

Chapter 8

The Future of Cash in Sweden



Is a Cashless Economy Possible?

Many may argue that it is possible to see a society without cash. Cash is—as I have argued—one of the most important innovations in the history of humanity. Could and should we get rid of that? Many are convinced we must keep cash, while others welcome a transition toward a cashless society.

The US economist Kenneth S. Rogoff advocates a move toward a society with less cash in his book *The Curse of Cash* (Rogoff, 2016). The book concludes there are benefits from less cash since it discourages tax evasion and crime and enables governments and central banks to handle economic crises more effectively. One main reason being that the financial policies no longer would be limited by the “zero lower bound” interest rate, i.e., that the existence of cash makes it difficult to operate with negative interest rates since investors then can turn to cash instead of bonds with negative interest rates. Rogoff also states that illegal activities like organized crime, illegal immigration, and untaxed payments hurt the entire society and could be avoided—or at least made more difficult—if cash disappears. He also shows that this must be balanced against negative effects from less cash such as, for instance, the risk of financial exclusion of some groups if cash disappears.

Issuing cash has always been an instrument for a ruler—a king, queen, government, or dictator—to finance its own activities since the seignorage,¹ the difference between face value of cash and the production costs of cash, often is rather substantial. A question then is whether central banks risk to become financially dependent on governments if their ability to generate seignorage from cash disappears. This may in the end harm the ability for central banks to control the interest rate and to govern the domestic economic markets. Rogoff also acknowledges,

¹Rogoff defines seignorage as “the difference between the face value of coins minted by the government and the cost of inputs, including both materials and production costs” (Rogoff, 2016, p. 81).

however, that seignorage in Sweden actually already is negative² which implies that this risk does not seem to be critical for the independence of the Riksbank. And it is of course also possible to gain seignorage if a central bank issues digital currencies, i.e., CBDC, which the Riksbank is considering to do.³ A central bank may also fund itself via margins between lending and borrowing. Having central banks that do not issue cash is a possibility (Segendorf & Wilbe, 2014). The central bank of law of Sweden is currently being reviewed where one question concerns the role of cash in Sweden.⁴

Rogoff (2016, Chap. 7) actually outlines a top-down-driven plan for how central banks and governments can address the move toward a cash-free society. This is built on first phasing out large value bills until only small bills or even coins remain. The next step is to develop policies ensuring financial inclusion for all. A situation with a digital divide and financial exclusion is simply not acceptable. The third step is to enforce regulation and laws ensuring privacy and integrity for people making electronic payments. Money and payments are built on trust, and if people are worried about privacy and integrity when making payments, they will not use these services. The last step is to build infrastructure—clearing and settlement systems—that enables real-time payments or close to real-time payments. This will make the electronic payment services provide the same value proposition as cash, i.e., the ability to transfer value in a second or two. Just like what happens when we make a cash payment, but electronically. Rogoff acknowledges this is a slow, gradual process without a clear aim to get rid of cash entirely. The slowness enables the system to handle challenges that are not foreseen.

If the Riksbank of Sweden had seen Rogoff's plan, the parliament⁵ or the Riksbank should of course have gotten rid of the largest Swedish bill—the 1000 SEK bill—when introduced new cash. But they did not. This confirms that it is not politicians and the Riksbank that drives the process toward less cash in Sweden. But the central bank does not seem to be strongly opposed to it either since it acknowledges that a central bank could stop issuing cash and is also looking at the alternative of providing electronic central bank money.

Several central banks around the world are considering the possibility to launch central bank digital currencies, i.e., digital cash backed by the central bank and the

²Sweden actually had a negative seignorage during the period 2006–2015 (Rogoff, 2016, p. 84) which is related to the decreased use of cash in Sweden and in particular the decrease of the nominal value of cash in circulation.

³http://www.riksbank.se/Documents/Avdelningar/AFS/2017/Projektplan%20e-kronan_170314_eng.pdf

⁴<http://www.regeringen.se/rattsdokument/kommittedirektiv/2016/12/dir.-2016114/>

⁵http://www.riksbank.se/Documents/Protokollsbilagor/Fullmaktige/2014/probil_fullm_bilaga_B2_140822.pdf

government.⁶ The Bank of England,^{7, 8} the Bank of Canada,⁹ and the Riksbank^{10, 11} are just some examples (see also discussion in Arvidsson, 2018). The Riksbank in Sweden has outlined different areas in which they need to make decisions if they are to introduce digital cash that is backed by the central bank. These areas concerns which technologies to use, which devices that may be used, which policies to develop, and which legal requirements that must be addressed. The Riksbank is clearly formulating this as a possibility that needs to be studied, and the decision to actually realize this or not will be taken in the end of 2018.

The Committee of Inquiry on the Riksbank is currently reviewing how the Riksbank's responsibility for effective cash management throughout Sweden should be clarified in law.¹² Given the reduced access to cash in the Swedish society and the problems this creates for some groups, the Swedish parliament decided to start a thorough inquiry of whether the central bank law and demands on commercial banks must be changed in order to ensure an efficient and secure system for cash payments in Sweden. The interim report is proposing actions and requirements in a new system for cash handling which would, if realized, increase the demand on commercial banks to deliver cash handling services in all parts of Sweden.¹³

The report states:

In the Committee's view, access to cash withdrawals and the possibility for businesses and associations to deposit their daily receipts must be improved to strengthen cash's position in society. Initiatives should primarily target rural areas, where access to cash services is already significantly more limited with respect to distance than in the rest of the country and where there is greatest risk that cash-in-transit and cash services will disappear completely (SOU, 2018:42, page 24)

The interim report proposes that essentially all Swedes—99 out of 100—and businesses should have access to cash withdrawal services as well as cash deposit services within 25 km from where they live and/or operate their businesses. And it is the largest banks—the ones offering consumer payment accounts and having more than 70 billion SEK in deposits—that should supply these services. These banks are regarded to be critical for the cash system and have national coverage of services, which today means that five banks and one foreign credit institution—SEB, Svenska

⁶There are studies indicating positive macroeconomic gains if a central bank introduces a “central bank digital currency” (CBDC) as, for instance, Bardear and Kumhof (2016).

⁷<http://www.bankofengland.co.uk/research/Pages/onebank/cbdc.aspx>

⁸For a full list of research questions, see <http://www.bankofengland.co.uk/research/Documents/onebank/cbdc.pdf>

⁹<http://www.bankofcanada.ca/>

¹⁰<http://www.riksbank.se/sv/Press-och-publicerat/Riksbanken-Play/Skinsley-Borde-Riksbanken-ge-ut-e-kronor>

¹¹http://www.riksbank.se/Documents/Avdelningar/AFS/2017/Projektplan%20e-kronan_170314_eng.pdf

¹²<https://www.regeringen.se/rattsliga-dokument/kommittedirektiv/2016/12/dir.-2016114/>

¹³<https://www.regeringen.se/rattsliga-dokument/statens-offentliga-utredningar/2018/06/sou-201842/>

Handelsbanken, Nordea Bank, Swedbank, Länsförsäkringar Bank, and Danske Bank—would need to follow these requirements.

The report argues that costs related to supplying these services are not extensive and suggest there will be some sort of fines or sanctions if banks fail to meet these requirements. Moreover, it states that the role of the Riksbank in the cash handling system must be clarified in law especially related to monitoring and analyzing cash handling as well as to report this to the Swedish parliament. The interim report is currently under review.

The Swedish Bankers' Association is critical to the propositions in the interim report. The bankers argues that there is no motivation behind the propositions, that there are arguments speaking against the conclusions, and that it is not correct to name a few banks and institutions that should provide these services.¹⁴ They also argue that these recommendations may contradict other laws, that they do not ensure actual services will be provided at the places where they are needed, and that sanctions are disproportionate. Not surprisingly, banks are negative toward the interim report propositions. It is not very brave to conclude the report will lead to an engaged debate about the future of cash in Sweden and the legal framework around cash.

When discussing possible changes in the roles of commercial banks and the Riksbank, we must of course also dig deeper into the Riksbank's e-krona project. The Riksbank is studying the possibility to launch an e-krona, which can be described as digital cash issued by the central bank of Sweden or more formally as a central bank digital currency (CBDC). The Riksbank has not yet decided whether they will launch an e-krona or not but is pursuing the project as a possible action to meet the rapid decline of cash in Sweden.¹⁵

The Riksbank states:

An e-krona would give the general public access to a digital complement to cash, for which the state would guarantee the value of the money, a form of digital central bank money. At present, the Riksbank only offers banks and other RIX participants digital money, the other digital money in society is private bank money issued by commercial banks.¹⁶

Their project started in 2017 and has studied different options they may choose between, which properties this possibility should have, the legal implications around the idea, and also reviewed proposals for possible technologies. The motivation is that a society and an economic system are stabilized and made more efficient if there is central bank money that is at the core of the system. This form of money is more stable and reliable since it is issued by a central bank through the mandate given by a government and thereby represents a direct claim on the Swedish state, whereas bank money—the money in our bank accounts—is a claim on the bank we have as our bank. In the end, the reliability and strength of the money we have are decided by the actor toward whom our claims are made. If we have cash or possible e-kronor

¹⁴<https://www.swedishbankers.se/media/3916/f181015y.pdf>

¹⁵<https://www.riksbank.se/en-gb/payments%2D%2Dcash/e-krona/>

¹⁶<https://www.riksbank.se/en-gb/payments%2D%2Dcash/e-krona/>

denominated in SEK, we have a claim on the state of Sweden. If we have money deposited in a bank account, we have a claim on that bank. So, who do you trust the most?

We cannot be 100% certain the state will redeem our claims and maintain a stable currency—as we have seen throughout history—but I would definitely argue that a claim on the state of Sweden is better than a claim on a commercial bank. And most will agree. So there is a role to play for central bank money also in a cash-free society. An e-krona may play the same role as cash used to do, and the Riksbank is continuing their work to develop this.¹⁷

We should at the same time acknowledge that regulation and legislation governing banks are aimed at guaranteeing that consumers and businesses do not lose their deposits—claims—on a commercial bank if it ends up in a situation where its assets do not cover their debts, i.e., face bankruptcy. The central bank and the government may act as lender of last resort in order to make sure people and businesses do not lose their assets, there are deposit guarantee legislations covering up to 100,000 Euro for deposits made in banks, and there are regulations overseeing banks in order to avoid bankruptcies.

Swedish banks are not positive vis-à-vis an e-krona since they argue it will not play an important role in the Swedish payment system and that it even will make the Riksbank with an e-krona a potential competitor to savings or transaction accounts provided by commercial banks, which is something the Riksbank by law cannot do. The Riksbank is not allowed to compete with commercial banks, and an e-krona that is deposited in an account provided by the state—for instance, in a tax account managed by the tax authorities—may become a competitive service compared to transaction accounts provided by commercial banks. The Swedish Bankers' Association has even warned the Riksbank to issue an e-krona.¹⁸

Once again we see that money provided by a central bank—in the form of cash or possibly digital forms—creates discussions and heated debates. Money matters!

Today we are intrigued and fascinated by new forms of money and payments that seem to pop out of entrepreneurs' minds almost every day. There are more than 2000 different types of cryptocurrencies.¹⁹ The main cryptocurrencies include Bitcoin, Ethereum, XRP, Bitcoin Cash, EOS, Stellar, and Litecoin. It is without doubt these alternative forms of currencies have made a strong impact on the banking and payment industry where the current value of Bitcoins is around 112 billion USD, the value of Ethereum is around 21 billion USD, the current value of XRP is around 18 billion USD, and the current value of Bitcoin Cash is close to 8 billion USD.²⁰

¹⁷<https://www.riksbank.se/en-gb/payments%2D%2Dcash/e-krona/e-krona-reports/e-krona-project-report-2/>

¹⁸<https://www.affarsvarlden.se/bors-ekonominyheter/bankforeningen-varnar-riksbanken-for-e-kronan-6910428>

¹⁹<https://coinmarketcap.com/all/views/all/>

²⁰<https://coinmarketcap.com/all/views/all/>

Cryptocurrencies may at the moment together be valued to around 209 billion USD. This is impressive.

But we also see rather high volatility in the exchange rates of these currencies which means they are not meeting one critical demand, i.e., store of value that we put on efficient payment methods. The future of cryptocurrencies is very interesting, and these new forms of money and their underlying technology—block chains and distributed ledgers—are expected to revolutionize banking in general and payments in particular. In addition to the many other industries that will be disrupted via these technologies.

A possibility is that if central banks start to issue digital currencies, i.e., CBDCs, they will use the block chain technology to build and operate these currencies and the transactions connected to them. Even if I do not expand my discussion of these new technologies, it is without doubt they have an important role to play in the future payment system. We do not yet know which role they will play, but they will definitely play an important role.

New technologies also open up opportunities for new actors to enter the industry based on innovative services, and if this at the same time is stimulated by changed regulations, we can expect drastic transformations of both services and service providers. An important regulation that is changing the payment landscape at the moment is the second Payment Service Directive (PSD2) from the European Union. Some of its main aims are to increase competition and to stimulate innovation in the field of payments by institutionalizing an industry characterized by open banking.

Open banking is based on the simple idea that a bank account—usually the account where employees receive their wages and salaries—constitutes the centerpiece upon which other financial and payment services are built. When discussing payment services, we see that all services—cash, cards, mobile payment services, or other forms—build on the connection to a central account from which money is drawn when a payment is made. Since these centerpiece accounts—almost by definition—have been provided by commercial banks, these banks have had a natural opportunity to provide payment services connected to the account in question. This firsthand access to customers' account enables banks to sell additional services relatively easy, and they often supply a package of services connected to the centerpiece account. As customers also tend to be loyal to their main bank, these banks have had a privileged position for many years. But the intention of open banking is to change this.

A key feature of PSD2 and open banking is that new forms of payment service providers—like payment initiation service providers (PISPs) or account information service providers (AISPs)—should be able to build their services directly connected to a person's bank account if that person allows them to do this. As the software governing bank accounts also should build on open application programming interfaces (APIs), a PISP or an AISP can build their services connected to the account without being hindered by the bank and its software specificities.

We can compare open APIs with electric sockets. What? Well, I mean that electric sockets have been standardized so that everyone knows exactly the characteristics of the electricity in the system as well as the physical appearance of the

sockets. Even if this—for some unclear reason—still differs between countries, we can be certain of the standard within a country. This also means that any product that relies on electricity can use the electricity if they only adapt the standard setting. Toothbrushes, computers, ovens, refrigerators, dishwashers, lamps, and so on can use the same electricity. By setting this standard, any type of product can use the same electricity. So, by setting a standard—open APIs—for the systems handling accounts, any type of service can connect to a bank account and realize its value.

In essence, this means that banks all of a sudden is facing potential competition in a new way. They have been used to compete with other banks, but now they are facing competition from start-up, Fintech companies that are created in a new era based on new ideas and new systems. This requires new skills and roles from the traditional banks.

At the same time, we see a new generation—the millennials²¹—entering the banking markets who seem to have new demands and less loyalty to traditional banks than the previous consumer generations. They are also seem to have different forms of needs and demands and are perhaps more attracted by start-ups than by the old, retail banks. This is, at least, what many believe is about to happen.

All these events and changes point to an interesting future, and I conclude there is no law of nature stating that a central bank always will issue cash as legal tender.

The Future of Cash in Sweden

I have already concluded that Sweden is internationally unique in its low and rapidly decreasing use of cash. As of today there are few signs that this development will not continue. The speed of the decrease in the use of cash and instead favor electronic payment services will most likely fall, but the trend is likely to continue in the coming years.

Whenever you are saying something about the future, you need to open to the likelihood that you not be entirely correct. There are always events that cannot be foreseen and that may change the future in ways we cannot imagine. This does not mean I will refrain from discussing the future though. There are techniques—like scenario analysis—that are helpful tools to learn how to prepare for the future (Ramirez & Wilkinson, 2016). There are always some trends in a society that are highly likely to remain for some time and that therefore can be used as a foundation even for the future.

It is of course also possible to collect data about the future or rather data on what different actors believe about the future. So we did just that. We ran a large survey with Swedish merchants in 2017 where we asked them if they accept cash, if they are

²¹<https://www.forbes.com/sites/shamahyder/2015/02/25/millennials-and-money-how-banks-are-missing-the-mark/#4f66363769b5>

considering to stop accepting cash, which costs they face for different payment services, and a lot of other questions (Arvidsson, Hedman, & Segendorf, 2018).

Given the answers from 741 merchants in Sweden who rather well represent all the merchants in the most cash-intensive merchant industries, we were able to understand how the immediate future may look like. Today 97% of the merchants accept cash, but many are thinking about stopping to accept cash. In fact, if the beliefs from merchants turn out to become true, Sweden may become a practically cashless society in 2023. Our projection indicates that the average merchant in Sweden will not make a profit from cash-based sales in 2023 if the current development continues.

We conclude that merchants do not seem to be worried by costs behind accepting cash. Tangible costs for this are fees to service companies and equipment for cash handling, and these are often well-known by merchants. Less tangible costs like man-hours needed to handle cash and costs related to the risk of being robbed seem to be less well-known, however. All in all this makes merchants to underestimate actual costs for cash-based sales. Our study found that merchants in general seem to believe that their costs for cash-based sales are acceptable, while their costs for card-based sales are too high even though their actual costs for accepting cards are significantly lower than their actual costs for accepting cash.

I can list a number of factors making me conclude the reduction of cash will continue but of course some factors speaking in the other direction, i.e., that cash will not disappear but instead remain as an important way to make a payment in Sweden (Table 8.1). When looking at the entire list of factors influencing the future use of cash in Sweden, I draw the conclusion that there are more factors leading to less use of cash than there are factors preserving cash, which is a clear indication the process will perhaps be halted but not stopped. A critical counterforce, i.e., preserving cash, is of course a changed law forcing banks to provide cash handling services and thereby making a case for continued use of cash.

Table 8.1 Factors leading toward a cash-free society and factors preserving cash

Factors leading toward a cash-free society	Factors preserving cash
<ul style="list-style-type: none"> • Laws allowing cashless stores • Salaries paid into bank accounts • System for card payments • Laws on bank secrecy yielding trust in electronic services • Outsourced cash system making it demand-driven combined with curious and skilled consumers • Unions lobbying against cash for safety reasons • Laws forcing retailers to report sales to tax authorities • Tax incentives making household services “white” • Business models meaning cash is not profitable for banks • Crimes leading retailers to not accept cash • Innovative services substitute cash • Youngsters use electronic solutions • Fintech and IT firms create innovative payment services • Co-opetition realize interoperable, digital platforms but also energize creativity and efficiency • Importance of central bank money trigger ambition to create central digital currencies 	<ul style="list-style-type: none"> • Problems for elderly, disabled, immigrants, and small firms leading to political action • Lobbying from interest groups (Access to Cash Campaign and interest group for elderly) to keep cash • A political aim to avoiding a “single point of failure” structure in the payment system^a in combination with other work aiming to safeguard against cyber threats in the payment system^b • Importance of reliability in retail payment systems • Importance of central bank money in the economy which trigger a political interest to keep cash • New legislation aiming to make sure cash handling is provided in all parts of Sweden

Source: Author’s own illustration

^aSee, for instance, Engert, Fung, and Hendry (2018)

^bhttps://www.riksdagen.se/sv/dokument-lagar/dokument/interpellation/kontanthering-under-kris_H510351

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