the media and financial sectors and from authorities and politicians. Below, we explain what Libra is, why this initiative has been taken and what the consequences could be for the Swedish financial system.

Libra – a proposed global cryptocurrency

In June 2019, the Libra Association, a Facebook-led consortium of companies active in finance, IT and social media announced its intention to launch a new financial asset intended for making payments, called Libra. According to the initiators, Libra is to be a global currency, able to function in a global infrastructure to serve billions of people around the world. The motivation for creating Libra is said primarily to be to make it easier to include those outside the financial system, approximately 1.7 billion people around the world.[3] Libra Association also wants to facilitate global payments for people and companies who already have good access to financial services. The project thus has a strong visionary touch. It wants to create "the Internet of money".

Libra's official document describes three components that must be in place for the vision to be realised:

1) An independent organisation, Libra Association, to develop and administer Libra.
2) A reserve of assets to ensure that Libra's value is stable.
3) Secure, scalable and reliable technology to execute transactions in Libra.

It is important to emphasise that Libra currently only exists at the planning stage and it is unclear if the project can be realised. We describe these three components in the rest of this section.

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[2] The common factor for all of these actors is that they use new technology to facilitate cross-border payments. Ripple is a commercial cryptocurrency-based (XRP) solution for the settlement of cross-border payments and TransferWise is a FinTech company that combines cross-border payments before executing the combined payments in a traditional manner. Bitcoin is the best-known cryptocurrency and is not a commercial operation.
[3] Libra's white paper can be found here: https://libra.org/en-US/white-paper/

The Libra Association develops and administers Libra

The Libra Association is a non-profit organisation with its registered seat in Geneva, Switzerland, and offices in California. Switzerland was chosen as it is one of the few countries with legislation covering cryptocurrencies/assets. The founders of the association (founding members) are included as members. A founding member must invest at least USD 10 million. Earlier this year, companies interested in becoming founding members signed a non-binding declaration of intent to become founding members and negotiations are now under way over the shape of the association's statutes. The potential founding members come from the payment market, the FinTech sector, digital marketplaces, the telecommunications sector and elsewhere. Examples of specific companies that initially expressed interest in participating in Libra include Visa, Mastercard, PayPal, Facebook, eBay, Booking Holdings, Spotify, Uber Technologies, Vodafone Group and Coinbase. However, a number of these have chosen to leave the project at a later point.[4] The Libra Association's first official meeting was held on October 15th in Switzerland. At this meeting, 21 companies signed the Libra Association's statutes.[5]

A council in which each founding member will have one representative will govern the association. Libra's council will select a board and a CEO, grant permission for the issue of Libra, approve the association's budget and so on. The board will monitor the association's operations and provide the association with operational advice. The association's council determines the responsibilities of the board. Facebook will continue to play a leading role in Libra over the rest of 2019. After this, the plan is for each founding member to have one vote and for Facebook to be one member among others.

The association's founding members have two important tasks apart from those described above: they issue Libra and administer the reserve collectively, and they operate and take responsibility individually for the nodes in the network that validate the transactions.

Libra is to have a network of resellers

It will not be possible to purchase Libra currency units directly from the Libra Association. Instead, there will be licensed resellers to act as intermediary between the association and users. The necessary requirements to become a reseller and the manner in which these shall be organised are not specified. Information received suggests that discussions are in progress with larger banks and companies currently trading in crypto-assets over the possibility of making them resellers. There are also hopes that it will be possible to trade in Libra on exchanges around the world.

Facebook has also created a subsidiary, Calibra, to guarantee that all financial data is separated from other user data on the social platform. Calibra will develop a digital wallet for WhatsApp and Messenger, as well as a freestanding solution for iOS and Android.[6]

Libra is a crypto-asset with stable value

Libra is explicitly described as a crypto-asset, or a cryptocurrency to use the document's wording.[7] The best-known crypto-asset is Bitcoin, the value of which has fluctuated heavily in a manner that will not be permitted for the value of Libra. To ensure that the value remains

[4] At the time of writing, Visa, Mastercard, PayPal, Booking Holdings and eBay have withdrawn from the cooperation but are open to the possibility of returning at a later point; see Financial Times (2019a, 2019b). The main reason is likely to be the tough regulatory scrutiny by authorities all over the world. Facebook has said that the realization of the project is subject to the approval of the relevant regulatory authorities, see Zuckerberg (2019).

[5] See Libra Association (2019).

[6] There is no clear definition of a digital wallet. This usually refers to an application for smart telephones that allows the user to initiate payments from prepaid accounts or by using stored card details. Masterpass, Apple Pay and Samsung Pay are examples of digital wallets.

[7] The terms cryptocurrency and crypto-asset will not be explained in any more detail here. For more on cryptocurrencies and their use, see Söderberg (2018) and Segendorf (2014).

stable, a reserve will be created consisting of safe and liquid assets, mainly government securities with short maturities issued by various countries and bank deposits in various currencies. Libra's value is then a weighted average of the currencies in the reserve.[8] Such a backed crypto-asset is usually called a *stablecoin*. The concept is the same as the gold standard of days passed, when the possibility of exchanging money for gold provided a stable value and inspired confidence. Even if a holder of Libra currency units does not have a direct claim on the reserve, unlike in the case of the gold standard, the hope is that Libra's value will only vary through fluctuations in the value of the underlying reserve. In the case of a gold standard, variation depends on fluctuations in the price of gold and, in Libra's case, it is due to fluctuations in the exchange rate for the underlying currencies and in the market value of the assets in the reserve. Ultimately, therefore, Libra's value is based on states' monetary policies and economic outlooks, which affect the value of exchange rates and government securities. This means that Libra differs from a traditional crypto-asset, which is explicitly free from government intervention. The way that the reserve is built up and administered will be decisive for confidence in Libra and the general public's willingness to use it.

The Libra reserve will be built up in two stages

As Libra's value is to be stable and equal to a basket of assets, the basket must be constructed so that volatility is as low as possible. The assets must therefore be geographically widespread and, above all, be issued by credit worthy states and central banks. Returns from the reserve will primarily be used to fund Libra's organisation and technical infrastructure.

The reserve will be built up in two stages. The first stage is formed of the money invested by the founding members. The founding members receive what are known as Investment Tokens in return for their investment. Simplified slightly, Investment Tokens can be considered to act as equities in Libra Association. The investment capital will be used both to construct the technical system and to form the initial contribution to the Libra reserve. Investment Tokens also grant the right to part of the future return on the Libra reserve, which is to say any surplus that may remain after the necessary costs for maintaining the Libra system have been covered.

In the next stage, once Libra has gotten started, the reserve is built up further as users purchase Libra for their national currencies via licensed resellers. Consequently, new Libra currency units can only be created through a corresponding payment in a national currency, which is then invested in the reserve. This means that it is the amount of Libra currency units demanded by users that determines how many of these will exist. Each Libra currency unit thus always corresponds to a part of the reserve and it must always be possible to redeem it for the corresponding value in a national currency. The value of the Libra reserve will fluctuate at the same rate as the value of the treasury securities and foreign exchange present in the reserve. Libra will thereby 'inherit' national central banks' monetary policies.[9]

Those holding Libra currency units will not receive any interest. However, the Libra reserve will generate a return, which we here call the net interest income, corresponding to the return on the assets existing in the reserve.[10] As the reserve has been constructed to have a low risk (volatility), the return will also be low. This, in turn, means that use of Libra must be comprehensive so that the reserve can be large enough for the net interest income to cover the costs and give the investors a profit.[11]

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[8] Facebook has also floated the idea of creating a series of stablecoins, each pegged to a fiat currency, see Reuters (2019), in which case there would be a Dollar-Libra, a Euro-Libra, a Yen-Libra and so on. No decisions have been taken and we will not discuss this eventuality in this Economic Commentary.

[9] Catalini et al. (2019), p. 3.

[10] Central banks receive a corresponding return on the issue of cash, known as seigniorage.

[11] Catalini et al. (2019), p. 2.

Libra will be built using new technology

So far, we have discussed Libra as a crypto-asset that can be transferred and thereby used as a means of payment. However, for it to be possible to pay with Libra, there must be an associated payment system in the form of an IT platform in which transactions can be registered and payment information mediated between the participants involved. Libra's payment system is based, to a certain extent, on existing and known technology but much is new and untested. The Libra Association says itself that further development work is necessary.

The payment information in Libra will be stored in what is known as a distributed database, on which Distributed Ledger Technology (DLT) is based. A distributed database exists in several places simultaneously in a network of computers (nodes) and the different nodes in the network have copies of the database, unlike centralised databases, where the information is stored centrally, in one place. Traditional payment systems like Bankgirot or card networks are centralised. In Libra's case, the nodes in the network are formed of the members of the Libra Association.

The two best-known applications of Distributed Ledger Technology are the blockchains Bitcoin and Ethereum.[12] Bitcoin's blockchain is completely open in the sense that anybody who wants to can participate in the registration of Bitcoin payments (known as mining). Libra calls its solution a blockchain but this has been widely questioned. The transaction history in Libra is not stored in a linked chain of transaction blocks (hence the name blockchain) but in a structured database. Unlike Bitcoin's blockchain, Libra's 'blockchain' is permissioned, which means that only members of the Libra Association can register transactions. However, the Libra Association has expressed plans to transition to a permissionless blockchain within a period of five years, although this may prove to be more easily said than done.[13]

Libra has also developed a new programming language called Move to handle smart contracts among the other things. A smart contract is a small programme able, for example, to execute a payment when an event, specified in advance, occurs. For example, a customer and an online trader could sign a smart contract to implement payment once the goods sold have arrived at a specific address. The customer would thus not pay until the goods had been delivered, while the retailer knows that payment will be made. It is difficult and still premature to comment on the strength of the Move programming language at this time.

Libra must be able to manage large numbers of payments

A major challenge for the payment system Libra is the potentially very large number of payments. Each payment creates a change in the information stored in the database, which, with distributed databases, requires the changes to be implemented in several places simultaneously. As there is no central administration, this requires the nodes to somehow agree that a new payment is to be approved and registered. Consequently, what is needed is a rule to steer this process that can be applied by all users – which is known as a consensus algorithm. The consensus algorithm needs a certain amount of time and computing power to execute, which means that it often forms a bottleneck. For example, Bitcoin's blockchain can at present only manage about 400,000 transactions a day, which is very little for a global payment system.[14] As a comparison, it can be pointed out that an average of about 10,000,000 card payments are made every day in Sweden alone. Libra is to have its own

[12] Ethereum is an open blockchain developed to manage crypto-assets and so-called smart contracts, among other things.

[13] During such a transition, Libra would have to change its consensus algorithm, which is complicated. Ethereum's attempt to change consensus algorithm has been in progress for a long time and is curently far behind schedule.

[14] In a publicly distributed database, the consensus algorithm is crucial to validate transactions and create trust in the system as a whole. Consequently, complex consensus algorithms are used, so-called *'Proof-of'* algorithms. Bitcoin blockchain uses Proof-of-Work consensus algorithm, which requires much time and energy. The high energy consumption and limited number of transactions that can be managed per unit of time are disadvantages of this kind of algorithm.

consensus algorithm, LibraBFT, which is said to be able to approve transactions relatively quickly and efficiently, but this needs to be verified.[15] For example, it would require a very high capacity for Facebook's approximately 2.4 billion users to be able to use Libra efficiently. A number of questions regarding IT-architecture and technology will also have to be resolved before Libra can be launched, as the Libra Association itself writes in its declaration of intent.[16]

Given the technological challenges in distributed databases, why does the Libra Association want to use one instead of a centralised one? The reason is that it offers a number of possible advantages. A distributed database can have higher reliability, availability and security. If a node is unavailable, the system can still function fully as data can be collected from another, available node. The database can also have better performance in terms of rapid access to data given that the code can be split and executed in parallel in several nodes. It can also be cheaper to increase the capacity of a distributed database than a centralised one. In the former case, a new, relatively cheap computer can be added. The latter case requires changing to a new, larger and more powerful computer. This modular growth makes the system easy to extend without business disruptions.

Libra and the Swedish market

We have reviewed how Libra is intended to be constructed and, in this section, we will examine a couple of overarching questions concerning how Libra could affect the Swedish market.

Is Libra money?

First, we need to answer the question of whether Libra will be money or act as money. Money is usually said to have three functions. [17] It must function as a *means of payment*, which means that it must represent a value that can be given or transferred from buyer to seller. Furthermore, money must act as a *unit of account* that can be used to set prices and measure economic results. Finally, money must act as a *store of value*, meaning that it must be possible to save money for later consumption without the value of the money appreciably deteriorating.

The aim of Libra is to enable payments and Libra is thereby intended to be a means of payment. By guaranteeing its value with a reserve of stable collateral, the hope is that its value will be stable. In practice, it is thus probable that Libra will act as a store of value. The extent to which Libra will act as a unit of account, with companies and private persons setting prices in Libra, remains uncertain, however. Initially, it is not likely that Libra will be able to function in all three roles, but it is possible that some prices, perhaps primarily in cross-border eCommerce, will eventually be expressed in Libra. In the longer term, it is thus likely that Libra will function as money in certain parts of the economy.

If Libra will act as money, in purely practical terms, does this make it money from a legal perspective? Swedish banknotes and coins have a legal status as means of payment in Sweden, which Libra will not.[18] There is also the Electronic Money Act, which says that electronic money is an electronically stored monetary value that represents a claim on the issuer, is issued for the purpose of payment in exchange for money, and is accepted as means

[15] Libra's consensus algorithm, LibraBFT, is a variant of Byzantine Fault Tolerance (BFT), known as HotStuff, which is well known for its good performance and high security. BFT is a common consensus algorithm in private distributed databases and provides a method of reaching agreement even if up to one-third of nodes are unavailable or even dishonest. One disadvantage of this kind of algorithm is its current limitation to the number of nodes.

[16] https://libra.org/en-US/white-paper/

[17] A good overview of money and its role in the economy can be found in Camera (2017) or Söderberg (2018).

[18] The Sveriges Riksbank Act (1988:1385), Chapter 5, Section 1, stipulates the status of Swedish banknotes and coins as legal tender.

of payment by parties other than the issuer. [19] It is unclear whether Libra meets these criteria. According to the Act, it must be possible to redeem electronic money immediately to the same value for which it was purchased. As Libra's value will be determined as a weighted average of the exchange rates of a couple of larger currencies, it is not certain that a party exchanging Libra back will get the same exchange rate they did when they purchased it. Neither is it clear, at present, whether such an instant redemption will be possible.

Furthermore, it has been argued that Libra is not money but should instead be regarded as a money market fund, as Libra, it is argued, will form a claim on a portfolio of interest-bearing securities and bank deposits.[20] [21] However, shares in money market funds are not used as a means of payment. Another difference is that it is possible, as a private person, to interact directly with the fund and own shares, which is not possible in Libra, as purchases and sales of Libra take place through agents. It is also unclear whether Libra forms a direct claim on the reserve.

The uncertainty surrounding the details of Libra's design make it difficult to classify Libra from a legal perspective. Whether Libra, from a purely legal perspective, will be considered money or something else is thus a question that will have to be answered in the ongoing regulatory work.

Will Libra be used for payments in Sweden?

Overall, the Swedish payment market is efficient, with functional, secure and accessible payment services. The most common payment services, such as cards and Swish, as well as online and mobile banking, can literally be found in every person's hand. These services are highly integrated into companies' cash systems and administrative systems. Initially, Libra will not have the same established network of users and the same technical integration. It is not obvious how Libra will overcome this competitive disadvantage. Furthermore, payers and payees in general have their own incomes and expenses in Swedish kronor, meaning that going through Libra would give rise to an exchange rate risk and possibly a cost for the exchange. It is therefore unlikely that Libra will be used for payments within Sweden to any greater extent, at least not in the medium term.

Libra could have an advantage for some payments to and from the rest of the world

Payments to neighbouring countries, the euro area and important trading partners work well but are slightly more difficult than domestic payments as, most of the time, they have to be initiated in another country's infrastructure for payments. However, the Swedish banks are often present in these countries.

Payments to countries other than those mentioned above are more complicated, as the Swedish banks do not have direct access to those countries' infrastructures for payment. The Swedish bank must then rely upon a network of bilateral agreements between banks in different countries, known as correspondent banks. These agreements are based on one bank (the correspondent) holding deposits owned by another bank (the respondent) and performing payments and other services on behalf of the respondent bank.

Slightly simplified, it could be said that there often lacks an effective infrastructure for cross-border or cross-currency payments. By acting as a global payment system, Libra could bridge over some of the existing shortcomings. This would primarily concern cross-border payments between individuals and in eCommerce, not least considering that some of the

[19] Electronic Money Act (2011:755). E-money is not common in Sweden. The best-known Swedish example is the Cash Card, which was issued between the end of the 1990s and the early 2000s.

[20] A money market fund is a special form of short fixed-income fund that invests in securities with short maturities (shorter than six months for a money market fund and one year for a short fixed-income fund). As risk increases in step with the maturity of the security, money market funds have relatively low risk. They are expected to give an even (but relatively low) return and are a suitable means of saving for those with short investment horizons.

[21] See Deutsche Bank (2019)

founding members of the Libra Association will probably let users make payments in Libra through their social media platforms.

It is possible that Libra could be large over the long term

We have explained above why the use of an eventual Libra for domestic payments in Sweden will probably be limited in the medium term, but, on the other hand, will probably become established and commonly used in various segments of the cross-border flow of payments.

This analysis, although reasonable from a Swedish perspective, does not take account of the extent that Libra may be used abroad or of what may happen in the long term. How common Libra becomes will be depend on how Libra is used on social media platforms and in the services provided by the major technology companies. The stance taken on Libra by public authorities in other countries will also be significant.

Among the companies that have signed a declaration of intent in their involvement in the founding of Libra are Facebook, Visa and Mastercard. However, the last two have withdrawn but are following the work on Libra and are keeping their options open for re-joining.[22] Facebook has a little over 2.4 billion users and also owns the messaging services WhatsApp and Messenger. Visa and Mastercard are globally active card networks with great knowledge of payment mediation and regulation. Together, they have a very broad customer base. If this could be combined with accessible, convenient and cheap payment services, Libra could become big. In this case, it would probably be a gradual expansion from payments between consumers and eCommerce to general payments from consumers to companies and, finally, between companies. If consumers and companies in other countries start to use Libra, willingness to use Libra among Swedish consumers and companies will also increase. This will give us a situation in which Libra is competing with national currencies and will perhaps push these out from parts of the payment market and possibly also from the financial markets.[23]

If the use of Libra becomes extensive, it is also possible that financial actors will start to offer loans in Libra. However, this is not part of the Libra Association's plans. Independent actors would offer such loans in that case. Experience has shown that it is risky for a borrower with their revenue and expenditure in one national currency to take loans in another currency, as the exchange rate risk can be significant. However, in a case in which Libra is used to a great extent, it may be reasonable for actors with revenue and expenditure in Libra to also borrow or save in Libra or Libra-based products. In this case, there would also be consequences for both monetary policy and financial stability.

However, it would probably be a long time before we had a scenario with a truly comprehensive use of Libra. It is also likely that politicians and authorities in various countries would take countermeasures if they considered that national institutions like the central bank and the national currency were being challenged.[24]

Libra, in large amounts, could affect monetary policy

The Riksbank has two main ways of conducting monetary policy.[25] Firstly, we set the interest rate for deposits and lending in RIX, the Riksbank's system for large-value payments in Swedish kronor between the banks and clearing organisations, and loans to or from the banks via what are known as repos.[26] The interest terms in RIX are used to influence the

[22] See, for example, Financial Times (2019a).

[23] There is literature dealing with competition between currencies and with optimal currency areas. Newly published papers on how a global digital currency could conceivably compete with other currencies is, among others, Brunnenmeier, James and Landau (2019) and Benigno, Schilling and Uhlig (2019).

[24] Analyses are under way in a number of international organisations and cooperation forums such as G7, a group consisting of the seven major economies.

[25] A brief overview of monetary policy can be found here. https://www.riksbank.se/en-gb/monetary-policy/what-is-monetary-policy/

[26] Repo is derived from the term repurchase agreement. By entering such agreements, the Riksbank can lend money to the banks against securities that the banks buy back later on an agreed date. Interest is formed by the difference between the agreed price that the

shortest interest rate (overnight) and repos are used to influence the interest rate for investments of one or two weeks. Secondly, we influence interest rates with long maturities by purchasing and selling securities on the market and thereby influencing the price (and the yield) of five-year government securities, as an example.

One important reason for why the banks carry out their large-scale payments in RIX is that no counterparty risk arises, as the Riksbank can always fulfil its commitments in Swedish kronor. If Libra instead were to be used for this type of payment, there would arise both an exchange rate risk and a risk that the Libra Association would be unable to fulfil its obligations (credit risk).[27] There is also a risk that it will be difficult to exchange Libra back to Swedish kronor (liquidity risk). It is to avoid such risks that banks around the world prefer to execute their payments through the central bank. Libra will not change this. For more or less the same reasons, those issuers who are active in Sweden and wish to issue securities in Sweden will primarily denominate them in Swedish kronor. This means that the Riksbank's tools for implementing monetary policy will not be affected. Even if the use of Libra were to become extensive, it is difficult to imagine a situation in which central parts of the financial system would go over to Libra.

At the same time, the efficiency of monetary policy is dependent on Swedish households and companies borrowing and saving in Swedish kronor. If they do this, interest rate adjustments will influence their decisions on consumption, saving and investment, which, in turn, will influence demand in the economy and thus inflation. This influence from interest rates to economic decisions is usually called the transmission mechanism. Libra, which will not pay interest, should normally not be an attractive form of saving in times of positive interest rates. As long as households and companies do not hold large amounts of Libra, the transmission mechanism will not be affected. If, on the other hand, households and companies were to elect to hold a large part of their financial assets and liabilities in Libra, the transmission mechanism would be weakened.

Another potential monetary policy problem with Libra is that the lower bound for the interest rate could be raised. The lower bound emerges when the central bank is unable to cut the interest rate as banks, companies and households would then purchase other assets. The lower bound has traditionally been considered to lie at zero per cent interest, as a lower rate would lead to a flight to cash, which does not bear or incur interest.[28] Nevertheless, in Sweden, the Riksbank's interest rate has been negative since 2015. This has been possible because it is costly to store cash in a secure manner, in addition to which there is a risk of robbery. If Libra were considered to be a safe asset with zero interest, and it is easy to purchase Libra in large amounts, it is possible that the Riksbank's ability to set negative interest rates would be impaired.[29]

Libra, in large amounts, could affect financial stability

The Riksbank's work of safeguarding financial stability partly focuses on preventing financial crises. The Riksbank does this by analysing the financial system and its participants, working

Riksbank pays and the amount the banks later pay upon repurchase. Repos can also be used if the banks wish to lend money to the Riksbank.

[27] Libra's reserve is intended to protect its holders against what is known as a credit risk, which is to say the failure of Libra to fulfil its commitment to exchange Libra for national currency or only to be able to do this for a lower exchange rate than is specified by Libra's currency basket. However, Libra is a private organisation and part of the reserve will be held in private banks. Neither can the risk be entirely ruled out that Libra will incur a credit loss if a bank in which part of the reserve is held fails. The value of the reserve would then decrease, which could make it impossible for the Libra Association to redeem Libra at full value. The reserve could also be undermined by a longer period of losses, caused, for example, by very low returns on the reserve or fines if, for example, government agencies should consider that Libra is abusing a dominant market position or is failing to comply with anti-money laundering regulations.

[28] This is normally called the Zero Lower Bound (ZLB) and has been the subject of discussion among economists for a long time. This subject has been topical in recent years as a number of countries, including Sweden, have negative interest rates, as well as in conjunction with work on the e-krona. Nessén, Sellin and Åsberg Sommar (2018) is recommended to any reader interested in examining the e-krona and its effects on monetary policy in more depth.

[29] Benigno, Schilling and Uhlig (2019) argues that competition between national currencies and a global currency could severely restrict central banks' ability to conduct monetary policy.

for regulation that contributes to efficiency and stability, and by overseeing the financial infrastructure systems.

In a scenario where Libra is used to a limited extent, and primarily as a means of payment, we do not see, at present, any direct threat to financial stability in Sweden. Some households and companies may wish to buy smaller amounts of Libra but that outflow should be small in relation to the banks' balance sheets and the daily flow of payments. As we do not believe that either the banks or their customers will have any greater holdings of Libra, at least not in the medium term, no appreciable credit risk caused by Libra that could spill over into the banks will arise.

If, on the other hand, Libra is used to a wide extent and starts to be used for lending, for example, the effect could be greater. Existing lending institutions could see their profit margins decrease if new, large actors were to compete with them in the granting of credit. In the end, this could lead to increased risk taking (search for yield) affecting the entire financial system. Extensive use of Libra would also mean that users would have to rely on Libra's technical system always functioning. Operational disruptions in the technical system could then have major negative effects and form a threat to financial stability. For example, a cyber attack could result in it becoming impossible to use Libra. If larger companies use both Libra and traditional currencies for incoming and outgoing payments, any liquidity and credit shortages could spread into the financial system as the failure of incoming payments in Libra to materialise would prevent these from being used to fund outgoing payments.

Authorities must cooperate over Libra

Libra and the financial infrastructure built around it must be regulated in a way that effectively counteracts the risks arising. In a press release, the Swiss Financial Market Supervisory Authority (FINMA), which corresponds to Sweden's Finansinspektionen, has stressed that Libra should be regulated according to the principle 'same risks, same rules'.[30] This means that Libra's financial infrastructure must comply with the international minimum requirements agreed on by central banks and supervisory authorities around the world as specific to the financial infrastructure system.[31] The risks linked to Libra's function and structure must be managed in the same way as risks in other financial infrastructures.

On October 18th 2019, the G7, a group of seven major economies, published a report in which they have analysed the possible consequences of what they call global stablecoins, which includes Libra.[32] [33] Their report forms the starting point for a global discussion to achieve consensus on how phenomena such as Libra should be managed in terms of regulations. They establish that authorities must cooperate globally and that the basis of this cooperation must be established regulations against money laundering and the financing of terrorism, as well as technical and legal requirements for important financial infrastructures.[34] It is clear that a global stablecoin should not be able to exploit regulatory arbitrage, which is to say it must not be allowed to cherry pick and enjoy lower regulatory demands by systematically playing different countries' legal frameworks off against each

[30] FINMA (2019).

[31] The principles that financial infrastructure must comply with are the Principles for Financial Market Infrastructures issued by the Committee on Payment and Market Infrastructures (CPMI) and the International Organization of Securities Commissions (IOSCO) (2012). Within the EU, these principles have formed the basis for legislation. See, for example, European Market Infrastructure Regulation (EMIR) on OTC derivatives, central counterparties and transaction repositories, EU 648/2012, and the Act (2013:287) with supplementary provisions to the EU Regulation on OTC derivatives, central counterparties and trade repositories.

[32] G7 Working Group on Stablecoins (2019). This report was submitted in October 2019 to other standard-setting international collaboration forums for further discussion and analysis.

[33] The G7 Working Group on Stablecoins (2019) defines global stablecoins as stablecoins, usually issued by companies with large user bases, which can quickly become global and reach systemic scale.

[34] The G7 particularly points out Principles for Financial Market Infrastructures (CPMI-IOSCO (2012) and FATF Recommendations for AML/CFT and countering the financing of proliferation of weapons of mass destruction.

other. Libra, should it be realised, will have to comply with the same requirements as banks and major payment systems, for example.

The above makes it clear that international cooperation is needed for the oversight of Libra. Standards for such global cooperation already exist.[35] Current practice is to set up an oversight college under the leadership of the authority under whose jurisdiction the infrastructure falls.[36] [37]

In practice, however, it can be a challenge to create effective cooperation between a large number of public authorities in many countries that all have a legitimate interest in overseeing Libra. One special challenge is that Libra's technical systems will probably be located in many different legal domiciles, as will resellers of Libra and the companies building financial services with Libra as foundation. Cooperation on oversight would have to be based on clear principles regarding which countries or public authorities would participate. For example, it could be formulated so that countries whose currencies are included in the Libra reserve would be represented. Alternatively, representation could be determined in relation to the currencies exchanged for Libra and where use of Libra is large enough, according to a few agreed criteria.

Libra's distribution over many legal domiciles is not just a headache for public authorities but also for Libra itself, as Libra will have to comply with legislation and regulation in a large number of countries at one and the same time. For example, it could be a delicate undertaking to comply with the strong know-your-customer requirements and checks for money laundering and terrorist financing existing around the world.

Who is to control the payment system?

In this Economic Commentary, we have taken a Swedish perspective as starting point. Overall, Sweden has a well-functioning payment market and well-functioning institutions, but there are countries in which the situation is different. For example, if a country has very high inflation, what is known as dollarisation can take place, where the national currency is abandoned in favour of another one that works better. If Libra is easily available in such a case and is seen as a safe alternative compared with the local currency, it may supplant the national currency.

The same thing may happen if a country has an ineffective payment system that is not capable of supplying the payment services the population needs. A related example is the payment service M-Pesa in Kenya. Only part of the population had bank accounts and access to the banks' payment services. There was thus a pent-up need to be able to make payments simply, including a need to be able to send money from the major cities to relatives in the countryside. The largest mobile telephone operator then launched a payment service based on text messaging that rapidly became very popular and took the greatest share of the payment market. It is entirely possible that the same thing could happen with a Libra-based payment service in another country.

The initiative surrounding Libra encountered a number of setbacks in September and October, when a number of important interested parties left the cooperation, at least for the time being. One reason for this was the relatively harsh response from public authorities in a number of leading countries and on a global level. Libra's future is therefore uncertain. Nonetheless, Libra has highlighted an inadequacy in the existing infrastructure for cross-border payments. This also means that Libra must be seen from a broader perspective – as long as the central banks do not jointly create an infrastructure for global payments, other

[35] See CPMI-IOSCO (2012), pp. 133-137.
[36] CPMI (2005) includes an instructive review of the reasons central banks oversee financial infrastructures.
[37] Two practical examples of cooperation in which many authorities are included are provided by the oversight cooperation for CLS and SWIFT, respectively.

actors, probably major technology companies, will attempt to do so. The payment system is collectively utilised by individuals, companies and public authorities. The debate over Libra is ultimately a matter of who is to control the global and systemically important payment systems that we all depend upon. Consequently, we deem it necessary that the Riksbank, together with other central banks and public authorities, continue to monitor work on Libra and analyse the consequences that could arise for the financial system should Libra become an important actor.

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Figures and tables

Figure 1. An overview of Libra's ecosystem and role allocations PSP is an abbreviation of Payment Service Provider. 'Agent' refers to an authorised reseller of Libra.