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When fintechs and incumbents team up Interview with Markus Graf, head of the Idea Workshop F10

Plugs and Sockets – Standardized interface to banks through EBICS

International interest in the Swiss harmonization activities



### Interview

### When fintechs and SIX team up

It is not long ago that the paths of the fintech industry and banks were widely diverging. Collaboration is what is called for today, and the two industries are cooperating as much as possible – worldwide. F10 is an example of just how the local fintech scene is driving the financial center further forward. Markus Graf, head of the Idea Workshop, discusses the goals, successes, background and motivation of the operator SIX and its partners.

### Standardization

### Payment traffic in ERP with a click of the mouse: The route to an EBICS interface

A growing number of suppliers of business software, ERP and other solutions with integrated payment traffic functions would like to offer their customers the convenience of a direct interface to their financial institutions. But just how easily, quickly and sustainably is such a functionality achieved?

### Standardization

## ISO 20022 Payment Status Report – Measurable added value

Most new payment traffic messages in the ISO 20022 standard replace existing messages. But there are also those that enable new, additional interactions, such as the XML message "Customer Payment Status Report", pain.002.

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So-called instant payments enable companies and individuals to pay within seconds, with instant crediting or debiting. The popularity of smart phones and the increasing use of the Internet for shopping are leading to the steady growth in the popularity of real-time payment traffic in the interbank sector in Switzerland as well.

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### International interest in the Swiss harmonization activities

How Switzerland is proceeding with the introduction of ISO 20022 is also being followed with great interest from abroad. Among other things, this is because in Switzerland the complete domestic and foreign payment traffic is being converted, both in the customer-bank and interbank sectors.

#### Facts & Figures

### Swiss payment traffic through changing times: A review and outlook

There is an upbeat mood in the world of cashless payments. This is shown not only by the fact that what traditionally has been a little noticed topic has recently even found its way into the headlines of the popular press. Innovations and developments labeled disruptive are also being introduced and discussed more frequently at expert conferences. A glance at the history of payment traffic in Switzerland shows, however, that there have been moments in which the status quo was questioned in order to smooth the way for innovative solutions.



Aimé Achard

### Dear readers,

Since time immemorial, payment has been a fundamentally simple exchange: debiting one side to credit the other, generally in return for a service or a good. In the background, however, the technologies that underlie the execution are often complex and based on very different operating procedures, involving many stakeholders.

Payment systems are chains of several elements. At one end there is the user interface, which is becoming increasingly digital and user-friendly (especially the mobile P2P payment solutions Paymit and TWINT). At the other end, the interbank and clearing systems must be able to deal with considerable volumes of transactions within a relatively short period of time, where there is a complexity in their implementation and their maintenance.

Longstanding players in the market, these infrastructures are stacks of layers – some of which are older than others – of which the least sophisticated will disappear only very slowly. For example, while the end of cash has long since been foreseen, it is not difficult to predict that coins and notes are not likely to disappear any time soon. Another illustration: While studies announced the advent of contactless payment more than ten years ago, POS terminals reading the magnetic strip on cards or checks remain widespread – even in some countries which are at the cutting edge of technology.

Each new innovation permeates very slowly, and the oldest methods still remain, which explains the complexity and therefore the costs of infrastructure. New entrants, and sometimes also some regulators, want to tackle the price, the slowness, the complexity or the perceived monopolies. Nevertheless, whether it is GAFA (Google, Apple, Facebook and Amazon) or fintechs, none of them today replaces the major players, which are the banks and settlement systems. In effect,

they all revolve around the same almost prehistoric concept, but one that is always inescapable: the current account opened at a bank.

One technology may eventually contribute to replacing this centralized key element in the long term: blockchain. At this stage, however, it is ultimately a means of transport and registration of assets. Whenever there is an exchange, the parties involved must understand each other and must therefore share a common language. That is why, whatever the medium of communication and discourse is, the dialog protocol must follow a standard.

Standardization thus remains a fundamental work, but it is difficult, slow and often gives the possibility for protectionist tendencies to express themselves. Each country wants to retain its own infrastructure and clearing, which is an effective means of control. In Switzerland, we are progressively putting in place ISO 20022, slightly ahead of other countries. This is expensive, not only for SIX, but also for banks and their customers. It is, however, the price that must be paid to keep up with regulatory and technological evolution.

Aimé Achard Head of the Business Support Division at Banque Cantonale Vaudoise

# When fintechs and SIX team up



It is not long ago that the paths of the fintech industry and banks were widely diverging. Collaboration is what is called for today, and the two industries are cooperating as much as possible – worldwide. F10 is an example of just how the local fintech scene is driving the financial center further forward. Markus Graf, head of the Idea Workshop, discusses the goals, successes, background and motivation of the operator SIX and its partners.

## **CLEARIT:** Mr. Graf, what is the business idea behind F10?

**Markus Graf:** Our business idea is to work closely together with startups and to promote innovation in the SIX Group through such cooperation. It primarily involves creating an environment for young, not yet established companies in the fintech field, to enable them to optimally develop. The expectation, in turn, is as they profit from SIX, they will deliver ideas and impulses for new services. We have also created spaces which should facilitate the innovative collaborations of SIX staff and startups – independent of the usual work environment and SIX internal organizations and processes.

### What are your expectations in terms of business development and how do you measure success?

What is most important is that we can maintain the high quality of our program, or increase it. Success cannot be measured in monetary terms. It is more a matter of developing numerous prototypes, and from them proofs of concept, i.e. mini-projects – these are referred to in the startup field as "minimal viable products". If these result in new specific applications and services that can be productively used by SIX, then we will have met our expectations or even exceeded them.

### How satisfied are you?

It is going better than we anticipated. We closely evaluated twelve startups for the first program in 2015. Based on the success of this initial program, the SIX Executive Board decided to take customers and owners on board. That is what led to the founding of the F10 Association by SIX last autumn together with Bank Julius Bär and the consulting firm PricewaterhouseCoopers.

We have already evaluated 170 startups for the current program and we think there will be even more in 2017. The larger the group of applicants, the greater the chance is that we will find startups of the appropriate quality. The other goal is to increase the number of association members by two to three.

### What has been your greatest success story so far?

It started right away with the first startup attempt. The team calls itself Veezoo. It solved a so-called challenge, first in the cards business and then in the financial information area. This startup company is now in the process of launching an analysis product for merchants in the SIX acquiring business, which should help merchants boost customer loyalty, optimize sales channels and identify potential customers. If we realistically manage to come up with two to four radical new ideas each year, then I think our work will be well worth it.

### What do you mean by "radical new" ideas?

Let's put it this way: an improvement or replacement of a service that does not change procedures at SIX is not radically new.

## Do you have other examples from payment traffic of similar quality?

The most interesting in this field is a startup that aims to virtualize cash dispensers. Their hypothesis is that in the future – let's say in ten years – consumers will pay using a digital wallet. However, they are not yet ready to do without cash money today. Therefore, the company is planning a digital wallet with which the consumer can not only pay the delivery boy for a pizza, but can also withdraw cash from him. This is a clever idea to the extent that both payment worlds have been combined, making it easier for people who are not yet ready to pay digitally to enter the new world through the cash function.

The proof of concept of another team with a credit card company in England can already take care of 85% of customer inquiries through a bot. This bot rapidly recognizes whether an inquiry can be answered or not. If not, the appropriate specialist is very quickly called in. The advantage of this is that the customer does not need to be relayed multiple times within the organization to ultimately find the right person to talk to about his problem.

### What happens if one of your fintech startups successfully develops a new service?

It is here that I see great potential in the collaboration with the association members. There are basically several options: we can invest or offer the product together with the startup company or the startup company can do it on its own. We have the customer relationship with the banks, we have the sales channels and we can help scale the whole thing.

## Isn't there a danger that F10 will become merely a stepping stone?

Theoretically yes. However, in practice, at the current time, all the startups want to work together with the association members. Our challenge is to offer them the support they want and need in order to grow. If we do not provide that, they will look for it elsewhere; this much is clear.

### Such as from Facebook and similar companies?

The concern that fintechs could be bought up by Google, IBM or even Facebook, is justified. These

giants have often proven that they can integrate startups extremely quickly and successfully expand their business model. We clearly need to get up to speed. We only stand a good chance, I think, if we can help them to grow quickly. I am optimistic about this. As previously indicated, SIX has a lot to offer: a large customer base and an excellent, broadly based technical infrastructure. And finally, if needed, we can help overcome regulatory and other legal obstacles.

#### How do you envision SIX's specific options for action?

In a "fireside chat" with members of the SIX Executive Board several weeks ago I had the opportunity to ask: How can we increase the benefits for SIX? We currently have ten startups. Working with them, one or two new products or services are being developed in each of the SIX business fields. The fact is that it is not possible for SIX to launch so many things at the same time in one year. We have no choice but to focus and select. We asked ourselves just how we are going to do that. It would be more than a pity to have helped a startup become a good company – just to see it be bought up by someone else. From the perspective of the association, we could pat ourselves on the back and say: well done! But that situation would be less than ideal for the association members. One option would be to work with a fully-fledged startup as a supplier. Another would be to enter into a joint venture or partnership. Or, as SIX has already done in the first program: recruit startup talents as employees.

#### Are fintechs actually friends or competitors to the banks?

That depends on the motivation of the respective sides. Up until two or three years ago, many fintechs thought they would show the banks how it's done, and that it was just a matter of time before they would replace the banks. At the same time, the banks had the feeling that these fintechs really did not have a clue to begin with. Meanwhile, the two sides have noticed that working together is the best way to go.

## What areas of activity can the fintechs sensibly take over from the banks and vice versa?

I think the second case is more realistic. For example, I see distribution potential in the B2B business. If we aim for automatic, instantaneous trade execution in the securities sector without counterparty risk, then the potential offered by new technologies, such as blockchain or digital ledger technology, is great. However, the acceptance barriers among customers are probably relatively high. The method of approach is what plays a decisive role. I must expand on this a bit. For example, when What's App came on the market, it was nothing more than a minimal viable product, more or less an immature application. The producer offered it to customers and watched how it was received. In the beginning, What's App was only capable of distributing SMS. New features were then gradually added on. If they were accepted by customers, then they remained, otherwise, they didn't. Today, I can send video messages with the app. What I mean to say is that we cannot develop a product for six years with plenty of great features only then to be surprised to find out that no one is interested in it. To quickly throw a minimal viable product on the market in order to test it is how startups do it. And we can learn a great deal from them. We need to talk to the customers before the first line of code is programmed and not after a year of development.

## Let's talk about money. How do things look for the start capital for startups? And what about the benefits to the association?

Our association is a non-profit organization. We neither purchase shares in startups nor do we invest in them. However, we do pay each startup CHF 15,000 in cost compensation in three installments. We thereby typically finance two people in a young startup so that they can participate in five of the so-called master class weeks in Switzerland. However, the individual association members and other investors are free to commit themselves financially. We welcome and even promote this. Within the scope of the last master class weeks, we invited more than 45 national and international investors and offered them a platform on which to support startups.

### "We want to work together with the startups and not just invest in them."

## Did you have role models for the way you organized the F10?

Yes and no. On the one hand, before founding the F10, we held discussions with larger incubators and accelerators, because we originally thought we could team up with them under the right circumstances. It became clear relatively quickly that Startupbootcamp in London, for example, one of the largest fintech laboratories in Europe, did not quite match our needs. Many such fintech incubators take shareholdings from their startups. Not all of these promising young companies want to give up shareholdings. There were also other aspects that kept us from adopting an organization form like this. That which inspired us, we adopted, otherwise we consciously distanced ourselves from the rest. We primarily sought to offer a platform on which something new would be created. We want to

work together with the startups and not just invest in them.

### To what degree is the association the ideal organization form for F10?

The association is a popular legal vehicle in the fintech sector in Switzerland. Swiss Finance Startups is an association, for example, as is Swiss fintech Innovations as well. For us, as SIX, it was important not to go about it on our own. While the operator of the Swiss financial market infrastructure is an attractive partner for startups, as soon as a bank with a focus on the private customer business or the asset management, or an insurance company, take part, then it becomes more interesting for a startup. This is because there are greater opportunities to find a partner as a result of the different business models. SIX is therefore very interested in increasing the number of members in the association. The company form means that it can be joined very easily at any time.

### Where do the Swiss banks stand in regard to digitalization? In view of the "digital banking readiness" rankings published by the business consultant ATKearney, shouldn't the answer be: in no man's land?

It always depends on what precisely is meant by the term digitalization. Inside the banks, very many processes have long since been digitalized. In those areas Switzerland really is not in a bad position. Things look somewhat different when we look at the customer interface. For example, if a customer would like to open a bank account through his app on Sunday morning, that does not work, as far as I know. To that degree, we have to admit that the Swiss banks have some catch-up work to do. On the other hand, it often happens that some super cool app may enable a fully digital customer experience, but there are many employees in the backend managing it manually. That means that you cannot really talk about end-to-end processes here.

### "All current variations involving blockchain and cryptocurrencies are proofs of concept or prototypes at best."

### How do you assess the strengths of the Swiss fintech industry? Where is the best music being played? In the USA? In the UK, in Luxemburg or in Germany?

The sheer number of so-called innovation rankings on which Switzerland can be found on top always surprises me. I always ask myself how this can be, when I really do not notice it much at all? It still is always very difficult to achieve innovations in companies. Now, when it comes to these lists, the ETH spin-offs are often looked at, particularly in regard to the life sciences. Switzerland has made an incredible progress there. We still have a lot to do to catch up in fintech. That is little wonder, if you consider that Silicon Valley - in contrast to us started pursuing the model of extremely close cooperation between universities, startups and investors 30 years ago. They are not where they are today because they are much faster than we are in Switzerland, but because they simply have a 30 year head start. Without a doubt, Silicon Valley is the role model in the ICT field. When it comes to fintech, then London is the most impressive, followed by New York, Berlin and Tel Aviv. Switzerland seems to have gotten off to a rapid start in the past 24 months, when I consider the numerous new associations, accelerators and various startup incubators. These are developments we can be proud of.

### There are reports that hackers demand payment in Bitcoin for blackmail schemes and then disappear with the money without a trace. Where do things stand in terms of security in the field of cryptocurrencies?

I view all current variations involving blockchain and cryptocurrencies as proofs of concept or prototypes at best. All these distributed ledger technologies are still experiencing relatively many teething problems. Just how money laundering is to be prevented, for example, remains to be seen. Yes, blackmail attempts are happening. However, this has not only to do with the new technology, but more with the Internet itself, which is not exactly considered to be a secure standard. Very many business models today are based on the availability of the Internet, which makes companies vulnerable and subject to blackmail. Just look at the ever more frequently occurring denial-of-service attacks. That is not just Bitcoin's problem.

### Is fintech just a buzzword, or even worse: Is the same hangover looming in the short or medium-term as was experienced when the dot-com bubble burst in 2000/2001?

It really is not just a matter of the dot-com bubble. The "funny" constructs that triggered the financial crisis in 2008 all involved the same issue: greed for power and money. If this takes control, then there is a risk of a crash in the fintech scene as well. As long as due care is taken, such risks can be minimized. While I am no expert when it comes to due diligence analyses, in my experience, the startups that we train and coach for months in the accelerator program are keeping such risks in check.

Interview: Gabriel Juri SIX Interbank Clearing

### Mini fintech glossary

**Accelerator:** Accelerator programs take startups on with the goal of promoting them within a short period of time and thereby to attain the greatest possible growth.

**Denial of service:** Refers to the non-availability of an Internet service. These attacks are usually intentionally caused by an overload of the data network in order to damage the provider or to extort money.

**Distributed ledger (also known as blockchain):** A transaction register that is maintained decentralized within a network. A distributed ledger is a chronologically sorted chain of blocks from transactions that are linked together. These can be transmissions of information, rights or values. The cryptocurrency Bitcoin is based on this.

**Incubator:** A facility for accompanying and supporting startups on their path to independence with consulting, coaching and infrastructure for the creation of a business plan.

Minimal viable product: A product on the market with just the core functionality, which is tested by users and must prove that the product really does meet or create a demand.

**Proof of concept:** Designates the stage of a product that proves the principle feasibility of a project. It generally involves the development of a prototype that demonstrates the necessary core functionality.

**Prototype:** Describes a raw version of the results that are aimed for. The production of a prototype is aimed at visualizing ideas, researching the aspects of a solution or testing a preliminary result.

## Payment traffic in ERP with a click of the mouse: The route to an EBICS interface



A growing number of suppliers of business software, ERP and other solutions with integrated payment traffic functions would like to offer their customers the convenience of a direct interface to their financial institutions. But just how easily, quickly and sustainably is such a functionality achieved?

There is still no mandatory transmission standard in payment traffic in Switzerland. This has resulted in proprietary solutions that are widespread to varying degrees. Nevertheless, the trend is toward an openingup of the payment traffic standard. Following the open infrastructure (Internet) and the ISO 20022 open payment traffic standard, one open transmission standard also offers itself as a promising solution: EBICS. It is being supported by an increasing number of financial institutions and software producers in Europe.

While the advantages and characteristics of EBICS have been pointed out in the last three issues of CLEARIT, just how does a supplier of software and solutions with payment traffic functionality achieve an EBICS-capable interface? There are basically two ways: either you build it yourself or integrate a solution offered on the market.

To start off, the open EBICS standard offers a way to develop the solution in-house. However, it should be noted that the Swiss recommendations are constantly being further developed and that the appropriate resources must be applied to keep up to date. Furthermore, since they are recommendations, some financial institutions may deviate from them for historical reasons, meaning that the recommendations are open to multiple solution options. And finally, there are still differences to the Swiss recommendations in neighboring countries. \$If an interface with updates that has been developed by an EBICS-specialized supplier is chosen instead, then there are fewer things to be concerned about in this area: The proven functionality can be quickly implemented and always matches the latest state of development. There are several solutions available on the market. Whatever option is chosen: EBICS is increasingly a candidate for a European standard for the transmission of financial files.

Andreas Carl Credit Suisse

### ISO 20022 test platforms with EBICS

Within the scope of the ongoing Swiss payment traffic harmonization project, it is indispensable for Swiss software producers to test their own "pain.001" and "pain.008" with the largest Swiss banks. This also applies for the "pain.002" and the various "camt" messages, which the relevant software is able to process. When it comes to software with EBICS functionality, it is advisable to do all this via EBICS. Most banks offer test platforms on which this is possible: CS credit-suisse.com/iso20022test

UBS ZKB

raiffeisen.ch/testbank ubs-paymentstandards.ch testplattform.zkb.ch

**EBICS initiative for the Swiss financial market** Specifically to promote a built-in solution, Credit Suisse and PPI launched an initiative through which software producers based in Switzerland can inexpensively obtain the EBICS functionality. The initiative, which is open to other financial institutions, essentially contains a three-part offer: The EBICS core from PPI is now free of charge. Associated with it is a maintenance contract for ongoing updates, the fee is based on the number of software installations. A one-time package that facilitates smooth entry into the EBICS world comprises the third element. The core of the EBICS initiative is available for Java or C/C++ and can be integrated in practically any solution. Use of the core saves the producer of software with bank interfaces development and further development costs, which are not to be underestimated. (Further details can be found at: ebics-initiative.ch)

### "Staff gains time to devote to other, more valuable work"

What considerations lead to the offering of a direct interface to financial institutions? CLEARIT spoke with Fabian Zihlmann, co-founder of myBica AG. He describes his experiences during the process of choosing EBICS and how the common customer benefits by its introduction.

## **CLEARIT:** Mr. Zihlmann, what does software from myBica offer?

**Fabian Zihlmann:** We provide a comprehensive ERP solution for the SME sector and thereby cover all fields of administration as well as industry-specific operational processes. An internal, highly integrated, audit-proof document management system (based on FTA-conforming signatures) is implemented in the process. Despite this complexity, myBica is user-friendly.

## Why have you decided to offer a direct interface to the financial institutions?

Our customers depend on accurate accounts receivable management. It is very important today to know as quickly as possible whether an accounts receivable invoice has already been paid. With a direct interface, account movements are promptly accessible in the application.

Instead of logging in each morning to multiple webbased online banking systems with various methods to download files and then manually importing them into an application, staff gains time to devote to other valuable work.

### Why did you choose EBICS?

Several customers work with financial service providers who have switched to EBICS. Since our customers do not wish to do without the automation and convenience, an EBICS implementation was indispensable. Furthermore, I believe that EBICS will emerge as the standard, therefore we are early adapters.

### Did you develop the interface in-house or did you purchase it?

We decided to license the PPI Core of the EBICS initiative. We were convinced by the price-performance ratio and the interface itself. It can be used very flexibly and saves development and maintenance costs.

### How did the implementation of EBICS go?

The implementation occurred without any major problems. When uncertainties arose, even those of a conceptual nature, we received a comprehensive answer from PPI Support within a few hours. Two calls to Support during the implementation phase were all that were needed to get things running smoothly. The good documentation made it possible.

### During manual uploading of the payment instruction files in the online banking system, the bank takes on the administration of payment approvals. However, for this, EBICS requires user administration in the software that creates the file. How did you handle this?

Normally, the payment instruction is signed by two users in an ERP system and thereby released. We moved this approval up earlier in the process: The supplier invoices are signed, not the payment instructions. The advantage of this is that the payment of the invoice with myBica takes place after the invoice has been approved fully automatically with our Autopay function at the optimal point in time. This means that approval authorizations can be issued freely. Execution of the payment is detected and booked automatically without any further user effort by means of an electronic account statement. And all this is audit-capable. This combination of a high level of automation and a secure audit trail, in our view, matches what an ERP user can expect from a contemporary solution today. By the way, we apply this high level of automation in all modules, such as capturing supplier invoices received by e-mail, the booking of recurring incoming payments and with the EDIFACT solution connected to large customers.

## Did you also use EBICS for your ISO 20022 tests during the Swiss payment traffic harmonization project?

Yes, the Credit Suisse test platform makes this possible, for example. It is easy to set up, so approval is easy and instant with a click of the mouse. This enables more practical and faster tests for software with EBICS.

## How are your customers reacting to the possibility of having a direct interface to financial institutions?

Customers are often initially rather skeptical. Autopay, in particular, even sometimes causes anxiety. But as soon as this function is implemented and runs successfully for a few days, no one wants to do without it.

Interview: Andreas Carl Credit Suisse, for CLEARIT

## ISO 20022 Payment Status Report – Measurable added value

Most new payment traffic messages in the ISO 20022 standard replace existing messages. But there are also those that enable new, additional interactions, such as the XML message "Customer Payment Status Report", pain.002.

The advantage of the new XML messages lies in the more detailed and better structured depiction of information, which can be transported in an end-to-end process. Processing quality can thereby be improved and it will be easier to implement regulatory requirements.

The most important of these new messages is the Customer Payment Status Report pain.002. The bank sends its customer detailed information about the acceptance or rejection of individual payment instructions in the submitted instruction. The bank informs the customer about erroneous instructions and transactions with the pain.002 message with detailed error texts. This message can be automatically imported into and processed by the customer's payment software and error messages are displayed.

This means that communication between the customer and the bank is not only a great deal more precise, but is, above all, much faster. Because the payment status messages are usually returned by the bank within minutes, a bank customer with quality software can promptly see the bank's error messages in his payment software and react accordingly. Precise error texts make it possible to correct the error, in most cases, on the same day without consulting with the bank, which means the originally planned execution date can be respected. This is generally only rarely possible with the old messages, because too many manual steps are involved and media disruptions occur.

Peter Ruoss UBS Switzerland

### Comparison of the processing of old and new messages in the event of an error

The following scenario shows the process steps during the entering of an (erroneous) payment instruction by a bank customer with execution planned for the same day. The customer entered the payment instruction in his payment software two hours before the bank's cut-off time, before a weekend.



## Instant payments in Switzerland

So-called instant payments enable companies and individuals to pay within seconds, with instant crediting or debiting. The popularity of smart phones and the increasing use of the Internet for shopping are leading to the steady growth in the popularity of real-time payment traffic in the interbank sector in Switzerland as well.

Within seconds of initiating the payment, the payment message is transmitted to the creditor's financial institution and the confirmation of its execution is sent to the debtor. The payment is immediately credited to the creditor's account and the creditor has instant access to the amount credited. And this applies around the clock, even at night and on weekends.

That is how the Euro Retail Payments Board (ERPB) correspondingly defines such electronic retail payment solutions. At the same time, the committee, chaired by the European Central Bank, requires that instant payments be possible regardless of the underlying payment instrument (credit transfer, direct debit or card payment), of the clearing processing (whether bilateral interbank clearing or clearing through infrastructures) and of processing (e.g. with guarantees or in real time).

Instant payments are multichannel-capable. Their usage ranges from mobile payments between private individuals (P2P) to the areas of invoices, credit transfers and payments.

### The benefits of instant payments

There are a variety of reasons why the new payment method is growing ever more popular. The popularity of smart phones and the growing need to carry less cash around have led to the powerful spread of real-time-capable P2P apps in many countries.

There are some situations in which not only cash but even checks are still used today – although central check processing was discontinued over ten years ago in Switzerland. Instant payments can offer assistance here, also when it comes to the high costs for handling, administration and security. This benefits the entire economy. A large insurance company for example is currently piloting real-time payments for claims.

As soon as instant payments also become possible for larger amounts, such as planned within the scope of the European "SEPA Instant Payments" solution to the maximum amount of EUR 15,000, many invoice, credit transfer and payment applications will become more interesting. Last, but not least, the nationwide intro-



duction of instant payments would help companies improve their cash flow and liquidity management and reduce the need for external financing.

### What's next in Switzerland?

A major customer demand for EUR transactions has not yet been identified in Switzerland. The pan-European "SEPA Instant Payments" solution, which is being promoted by EBA CLEARING and the European Payments Council (EPC), plans to start a pilot operation with several banks in the European Union at the end of 2017.

In Switzerland, the mobile P2P payment solutions Paymit and TWINT fall within the ERPB definition of instant payments. To cover the growing demand in this country in its domestic currency – around three million TWINT/Paymit transactions were processed last year – the operators of the two solutions will launch a uniform payment app in the coming months. Under the leadership of the six largest Swiss banks, SIX, the retailers Coop and Migros, and Swisscom, a uniform, nationwide instant payment solution will be created – the new Swiss mobile payment standard.

Peter Ruoss UBS Switzerland

## International interest in the Swiss harmonization activities

How Switzerland is proceeding with the introduction of ISO 20022 is also being followed with great interest from abroad. Among other things, this is because in Switzerland the complete domestic and foreign payment traffic is being converted, both in the customer-bank and interbank sectors.

The Swiss approach is therefore being observed from as far away as Africa, because it extends far beyond a purely "technical" migration. The financial center is using the migration to ISO 20022 for extensive harmonization activities. It is therefore far more than a depiction of the current Swiss credit transfer standards (DTA/EPO) in the international ISO 20022 standard, and not more or less the same, in other words. With the use of a uniform standard for electronic payment traffic and cash management reporting, major usage potential is opening for all participants, including:

- Consistent customer references (with more characters than are currently possible). This facilitates automation among debtors and creditors.
- Fewer processing errors (returns) as a result of uniform message standards.
- Use of common terminology among market participants.
- Standardized validation, i.e. the same instruction quality is applicable for financial institutions.
- Uniform status and error codes (simpler communication with support points, independent of software producer or financial institution).

### Swiss participation in the SWIFT HVP+ Project

Switzerland is represented by SIX Interbank Clearing in the SWIFT "High-Value Payments Plus" (HVP+) working group – including representatives of the Federal Reserve Bank of New York, Bank of England, South African Reserve Bank and Payments Canada. Participants are divided into so-called "core participants" (USA, Canada, Germany, England, Italy, France, Holland and South Africa) and "advisor participants", whereby the latter includes just two countries: Switzerland and Japan (due to the implementation of pacs.008/pacs.009 for cross-border transactions within the framework of the RTGS system BOJ-Net).

A two-day meeting in La Hulpe, Belgium, in the middle of last December offered the opportunity to explain the Swiss adaptation of ISO 20022. The messages



Volker Heinze, UNIFITS, with participants of the training session in Mwanza on 8/9 November 2016.

used in the BOJ-Net and the Swiss RTGS systems – SIC and euroSIC – were discussed bilaterally with the Japanese representative. The Swiss Implementation Guidelines received a thoroughly positive assessment by all participants. The presentation of the Swiss procedure evoked further questions from the Americans and South Africans, which were clarified in subsequent telephone conferences.

### **Training of African central banks**

SIX Interbank Clearing received a further inquiry about the Swiss path from the German consulting firm, UNI-FITS, which – on behalf of the East African Community (EAC) – conducts training sessions for the EAC members in the field of payment traffic. Swiss knowhow



was requested for such a training session at the beginning of November last year in Mwanza, Tanzania. This involved basic information about ISO 20022 and the implementation thereof. The training session was attended by representatives of the central banks of Tanzania, Uganda, Burundi, Kenya and Rwanda. The Swiss "philosophy" was conveyed by SIX Interbank Clearing and discussed via Skype. Volker Heinze, UNIFITS course instructor, was impressed and summarized his impressions and those of the participants as follows: "ISO 20022 as the lingua franca for the reorientation of payment traffic is being accepted internationally not only theoretically, but also practically. In addition to the ISO 20022 basics, the participants also attentively grasped how important the comprehensive involvement of all stakeholders, as well as the active support with specifications, conferences and validation portals, is for a successful migration – which is successfully demonstrated by the harmonization of Swiss payment traffic."

### lstvan Teglas

SIX Interbank Clearing

## Swiss payment traffic through changing times: A review and outlook

There is an upbeat mood in the world of cashless payments. This is shown not only by the fact that what traditionally has been a little noticed topic has recently even found its way into the headlines of the popular press. Innovations and developments labeled disruptive are also being introduced and discussed more frequently at expert conferences. A glance at the history of payment traffic in Switzerland shows, however, that there have been moments in which the status quo was questioned in order to smooth the way for innovative solutions.

The creation story of Swiss Interbank Clearing (SIC) illustrates that long-term secure and efficient solutions are most likely to arise when a balancing of interests between the involved parties is achieved in dialogue.

### The path to Swiss Interbank Clearing

Cashless payment traffic in its current form did not come into being overnight. Rather, the current payments landscape developed incrementally and through close cooperation between the players and the Swiss National Bank.

In the first half of last century, cashless payments were based on two main pillars: the Swiss National Bank's giro system and the PTT's post check system. While the giro system primarily served the processing of larger payments in terms of amount, small amount payments were exchanged through the post check system. Until the 1950s, the banks did not have an efficient credit transfer system through which payments between customers with accounts at different banks could be processed directly.

However, as the general public began to increasingly use the banking system, the banks agreed upon bank clearing whereby the largest bank institutions functioned as clearing centrals. The clearing centrals in turn balanced the payment balances with the Swiss National Bank giro system. In addition, the National Bank functioned as a hub for payment balancing between the banks and the post check system. Bank clearing, developed on the initiative of the large banks between 1949 and 1954, can be seen as the first major milestone for cashless payment traffic.

A second major milestone began to emerge at the beginning of the 1980s. Back then, the banks were already processing transactions worth around CHF 15,000 billion annually through slip-based bank clearing (compared to around CHF 40,000 billion in SIC in 2016). The proportion of manual work became too great; the system grew correspondingly heavy and hardly transparent. It meant that it could take up to four

days before a payment was finally executed. The bank clearing system therefore required participating banks to provide high liquidity reserves, thereby increasing their risks. That is why the banks and the Swiss National Bank began to reconsider the system and the way it functioned.

This work resulted in 1980 in a project study that sketched the initial ideas regarding the basic structure of a new, electronic interbank payment transfer system, through which liquidity management was also addressed. In particular, the study defined that all transactions were to be processed directly through the participants' sight deposit accounts at the Swiss National Bank. These considerations and the resulting solution approaches ultimately led to the launching of the SIC payment system in 1987.

Looking back, the two above-mentioned milestones – bank clearing and the introduction of the SIC system – represent farsighted innovations. Even back then it was recognized that a payment system should be structured to be flexible and expandable, so that future developments and applications can be easily integrated in the bank and customer sectors.

### Dynamics of the payment traffic landscape

The ideas behind the two aforementioned milestones from the development history of payment traffic in Switzerland are also to be considered when looking at current developments.

The financial industry is currently experiencing a wave of innovation known as "fintech", which also has not left payment traffic untouched. These innovations, primarily driven by technological progress, influence both the demand and the offer sides of the market.

On the demand side, the acceleration and increasing mobility of technological applications are changing customer expectations when it comes to payment services and are influencing the market landscape as a whole. Payment services should basically be available everywhere, e.g. by mobile phone, and at any time (24/7), quickly, and should be adaptable to specific customer preferences. At the same time, the willingness to pay an explicit price for these services is decreasing. This represents various challenges for traditional providers of payment services, such as banks, and triggers questions regarding the nature of interaction between financial institutions and their customers.

On the offer side, the technological change facilitates new services and business models designed to address these requirements. As a primarily retail payment processing system, SIC is strongly impacted by these digital developments and the dynamics caused by them, which are essentially leading to new payment services (such as mobile payments, contactless payment), to new providers (non-banks or fintech companies) and infrastructures (so-called fast or instant payment systems). For example, the smart phonebased TWINT payment service was launched in Switzerland in 2015, enabling instant payments.

These developments, both on the offer and demand sides, justify the question of what service providers and their services in cashless payment traffic will look like in the future.

### In conclusion

Looking back on the past certainly offers a potential blueprint for the challenges the future may hold. Technological change in the financial sector and thus also in cashless payment is proceeding apace. In conjunction with this, existing and proven structures and technologies will come into question.

Comprehensive innovations and further developments in cashless payment traffic are nevertheless not new. As history has shown, the SIC system, for example, has been compelled to reinvent itself through phases of change for decades. And examples for this can also be found in the recent past and up to the present day: For example, through the connection between SECOM and the SIC system created in 1995, delivery versus payment could be established for the fully automated processing of securities transactions. At the beginning of 2016, the Swiss National Bank, upon request by the Board of Directors of SIX Interbank Clearing Ltd, approved an adjustment of the SIC operating hours, which met market demand for extended processing times for customer payments. The importance of the SIC system is currently not only being demonstrated on the basis of the adjustment of operating times: In November 2016, SIC participants were informed that PostFinance has decided to process its bilateral payment traffic with other banks exclusively through the SIC system in the future.

The challenges in cashless payment transfer will thus also require the willingness to change from all involved players in the future. A retrospective shows that secure and efficient solutions tend to arise most where the involved players, i.e. the participants, the infrastructure operators and the National Bank, work together in a constructive dialogue. That is a basic prerequisite for enabling innovation and, at the same time, to guarantee the security of financial market infrastructures.

### Nino Landerer and Stefan Michel Swiss National Bank

### From bilateral to central clearing through the SIC system



Source: In-house diagram based on Klein, F. & Palazzo, G.: Cultural history of the flow of money. The development of payment traffic with a focus on Switzerland. Fluri, R.: Cashless payment traffic, in: Swiss National Bank 1907–2007.

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