



PAYSYS REPORT

Issue 3 – November 2022

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1. The relevance of the climate change for payment business

Climate change is happening and the payments industry cannot overlook it. In this section we focus on the interplay between sustainability and the payments sector, with information on its relevance, the regulatory framework, the consumer preference, what have companies done so far and the challenging question of whether cashless payments are more or less sustainable than cash payments. One thing is certain: sustainability is here to stay and the payments industry has to consider it.

2. The relative success of the German debit card scheme girocard

The German debit card scheme "girocard" is obviously on the road to success. After three years with double-digit growth rates (2018-2020), the increase in 2021 is still considerable at 17 billion euros (+7.2%). A differentiated view shows the influence of two growth drivers: the substitution of ELV transactions and the strong increase in cash withdrawals at the POS terminal, which are recorded as girocard payments. The "real" growth in 2021 is "only" about 4.4%. In addition, serious competition is emerging from Mastercard and Visa debit cards..

1. The relevance of the climate change for payment business

by Diana Raicu as our guest author of this issue. She is Compliance Consultant at our Dutch EPCA-partner Connective Payments, interested and knowledgeable about the ever-changing regulatory framework in the European Union.

Companies around the world are changing their priorities and incorporating Environmental, Social, Governance ('ESG') strategies in their DNA. The 'E' in ESG stands for how a company considers the environmental risks that it poses to the climate and how they can do better, mostly through internal policies.

ESG is focused on specific goals that a company sets, whilst sustainability is a

broader, more vague term that often refers to efforts taken to fight climate change. However, they are obviously linked and most often used interchangeably.



For example, most companies set environmental goals to reduce their carbon footprint and increase resource use efficiency in their ESG Strategies and often refer to it as 'Sustainable Operations'. So, the market uses sustainability and the environmental goals from ESG interchangeably. The European Union also refers to sustainable finance as the process of taking ESG considerations into account when making investment decisions in the financial sector.

Our comment:

Are cashless payments more or less sustainable compared to cash payments?

The first thing in mind when thinking about payments is not its environmental costs. Nonetheless, all methods of payment have their related environmental costs. Specifically in physical payment such as cash, plastic payment cards, paper receipts. The inherent costs come from production methods such as in the production of cash where, water, electricity and fuel are required, including material inputs (ink, cotton, foil) and transportation.

At the same time, there are operational costs in the lifecycle of currency such as the distance to retrieve and deposit cash and their frequency and ATM costs. In relation to this, the Dutch Central Bank (De Nederlandsche Bank 'DNB') conducted a study which showed that cash payments had a higher impact on

the environment than debit card payments in the Netherlands in 2015.

Nonetheless, digital payments have an inherent environmental impact based on their operations, coming from the use of buildings, production methods, travel and other underlying factors. The DNB study conducted in 2015 showed that 75% of debit card payment's total environmental impact is caused by POS terminals due to their materials (37%) and energy consumption (27%). The processing of debit card payments makes up 11% of the total environmental impact of debit card payments and 15% of the environmental impact is based on the materials needed to produce the debit cards, specifically the PVC.

A contrasting perspective is coming from the mint in Austria where 79% consumers prefer cash as means of payment.¹ The view is that cash payments protect the environment more than digital payments because

the latter produces CO₂ and consumes significant amounts of electricity. Therefore, the question remains open: Are cashless payments more sustainable than cash payments?

Is the financial sector ready for their sustainability regulatory obligations?

Another significant aspect of sustainability for the payments industry is the regulatory framework. Currently, it is uncertain whether the payments industry is ready. At a larger scale, a recent KPMG survey² of over 1300 worldwide CEOs showed that almost 9 in 10 believe that a recession is on the way in the next 12 months. Consequently, half of them is pausing or reconsidering ESG strategies over the next 6 months and 34% have already done so. However, 45% of CEOs agree that ESG programs improve financial performance.

The Survey has uncovered that the top 5 challenges in delivering ESG strategies are:

- Other pressing business/economic matters that cause us to shift focus away from ESG
- Increased or frequently changing regulations
- Lack of budget to invest in ESG transformation
- Necessary technology to effectively measure and track ESG initiatives
- Identifying and measuring agree metrics.

What are the regulatory obligations?

In the European Union, the regulatory obligations for the financial sector are aligned with the European Green deal in their Sustainable Finance goals.³ The European Banking Authority (EBA) plays an important role in supporting the banking sector under its jurisdiction towards the objective of transitioning to a more sustainable economy and to mitigate the risks that stem from climate change and broader environmental, social and governance factors.

Currently, the Taxonomy Regulation⁴ is in force which establishes a classification system that serves to indicate which economic activities are environmentally sustainable. Its obligations are in effect partially from January 2022 and fully from January 2023. It applies to financial market participants, so a larger scope than payments industry, but within scope there are banks and insurance companies.

The Sustainable Finance Disclosure Regulation (SFDR)⁵ is also in force which imposes disclosure requirements in relation to ESG on financial market participants with the aim to protect investors from greenwashing concerns, although this is not relevant specifically for payment instruments, it is relevant for banks and other financial market participants.

Companies around the world are changing their priorities and incorporating ESG strategies in their DNA.

Moreover, the Corporate Sustainability Reporting Directive (CSRD)⁶ is set to amend the current Non-Financial Reporting Directive (NFRD) and contains reporting obligations that will be required under the EU Taxonomy Regulation. Its application will take place in three stages from January 2023 until January 2026.⁷ Its scope will cover listed or non-listed large companies which meet two of the three criteria of having: more than 250 employees; over 40 million Euros turnover and/or over 20 million Euros total assets. From 2026 small and medium sized companies will also fall under the scope of the Directive.

CSRD's global scope has caused some US banks⁸ to describe it as the most pressing policy issue on their plate due to the liability for inaccurate information and the obligation for reporting not only for the company itself but also on the companies they do business with.

Thirdly, there is the Regulation on Markets in crypto-assets (MiCA)⁹ whose text was approved by the European Council on the 5th of October 2022 and after a further vote by the European Parliament that follows it, it will come into effect at the start of 2024. Actors in the crypto-assets market will be under the obligation to

declare information on their environmental and climate footprint. ESMA will be charged with drafting regulatory technical standards (RTS) on content, methodology, presentation of information related to principal adverse environmental and climate-related impact, according to the EU Press Release.¹⁰ The European Commission will need to provide a report on the environmental impact of crypto-assets and introduce the mandatory minimum sustainability standards for Blockchain's consensus mechanisms, including proof-of-work.

Actors in the crypto-assets market will be under the obligation to declare information on their environmental and climate footprint.

Business perspective vs. consumer preference

In the July-August issue of the journal "Payments, Cards & Mobile" (2022), there was a section on how consumers do their own greenwashing and expecting rewards for their environmentally conscious decisions and at the same time companies struggling with the costs of ESG. The recommendation was for more and better consumer education from governments, supported by financial institutions.

On the other side, a consumer study by Deloitte¹¹ from 2022 shows consumers' top five most important sustainable or ethical practices. It also showed a lack of consumer trust in businesses. In addition, an IBM survey¹² of February 2022 on 16,000 global consumers found that 51% of respondents find that sustainability is more important to them currently than it was 12 months prior. Also half of consumers paid an average of 59% more for products branded as sustainable in the

same time frame. Therefore, there are two different balancing interests on sustainability, the consumers', and the businesses.

What have financial institutions done so far?

First, the 2022 top global sustainability trends¹³ include:

- All-electric infrastructure implementation,
- Penalty actions from the regulatory for poor compliance with legislation,
- Clean air initiatives - implementing renewable energy projects,
- More climate change disclosures,
- Going one step further from net-zero to climate positive actions,
- Carbon offsetting- a way in which corporations can contribute by investing such as in renewable energy developments, carbon sequestration initiatives or protection of natural resources,
- Hybrid working – reduces company overall emissions,
- Renewable energy sourcing,
- ESG disclosures,
- Consumer sentiments on sustainable products.

Recent initiatives of players in the payment industry

What have several market leaders in the payment industry done so far:

Fiserv

Fiserv acquired First Data Corporation, making it of the world's leading payments and financial technology providers. Fiserv lays down its commitment to the environment which states that for the first time since the merger of Fiserv with First Data, Fiserv provided data about its environmental impact through the Carbon Disclosure Project. At the same time, Fiserv provides its customers an eco-friendly debit and credit cards turnkey program from production to responsible disposal. This includes recycled PVC, bio-sourced plastic substitute and recovered ocean-bound plastic.

American Express

American Express published its 2021-2022 ESG Report in which its climate solutions are laid down. It includes minimizing its climate change impact and managing its climate-related risks and opportunities, enabling its customers and partners to transition to a low-carbon economy including carbon tracking and supporting community programs and

initiative by providing at least 10 million dollars to support initiatives against climate change.

Visa

Recently Visa launched the Visa Eco Benefits, a suite of sustainability-focused solution. This enables users to calculate the carbon footprint generated by their Visa transactions and access options for carbon off-setting or charitable donations from their bank’s website or app. This helps Visa cardholders understand how their day-to-day payments impact the environment.

In terms of its operations, Visa has taken measures such as: greening of its offices and data centers; 100% renewable electricity; sustainable business travel and events; engaging its suppliers to identify areas for improvement and opportunities for partnership on emissions reduction strategies; employee commuting; employee engagement and Visa’s inaugural green bond (issued in 2020, for 500\$ million and maturing in 2027). In addition, Visa also committed to help bring forward alternative card materials to reduce environmental footprint. In 2020, ecolytiq joined the Visa Fintech Partner Connect program in Europe, which enables ecolytiq to help banks to seamlessly implement their sustainability strategies using payment data.¹⁴

Mastercard

Mastercard states its commitment to protecting the environment with measures aimed at reducing their carbon footprint and offering its consumers the opportunity to do the same. It is also committed to reach net-zero emissions by 2040.

Mastercard’s offers environmentally conscious solutions such as a sustainable cards program which will include a badge to signify their sustainable construction, a carbon calculator developed in collaboration with Doconomy, a commitment to restoring 100 million trees globally and a wildlife impact card.

Klarna

The Swedish fintech company has taken sustainability significantly seriously in its operations. They have an internal carbon tax where they tax themselves for their own carbon emissions and invest the proceeds in high-impact climate projects. On top of that, Klarna launched in 2021 a CO2 insights for all shopping purchases at no cost for consumers with the aim to help drive awareness around climate change. For this

feature, Klarna partnered with Doconomy, which is a Swedish fintech and world leader in providing calculation tools that enable banks and brands to display the carbon footprint of transactions.



An integrative concept of sustainability?

Nordea

The leading Nordic universal bank that provides private banking, life & pensions and Asset Management takes sustainability seriously as well. Nordea issues bonds to fund sustainability-linked loans which allows investors to invest in loan financing activities that tackle climate change. Same as Klarna, Nordea offers a carbon calculator for the goods and services that customers buy with credit and debit cards. This feature was made in collaboration with Åland Index Solutions, which is a joint venture between Doconomy and Bank of Åland.

Stripe

UK’s PSP offers to their business customers the Stripe Climate feature, with which they can direct a fraction of their revenue to help scale emerging carbon removal technologies. This provides the customers who use it with a badge automatically updated on Stripe-hosted checkout, to let their customers know about their climate commitments.

Bank of Ireland

Recently, Bank of Ireland has started rolling out bio-sourced debit and credit cards for both personal and business customers. The card is composed of 84% bio-sourced renewable materials which take six months to decompose, as opposed to the plastic variants which would take around 400 years. The aim of Bank of Ireland is for its entire cards portfolio

to switch to bio-sourced cards by 2026, which will save CO2 and plastic.

Conclusion

To recap, there are many regulatory obligations that affect and will affect the payment sector. At the same time there are many financial institutions which have incorporated sustainability goals and measures. What is certain is that sustainability is a priority subject because of the fast-acting climate change, the regulatory obligations and consumer preference. The cost of putting ESG aside can be significant on the long terms.

Our take is that financial institutions should look at their innovation budget and allocate more for sustainable solutions. The practices from the companies laid above can serve as an example of best practices. In this, there is also a business opportunity for financial institutions to create products that serve sustainability and make a positive impact on the market for both consumers and other businesses.

Regarding the question on whether cashless payments are more or less sustainable than cash payments, this question remains controversial. What is clear from the examples of companies listed is that there are many measures taken to make cashless payments more sustainable such as carbon calculators and eco-friendly credit and debit cards. However, is this enough to make cashless payments more sustainable than cash? That remains to be seen.

The relative success of the German debit card scheme girocard

(hg) Also in the 2nd Corona year, the German Banking Industry (DK) celebrates the success of its national debit card scheme girocard. For 2021, the scheme records an increase of €17 billion. This is less than in the first Corona year (+€25 billion), but still a proud growth rate of 7.2% (2020: 11.9%). In its press release¹⁵, DK describes contactless payment as the driver of this growth. Almost 73% of the transactions were contactless (2020: approx. 63%). As a result of the pandemic, card payment in the low-price segment (bakeries, kiosks, etc.) has now also become the norm. The total number of girocard-accepting POS terminals was almost 1 million (+7.7%) at the end of 2021.

However, in contrast to the competing debit and credit cards of the International Card Schemes (ICS), the use of the digital girocard in e-commerce is still rare. So far, only savings bank customers have been able to use their

girocard via Apple Pay on the internet. This is expected to change this year due to announced product innovations ("Giropay").

There is also no real progress in cross-border sales. The EPI euphoria has long since disappeared. At the end of the February 2022 press release, it only says vaguely: *"In the future, the banks and savings banks will also provide their customers with good solutions for cross-border payments with their girocard."* For the time being, this future is called "Debit Mastercard" and "Visa Debit" after brand migration of the girocards that are still largely co-badged with Maestro and V PAY. Via these brands, the debit cards can also be used on the internet for remote payments, which was not possible until now.

Our Comment:

The almost legendary cash preference of German consumers is actually on the decline rather abruptly and in leaps and bounds. The trigger is the virus. At the physical POS, more and more retailers and consumers prefer card payments. The EHI Retail Institute¹⁶ reports a sharp decline in the share of cash in total sales for stationary retail (excluding the T&E segment):

- 2019: 46.5%
- 2020: 40.9%
- 2021: 38.5%

Cash is being replaced by the card (plastic or smartphone). Despite a corona-induced reduction in consumption and a shift in consumption to e-commerce (still hardly any acceptance of the girocard),

girocard sales have nevertheless risen strongly in absolute terms. The scheme benefited at least in 2020 from its design as a debit card, which became the preferred means of payment in the lockdown throughout Europe.



By contrast, the international Scheme's credit cards, which are favored in the travel & entertainment segment, were the big losers in the EU (minus 13%) and also in Germany (minus 19%) in 2020. However, both

card types largely recovered from the shock in Europe in the second Corona year (debit cards + 17%, credit cards + 6%).

Now, the girocard is not the only debit card scheme in Germany. It has three direct competitors: ELV and the single-brand debit cards of the two ICS Mastercard and Visa.

ELV

The competitor ELV (electronic direct debit) has been losing significant market share since 2018. The volume has halved in 2021 (38 billion euros) compared to 2017 (78 billion euros) in just a few years.

The scheme is not actually a true Scheme with its own Rules & Regulations. The card of the scheme "girocard" is used at the POS to initiate a SEPA direct debit using

the stored IBAN data. In contrast to a girocard transaction, there is no payment guarantee. The merchant bears the risks (bad debt, fraud). In the past, the risk costs for the merchant were lower than the acceptance fees for the girocard in many market segments. This price ratio has now been reversed in many cases - especially due to the regulatory price reductions in the girocard scheme. Competition between the two systems only takes place on the acceptance side. The customer uses the same card in both cases (with the girocard brand) and only notices that he has to sign now and then instead of using a PIN (or often without authentication in the case of contactless payments).

Another reason for the shift from ELV in favour of the girocard is probably also the new popularity of contactless payment. DK's statement that contactless payment was the "engine" of the strong growth needs explanation. Girocard was rather a latecomer in terms of

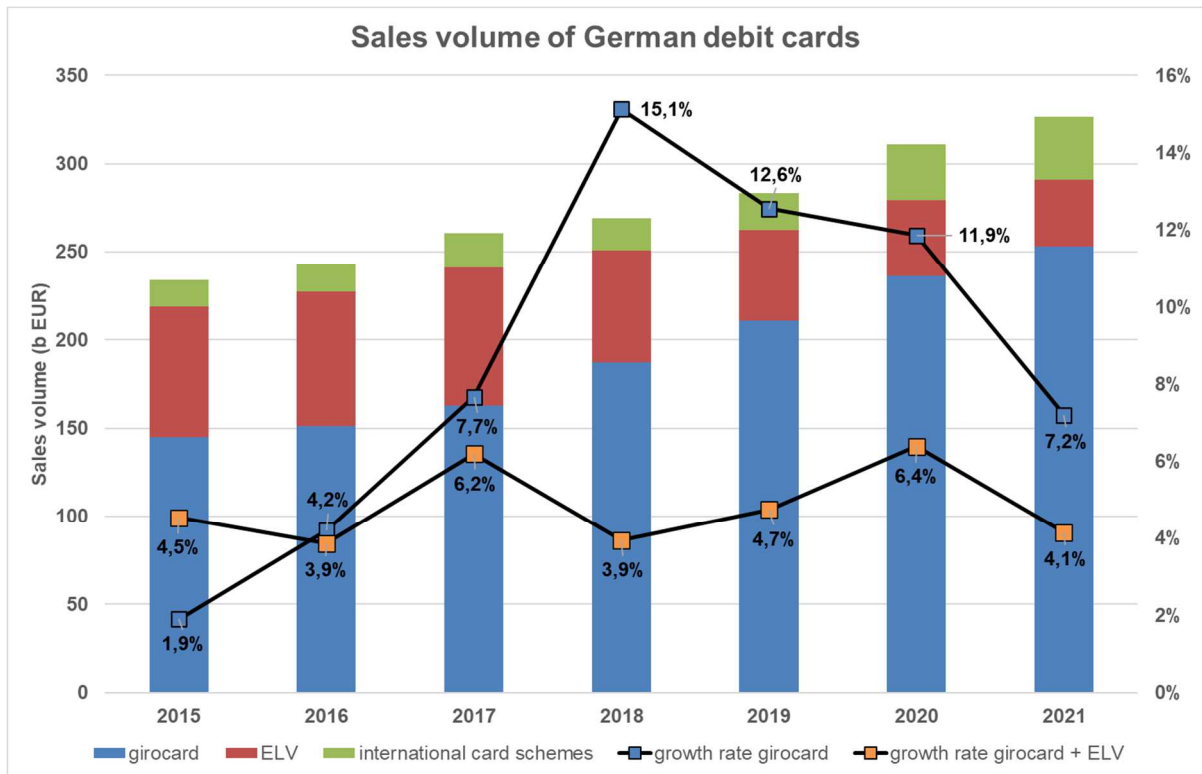


Chart 1: Development of payment volume (2015-2021) generated by debit cards issued by domestic payment service providers. Source: Deutsche Bundesbank and PaySys card market statistics.¹⁹

Approx. 32% of the growth in girocard sales volume was therefore due to substitution of ELV

"contactless" compared to the cards with the ICS brands and had a disadvantage against this competition for several years. Girocard, however, had a temporary competitive advantage over ELV with regard to "contactless". Contactless payment via ELV was not released until the beginning of 2021 (so-called ELV Tap&Go¹⁷). Until then, merchants could only offer contactless payments via girocard to their customers who swiped this debit card.

A significant part of the high girocard growth since 2018 is therefore due to the substitution of "non-genuine" (ELV) by "genuine" girocard payments.¹⁸ The ELV volume in 2021 (37.9 billion euros) shows a decline of about 5.4 billion euros. Approx. 32% of the growth in girocard turnover in 2021 (+17 billion euros) was therefore due to substitution of ELV. This part of the growth was not caused by increased consumer demand for debit card payments and cash substitution. If this "unreal" growth is factored out, turnover with the girocard debit card (ELV + girocard) continues to record a fairly steady unspectacular growth rate of between 4 and 6% p.a. See chart 1.



Cashback at the POS

Not only the substitution of ELV payments puts the super growth of the girocard in recent years into perspective. It has also led to changes in cash withdrawals. Cash withdrawals at ATMs have declined sharply. Instead, consumers are increasingly using debit and credit cards to get the cash they need at the shop checkout when making purchases. These cash withdrawals are usually not recorded separately in the girocard system.²⁰ They are authorised and charged like

The issuer is the winner. He gets his interchange fee for each girocard transaction.

conventional card payments. The merchant usually pays the same fees for these cash transactions as for a card payment.

PaySys already estimates the cashback share at 2.3% (2021) of girocard sales. For the retail sector, the EHI expects cashback to grow by a total of over 40% in 2021 (compared to 2020) (basis: all cards, including girocard).²¹ In its latest survey on payment behaviour in Germany in 2021, the Bundesbank reports that already 8% of the respondents' cash needs are made via the shop checkout (GAA: 81%; bank counter 11%). The cashback share has quadrupled compared to the 2017 survey²². In the statistics, these transactions can no longer be neglected due to their weight. Compared to 2020, the cash share has increased by about €1.2 billion to €5.9 billion in a conservative estimate.

The additional €17 billion girocard turnover in 2021 thus consists of approx. 5.4 billion substituted ELV payments and €1.2 billion additional cash withdrawals. From my point of view, the "real" growth is therefore "only" €10.4 billion, which is still 4.4%. The issuer should be quite indifferent to this relativising view of the girocard success story. He gets his interchange fee for each of the €17 billion.

But when it comes to the question of how card payments develop relative to cash payments, the official figures give a distorted picture. The upswing of the girocard is overstated.

ICS Mastercard and Visa debit cards

The second direct competitor of the girocard scheme is the debit cards, which are only equipped with the Mastercard and Visa brands. These competitors are not as easy to beat as the ELV, because here the competition also takes place on the issuing side.

In contrast to the conventional co-badged girocard, the cardholder can use this card immediately (even without

a wallet) worldwide on the Internet and at POS terminals. The number of these debit cards (incl. prepaid cards) issued by domestic issuers is still relatively low at around 18.6 million (2021) compared to girocard (102.7 million). However, sales are rising strongly (2021: doubling compared to 2018; see chart 1).

This development is reinforced by the new pricing strategy of several issuers. The girocard and the ICS card are provided for the current account, but the girocard is provided for an additional annual fee (e.g. 12 euros p.a. by ING). Other issuers do without the girocard and offer only the ICS card (e.g., N26) or offer the girocard only single-badged. Neo-banks based abroad also offer only the ICS card for the German market (e.g., Revolut's Debit Mastercard).²³

The issuer usually receives higher interchange fee revenues compared to girocard (0.2% as opposed to 0.17% on average for girocard). Also, interchange fees for cash withdrawals outside the issuer's own ATM network or affiliated group are much more moderate.

On the other hand, the issuer pays higher scheme fees to the ICS. For certain customer segments, the ICS debit card is currently the better option economically for the issuer. For the merchant, however, the girocard is the least expensive option.

In view of these different cost-benefit and power ratios on both sides of the market, the medium-term market development of both debit card products is currently difficult to predict.

Notes

- 1 <https://www.muenzeoesterreich.at/infothek/bargeld/nur-bares-ist-wahres/bares-ist-wahres>
- 2 <https://assets.kpmg/content/dam/kpmg/xx/pdf/2022/10/ceo-outlook-report.pdf>
- 3 https://finance.ec.europa.eu/sustainable-finance/overview-sustainable-finance_en
- 4 <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:32020R0852>
- 5 <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=celex%3A32019R2088>
- 6 <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:52021PC0189>
- 7 <https://www.consilium.europa.eu/en/press/press-releases/2022/06/21/new-rules-on-sustainability-disclosure-provisional-agreement-between-council-and-european-parliament/>
- 8 <https://www.ft.com/content/084b3974-763f-4a96-866e-3acf29a9fd8c>
- 9 <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A52020PC0593>
- 10 <https://www.consilium.europa.eu/en/press/press-releases/2022/06/30/digital-finance-agreement-reached-on-european-crypto-assets-regulation-mica/>
- 11 <https://www2.deloitte.com/uk/en/pages/consumer-business/articles/sustainable-consumer.html>
- 12 <https://www.ibm.com/thought-leadership/institute-business-value/report/2022-sustainability-consumer-research>
- 13 <https://sustainabilitymag.com/top10/top-10-global-sustainability-trends-for-2022>
- 14 <https://ecolytiq.com/ecolytiq-and-visa-bring-sustainability-as-a-service-to-banks-in-europe/>
- 15 Press release girocard annual figures 2021 from 16.02.2022
- 16 <https://www.ehi.org/themen/payment/>
- 17 https://elv-forum.de/?page_id=119
- 18 See also PaySys Report No. 3-4 (2019), Why is the girocard booming in Germany, pp. 11-12.
- 19 The payment volume of ICS debit cards includes Mastercard, Visa, Maestro and V PAY. The volume of ELV sales in 2021 is based on the data from the involved PSP.
- 20 At most POS terminals, cashback transactions with the girocard are not recorded in a separate data field of the girocard transaction. These transactions are therefore included in the DK statistics.
- 21 <https://www.ehi.org/presse/die-supermarktkasse-als-geldschalter/>
- 22 Deutsche Bundesbank, Zahlungsverhalten in Deutschland 2021, July 2022, p. 10
- 23 These cards are not included in the figures for Germany given here (number of cards and revenue).

Should you have any questions or comments please contact:

Dr. Hugo Godschalk (hgodschalk@paysys.de)

Dr. Malte Krueger (mkrueger@paysys.de)

Please, send us your views to:

paysys-report@paysys.de

 PAYSYS REPORT IMPRINT

PaySys Consultancy GmbH

Im Uhrig 7

60433 Frankfurt /Germany

Tel.: +49 (0) 69 / 95 11 77 0

Fax.: +49 (0) 69 / 52 10 90

email: paysys-report@paysys.de

www.paysys.de

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