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## High Bar for a Digital Currency

Interview with  
Dewet Moser and  
Sébastien Kraenzlin,  
Swiss National Bank

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on Coronavirus

Quality Craftsmanship  
Meets QR-bill

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**FRONT PAGE**

E. Thomann AG CEO Christian Renold



## Dear Readers

Are you a creature of habit, too? – They say that humans in general are. There may be a certain negative undertone here, even though habits are essential for us humans. After all, it is only through constant repetition that a child learns how to walk, for example. By achieving routine in everyday activities, we save resources and energy to focus on new things.

In the world of work, we can also achieve the same habit and routine through efficiency, standardization, or digitalization. However, habits can also have negative effects – particularly if we only do something a certain way because that is the way we have always done it. Then we shut ourselves off from new possibilities. We no longer think about whether it could be done better or differently.

When we started working on harmonizing payments in Switzerland a few years ago and ultimately also replacing the payment slips with the QR-bill, habit represented the biggest obstacle. The tradition of payment slips dates back to 1906 and has become an everyday habit. Although there has been a digital form of invoicing for some time already, most people have stuck with the familiar payment slips despite the many benefits offered by eBill. This poses a dilemma. The QR-bill may offer a way out of it by introducing the changes gradually instead of suddenly. It bridges the gap between the familiar but outdated payment slip and the cost-effective, modern, and digital eBill invoice. On the one hand, familiar elements are reminiscent of the payment slip, while on the other hand new elements support standardization and digitalization. And not least, there are already possibilities to use the QR-bill to create an eBill invoice.

The QR-bill has been in circulation since 30 June. It has met with a positive response on the market: Since the very first day, payments have been made by this method without any difficulties, and the number of transactions has continuously been rising steeply. This is a good thing. So can we now sit back and assume that the readjustment will happen automatically? Definitely not! The financial center has gone to great efforts to make the QR-bill a success. The conditions are therefore in place. Now it is a matter of consistently continuing along the chosen path. For example, support staff at the banks need to practice dealing with the QR-bill even more, so that they can respond to customer queries in a routine manner. Companies need to be approached by customer advisors about the QR-bill and eBill, persuaded of the benefits of invoicing, and given expert support.

QR-bill and eBill need to become a new habit so that we can move on to focus on new things. I wish us all every success with this.

**Boris Brunner**

Head Account & Partner Management, SIX



Sébastien Kraenzlin (left)  
and Dewet Moser,  
Swiss National Bank



# National Bank: High Bar for a Digital Currency

*According to the Swiss National Bank, alternative payment methods and new digital technologies still have to prove that they create added value. In this interview, Dewet Moser, Alternate Member of Governing Board, and Sébastien Kraenzlin, Head of Banking Operations, talk about the digitalization of payment transactions, instant payments, cash and Libra, and the central bank's role with regard to financial stability, efficiency, and security.*

**Until just a few years ago, the topic of payment traffic hardly received any public attention. Now it is omnipresent in the media. How do you explain that?**

**Dewet Moser:** Payments are a reflection of the economy. As national economies move closer, economic areas merge, and international trade increases, payment transactions have moved into the spotlight. Supply relationships are increasingly globalized, not just between companies but also with private customers. Many companies nowadays have a global customer base. All this has fueled the need for simpler payment solutions, while technological progress has created the possibilities for this. It's not just trade that benefits from the digitalization of the economy, but also payments of course. And along with the possibility for digital and mobile payment, competition in payment traffic has also increased enormously.

**Speaking of reflecting the economy, one economic indicator is GDP. But this is growing at a much slower rate than payment transaction volumes.**

**D.M.:** This is to do with the fact that payment transactions are much more transparent nowadays, as they directly involve the general public. Before, everything went through the intermediation of the banking sector. Now bank customers participate directly in payment traffic. They can decide for themselves how they want to make payments, using traditional or modern channels. This increases gross payment transaction volumes. Before, there was a clear difference between payments in the interbank sector and those in customer business. Now the two are more closely integrated.

**Sébastien Kraenzlin:** As regards economic activity, I would not make a one-to-one comparison with payment transactions. Because a product rarely goes straight from the producer to the end customer, a product often causes multiple payments – for example, at both the wholesaler and the retailer. This means that payment transactions can be several times higher than economic output.

**Banking business does not seem to be a zero-sum game in which payments gain what other areas of banking lose. Why is this the case?**

**D.M.:** As a traditional business area for banks, payment transaction business was never really in competition with other areas such as lending or investment. I see payments clearly as an addition. On top of this, the digitalization of payments naturally generates data that can be very useful for the banks' customized services for their customers. This could be one of the reasons why banks have rediscovered payments.

**S.K.:** And because banks can use the customer contact for other business areas, payments represent a strategic pillar for them. After all, almost all business areas involve payment flows. Whether you're buying a share, for example, or taking out a loan – you're always transferring money. For this reason, payment transactions are – as Dewet Moser just mentioned – complementary.

**“When it comes to the debate about alternative payment methods and new digital technologies, we don't yet have any evidence that these really generate added value.”**

**There have been calls from all sides for central banks to issues digital money themselves for both banks and consumers. To what extent do you see this as just pie in the sky?**

**D.M.:** I have to start by saying that everything we do as the National Bank is based on our statutory mandate: As well as having an obligation to ensure the supply of cash to the economy, we must also facilitate and secure functioning cashless payment. In addition, we have a duty to contribute to the stability of the financial system. These are the guiding principles that we also have to consider when further developing payment traffic. It should be noted that the SIC system we have today has proven highly successful. Designed 40 years ago and in use for 33 years, it has continuously been enhanced to keep it up to date. When it comes to the debate about alternative payment methods and new digital technologies, we don't yet have any evidence that these really generate added value, whether in terms of functionality or efficiency. Furthermore, if we wanted to offer the population digital central bank money, we would ultimately have to be willing to shake at the foundations of the financial system. At present, there's a clear division of tasks between the SNB as the central bank and the banks as service providers for customers. We would have very serious concerns about calling this two-tier banking system into question. In particular, this could entail risks to the stability of the entire financial system.

**“One of the projects in which SIX is involved is a feasibility study in which we examine the integration of digital central bank money in a distributed ledger technology infrastructure for financial institutions.”**

**S.K.:** Over the past 33 years, the SIC system has not only proved that it is highly efficient and secure. It has also demonstrated that innovations at the customer-bank interface can be offered on the basis of SIC. We believe that banks or other financial intermediaries are best placed to offer these innovations and that it's not the role of the central bank to implement them on the market. Our task is to identify what needs are arising and what innovations are taking place on the market, and how the SIC system – as the core infrastructure of Swiss payment traffic – can support these innovations and create synergies.

#### TWO-TIER FINANCIAL SYSTEM

Division of tasks between the central bank and commercial banks. In a two-tier system, the competing banks provide households and companies with loans and liquidity, while the central bank acts as the banks' bank and manages monetary policy.

#### Have there been specific deliberations on this matter?

**D.M.:** In addition to the key issues mentioned before, digital money would involve in particular an in-depth review of the new technological possibilities for digitalizing payments, such as the distributed ledger technology (DLT). Here we also focus, for example, on more efficient processing of financial market transactions or on international payments. A very active and intense discussion on these issues is also taking place between central banks and public authorities. Specifically, we're involved in projects at the Innovation Hub center in Switzerland together with the Bank for International Settlements (BIS). One of the projects in which SIX is involved is a feasibility study in which we examine the integration of

digital central bank money in a distributed ledger technology infrastructure for financial institutions. Specifically, part of the current SIC deposits would be converted into franc tokens with which the financial institutions could then process banking or stock market transactions, for example, with one another. But this is still a long way off. And the bar is high, as the current system is already very efficient.

**If this proves feasible, implementation could theoretically happen relatively quickly, when we remember that the RTGS concept caught on all around the world within a few years after the SIC system was launched.**

**D.M.:** Yes, we were a pioneer with the SIC system as far as gross settlement is concerned. In this way, we addressed, clarified, and resolved the issues of efficiency and security of payment transactions between banks for a long time. But with the SIC system, we did not create a new form of money but rather simply used the banks' deposits to move from a paper-based system to a paperless, efficient, digital system. When we talk about a digital currency, this is a completely different dimension.

**S.K.:** In general, there are a number of questions that still need to be clarified. For example, whether DLT generates added value in payments. There are some payment options on the market that are also innovative and are based on traditional technologies. For example, mobile payments. We also do not yet know to what extent DLT has advantages over the current infrastructure when it comes to the settlement of securities. For the time being, the experiments at the BIS Innovation Hub are aimed at looking into this new technology, clarifying questions, and defining the conceptual parameters in the event that the market develops in the direction of DLT.

#### INNOVATION HUB

The aim of the Innovation Hub is to gain in-depth knowledge of the relevant technological developments that affect central banks' tasks. At the same time, the Innovation Hub is to develop public assets in the area of technology to further improve the functioning of the global financial system. The Hub serves as the center for a network of innovation experts from central banks. In the first phase, Hub centers were opened in Switzerland, Hong Kong, and Singapore. Further centers are presently planned in Toronto, London, Stockholm, Frankfurt and Paris.





**Dewet Moser has been an Alternate Member of the Governing Board since 2007. He is responsible for the operational management of the Financial Stability and Cash divisions as well as the Central Accounting, Controlling, Risk Management, and Operational Risk and Security units.**

In one of these experiments that Mr. Moser just mentioned, we're creating a digital currency within the financial market infrastructure that serves as a token for financial transactions between banks. But this is located in a decentralized rather than a central infrastructure. It's also important for this infrastructure to be provided to financial institutions only, meaning that we keep to the two-tier financial system.

The other experiment that I also find very fascinating relates to the interface between the SIC system and the platform on which the securities are processed. This means that we're connecting the previous "central" world with the potential new "decentralized" world of DLT. In this way, we could facilitate the settlement of securities for money between financial institutions across the different systems.

**In 2002, Stephan Zimmermann, then President of the Board of Directors of what is now SIX Interbank Clearing Ltd, said that Switzerland had coined the term RTGS with the SIC system. What other pioneering roles have the SIC generations played?**

**S.K.:** I followed the launch of SIC4, which went into production five years ago. With this generation, we were the first in the world to introduce ISO 20022 in an RTGS system. We thereby facilitated the innovation with the QR-bill, among other aspects. This was a very important milestone.

**D.M.:** In general, we can say that the SIC project benefited from a collaborative approach across all generations. Nowadays, we would talk about a "public-private partnership". Maybe we experienced this at the time without calling it by that name. The fact is that the banks were willing to establish a system like this together with the National Bank.



Sébastien Kraenzlin has headed Banking Operations, which also includes payment transactions, since 2016.

**“What we currently have in SIC with the real-time gross method in the interbank sector is also to be replicated in the relationship between banks and their customers.”**

And in addition to the actual interbank payment traffic, we also integrated customer payments in the SIC system as far as possible at an early stage. As a result, SIC can efficiently and promptly process not only large-value payments but also retail payments of smaller amounts –

at least at the interbank level. I think that we can see this as a pioneering service and as a model for the current situation, which is about speeding up payments between bank customers and making them more efficient and secure, whether for the purpose of making the credit available quickly or initiating another step forward in digitalization thanks to technological progress. To sum up, all SIC generations certainly have an exemplary nature both in terms of their design, architecture, and technology, and also with regard to governance. While we're on the topic, I still remember well how Christian Vital, one of the founding fathers of SIC, was in China in the 1980s and advised the Chinese central bank as it moved to a modern system. Back then, payment records were still transported from place to place by the simplest means, so it took several days or weeks to process payments over longer distances.



**With WIR money, a niche parallel currency has been in circulation in Switzerland for decades. The Libra currency, which is currently in the starting blocks, seems to be of a very different caliber, especially in terms of its potential distribution. What is your position on this foreseeable competition with the Swiss franc?**

**D.M.:** Money has different functions and can take different forms. Traditionally, a currency is something sovereign that is issued and managed by a central bank with the aim of maintaining its purchasing power so that it can perform its functions: as a payment method, as a store of value, and as a unit of account. The new technology that exists and is used in the private sector essentially makes it easier to provide money in a private form, too. And this also means that Libra should not be seen as competition to the existing money, but rather as a potential supplement to it. Although the original concept stipulates that Libra is based on various existing currencies, it is ultimately a private currency. This raises the question of how the relationship with the sovereign currencies will be organized and how stable, reliable, and recoverable this private currency will be once it has been issued. Whether or not Libra becomes widespread will ultimately depend on whether it can take on the properties of good money, i.e. stable value, broad acceptance, and the possibility of efficient payment. All of this and much more are things that we don't yet know about Libra. For example, a wide variety of players are planned in the Libra system (e.g. designated dealers, virtual asset service providers, validators, custody banks). It's still unclear which institutions would perform these different functions and what rights and obligations would be associated with them. With traditional money, it's simply a bank that assumes an obligation to the customer. With the Libra system, it's not clear what role non-banks and other service providers would play. While all of these questions remain unanswered, Libra will hardly be able to meet the regulators' requirements. The intention to make international payments more liquid, efficient, and secure is laudable in itself, as there is certainly a need for action here. However, it remains to be seen whether this can ever actually be achieved.

**S.K.:** With regard to international payments, the exponents of Libra have stated that they want to contribute to financial inclusion, so that everyone in the world can have an account and make payments efficiently and cost-effectively. The current inefficiency in international payment transactions is evident. First, it takes a long time for money to be transferred to another country. Second, these transfers are expensive. This is something that Libra and other market initiatives want to

address. I think this is an important issue that should also be addressed by the current players in payments, including central banks. It will not necessarily require new technology. At an international level, measures have been identified to address the inefficiency in international payment transactions. These include the ISO 20022 migration, the admission of new providers in payments (including fintechs) to accounts at central banks, and the extension of operating hours. Switzerland has already implemented these measures in the SIC system.

**“I followed the launch of SIC4. With this generation, we were the first in the world to introduce ISO 20022 in an RTGS system. We thereby facilitated the innovation with the QR-bill.”**

**The extension of operating hours in particular and instant payments in general will become reality in a few years with the fifth generation of the SIC system. What effects will SIC5 have on banks' operational organization and on the SNB?**

**S.K.:** I would approach the question a little more broadly: SIC5 is an initiative affecting the entire financial center, so it's a joint endeavor, or a private-public partnership in Mr. Moser's words. With SIC5, we will make instant payments possible in the SIC system – and expect to do so as of 2023. It's extremely important for us, as a small open economy, to build systems together. If we look across our borders, we can see that many countries also have instant payment systems as well as many other payment systems. With the small number of players in Switzerland, where the margins in payments aren't particularly big in my view, it's therefore important to build a joint infrastructure. This will enable us to make better use of synergies and thus keep the costs incurred low. From an operational perspective, the banks are facing the challenge of upgrading their accounting systems so that they can fully process the transactions at the bank-customer interface in real time. As the originator of SIC, it's important to us for Switzerland's core payment infrastructure to remain fit for the future and facilitate innovations in customer payment transactions.

“

*To sum up, all SIC generations certainly have an exemplary nature both in terms of their design, architecture, and technology, and also with regard to governance.*

Dewet Moser  
Swiss National Bank

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### How much demand is there in society for instant payments?

**S. K.:** This demand exists and is increasing further as a result of digitalization. Overall, cashless payments are benefiting from widespread use of smartphones and the growing importance of online purchases. At the same time, there are new providers of payment solutions, and end customers expect making a payment to be as easy as sending a text message. Many people already use mobile payments and are used to receiving money transfers immediately, whether with TWINT or with other mobile solutions. Such use will also increase further over the next two or three years until instant payments are implemented in the SIC system. However, very few people are aware that with the current mobile payment solutions the transfer between the banks does not actually take place in real time. For example, if you pay a car dealer using a mobile payment so that you can take the car away with you immediately without having to bring along cash, the car dealer's bank makes an advance payment. The bank credits the amount to the car dealer before receiving it itself one or two days later. Here, the new generation of the SIC system reduces risks by processing the payments within a few seconds, and also provides the option of new solutions that are not yet available.

**D.M.:** This is also a question of efficiency and security. What we currently have in SIC with the real-time gross method in the interbank sector is also to be replicated in the relationship between banks and their customers. The end-to-end real-time processing of the transactions from the payer via the banks to the payment recipient, and thus also their irrevocability, makes the system more robust.

### Speaking of efficiency and security – but this time in relation to cash: Is there a need for innovation here with regard to the banknotes?

**D.M.:** Yes, there is of course. Trust in the monetary system, of which cash is an important part, needs to be protected. We've therefore invested a lot in the technology for the current series of banknotes as well, to ensure that the authenticity of the new banknotes can be verified and traced. In this respect, cash is a continuous innovation project, as the counterfeiting risks are becoming increasingly complex.

**“Overall, cashless payments are benefiting from widespread use of smartphones and the growing importance of online purchases.”**

The National Bank is one of the central banks that attach particular importance to maximum security of their banknotes. Cash is also the only payment method for the general public that is backed directly by the central bank. When you hold a franc banknote in your hand, you have a claim vis-à-vis the National Bank. Furthermore, the handling of the note is anonymous, making it much less exposed than a digital payment method when it comes to data protection and privacy. This is generally also valued. And another aspect we shouldn't forget to mention is that cash isn't dependent on technology, of course. Even a highly sophisticated, digitalized system has its pitfalls and could theoretically break down temporarily. In a case like this, cash would actually be indispensable.

Interview:

**Gabriel Juri and Karin Pache**

SIX

### INSTANT PAYMENTS ON THE HORIZON

The introduction of instant payments in Swiss payment transactions is planned from 2023. With SIC as the settlement system, use cases can be settled with guaranteed processing in real time.



# Cash Beats the Odds on Coronavirus

In the past, the growth of cash circulation has been subject to major fluctuations. Particularly in times of great uncertainty, circulation has seen significant increases. This has also been confirmed during the coronavirus crisis, although cash withdrawals at ATMs did temporarily decrease sharply.

However, cash remains widespread and popular – and the results of the current survey on payment methods will show to just what extent.

## Major Fluctuations in Times of Crisis

Although cash in circulation has continuously increased over the past 100 years, the growth rates varied considerably over time, as the amount of cash is driven by various different factors. First, it increases along with economic growth. Second, demand for cash increases in phases of low interest rates, as the opportunity costs of holding cash then decrease. In addition, demand for Swiss cash may increase when the franc is strong. By contrast, the spread of new payment technologies has a curbing effect. Particularly in times of crisis or great uncertainty, the amount of cash in circulation increases significantly. For example, very high growth rates were recorded when the financial crisis escalated in 2008 and during the sovereign debt crisis in 2011–2012 (see Chart 1). In times of crisis, cash circulation may be affected not only by the traditional factors, but also by a flight to secure investments and by consumers and companies holding cash as a precaution.

## Increase of Cash in Circulation Since September 2019

After a phase of low growth rates, cash in circulation started to increase again from September 2019 with the prospect of low interest rates in the longer term and as the franc became stronger (see Chart 1). After the Swiss Federal Council announced an extraordinary situation in accordance with the Epidemic Act in March 2020, growth rates increased further. While large-denomination notes were in greater demand, a decline in demand for smaller denominations and coins could

be observed. Coins in circulation even saw the lowest growth rates since 2002. This is probably due in part to the fact that small-denomination notes and coins are used particularly often in the catering sector. In addition, hygiene concerns are likely to have contributed to the reduced use of cash, although it has not yet been proven whether cash may play a role as a potential transmitter of the coronavirus.

## Temporary Sharp Decrease in ATM Withdrawals

Following the announcement of the extraordinary situation, transactions with payment cards – i.e. cash withdrawals and card payments – also decreased significantly. For example, daily ATM withdrawals halved in comparison to the previous months during the closure of many shops, markets, restaurants, bars, and entertainment and leisure venues. When the measures were eased at the end of May, withdrawals picked up again and by the end of June they were only slightly below the level from the beginning of the year (see Chart 2).

The average amount of cash withdrawn increased by almost half during the crisis. This is probably partly a result of lower mobility leading consumer to withdraw cash less frequently but in larger amounts each time. In addition, the increase indicates a greater need for a reserve in the form of cash. This average amount has largely returned to normal levels again since early June. The use of non-cash payment methods also declined as a result of the crisis, but has actually increased to above the pre-crisis level since the measures were eased. Accordingly, card payments are recovering faster than cash withdrawals.

### Cash Still Widespread and Popular

Cash remains widespread and popular in Switzerland. This is reflected not least in the development of cash in circulation and cash withdrawals and was also confirmed by the results of the previous survey on payment methods. Despite the spread of alternative forms of payment, cash has certainly not been displaced as a payment method. Both cash and cash deposits have an important economic function in payment transactions. The Swiss National Bank (SNB) does not adopt a position in favor of any particular payment method. Rather, its mandate comprises the responsibility both to ensure the supply of cash and to facilitate and secure functioning cash-free payment systems. The decisive factor for the SNB is therefore the payment habits of the population and businesses. The long-term effects of the coronavirus crisis on payment habits in Switzerland cannot yet be assessed. However, the survey on payment methods currently being conducted on behalf of the SNB will provide some important indications.

### Market Analysis team

Cash division, Swiss National Bank

### OPPORTUNITY COSTS

Opportunity costs correspond to the lost benefit that would have resulted from an alternative course of action but cannot be gained from the chosen alternative. For example, money can be held or invested in different ways. In contrast to alternative instruments, holding cash does not generate any interest. This means that the holder goes without the income from an alternative investment – opportunity costs are incurred. The amount of the opportunity costs is equivalent to the interest on savings accounts or government bonds that is lost depending on the investment horizon. So, the lower the general level of interest rates and the interest on alternatives, the lower the opportunity costs of holding cash.

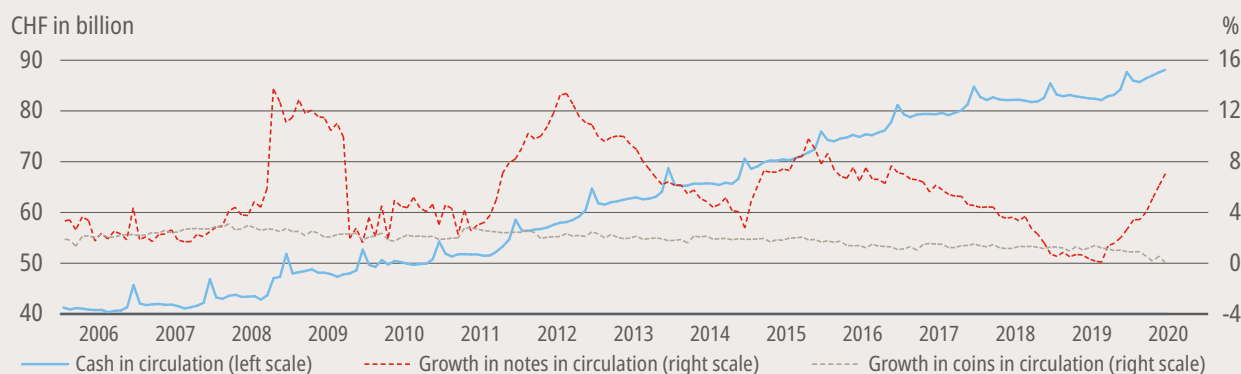


Further details

Survey on payment methods 2020 at [www.snb.ch](http://www.snb.ch)

### Cash in circulation – Swiss francs

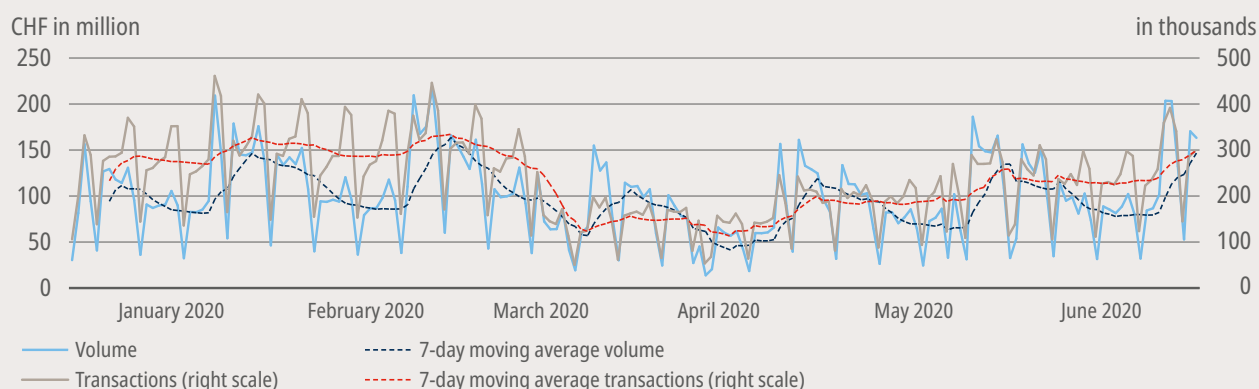
Percentage change from previous year; circulation of notes and coins in terms of value



Source: SNB.

### Cash withdrawals at ATMs

Debit Mastercard, Maestro CH, V PAY, Visa Debit and bank cards



Source: SIX BBS Ltd, Monitoring Consumption Switzerland (<http://monitoringconsumption.org/switzerland>).

# Why Cash Will Not Disappear Completely In the Future

*From the minting of the first coins all the way up to the 21<sup>st</sup> century, cash has been a recognized means of exchange and payment, enabling us to acquire goods and services and to store values. Digitalization has led to the future of cash being the subject of fierce debate for some time now. It is true that cash will, in all probability, not disappear completely from our everyday lives. But what does it mean for society if less and less cash is used? And what conclusions can be drawn from this?*

In addition to its function as a payment method, cash is significant for another reason. Since the production of the first coins in the 7th century BC, cash has been a constant store of value. Especially in times of crisis, people seem to have trust in the lasting value of cash (and precious metals). This is also the case in the current exceptional situation surrounding COVID-19. Although the number of cash transactions fell sharply during the lockdown, the average amount of cash withdrawn during the crisis increased by almost one half at times. Apparently, even today, cash as a store of value provides sanctuary for some people.

It is therefore not surprising that the emergency stockpile for crises recommended by the Swiss Confederation includes an ironclad reserve of cash. It will still be possible to pay with notes and coins, even if electronic payment processes fail.

In addition to the lasting value of cash, the privacy of payers is also an important aspect. Not only can electronic payments be traced to the smallest detail, in the most extreme cases they could even be prevented.

Physical notes and coins are immune to such risks because they are accepted and approved without electronic verification of the buyer.

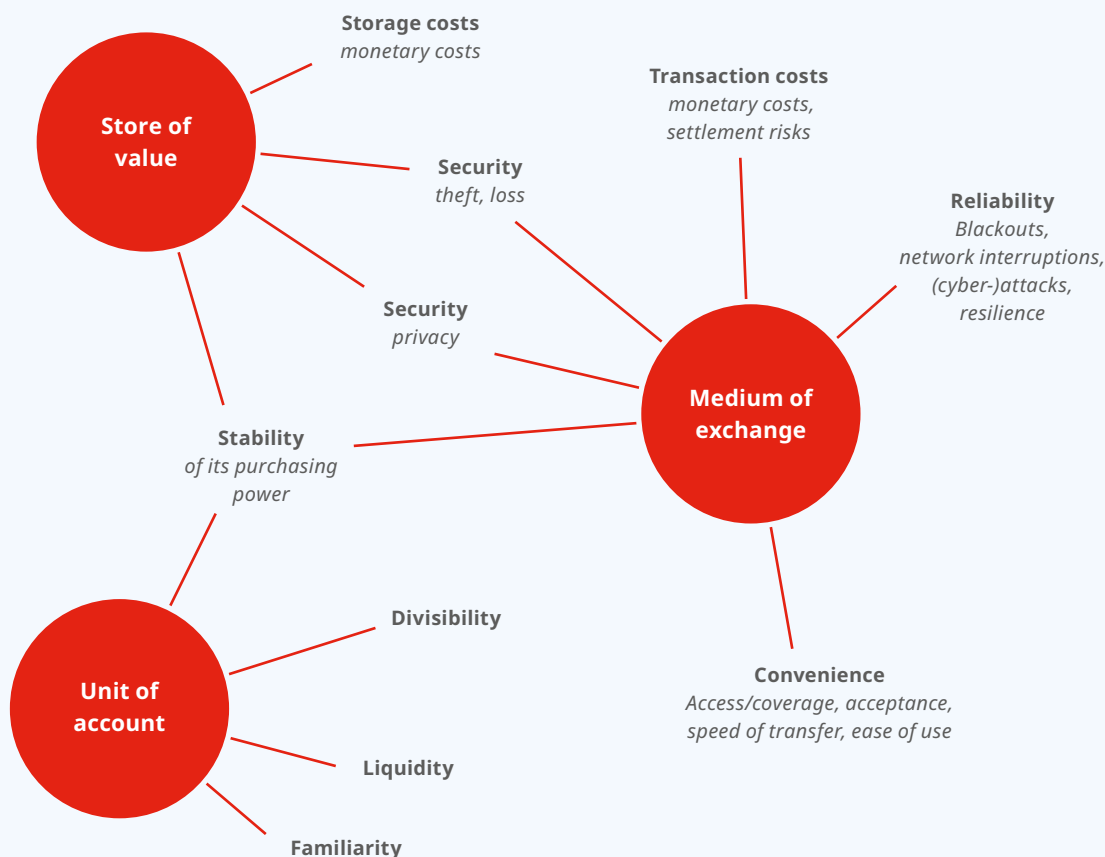
Nevertheless, for years the trend has been moving away from cash and towards digital payment methods. Digital payment processes are now very simple, secure and seamlessly integrated into our everyday lives. Retailers in particular are aware of these advantages. The less cash that needs to be stored, transported and deposited, the less effort and costs are involved in terms of security. Nearly cashless societies like Sweden show how far the digitalization of payment transactions can go and where the potential for it lies.

## **Cash Will Become More Expensive**

Cash will not disappear completely, but the volume of cash transactions will decrease. According to the SIX "Future of Money" white paper, this is the most likely future scenario for Switzerland. This study also highlights an aspect that often is only mentioned as an afterthought in public debate. In relation to the decreasing amount of cash, the infrastructure needed



## How money creates value for clients and society



Source: White Paper "Future of Money", [www.six-group.com/future-money](http://www.six-group.com/future-money).

for the comprehensive supply of cash to the Swiss population is becoming more and more expensive. Procuring and maintaining ATMs, safes in bank branches, cash transport to and from retailers, central cash collection points and complex physical and electronic security concepts cost a lot of money. If the number of payment transactions made in cash decreases, the costs of each individual payment transaction will initially increase.

It is estimated that the cost of cash management in Switzerland is far more than CHF 2 billion per year. These costs are borne by a complex network of service providers, primarily including retailers, banks, software companies and private service providers. So far, cooperation between these market participants and the joint search for efficiency improvements in cash handling have rarely been in focus. But this is beginning to change. The search for ways to meet the population's need for cash in the future while also reducing the costs of cash supply is becoming increasingly intense.

## How to Optimize Cash Supply

SIX is developing solutions for dealing with the new challenges in this area. There are three possible approaches to this problem. First, economies of scale and cost efficiency for the economy as a whole can be achieved by centralizing the cash supply. Secondly, the standardization of infrastructures and the software used can reduce costs and further improve coordination between market participants. And finally, the third approach is to intelligently reduce cash supply infrastructures without unreasonably restricting access to cash. It is a small irony of this development that digital solutions will play an essential role in the demand-oriented withdrawal of cash. It will be interesting to see how the long history of cash continues. But one thing is clear – the search for new, intelligent ways to make cash supply more cost-effective in the future is underway.

**Dieter Goerdten and Beat Glauser**  
SIX

# Quality Craftsmanship Meets QR-bill

E. Thomann AG stands for 75 years' experience with carpentry solutions for kitchens, windows, and doors – and also for innovation. This is not just because the long-established company is also home to a cooking school that offers steam cooker, teppanyaki, and wok courses in normal times. The family company is also breaking new ground when it comes to accounting. CEO Christian Renold explains why the long-established company is among the first movers with regard to issuing QR-bills.

**Mr. Renold, what motivated you to change over to the QR-bill so quickly as an invoice issuer?**

**Christian Renold:** To start with, we were a little skeptical of course, because the existing payment slips were part of everyday life and all our customers knew how to handle them. I also had the feeling that QR codes were something just for younger people who wanted to get certain information fast. But then it was clearly communicated to us by the banking world that the QR-bill would be mandatory in the future. For this reason, we took the opportunity to attend an information event organized by our house bank. What we heard there cleared away our concerns and uncertainties and we then decided on a consistent changeover as of 1 July 2020.

**How many invoices do you send with payment slips and how many as QR-bills?**

Since 1 July 2020, we've been sending only QR-bills to our customers. They didn't have any problems with the new format, as familiar information such as the IBAN is contained on the invoices. There was just one older lady recently who wanted to know how she should pay this invoice, as she didn't own a computer.

**According to a study by the University of Applied Sciences and Arts in Northwestern Switzerland (FHNW), it costs a SME more than four francs to issue a paper invoice. To what extent is the QR-bill cheaper for you?**

With regard to the cost of issuing a customer invoice, our experiences were more or less the same. However, we don't expect any significant cost savings with the QR-bill, as we already print in black and white on pre-printed letter paper. This looks a little more elegant and is intended to emphasize our quality craftsmanship.

**What is the ratio of the changeover costs incurred to the expected benefits?**

We see the greatest benefit for our company in relation to incoming supplier invoices. By scanning the QR code with a reading device, we can automatically transfer all the information from these invoices to accounts payable, which saves us a lot of time during processing. The cost of this changeover could be kept within limits, as we already worked with an accounts payable module beforehand. For this reason, the benefits very clearly outweigh the downsides in the long term. With regard to outgoing customer invoices, we don't have any direct financial benefit. But I think that by using the QR-bill we can convey an innovative image to our customers.

Christian Renold  
CEO of E. Thomann AG





### What role does digitalization play for your business in general?

Digitalization is becoming increasingly important at our company, too. Above all, the challenging conditions during the coronavirus have made it clear that digitalized data have a major advantage. The sales team had to work from home in some cases, and viewings were very difficult to organize. We benefited here from the existing infrastructure while also further expanding our digital work methods. For example, our customers can now take a virtual tour of their new kitchen or dressing room using a cloud solution.

### And what significance does the digitalization of payment transactions have?

I see this as a piece of the puzzle for generally increasing efficiency in administration. It is intended to make our day-to-day work easier and faster, thus freeing up time for other tasks. In the fall, we will purchase a new ERP system in which the connection of accounts payable will also bring advantages with regard to project monitoring. For example, invoices will be allocated directly to projects, meaning that interim calculations, final costing, and project invoicing can be carried out faster and more easily.

### When and by whom were you informed that the QR-bill was to be introduced?

As far as I can recall, we were already informed about the upcoming changeover by our principal banks and by the financial press around a year ago. We subsequently asked the banks from time to time what the current status was, so that we wouldn't miss anything. As I mentioned, our house bank's information event on this topic was then particularly useful to us.

### How did you prepare your processes and systems for the QR-bill?

We had already purchased an invoice scanner that could read QR codes. The company that administers the accounting system then linked accounts payable accordingly. Prior to 1 July, we received "QR payment slips" for our customer invoices from the bank. We did not have to adjust any other processes for the time being. All in all, the changeover was not time-consuming for us.

### How do you receive the invoices?

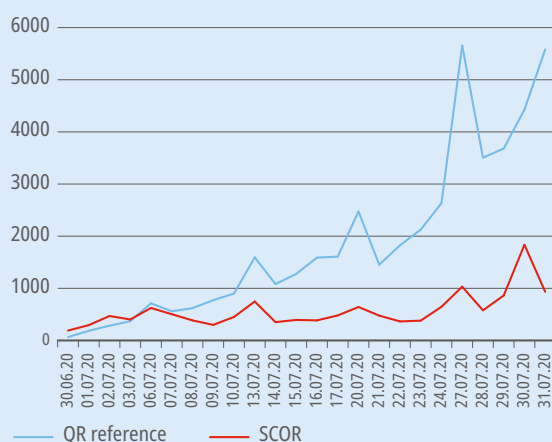
At the moment, we still receive around 95 per cent of invoices in the traditional format (paper and payment slip), while the rest are sent to us as e-mail invoices. Unfortunately, we still always print out the e-mail invoices, as we manage our accounting archive with physical copies and the invoices have to be viewed by the orderer. Surprisingly, we still only received very few QR-bills in July. This may be due to remaining supplies of "old" payment slips.

Interview:  
**Gabriel Juri**  
SIX

#### THE QR-BILL IN THE FIRST MONTH

On the first clearing day of its introduction, the QR-IBAN and QR reference version of the QR-bill was processed 64 times. One week later, 559 were processed, and by the end of July the total was almost 45,000. In its first month, the SIC system processed the IBAN and Creditor Reference (SCOR) version 13,000 times. QR-bills are processed without any issues and with no incorrect credit notes. Payments at the postal counters can also be successfully processed.

The third version of QR-bill (IBAN without reference) cannot be determined in SIC, as only transactions with a reference type can be identified.



# New Drive for ISO 20022 – Thanks to CGI and SWIFT

*There are dozens of national ISO 20022 standard variants, one of them being the Swiss Payment Standards (SPS). For over 10 years, the financial industry and internationally active companies have been trying to leverage synergy potential at the global level.*

*The Common Global Implementation (CGI) is aimed at creating a single, globally applicable ISO 20022 message format at the customer-bank interface. The planned switchover to ISO 20022 at SWIFT will give it a new boost.*

CGI already supports country-specific requirements in 140 countries, from Argentina through Luxembourg to Zimbabwe, including the payment slip requirement in Switzerland. Nevertheless, the initiative could not yet gain full acceptance. This is due to medium and small software developers or banks who are directly oriented towards local, country-specific standards and so far have shown low interests in a globally applicable version

of ISO 20022. However, this could change now. 2022 is when the switchover of SWIFT payment traffic actually begins – from “SWIFT MT” to “SWIFT MX” and thus from the proprietary to ISO 20022 message formats. At the same time, SWIFT is putting its full bet on CGI Credit Transfer/Payment Status also at the customer-bank interface.

Swiss Payment Standards (SPS) payment method	Settlement				
	Until Nov 2022		Nov 2022 to Nov 2025		From Nov 2025
	Proprietary	ISO 20022	Proprietary	ISO 20022	ISO 20022
PM3: Domestic CHF		SIC		SIC	SIC
PM3: Domestic EUR		euroSIC		euroSIC	euroSIC
PM4: Domestic not CHF/EUR	SWIFT MT		SWIFT MT	SWIFT MX	SWIFT MX
PM5: SEPA EPC		SEPA EPC		SEPA EPC	SEPA EPC
PM6: Foreign payment	SWIFT MT		SWIFT MT	SWIFT MX	SWIFT MX

Table: From 2025 only settlements as per ISO 20022.

**Global Focus, Local Use**

The developed CGI implementation documentation provides a clear instruction on what XML elements should be defined as required, optional, bilateral or should not be used from the perspective of core messages as well as of country-specific rules.

CGI brings various advantages to all participants:

- a globally applicable ISO 20022 implementation proposal.
- central documentation of additional country-specific requirements.
- “overpopulation”, i.e. submission of elements which are not used locally is permitted and payment orders can be processed regardless.
- If needed, many more XML fields are available than in other forms of the ISO 20022 standard.

However, CGI is not a solution to all differences caused by very different payment transfer systems across the world:

- Local mandatory requirements can still be met (such as rules on entries of the ISR payment order in Switzerland).
- The character set to be used must always be agreed upon and replacement of forbidden characters must be documented. The Swiss payment traffic does not allow for e.g. “Ö”; “O” is used instead.

**CGI pain.001 – More Possibilities with Less Expenditure**

The CGI pain.001 format helps with the development of a standardized payment format (pain.001), which, once developed, can be used in many countries and with various banks. The rules on entries of CGI pain.001 must also be adjusted to specific requirements of a given country, a specific payment method or local clearing requirements. But instead of developing a new payment format based on the ISO 20022 standard with each bank and for each country separately, CGI pain.001 provides the possibility to standardize the payment interface and use the same format with “minor modifications” across many banks and countries.

**SWIFT CGI-MP**

CGI aims at a multinational harmonization of using ISO 20022 messages. The Common Global Implementation Market Practice (CGI-MP) initiative provides for a forum for financial institutions (banks and banking associations) and non-financial institutions (companies, business associations, merchants and market infrastructures) organized by SWIFT to globally unify various topics of the customer-bank interface within payment traffic.



To meet the global requirements, CGI allows for submitting over 500 applicable XML elements with the payment order pain.001.001.03. The Swiss Payment Standards with “just” 140 XML elements and SEPA EPC with 120 fields are a pure subset of CGI when it comes to the support of XML elements. The German Banking Industry Committee (GBIC) has simplified the SEPA payment order even more to ca. 50 XML elements (figure).

Standardization bodies across the world must think to what extent the country-specific customer-bank standard should get closer to CGI or whether they should completely rely on CGI combined with a local market practice guideline.

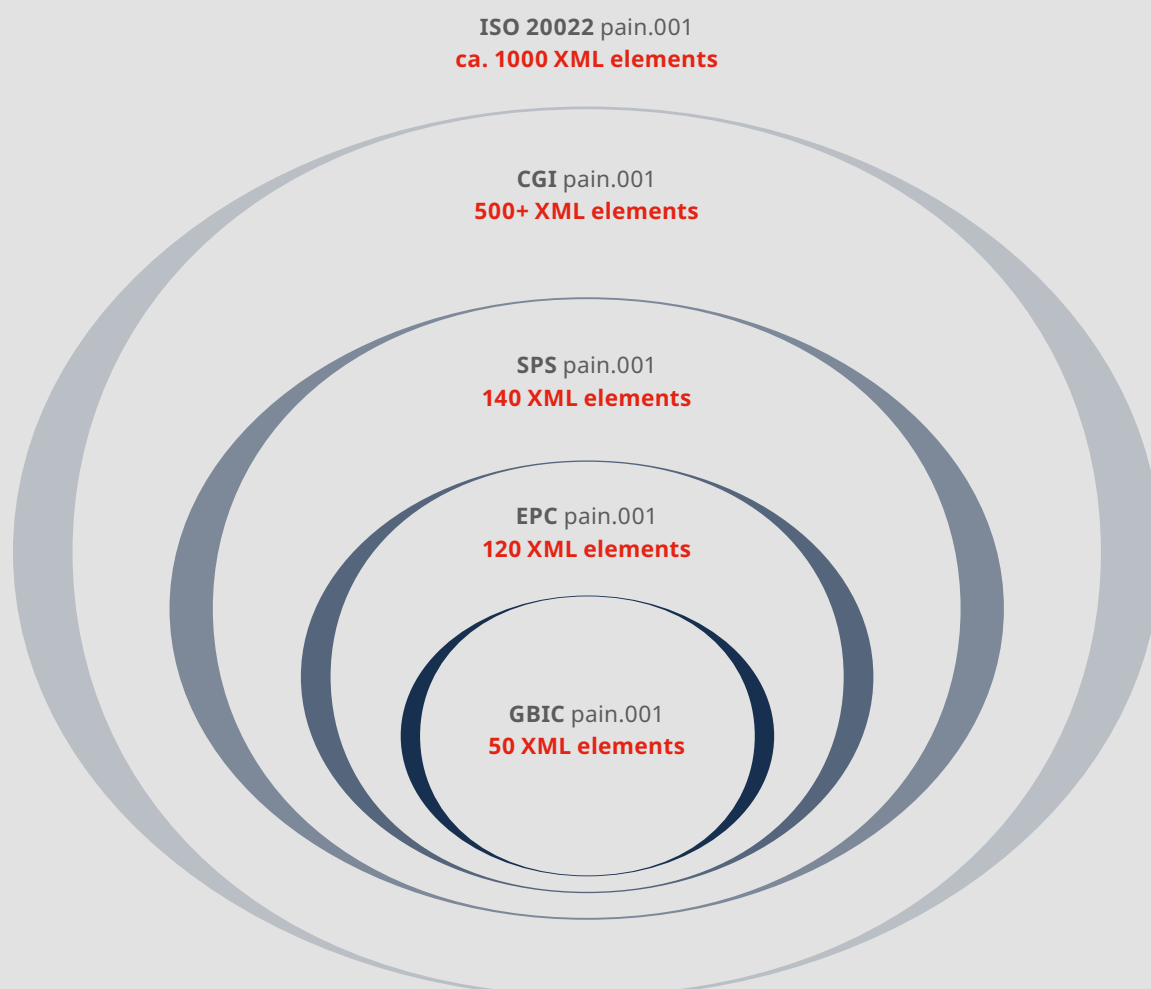
**Peter Ruoss**

UBS Switzerland AG

### CGI AND MESSAGE TYPES

The CGI-MP initiative covers five working groups focused on harmonizing the following ISO 20022 messages:

- pain.001.001.03 Customer Credit Transfer Initiation V03
- pain.002.001.03 Payment Status Report V03
- camt.052.001.02 Bank To Customer Account Report V02
- camt.053.001.02 Bank To Customer Statement V02
- camt.054.001.02 Bank To Customer Debit Credit Notification V02
- pain.008.001.02 Customer Direct Debit Initiation V02
- acmt.007 Account Opening Request
- acmt.008 Account Opening Amendment Request
- acmt.013 Account Report Request
- acmt.015 Account Excluded Mandate Maintenance Request
- acmt.016 Account Excluded Mandate Maintenance Amendment Request
- acmt.017 Account Mandate Maintenance Request
- acmt.018 Account Mandate Maintenance Amendment Request
- acmt.019 Account Closing Request
- acmt.020 Account Closing Amendment Request
- camt.086.001.01 Bank Services Billing Statement V01



# EBICS 3.0 – More Than Just a Version Change

*EBICS was initially used by business customers in Germany and France for communicating payment transaction data at the customer-bank interface. Now the communication standard is also used for interbank and market infrastructure solutions. Since 2015 the Swiss financial center has also been actively participating, and this year Austria joined in too. With the changeover to the EBICS 3.0 Version, it will become even more widespread.*

In Switzerland, it is mainly EBICS Version 2.5 that is currently used, and occasionally also Version 2.4. Once Version 3.0 will be launched in November 2021, Version 2.4 will no longer be supported, while for Version 2.5 there will be a three-year transition period.

## More Security, Moving Away from Order Types

With the launch of Version 3.0, increased security requirements will become mandatory. This applies to both the length of the key and the minimum version of the protocol used for encrypting the data transmission itself (TLS).

### BTF ELEMENTS

#### ServiceName

The service name indicates which banking service is to be called up (e.g. DDD for domestic direct debit or EOP for end-of-period statements). The list of available names is extensive and now also includes services such as securities settlement confirmation (SES) and securities trade confirmation (STR).

#### MsgName

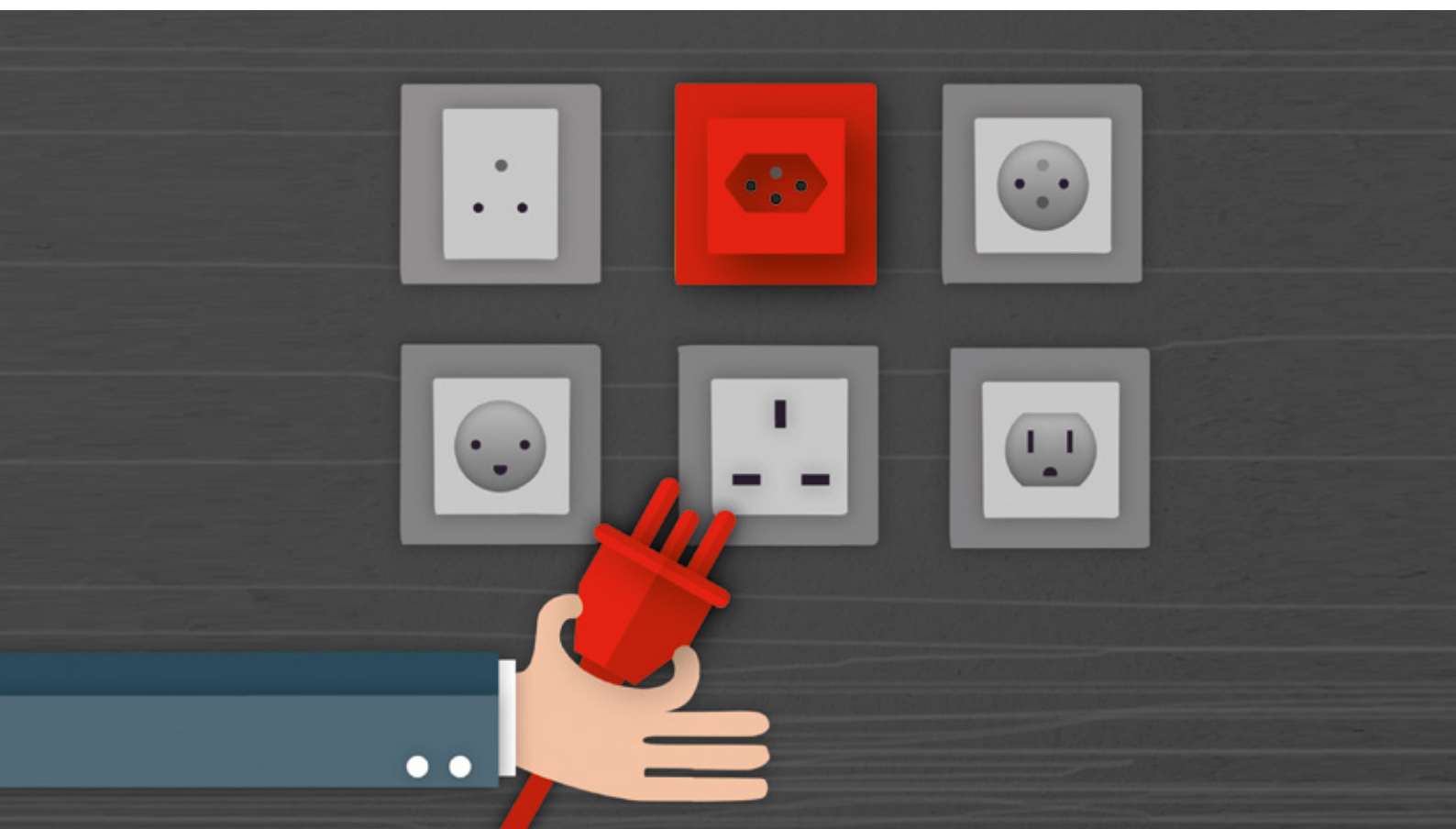
The message name refers to the format of the service, e.g. whether an account statement is to be obtained as an MT940 or a CAMT.053 file. The respective version used is optionally also shown in the name.

#### ServiceOption

With the service option, the type of file can be specified further, e.g. QR-CAMT.054 or BESR-CAMT.054. Of course, all CAMT.054, for example, can still be obtained at once without using this option.

#### Scope

The scope indicates which scheme is to apply to the file, e.g. "CGI" for Common Global Implementation or "CH" for the Swiss framework. The scope not only relates to all countries (DE, FR, CH, AT) and market infrastructures (e.g. EBA, CGI), but can also apply to individual banks if this has been agreed bilaterally in each case. For this purpose, the Swiss financial center has created a new list of issuer codes.



However, the biggest difference is that individual order types (3-letter code) can no longer be used for services. Instead, the different services and messages through to schemes can be clearly specified using business transaction formats (BTFs).

### Fewer Order Types, Higher Transparency

The previous list of order types has been scaled back enormously. Furthermore, the flexibility and scope of the services offered increase enormously with EBICS 3.0. In contrast to the rather random allocation of the previous letter codes, the use of the BTFs is organized in a logical, self-explanatory way. The plain-text names are also standardized and follow a clear pattern, which will prove an advantage for any subsequent uniform naming concept. New features include the fact that the wide variety of camt messages can now be clearly differentiated from one another. The version changeover is also perfectly suited for correcting double allocations of individual services and expired (e.g. DTA) or unused services that have been appearing on the market to date.

The financial center will provide a central overview in which all services offered by Swiss financial institutions are clearly displayed. This is intended to minimize the implementation work for software manufacturers while also preventing any future double allocations.

### More Than Just ISO Payments

Recommendations for the implementation of the EBICS standard can now go far beyond payment transactions. Here, Switzerland takes a leading role worldwide with regard to the wide range of offers. In addition to interbank payment orders (service name: FCT), foreign exchange confirmations (FXC), precious metals, and securities are also covered, for example. Last but not least, EBICS 3.0 will facilitate the transition of the ISO 20022 standard to the new “2019” version in November 2022. This is all the more important given that, for the first time, the new ISO version will no longer be backward-compatible with older versions.

**Lars Möller**

Credit Suisse (Switzerland) Ltd.

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*Payments business is a strategic pillar for a bank because here they are in regular contact with their customers and can use this contact for other business areas.*

Sébastien Kraenzlin  
Swiss National Bank

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