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**PAYMENT SERVICE
PROVIDER**

**Payment Service Provider –
Germany’s “Hidden Champions”?**

Niklas Bartelt / Ulrich Hommel

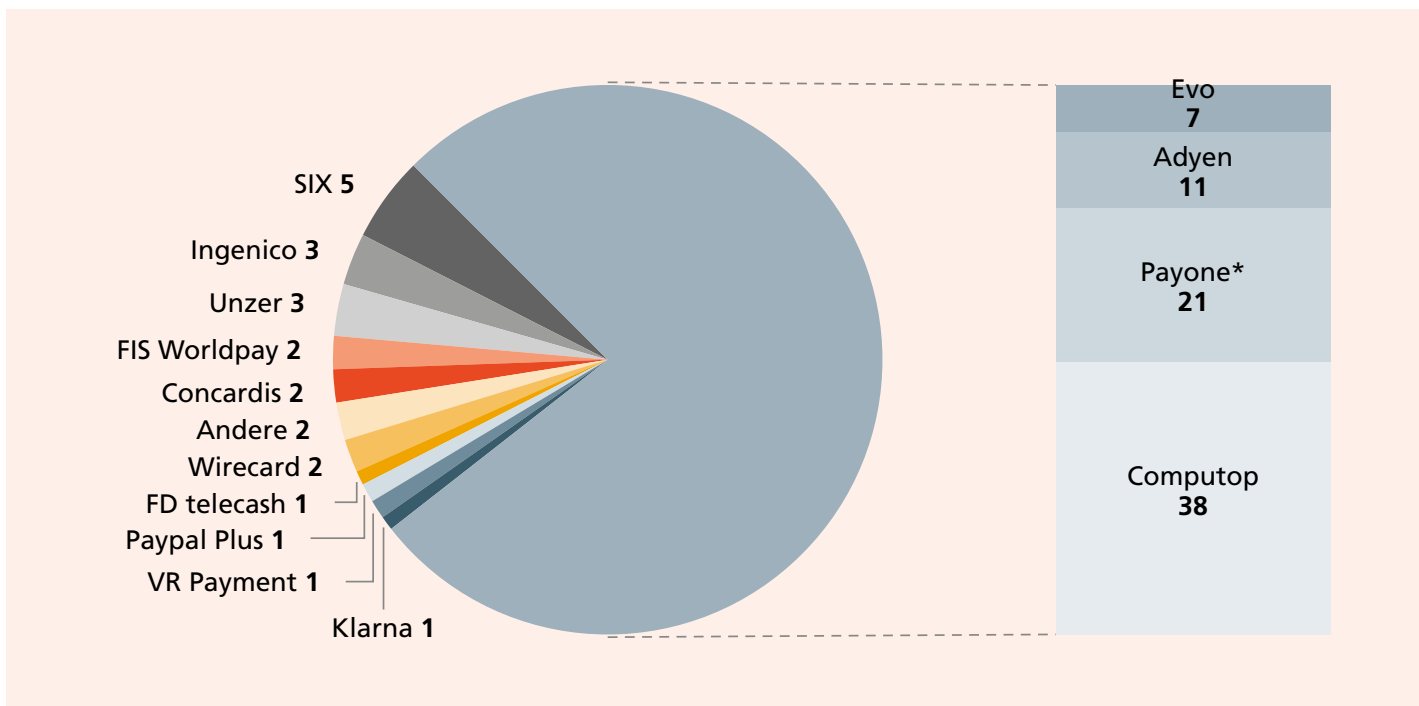
Management Abstract

Payment Service Provider Germany

The role of payment service providers (PSPs) is not always clear, even for experts in financial services. The authors explain the role of the service providers in the market, undertake a typification of the individual business models and show the market share of the PSPs currently active in the German market among the top 200 merchants. They also explore the question of whether there is a "hidden champion" in this sector in Germany or whether international providers will dominate the market.

This independent study sees Computop as the clear market leader with a 38% share of the turnover of the merchants that it serves who are, in turn, 1.4 times larger than the average dealer. Payone follows in second place with 21% and Adyen in third place with 11%. Further evaluations concern the shares of the merchant segments of individual PSPs, the effects of mergers of different providers as well as the market outlook for payment service providers.

Estimated market shares in the German PSP market in 2019 by merchant revenues serviced in percent



Source: authors' own analyses, expert input and EHI 2019 sales data.

* incl. Girosolution



Niklas Bartelt / Ulrich Hommel

Payment Service Provider – Germany's "Hidden Champions"?

The market for PSPs in Germany is largely unknown and, consequently, its characteristics and competitive structure are only understood to a limited extent, even by financial experts from outside the sector. This is partly due to the fact that it is a B2B market with a rather short history compared to other financial services. However, the PSP business has gained considerable economic importance in recent years, not least due to the rapid growth of internet-based retailing. This newfound strength was documented for everyone by the promotion of the supposed market leader Wirecard AG to the DAX in September 2018.

Wirecard AG's high-publicity upgrade was associated with the expectation that PSPs would play an increasingly important role in the financial services market. The now insolvent company was even temporarily granted the status of systemic importance, documented, for example, by the short-selling ban imposed by BaFin¹⁾ on the basis of the same. The sluggish processing of the Wirecard scandal and the accompanying discussion as to whether the company actually ever attained systemic relevance illustrates the lack of transparency in the German PSP market. If, for years, the origin of fictitious revenues is not questioned by so-called market experts (despite clear indications from abroad), this also demonstrates a lack of basic understanding of the PSP business itself. These shortcomings are to be addressed by this article.

This also addresses the question of whether hidden champions can be found in the German PSP market after all. In a first step, this article describes the PSP or-

ganisational form in concrete terms. The explanations are intended to clarify how the special features of e-commerce trade have promoted and shaped the emergence and growth of the PSP market to this day. Following on from this, in a second step, the business models of PSPs and their main value drivers are analysed. Based on this, thirdly, the current market structure is described on the basis of the revenues of the retailers served by PSPs. This enables statements to be made regarding market concentration and competitive intensity. Fourthly, this makes it possible to address the overarching question of potential hidden champions.

Attempt at a definition

It is difficult to find a clear definition of "payment service provider". The EU Directive on Payment Services in the Inter-

nal Market (PSD2), for example, contains a very broad application of this term. It includes not only payment service providers in the narrower sense, but also banks and central banks as providers of payment services.²⁾

In contrast, a narrower definition geared to the needs of e-commerce is prioritised here: PSPs enable e-commerce merchants to receive and process payments from their customers. The range of services varies and may be limited to some aspects of payment processing or include all technical processes. This excludes those companies that, for example, only provide their acquiring licence and do not offer active payment processing support.³⁾

Compared to bricks-and-mortar retail, e-commerce harbours a number of special features that foster and shape the

Figure 1: Specifics of e-commerce as drivers of the specialisation/scale advantages of the PSP business

E-commerce Specifics	Specialisation advantages	Economies of scale	Explanation
General			
24/7 availability		✓	– Compensation for capacity fluctuations/-utilisation
Importance of Special processes	✓	(✓)	– Knowledge of processes as well as intelligent automation options
Payment acceptance			
Cash no direct alternative	✓	✓	– Pure economies of scale via graduated prices of payment methods (e.g. Visa, MasterCard) – Know-how, e.g. in risk assessment and regulation/licensing
Conversion rate	✓	(✓)	– Knowledge of the optimal payment method mix and the click route with the least customer abandonment

Source: authors' own analyses



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Before the meteoric rise and fall of the payment service provider Wirecard, there were very few people, even in the financial services industry, who knew anything about the business model of payment service providers (PSPs). And even after the much-publicised Wirecard case, there are still uncertainties among industry representatives, politicians and supervisors, which the authors try to clear up in this article. They explain the role of the service providers in the market, classify the individual business models and show the market shares of the PSPs currently active in Germany. They also address the question of whether Germany has another "hidden champion" in this field or whether international providers will dominate the market. The aforementioned development of market share as well as a current trend of consolidation – which has taken hold of the industry – play a role here. (ed.)

emergence and growth of PSPs. These include the drivers that create high competitive pressure amongst e-commerce merchants in general and e-commerce payment acceptance in particular.

E-commerce-specific characteristics of PSPs

Compared to bricks-and-mortar retail, competitive pressure in e-commerce is particularly high. As a result, merchants are motivated to focus on their core

competencies and to outsource downstream activities for value creation. This also includes payment processing. Three factors play a particularly important role here:

- Low search costs for comparison with offers from other competitors (for example, promoted by price comparison platforms).
- Massively advancing concentration process⁴⁾ within the industry as companies merge in order to grow and survive
- High speed of technological progress, which generates a higher innovation density of business models (much higher than in stationary trade)

Two characteristics of e-commerce, as distinct from bricks-and-mortar retail, pose additional challenges: Firstly, the retailer must ensure that their offer is available without interruption (i.e. 24/7). If service problems occur, troubleshooting should take place within minutes and not hours or days. Investments in, among other things, a high-performance emergency backup to ensure uninterrupted operation are therefore unavoidable. Secondly, e-commerce requires the support of a multitude of special processes that significantly increase transaction complexity. These include returns, cancellations, partial deliveries and reservations. Only if these are sufficiently automated can the retailer scale its business with a competitive cost structure.

Since neither cash transactions nor step-by-step transactions are possible in e-commerce, there are specific counterparty risks that need to be addressed. From the buyer's point of view, there is the risk that despite payment they will not receive their goods/services or their warranty, or will receive them in an inadequate manner. This is particularly relevant in the case of prepayment or instant payment solutions without buyer protection. For the seller, there is the risk of bad debts, for example in the case of purchase on account or the reversal or non-redemption of direct debits.

In e-commerce, economic success is essentially determined by the conversion rate, i.e. the actual purchase processing of the virtual shopping basket. Basket abandonment is a continuous challenge for e-commerce, which among other things depends strongly on the number and convenience of the payment methods⁵⁾ offered.

PSP business models at a glance

The use of PSPs enables specialisation and economies of scale in payment processing. They contribute directly to increasing economic success (pull effect). At the same time, the integration of PSPs is unavoidable due to high competitive pressure (push effect). Specialisation advantages usually manifest themselves in PSP know-how regarding standards, processes, risks, regulation, etc., which is only relevant to the core business of the trade to a limited extent. On a case-by-case basis, the financial regulatory licence of a PSP can also be of benefit. Economies of scale result from the graduated prices of the payment procedures as well as the investments in IT and automation (see Figure 1).⁶⁾

The business model of PSPs focuses on B2B and therefore requires, above all, support from merchants. A client relationship with the merchants' customers is not mandatory. This limits possible network effects that could arise in two-sided markets, where success on one side of the market supports market success on the other side (for example Visa, Paypal).⁷⁾ Consequently, potential monopoly rents are unlikely and the PSP is not a natural "Winner Takes All" market.⁸⁾

The traditional core of the PSP business is the processing and forwarding of payments from buyers to the merchant (gateway and processing services). This may include providing the websites where buyers select the payment methods and enter their data (payment pages). Other services provided by the PSP may cover risk management, transaction matching (reconciliation) and payment



collection. Furthermore, PSPs usually offer the acquiring of payment methods, especially card payments, but also PayPal and others.

Collecting PSPs (for example Adyen) go well beyond this level of service and act as contractual partners in the execution and design of payment procedures. They accept payments from buyers directly and process them through their own accounts. From the merchant's point of view, this is an "all-round carefree" package, with net payments credited after fees and retentions. However, the merchant no longer has any influence on the contractual relationships with the payment process providers or the payment processing. The collecting model requires a licence from the relevant banking regulator in most jurisdictions.

One example of the growing competitive pressure in the PSP industry is the emergence of further forms of specialisation. These include so-called meta-PSPs (for example P-Pro), which take over the processing of payment procedures for other PSPs. This enables the service providers to supplement their offer with payment procedures that they cannot profitably offer themselves.⁹⁾ Examples include I-Deal, Paydirekt or Paylib, which have a relevant market position nationally but are of little importance internationally. These payment methods are not attractive for foreign PSPs, for example, due to a lack of critical mass, but they can still be useful for cross-border customer acquisition.¹⁰⁾

Structure of the PSP market and intensity of competition

The data situation for the German PSP market is only rudimentary. Various data sources exist at the international level. As a rule, they are based on turnover data of European or global providers, which include non-PSP-relevant business activities, which limits the informative value for the PSP market per se.¹¹⁾ It is also doubtful whether international market shares are a good estimation indicator for the German market. Nationally, for

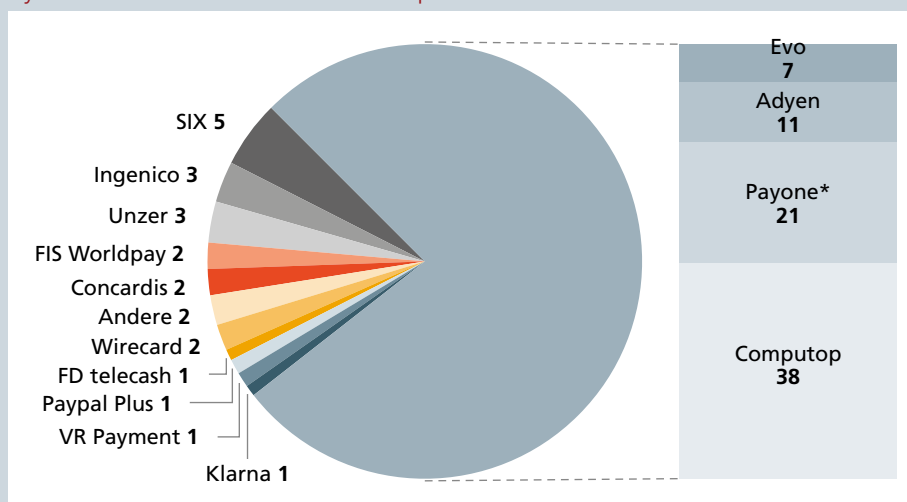
example, I-Business reported once in 2016,¹²⁾ while other publications follow a market definition that seems incompatible with the understanding of PSPs used here.

The data from the EHI Retail Institute (EHI) appears to be the most productive source so far. Since 2016, the EHI has published the number of retailers who report one or more PSPs in response to the question "Which PSP's services do you use to integrate payment services in your online shop and process payments accordingly?"¹³⁾ The 1,000 B2C online shops with the highest turnover for phys-

ical goods (including e-books) are surveyed.¹⁴⁾ In this study, this is supplemented by an examination of the market shares by turnover of the retailers. The analysis by turnover size, and not only by number of retailers, is relevant due to the high degree of concentration in the e-commerce market.

ined on 189 retailers who represent 51 percent of the total EHI turnover. In a third step, the main PSP for the retailers was identified with the help of experts. This was successfully determined for 53 percent of the sample by number of dealers and 67 percent by dealer turnover. Accordingly, the market share of the PSPs – based on the retailers they serve – could be estimated by means of the 2019 EHI retailer turnover. In addition, further expert interviews were conducted to validate the results.¹⁵⁾

Figure 2: Estimated market shares in the German PSP market in 2019 by merchant revenues serviced in percent



Source: authors' own analyses, expert input and EHI 2019 sales data.

* incl. Giro solution

ical goods (including e-books) are surveyed.¹⁴⁾ In this study, this is supplemented by an examination of the market shares by turnover of the retailers. The analysis by turnover size, and not only by number of retailers, is relevant due to the high degree of concentration in the e-commerce market.

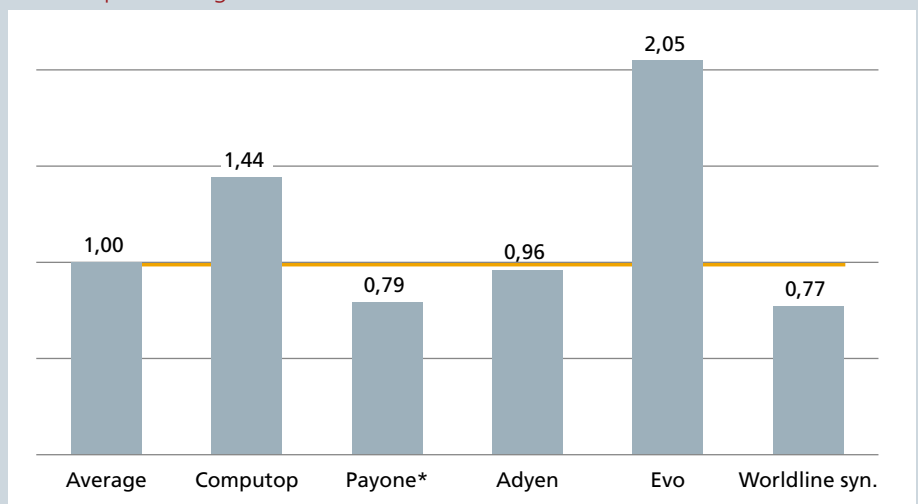
In a first step, the top 200 e-commerce retailers were identified and considered on the basis of the EHI Top 1000 for 2019 above. This sample represents 92 percent of the turnover of the Top 1000. In a second step, retailers that do not use a PSP or offer PSP services themselves (and are therefore PSP market participants) were excluded. This focuses the sample exam-

percent and thus occupy a potentially dominant market position. This is especially true for Computop with 38 percent and Payone with 21 percent, but Adyen and Evo also belong to this extended circle with more than 5 percent market share.

Providers focus on specialisation

The profile of the most important PSPs in terms of their customer structure has not been discussed in detail in the literature so far. Therefore, they are evaluated below according to the average size of the retailers served and their rough sector

Figure 3: Average retailer turnover per PSP in 2019 compared to the sample average



Source: authors' own analyses, expert input and EHI 2019 turnover data * incl. Girosolution

mix in the considered sample of the top 200 retailers, and the resulting profile is analysed. Figure 3 shows the average size of the dealers served by the PSPs under consideration in relation to the sample average. This illustrates that PSPs differ significantly in terms of their target segments and that Computop and Evo, in particular, prefer to work with large dealers. This should have a disciplinary

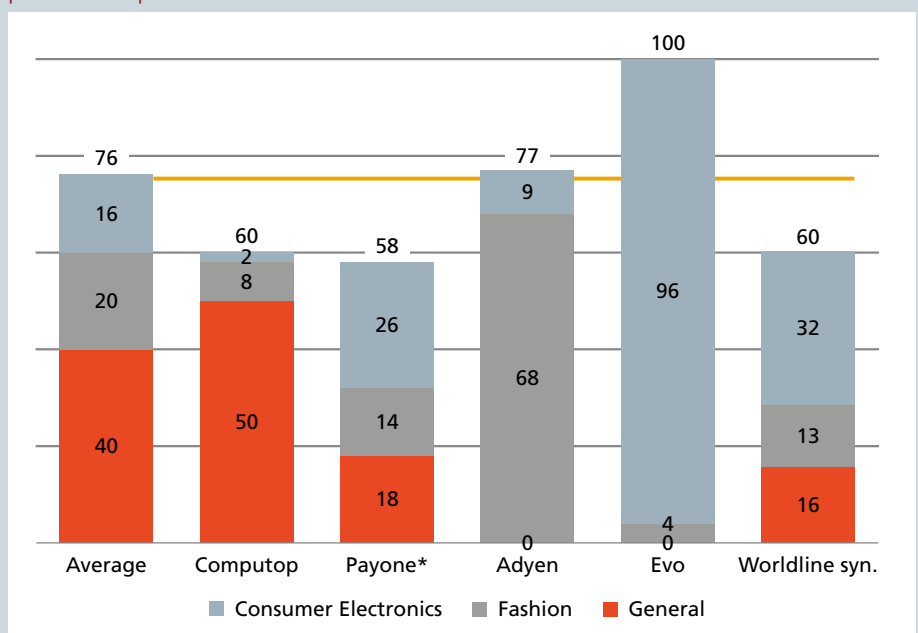
effect against an unrestrained exercise of market power, especially in the case of Computop. Due to the sample composition, however, the results are only exploratory in nature.

Similarly, the sectors of the merchants served by the PSPs were evaluated in comparison to the sample averages. Three sectors explain 76 percent of the

retailer sales of the sample: generalists (40 percent), clothing (20 percent) and electronics retailers (16 percent). Comparative values were evaluated for the PSPs considered in more detail here and described in Figure 4. PSPs differ significantly in terms of their degree of sector specialisation and only Computop earns the majority of its turnover from generalists – i.e. retailers who have not specialised in one sector. Again, due to the sample composition, the explorative nature of the results should be noted.

In summary, it can be concluded that Computop is the clear market leader in the German PSP sector with a market share of 38 percent. The dealers served by Computop in the sample are 1.4 times larger than the average. At the same time, the company's sector diversification is above average. 60 percent of sales are earned in the top 3 sectors, compared to 76 percent for the entire sample. Computop earns 50 percent of its turnover with generalists (in comparison, only 8 percent with clothing and 2 percent with electronics). Therefore, it is not surprising that the Otto Group is one of Computop's best-known and most important customers.¹⁶⁾

Figure 4: Sample share of the top 3 sectors by retailer turnover in 2019 per PSP in per cent



Source: authors' own analyses, expert input and EHI 2019 sales data. * incl. Girosolution

With 21 percent market share, Payone (with Girosolution)¹⁷⁾ is the clear number two in the German market. The relatively small size of the merchants served is an indication of its focus. This picture does not change if only Payone (without Giro-solution) is considered. Similar to Computop, the sector diversification is high, as the company only generates 58 percent of its turnover with the top 3 sectors. Nevertheless, electronics retailers are a focus of Payone with 27 percent compared to 16 percent for the entire sample.

Market shares after ongoing consolidation

Adyen is third among the top PSPs with 11 per cent market share. Adyen's own claim to focus primarily on the very large merchants cannot be definitively confirmed from the data. The dealer size



corresponds to the sample average, which, however, represents the top 200. In terms of the sector mix, there is a clear focus on clothing retailers with 68 percent.

Evo achieves a market share of 7 percent and has a very distinctive profile: the merchants it serves are twice as large as the average surveyed and are almost exclusively active in the electronics sector (96 percent).

After Payone and Ingenico entered into a joint venture¹⁸⁾ and Worldline acquired Six, the merger of Worldline and Ingenico was then announced in 2020.¹⁹⁾ Therefore, a conglomerate of Worldline was additionally formed from the data of Payone, Girosolution, Six and Ingenico. This conglomerate would have achieved a market share of 29 per cent, making it the clear number 2 and only just behind Computop. The electronics focus would have increased slightly to 32 percent, otherwise the industry and merchant profile would be comparable to Payone as a stand-alone provider.

It may come as a surprise that this study only shows a market share of 2 percent for Wirecard AG. Without examining the Wirecard case in more detail, reference must be made to investigations in the aftermath of the company's collapse, which found that a large part of the reported sales abroad were fictitious.²⁰⁾ According to the analyses presented here, Wirecard also played a subordinate role in Germany. No matter how one wants to view this case, the company was never systematically relevant.

Nevertheless, high competitive intensity

The concentration of the German PSP market is not surprising given the advantages of specialisation and scale already described. At first glance, this suggests that PSPs could increase their margins at the expense of merchants and therefore competition may be limited. For example, the three largest suppliers distribute 70 percent of market share among them-

selves. This value increases to 78 percent if the conglomerate of Worldline is taken into account.

If, in addition to the concentration rate, one considers the Herfindahl-Hirschman Index (HHI), which can range from 0 to 10,000, the value for the PSP market covered here is 2,105.²¹⁾ This rises to only 2,479 even if the synthetic Worldline is taken into account.

At the same time, one should consider that the retailer side of the market is also highly concentrated. Moreover, the PSP service is a commodity in its basic elements, as it is essentially the processing of standardised payment procedures

with usually well-documented processes and interfaces. This is why many large merchants select their PSPs with the help of public tenders. Contracting several PSPs is also not uncommon in order to compare options to support the ongoing business and as a backup. It therefore seems unlikely that PSPs will be able to over-extend their margins with large merchants (who make up the bulk of the market).

Current market trends

The strong position of Computop – still relatively unknown to the general public – shows that there is at least one hidden champion in the German market. Three current market developments may influence its positioning in the coming years.

Firstly, it is becoming apparent that the historical trend towards higher retailer concentration in e-commerce will continue in the coming years and that there will be one to three winners per retail segment. In parallel, more and more specialised e-commerce providers will probably establish themselves and successfully

escape the general price and margin pressure. These are either niche players, innovative concepts or companies with a differentiating brand. The PSPs that back these winners will grow with them. Whether profits will rise proportionately alongside volumes, however, seems unlikely. However, the economies of scale achieved can be used to position themselves successfully in the higher-margin segment of small and medium-sized retailers, for example.

Secondly, the example of Worldline shows that the European consolidation trend will also have an impact on the German market in the future. An important driver is the leveraging of econo-

“If the origin of fictitious revenues is not questioned for years, this proves a lack of basic understanding of the PSP business itself.”

mies of scale by merging online and offline acquiring activities. The realisation of synergies with other payment and transaction banking activities also plays a role. The planned merger of Nets/Concardis with Nexi falls into this category, after Nexi has already taken over SIA.²²⁾

The US is already a big step ahead: large bank IT providers like FIS and Finserv have respectively acquired Worldpay and First Data, two globally active PSPs.²³⁾ Whether the capitalisation of technology-side merger advantages can be realised remains to be seen. It is also unclear whether this rationale will lead to similar transactions in Europe.

The third trend is little discussed outside expert circles: The expansion of value creation by PSPs, especially under the collecting model. This usually leads to less substitutability of the PSP and thus to more attractive margins. Adyen is a notable example here, as evidenced by the company's high margins and impressive market valuation.²⁴⁾ On the other hand, it is still unclear how many of the e-commerce merchants will be willing to become dependent on a PSP or to finance higher margins.

Footnotes

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- 4) Bartelt „Kundenbindung im E-Commerce durch ‚unsichtbare‘ Zahlungen“, in: Zeitschrift für Zahlungsverkehr und Payments – cards Karten cartes, 15 May 2020, p. 24.
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- 14) *Ibid*, p. 13.
- 15) Cf. Bartelt, Hommel, „Did Wirecard ever matter? Reflections on the structure of the German e-commerce payment service provider market“, in: Journal of Payments Strategy & Systems, 2021, Vol. 15, Nr. 1.
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