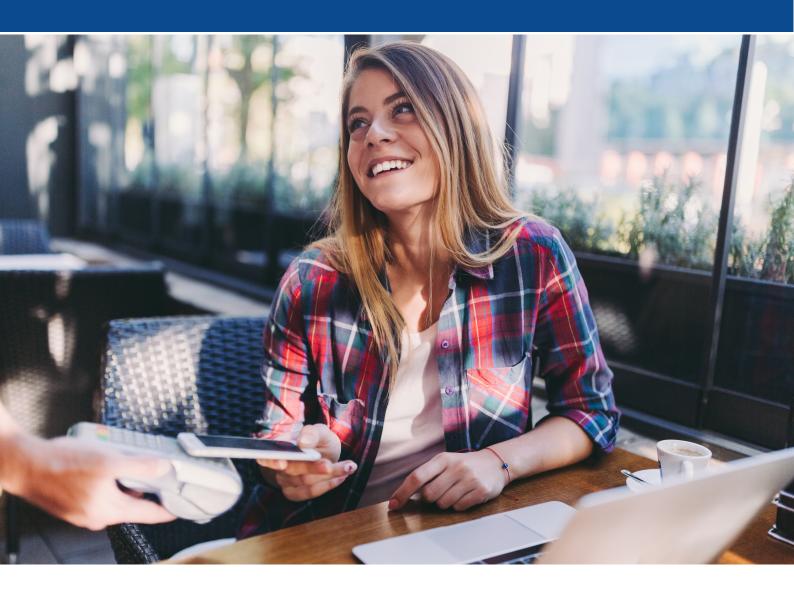
# KEY PLAYERS IN THE EUROPEAN PAYMENTS LANDSCAPE

2021 REPORT









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# **About the Emerging Payments Association EU**

#### The Emerging Payments Association EU is a

business club of decision makers in the payments industry. Our members are the enterprises forming all the components of the payments value chain in the 27 countries of the European Union.

Our circle is established as a non-profit association registered in Luxembourg. Our offices are hosted at the Luxembourg House of Financial Technology (LHoFT).

The Purpose of the Association is to facilitate business for its members. EPA EU seeks to achieve its objectives by organizing events, managing projects defending the interests of its members, publishing research documents and providing training. You will find more details in our <u>brochure</u>.

EPA EU builds on the international network of our London-based sister organisation, the Emerging Payments Association (EPA), consisting of 150 members from across the payments value chain; including payments schemes, banks and issuers, merchant acquirers, PSPs, retailers, and more.

Collectively, members of the EPA transact more than €6 trillion annually and employ more than 300,000 staff, meaning that we now have a significant influence over the industry's future.

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### **Thank you Note**

This project research could not have been done without the ground work of four bright students of the Solvay Brussels School of Economics and Management. Stéphanie Dufrane, Alexandra Leutscher, Elena Nalmpantidis and Arthur Van Gelderen have delivered a considerable amount of research with greatest seriousness and a true intellectual curiosity under the supervision of Professor Hugues Pirotte who brought his academic excellence to this study.



EPA EU would like to thank Bureau van Dijk, a Moody's Analytics Company for giving us access to Orbis, the world's most powerful comparable data resource on private companies. Orbis has the richest, most reliable private company information on the market, a wealth of sources globally, and yet remains instantly comparable and searchable.





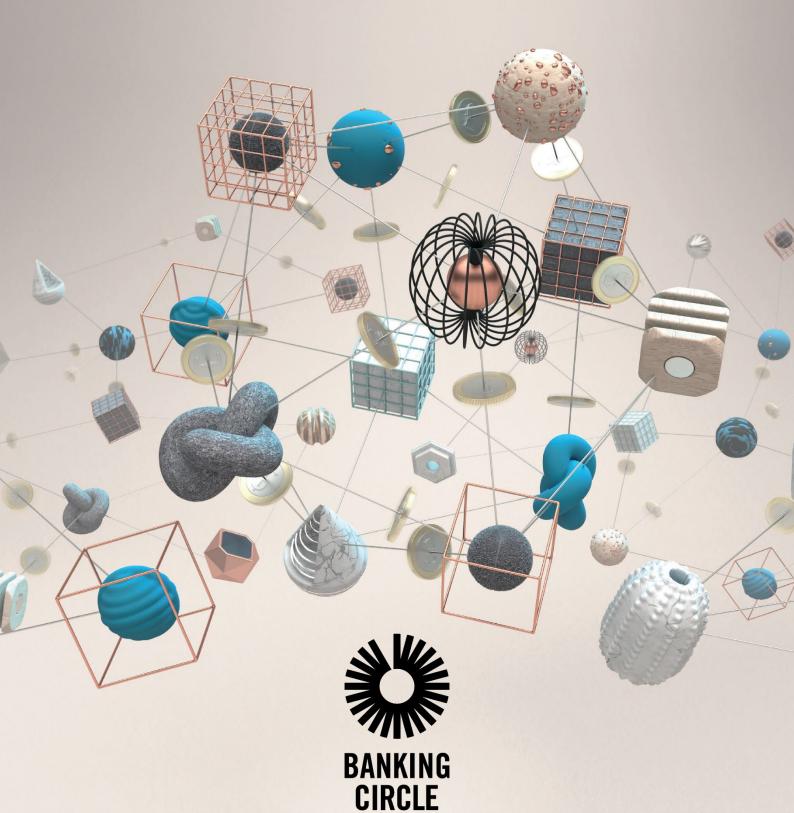
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### **Executive Summary**

Digitalisation affects all sectors of the European economy, including the payments sector. More and more Europeans are now turning to technology and more specifically, to a greater digitisation of their payments.

According to the ECB, ecommerce has doubled over the last 6 years and has jumped by 30% just during the year 2020 with the multiple lockdowns due to the Covid-19 pandemic<sup>1</sup>.

With digitalization, new and innovative players have entered the payments space, creating on the one hand a wider variety of payment methods, as well as better banking inclusion, and on the other hand market fragmentation and greater complexity<sup>2</sup>. As a result, the proportion of cash used by Europeans for their daily payments has decreased from 79% in 2016 to 73% in 2019 and the proportion of card payments has increased from 19% in 2016 to 24% in 2019<sup>3</sup>.

As in all other European sectors, the payments market is notable for its variety and lack of uniformity between countries. For example, the use of cash is drastically different between countries: cash makes up almost 80% of POS transactions in southern Europe, Germany, Austria and Slovenia, but only around 30% in the Netherlands, Estonia, and Finland<sup>4</sup>.



This report aims to provide you with insights into this diverse landscape. Part 1 provides an overview of terminology and semantics used in the report, as well as a conceptual framework for understanding the varied domains in which payment services operate. Part 2 then looks in detail at the actors and characteristics of the European Payment

Ecosystem, on three levels: firstly analysing the payment industry from an international perspective, gathering non-European international players that operate in the European Union, as well as Europe-based international players that have their headquarters in the EU but also operate in countries outside of Europe.



Secondly focus is then put on payment actors operating on a regional level. In other words, those regions gather payment actors that operates in other countries in addition to their domestic market. Finally, the third section provides summaries of domestic payment players for each country in the EU as well as some country-specific insights. It is important to note that most players in the European payments landscape can fit into more than one category: for example, a PSP may have a very strong presence in their home country, and a smaller presence in the neighbouring countries, which makes it a relevant player for both the regional section and the domestic section. Hence, the selection of different players into the different categories is not meant to be exhaustive. Instead, the purpose has been to provide the reader with the best possible overview of an industry that is constantly evolving and changing.

<sup>&</sup>lt;sup>1</sup>/<sub>2</sub> https://www.ecb.europa.eu/press/key/date/2020/html/ecb.sp201022~d66111be97.en.html

https://thepaypers.com/expert-opinion/payment-methods-in-2020-the-global-overview--1245332

<sup>3</sup> https://www.ecb.europa.eu/press/key/date/2020/html/ecb.sp201022~d66111be97.en.html

<sup>4</sup> https://www.ccv.eu/2019/european-payment-trends/

#### Conclusions:

Europe is defined by its diversity, and some of the most ground-breaking innovations are being made at the domestic or regional level, and every country has its own unique payment ecosystem – as is clearly revealed through the exhaustive overview in Part 2 of this report.

But even though the European payment landscape defies simple sweeping generalisations, we have observed some interesting trends that hold true at least for a large number of countries, if not all countries in Europe. Firstly, we have seen an increase of integrating payment services with alternative services and data sources. This is a result of improved connectivity in the digital world. Although not new as a technology, externally exposing services via APIs has seen a rise in popularity in the financial system over the last years. Automated and real-time access to data and services has significantly improved products and services by both financial and non-financial players. For scalability and resilience, data sharing standardisation and governance will be conditional.



Secondly, PSD2 is a key enabler for evolution in several of the domains described in the article below. Recent years for PSD2 are marked by discussions on (technological) standards and caused postponement of implementation (of the RTS, regulatory technical standards). A key topic in PSD2 is 'strong customer authentication' (SCA), which impacts various parts of the simpler customer journeys that have been important differentiators for parties across the domains in the payment ecosystem. This (and COVID) accelerates the developments of widely adopted digital identity services, which is crucial for the 'customercontrolled open everything' economy, i.e. 'PSD2alike' services for all sectors, not limited to the financial sector.

Thirdly, the world of decentralised infrastructures is gaining steam and is certainly something to keep an eye on. As it potentially offers 'more for less', it has large disruptive potential. At the same time, this development offers major opportunities, also for the incumbent financial system, as persons and businesses are embracing these currencies, assets, and services more and more.

Fourthly, the incumbent financial system in Europe still relies heavily on the traditional card schemes and is under increasing pressure from BigTechs (GAFA & BAT) that are expanding their footprint. Indeed, the global payments landscape is undergoing a transformation. Rapid technological advancements, regulatory reforms, and rising initiatives, in particular by global digital platforms, have led to changing dynamics. These developments are putting established banks and PSPs under considerable pressure to make a move. The EPI initiative is a result of this.

In response to this increased pressure, the largest PSPs in Europe are consolidating to increase effectiveness and reach: payments players have availed themselves of the opportunity of exploring the rapid transition to digital transactions and new markets, to consolidate their position in the value chain and further gain market share. The areas where most investments have fuelled in – both as direct investments and M&A deals – are checkout lending, corporate lending, acquiring services and digital finance services, each driven by specific rationales. In addition, the ongoing consolidation in the payment industry triggered a few large deals. 2020 saw two large mergers in the European payment industry: the leading payment services provider in Europe, Worldline, acquired Ingenico, a payments terminal manufacturer, while Nexi Payments, an Italy-based payment services provider, acquired SIA, an European payment processor and interbank network provider, as well as Nets, a payment services provider in northern and central Europe. The rationale behind the Worldline merger is value creation from leveraging synergies, while behind Nexi's, in addition to synergies, there are complementarities in market reach and opportunities to offer a full range of payment solutions to a few attractive, but still

underpenetrated, European markets (and after that, of course, the world).



Fifthly, we have seen an ongoing trend throughout Europe away from cash and towards online. This is partly due to government pressures: several countries have implemented limits on cash transaction volume, and partly due to consumer preference, especially since the COVID-19 pandemic started. This symbiotic trend creates great opportunity for payment players in Europe that are offering services specifically for online or non-cash-based payments, and we see many players taking advantage of the increased adoption rates of online payment methods and increased ecommerce.

Lastly, it is important to see how these trends interact and influence each other: increased rates of digitisation have created the need for new regulations, such as PSD2. In turn, the local innovations in domestic payment spaces have been able to spread and grow due to the easier crossborder expansion that has been made possible partly by PSD2. This has made it more attractive for large payment players to acquire local innovative companies, which creates more consolidation in the payment landscape. All of these trends are only expected to continue throughout the coming years, all accelerating and influencing each other to take on new shapes.

These are just some of the highlights of our findings in this report, and we encourage you to keep reading and explore the more detailed and specific insights per region, country, or company for yourself. Europe is a vibrant and ever-changing playground, with new innovations and players entering the scene every year, and this report reflects that. So read on, investigate, and stay informed about who are the key players in the European payment landscape!



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# PART 1: The European Payment Ecosystem

The following section is designed to establish some common ground with regard to the players within the payments ecosystem, and the common processes that are conducted to effect payments transactions.

### **Definitions:**

Terminology and classification of different forms of payments-related entities are defined below in terms of how they are classified in this report.

- ♦ <u>Banks (Issuers and Acquirers):</u> In this report, we discuss two types of banks: issuing banks and acquiring banks.
  - o <u>Issuers</u> are banks or financial institutions which offer payment cards to consumers on behalf of card networks such as Visa, MasterCard, or American Express. These are typically major commercial banks. In the context of PSD2 these banks are sometimes describes as 'Payer's banks'.
  - Acquirers are banks or financial institutions which acquire funds for their merchant from a shopper. To accept card payments, an acquirer should be licensed by corresponding card networks and either partner with a payment processor or be a payment processor itself. Some PSPs may operate as an acquirer as well. In the context of PSD2 these banks are sometimes described as 'Payee's banks'.
- Payment Service Providers: A company which combines the functions of both a payment gateway and a payment processor, can connect to multiple acquiring and payment networks. Additionally it can be an acquirer and provide risk assessments and other financial services.
  - o <u>Payment Schemes:</u> Payment schemes determine the technical norms and rules for conducting payment operations. They enable the management of the operations of the payment processes. These technical rules and standards are restrictions that determine how money is to be transferred between the payment institutions. Notable payment schemes include Mastercard and Visa.
  - o <u>Payment Gateways:</u> Payment Gateways are a service that helps merchants initiate ecommerce, in-app, and point of sale payments for a broad variety of payment methods. The gateway is not directly involved in the money flow; typically it is a web server to which a merchant's website or POS system is connected. A payment gateway often connects several acquiring banks and payment methods under one system.

Important reasons for a merchant to do business with a PSP are:

- a single technical connection for all the payment methods that are offered to the consumer on the web; (gateway)
- access to local payment methods in defined countries;
- a single administrative connection (reporting);
- a single settlement procedure with an agreed frequency;

- usually, fewer contracts are needed, compared to having individual connections to acquirers. The PSP acts as the 'super merchant', being able to offer lower fees because of its purchasing power at the acquirers;
- access to specialist knowledge concerning the payment process;
- risk management and fraud prevention tools are provided and regularly updated
  - <u>Payment Processors:</u> Payment processors provide a system that connects to a shopper's bank and a merchant's bank in order to make a payment transaction on behalf of a merchant. Usually, a payment processor obtains the payment information from a payment gateway.
  - ♦ <u>Electronic Money Institution (EMI)</u><sup>5</sup>: EMIs may store, conduct, and issue electronic money. This monetary value can be reused later for other electronic payments.
  - <u>Banking-as-a-Service (BaaS):</u> BaaS players are licensed companies that offer complete banking processes, such as payments or credit, as a service through modern API-driven platforms.

<u>Payments-as-a-service (PaaS)</u>: PaaS players operate cutting-edge cloud-based platforms to provide specialized services, such as card issuing, payments clearing, cross-border payments, disbursements, and e-commerce gateways. Companies wishing to offer these services can integrate these platforms via application programming interfaces (APIs). The ability to rapidly add or replace specific solution providers is key to this model, as it allows companies to realize the "fast follower" vision of capitalizing on best-of-breed solutions.

- (Alternative) Payment Methods: Payment methods refer to the entire set of means through which shoppers can pay for their purchases. Alternative payment methods or local payment methods are common terms for non-card-based payment methods.
- In this report, we discern the following payment methods:
  - O Credit card: Credit cards are issued to cardholders, after which a revolving account is created by the issuer, granting a line of credit to the cardholder. The cardholder can then borrow money for payment to a merchant. For credit cards, we distinguish two different types of schemes: the three-corner model (closed and exclusive scheme, e.g. AMEX, Diners Club, Discover) and the four-corner model (open and inclusive scheme, e.g. Mastercard, Visa, UnionPay, RuPay).
  - Debit card: Traditionally facilitating offline payments, debit cards are also used increasingly online, as well. They function almost the same way as a credit card, but without several risks of debt.
  - E-wallet: An e-wallet is a digital tool (software or app) for consumers to store their money or payment methods. It stores credentials of e.g. debit, credit cards, and alternative payment methods. Some e-wallets also store loyalty programmes.
  - o Account-to-Account payments (online banking e-payments): According to Global Payments Report (WorldPay) bank based payments, or online banking payments (or account-to-account payments) will account for 20% of all ecommerce payments surpassing both credit cards and debit cards by 2023. In Europe the growth is accelerated by PSD2 and instant payments. PSD2 has made it easier for payments providers (TPPs) to create an overlay between different banks, allowing the user to quickly authenticate and share her banking credentials to initiate payments. Furthermore, PSD2 mandates that banks have to develop APIs in order to provide a secure method for third-party providers to access the consumer's account and initiate

 $<sup>\</sup>underline{^5}\underline{\text{https://www.ecb.europa.eu/stats/money\_credit\_banking/electronic\_money/html/index.en.html}}$ 

payments on their behalf. In some countries, e.g. in The Netherland, Baltics, Germany, online banking payments were already a dominant payment methods for years.

- o *Direct debit*: There are no card scheme networks involved in the SEPA Direct Debit (SDD) Core scheme. All communication happens directly between banks. To set up payments by SDD, the payer must complete a mandate to the merchant. This mandate contains bank-approved wording that makes it clear the payer is setting up an authorisation for the merchant to debit their account. The interface for completing the SDD instruction is controlled by the merchant, which then sends the direct debit initiation to the bank. The SDD core scheme can be used for single (one-off) or recurring direct debit collections. Direct debit offers a relatively inexpensive payment method to merchants.
- o *Invoice/Instalment/Buy-now-pay-later* (BNPL): Can refer to two types of invoice payments: open invoice (payment after delivery) and instalment payments (a series of payments that a buyer makes instead of a lump sum to compensate the seller). The pay by invoice method has been and still is very popular in the DACH region where merchants enabled consumers to first choose and try the goods from the catalogues, and pay for them later on. At present, there is an uplift in the usage of BNPL solutions for shopping, mostly driven by trends such as Gen Z and Millennials looking for convenient budgeting tools, and the lack of interest fees in many cases. As well, the COVID-19 pandemic has also played a crucial role in pushing this new shopping habit further for the obvious reason: it's financially convenient. According to a Worldpay report, in 2020, buy-now-pay-later solutions accounted for 2.1% of ecommerce transactions worldwide, continuing to earn market share, and expecting to double by 2024.
- Direct carrier billing: Direct carrier billing implies making a payment for goods or services, which is charged to the customer's mobile phone account, either to the monthly bill (for customers with a contract) or as a debit from prepaid credit. Presently, online purchases of digital content (games, music, video, e-books, and ringtones), charity donations, TV voting, and competitions are the primary use case for direct carrier billing.



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## Domains in the Payment Landscape: "Faster, Connected & Diversified"

This piece was initially conceived for the Who is Who in Payments Report, published by the Paypers, and written by Annabel Keulen, Christian van Ramshorst, Lex Franken, and Mounaim Cortet from Innopay. It has been updated for the purposes of the current report.

The payment ecosystem and infrastructure continue to transform through increasing speed, connectivity, and increasingly diversified transaction services. Therefore, besides the seven domains, two new domains are introduced. As depicted by domain 8 (figure 1), the infrastructure layer is being innovated as **alternative infrastructures** are being introduced. At the same time, the payment ecosystem is diversifying its traditional payment services with **alternative transaction services**, as will be further illustrated in domain 9. The transformations within the seven domains and the two new domains will be discussed in the remainder of this chapter.

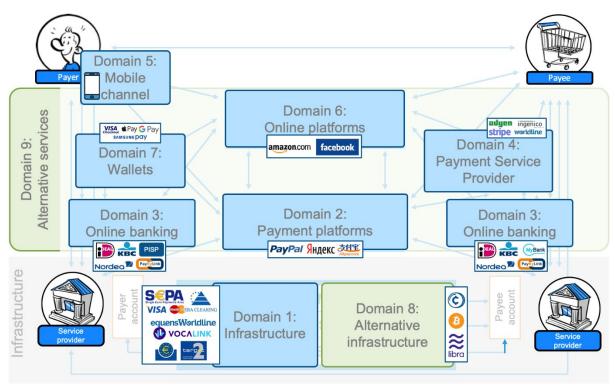


Figure 1: Interconnected domains in the payment ecosystem

### **Domain 1: Digitalisation of payment infrastructure**

Domain 1 covers the digitalisation of the payment infrastructure. Infrastructure encompasses 'instruments' (initiating money transfers via payment methods such as cards and SEPA Credit Transfers (SCT)), 'processing' (consisting of netting and clearing payments), and 'settlement' (settling funds via central banks).



Figure 2: Traditional infrastructure enriched by new infrastructures

As depicted in figure 2, a new infrastructure capable of instant processing (on a 24/7/365 basis) of payments is gaining traction on both demand and supply side as it is increasingly positioned as the new norm. The traditional payment infrastructure is aimed at batch processing and involves cut-off times (e.g. no processing after 17.00 or on the weekends). The transition to instant payments modernises the systems, lowers cost, and enables new services by facilitating pertransaction processing, 24 hours a day,7 days a week, and 365 days a year. So far, more than 45 countries have already moved towards faster or real-time payments and at least 25 more are working on it.

While this movement towards faster payments has already been happening for over a decade (e.g. UK's Faster Payments system launched in 2008), the more recent launch of the European SEPA SCT Instant scheme and SWIFT's GPI Instant service marks a development towards cross-border real-time payment services between connected banks

(SCT Inst within SEPA, and SWIFT GPI from SEPA to other areas).

Given the rise in consumers' and corporates' need for quick settlements globally and the ongoing regulatory push for faster payments, more banks are expected to follow by implementing instant payment capabilities. Instant payments is an important development for Europe as a key strategic building block to respond to the dominance of card schemes and increasing popularity of - and growing dependence on alternative payment networks. A major initiative in the field of instant payments is European Payment Initiative (formerly known as PEPSI), where 16 banks of 5 countries are developing a unified payment proposition, able to compete with the existing payment schemes and BigTech services. The first transactions are expected in 2022.

### Domain 2: Platforms on top of payment infrastructure

Domain 2 covers payment platforms, which facilitate the 'purchase' step in the customer journey of the payer. Besides initiating the required money transfer (for funding and withdrawal) via connected traditional payment instruments (facilitating 'payment'), payment platforms enable different variations on the 'transaction trinity' (each transaction consists of an agreement, payment, and delivery step) as illustrated in figure 3. While agreement and delivery usually are outside the scope of actual payment, payment platforms provide increasingly more options to manage timing and order of payment and delivery to ensure a trusted transaction between payer and payee, for instance withholding payment to merchant until a product has been delivered to the payer.

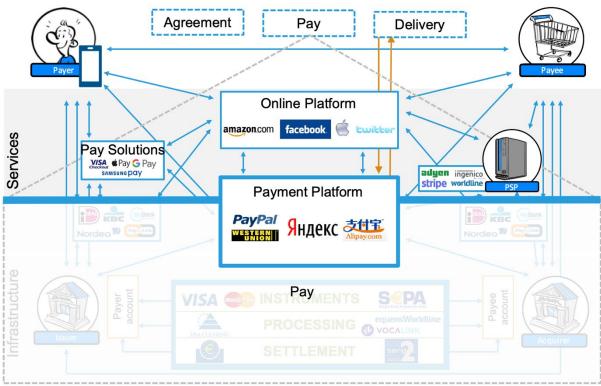


Figure 3: Payment Platforms facilitate a variety of 'purchase' flows by managing pay and delivery

Payment platforms developed their functional capabilities to support a larger variety of transaction types. Examples include Yandex's peer-to-peer payments and PayPal's consumer credit offering. Another area of functionality is data related, for example the registration of personal address preferences by payment platforms.

Next to functional developments, consolidation of platforms is taking place as a method to increase reach and volume of payment solutions. An example of this is the acquisition of Chinese GoPay by PayPal to increase their presence in the Chinese market and relevance for Chinese merchants. Increasing competition between platforms fuels consolidation via mergers and blurs boundaries. In order to stay relevant, players choose different strategic paths: for example, they can choose to acquire capabilities to strengthen geographical footprint, to specialise in specific merchant segments and verticals, or to expand service portfolio with value added services. More on this development in domain 4.

### **Domain 3: Online Banking ePayments**

Domain 3 covers the development of banks and banking communities offering online banking services to initiate electronic Payments (OBeP) from one bank account to another. Overall, there were two types of OBeP solutions: monobank solutions and multibank schemes (such as iDEAL, Giropay, and MyBank).

An important addition is the third-party payment initiation interface as required by the revised Payment Service Directive (PSD2). Banks are mandated to expose at least one interface (and a fallback mechanism, where required) to facilitate payment initiation by licenced third parties. These third parties require a specific PSD2 licence for the role of Payment Initiation Service Provider (PISP), which is a regulated role under PSD2. Note that third party providers who initiate payments directly from payment accounts are not a new phenomenon. Players like Sofort and Trustly, for instance, have managed to build strong positions in selected markets with their business models. These players will now be regulated as a PISP under PSD2.

Other developments in this domain are the customer journey improvements for customers by both non-banks and banks, as illustrated by figure 4. Banks are now developing their monobank solutions with improved journeys themselves, such as in-app person-to-person (P2P) payments.

Another interesting development is using OBeP at the physical POS through the mobile banking app. The payer scans a QR code from a terminal or cash register, or taps their phone. For example, Payconiq is developing POS payment propositions (directly linked to payment accounts with various banks in the BeNeLux and Germany) through QR codes that can be scanned via the Payconiq mobile app. Other examples include TWINT (CH), MobilePay (Nordics) and Bizum (ES).

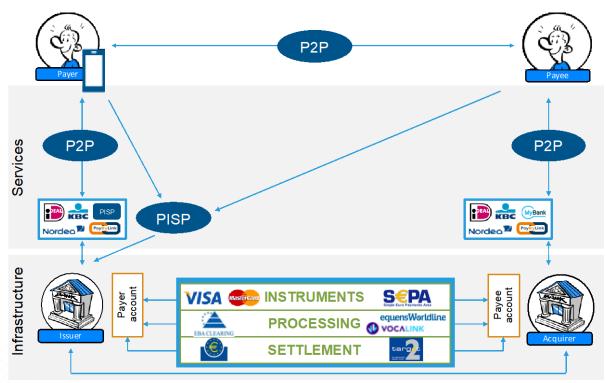


Figure 4: P2P payments simplify the customer journey for payments between consumers

# **Domain 4: Payment Service Providers offering simplicity to merchants**

Domain 4 covers the role of Payment Service Providers (PSPs), and mainly focuses on aggregation of payment methods and offering easy access to these methods for payment acceptance by merchants.

The PSPs' market for core payment transaction processing services is maturing, evidenced by the increasing price pressure faced by hundreds of incumbent PSPs and the strong drive towards consolidation. Staying on top of the game is challenging with the ever-evolving consumer and merchant payment needs. PSPs are pursuing various strategic paths to cope with the changing market dynamics:

- 1. Strive for cost-leadership through global reach and scale, flexibility and backward integration (e.g. Global Payments acquiring TSYS, Fiserv acquiring First Data, FIS acquiring Worldpay, Worldline acquiring Ingenico, and Nets acquiring Concardis, Sia, and Nexi)
- 2. Pursue niche plays by offering best of class services in a specifically chosen horizontal or vertical market and merchant size (e.g. Stripe, Braintree, and SumUp focusing on vertical niche markets and typical smaller merchant sizes)
- 3. Explore options before, during, and after the payment step in the buying process, to provide a more complete merchant service offering as depicted in figure 5. Examples include PayPal's acquisition of iZettle and Adyen's banking licence for improving their omni-channel offering in their merchant offerings

We also observe the market entry of new parties that integrate the diverse service portfolio of the various PSPs in the world, effectively aggregating PSPs (which were originally aggregating services on their own). Examples include ProcessOut, Alpha fintech, ZooZ, Ixopay, and Spreedly. Services typically include optimisation of transaction routing (selecting best fitting PSP for any given transaction), dashboarding key indicators across PSPs and aggregated reconciliation services.

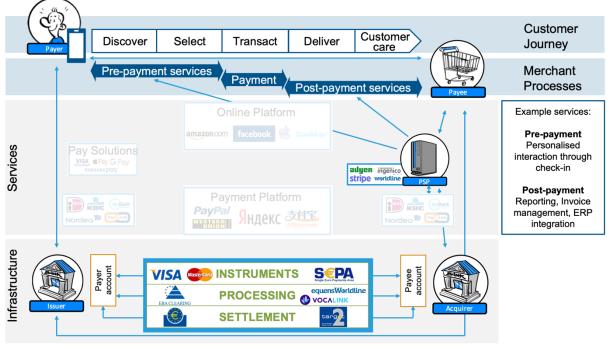


Figure 5: Growth strategy 2: Pre- and Post-payment Services being explored before, during and after payment

### **Domain 5: Mobile revolution**

The rise of mobile devices as a consumer channel for payment initiation is the focus of domain 5. The likes of Apple Pay, Google Pay, and Samsung Pay have popularised 'cardless' payments at the point of sale. Next to this, the mobile app has replaced the online web banking environment as preferred channel for interaction with the bank, as illustrated in figure 6.

The consumers' mobile preference has led to the rise of challenger banks that have a dedicated focus on the mobile channel. Banks such as N26, Revolut and Bunq do not have physical branches for consumers, virtually all banking services are accessible via an app-only approach. These mobile banks have entered the market with compelling customer-centric payment and banking propositions (B2C). Some of these challenger banks are seeking to leverage their technology assets by developing new business propositions (B2B). Examples include Fidor, Monzo, Wise, and Starling bank, who are aiming for business customers with their B2B banking propositions.

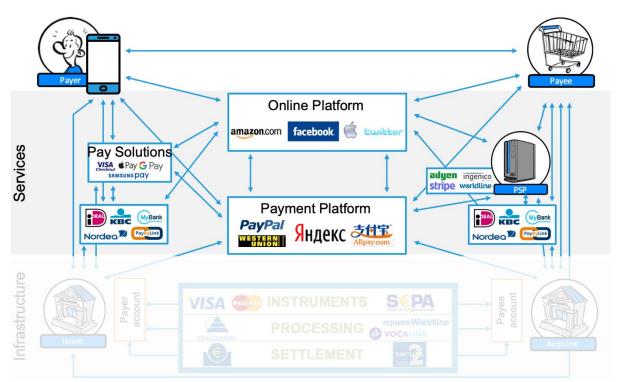


Figure 6: Traditional channels are replaced by new mobile-only channels

### **Domain 6: Online platforms**

Domain 6 covers the rise of online platforms (GAFA & BAT\*) for social interaction and commerce. With increased presence in every daily aspect of consumers, these platforms offer their own dedicated payment solutions integrated in their respective platform offerings as depicted in figure 7.

Globalisation provides a need for consumers to transact outside of their own regional scopes. Online platforms are offering services that simplify onboarding to payment systems outside a consumer's own region (e.g. Alipay offers a wallet solution for non-Chinese consumers to simplify their financial transactions in Chinese commerce markets). Similarly, online platforms are driving acceptance of their payment solutions beyond their core market, driving reach, and ultimately, conversion for merchants. More and more these are referred to as 'super apps' as these platforms gear all efforts to choice, ease of use, and security. WeChat, Alipay, and Baidu are examples, aggregating hundreds of thousands of merchants and services on their apps, reducing the need for separate apps for separate services.

Being present during every step in the consumer's daily life provides rich data, enabling sophisticated payment solutions that align with consumer needs beyond the current 'buying process'. In turn, providing payment services to consumers increases the platform's access to consumer data and strengthens its capability in providing relevant value-added services.

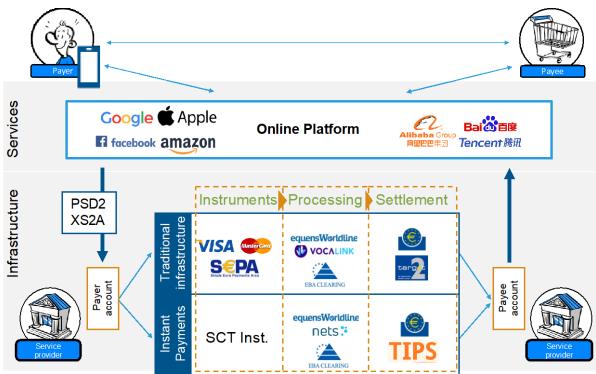


Figure 7: What position will online platforms claim in the financial system and how will this impact the role and relevance of traditional payment institutions?

\*GAFA = Google, Amazon, Facebook, Apple; BAT = Baidu, Alibaba, Tencent

### **Domain 7: Payment solutions; previously wallets**

Previously, domain 7 covered wallets (aggregating cards) aimed at reducing checkout complexity for consumers. Recently, new payment solutions have entered the market and the wallet domain has expanded beyond card aggregation: P2P payments have really taken off, PSD2 payment services are increasingly emerging and wallets incorporate non-payment related services to further support consumers.

At first, P2P payments were off to a relatively slow start. Consumers were not very willing to pay for this type of service, especially since they were comparing it with payments via OBeP or via Payment platforms, which are considered (virtually) free of charge. However, popularity of P2P payments is increasing since service providers are reducing (or even removing) costs. They do this by taking the approach of a marketing tool and thus absorbing any additional transaction costs to push adoption by consumers.



As a next step (towards a profitable business model), these service providers are now looking to move their (free) consumer payment solutions towards the business domain (C2B), capitalising their large customer base to create a revenue model by offering paid services to business customers. For example, the Dutch Tikkie has been a catalyst for the Dutch P2P market (absorbing iDEAL costs normally paid for by merchants), promptly followed by individual banks' P2P offerings (as briefly discussed in domain 3). Tikkie has expanded to the business domain, offering C2B services in order to generate revenue and a viable business model. Another example is Venmo (owned by PayPal), an American P2P payment solution that started off by absorbing transaction costs to create a user base. It now generates revenue by enabling payments to merchants (and charging transaction fees to merchants).

PSD2 enables consumers to initiate a payment from a licenced third-party application. This can

develop in a 'wallet' solution, in which the consumer is able to initiate payments from different accounts through a single application. However, a lack of standardisation in PSD2 interfaces among banks on a European (and often national) level slows down service providers willing to offer such payment account 'wallet' solutions, as it increases cost, complexity and implementation time to create sufficiently high reach. To off-set this burden and complexity we see various technical service providers emerging that take care of the connectivity.

Recent developments in wallets show incorporation of payments with non-payment related services, such as in-app storage for loyalty and discount cards (e.g. apps such as OK and Reward Cards). This further simplifies the customer journey beyond payments. Domain 9 further covers this development of non-payment services.



A strong growth may be expected from wallets for cryptographic assets (tokens), and of existing wallets who add these assets to their functionality. Some cryptographic tokens can be used for payments at the point of sale. Providers like Wirex, Gemini, and BlockFi offer Visa or Mastercard debit cards where payers can pay directly from their cryptobalance (e.g. Bitcoin, Ethereum, Litecoin), with real-time conversion into fiat currency at the moment of payment. The merchants receive the amount in fiat, and have no exposure to crypto.

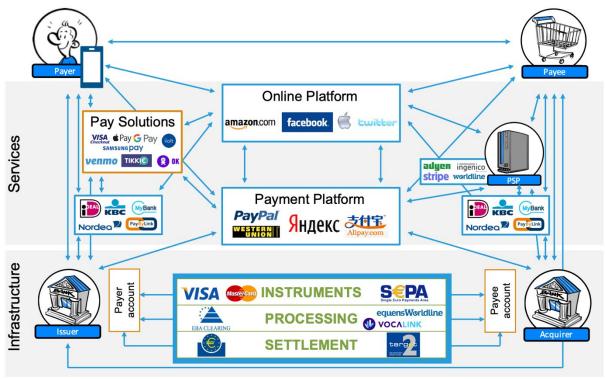
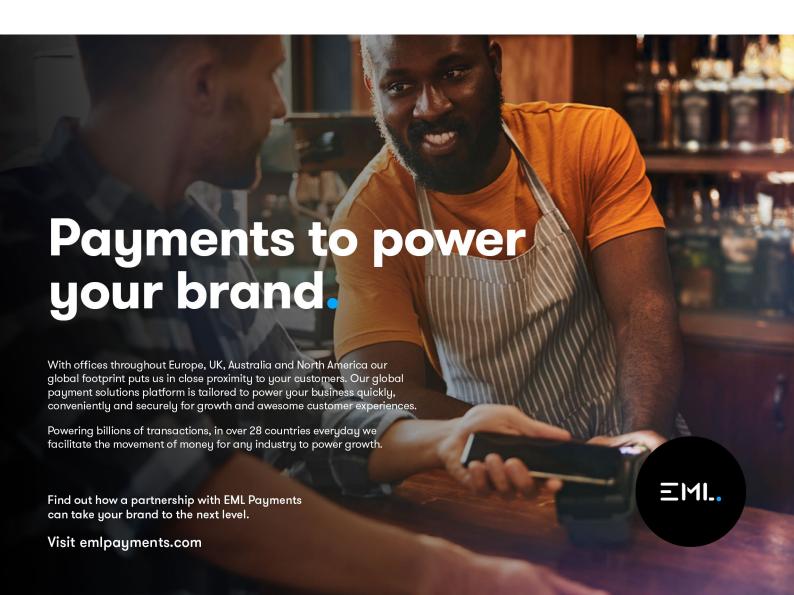


Figure 8: Payment solutions move beyond card payments in simplified check-out processes



### **Domain 8: Alternative transaction infrastructure**

The evolution of the payment landscape as described in domains 2 to 7 always had the initial payment infrastructure from domain 1 as the backbone for their innovation. Nowadays, the payment infrastructure itself is the subject of innovation, facing potential disruption. While traditional players have initiated new infrastructure initiatives such as instant payments, and are looking at the possibilities that technology such as blockchain can bring to the financial system, non-traditional players are also looking into development of infrastructure that may heavily impact the traditional financial system.

Non-traditional players are introducing alternatives to the traditional transaction infrastructure, creating a system in which 'service providers' exchange value on behalf of payer and payee through different transaction infrastructures (as depicted in figure 9). This is happening for several reasons, such as to reduce dependency on traditional financial players, to capitalise on existing capabilities, to accelerate innovation, and to shift trust and governance away from organisations and towards a trusted infrastructure instead.

Specific attention needs to be given to Decentralised Finance (DeFi). The DeFi movement is based on the disrupting perspective that existing financial products and services can be recreated, utilising a decentralised architecture that operates without the control of centralised companies and governments.



Instead, the infrastructure, products and services leverage existing technology-based protocols, smart contracts and cryptocurrencies. In effect, DeFi can offer anyone with an internet connection access to a global and open peer-to-peer alternative to the current financial system. As such, DeFi has significant disruptive potential and is poised to impact the current financial system and its players in markets such as international

remittance, lending and borrowing, derivatives, payments, and asset transfers.

Looking at the Total Value Locked (TVL) in the smart contracts of all projects – which is the common measure of DeFi's success – indicates that the movement seems to be gathering momentum. The TVL grew by a factor of 20 to approximately USD 16 billion in 2020, and that growth is clearly still accelerating rapidly as the TVL currently stands at USD 66 billion (as of 30 April 2021). To put this in perspective, this is approximately 6% of the valuation of Bitcoin.

Specifically for payments, the so-called 'layer 2 solutions' are of significant potential. They offer speed and low cost, but are securely locked on top of, for example, Ethereum or Bitcoin (both seen as 'layer 1'). Layer 2 solutions for payments include Lightning, Flexa, and xDAI. Its disruptive potential can be large, as there will be only a few parties involved in executing payments, mainly at the 'onramp' side for payers and payees (merchants) which takes care of the interface with the traditional financial world. All in the middle will be replaced by technology, protocols, and accompanying governance, enhancing speed and (probably) lowering costs. In June 2021 the parliament of El Salvador voted for making bitcoin legal tender and the lighting network part of its domestic retail payments infrastructure.

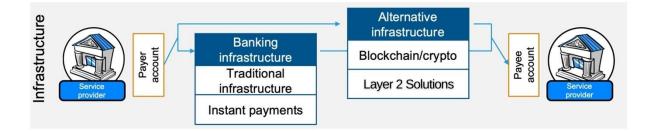


Figure 9: Operation of infrastructure is done by 'service providers' in the payer and payee domain (as opposed to traditional issuers and acquirers)

Alternative transaction infrastructure based on blockchain and cryptocurrency has been around for some years now. In certain situations, this proves valuable (e.g. recent hyperinflation of Venezuela's national currency), but general adoption as payment mechanism for everyday purposes is moving slowly. A more centralised endeavour into alternative infrastructure is coming from the Libra consortium, in 2021 renamed into Diem. Since its announcement in 2019, strong regulatory scrutiny has made the initiative revise and basically reduce its scope. Now Diem is poised to pilot launch in 2021 with the introduction of the Diem USD stable coin. Its headquarters will move from Switzerland to the US. Even though reduced in scope, Diem has a strong position for changing the infrastructure landscape, because of the huge reach of Facebook and its Novi wallet. This allows for the Diem USD stablecoin to be used worldwide in P2P and merchant payments.

At the same time, regulatory authorities are also starting to initiate their own initiatives in the domain of alternative infrastructures. In response to the initiation of Libra / Diem, China's national bank is accelerating their development of a digital Yuan (DECP). DECP would offer 'controllable' anonymity and the functionality to replace paper money. Pilots are conducted in 2021 and possibly first large usage on the Winter Olympics of 2022. Also, the European Central Bank and FED Reserve have their digital currency project on their way, without clear pilot and launch dates. Opinions on the viability and desirability of alternative transaction infrastructures by central banks vary, and the coming years are expected to reveal the real potential of these infrastructures.



### **Domain 9: Alternative services**

The traditional payment infrastructure serves as the foundation for payment related services. A variety of services exist in a certain layer, but in the end, they result in a traditional payment such as SCT or card transaction.

In the quest for new business models, financial institutions have found new applications for their payment infrastructure. Their interconnected network of trusted and regulated entities, specialised in the exchange of structured data, proves valuable for different types of services besides payments.

Examples on how the existing payment infrastructure can be used for other applications and services include the sharing of personal data for third-party onboarding or log-in actions (e.g. BankID schemes), but also combining payments with other data streams such as e-invoicing or loyalty and discount schemes (directly connected to payments). Other alternative services include credit services offered to both consumers (e.g. PayU) and businesses (e.g. PayPal). By using (historical) transaction information of buyers and sellers to do risk profiling and scoring, parties like Amazon and PayPal are able to provide instant lending services to facilitate payment transactions.

COVID brought acceleration in all sorts of digital services, especially in digital identity. The large BigTechs, governments, and banks all hold (parts of) the identities of people and organisations. Several projects and initiatives are on their way, where especially governments are improving the conditions for a more federated way of digital identity provisioning, in order to support a wide range of use cases, such as on-boarding, health-proofing and skill-proofing.

PSD2 accelerates these movements by facilitating customer-controlled re-sharing and re-using of their financial data. This way of working is expected not to be limited to the financial sector, as other sectors (e.g. energy, insurance, pensions, travel) also hold data which could be re-shared under the control of the customers. This will require a generalised identity and data exchange infrastructure.

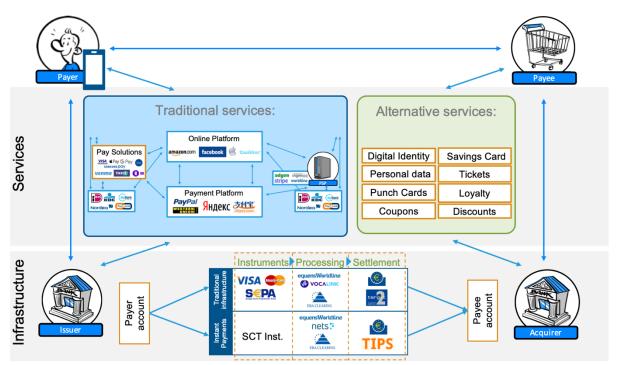


Figure 10: Rise of alternative services on top of existing infrastructure and services

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# Part 2: Mapping the European Payment Landscape

### **Non-EU International Players**

This section provides details on payments players headquartered outside the EU but with payments operations or subsidiaries within the EU. Players that are headquartered in the EU but have payments operations or subsidiaries outside of the EU are described in the "European International Players" section.



### Introduction:

Europe is a very attractive playground for non-European actors. The population is relatively wealthy, the free trade area is one of the largest trading zones in the world, and European purchasing power is significant. Moreover, the EU's laws are open to international players and there is a strong free-trade mentality, allowing major international payments players to set up shop and quickly gain market share. Among the foreign giants, we mainly find big digital players such as PayPal, Apple Pay, Alipay and Google pay among others. However, the traditional banking world seems to still be dominated by European institutions. But in a market undergoing a revolution, will they still be tomorrow's leaders in payments? This section attempts to identify those foreign international players operating over the European market.

### **Banks:**

European banks continue to dominate their home markets versus the non-EU giants such as Wells Fargo, J.P. Morgan or Citibank. However, these big foreign banks are starting to set foot in some European countries through extensive branch and subsidiary networks, as Wells Fargo and J.P. Morgan have done in Ireland. The British banks have fallen outside of the EU as a result of Brexit, but they continue to maintain and develop business in the EU space via "hubs" such as Ireland or Luxembour

Name	HQ for Europe	HQ Country	Group	Number of Employees	Net Turnover (Million)	Net Profit (Million)	LinkedIn
Bank of America Merill Lynch S.A.	IE	US	Bank Of America	15.100	\$91.247	\$28.147	<u>Profile</u>
Bank Of China <sup>Z</sup>	LU	CN	Bank Of China	309.384	\$75.143,84	\$28.895,23	<u>Profile</u>
<u>HSBC</u> <sup>8</sup>	UK	UK	HSBC	226.000	\$52.026	\$6.099	<u>Profile</u>
J.P. Morgan bank <sup>2</sup>	UK	US	JP Morgan	255.351	\$36.522	\$28.993	<u>Profile</u>
Barclays bank <sup>10</sup>	UK	UK	Barclays Bank	83.000	\$29.218	\$3.302	<u>Profile</u>
Citibank Europe <sup>11</sup>	IE	US	Citi Group	210.000	\$13.800	\$10.994	<u>Profile</u>
Wells Fargo Bank International 12	IE	US	Wells Fargo	268.531	\$3.750	\$3.301	<u>Profile</u>
Revolut <sub>13</sub>	UK	UK		1.289	\$213,52	-\$138,96	<u>Profile</u>
First Merchant 14		US	First Merchant Corp.	1.907	\$169,98	\$148,60	<u>Profile</u>
<u>Scotiabank</u> 15	UK	CA	Scotiabank	92.001	C\$7.446	C\$6.778	<u>Profile</u>
Bank of Montreal Europe 16	IE	CA	Bank of Montreal	43.360	C\$6.060	C\$5.097	<u>Profile</u>
NBC Global Finance 17	IE	CA	National Bank of Canada	25.604	C\$2.404	C\$2.041	<u>Profile</u>
Sberbank 18	AT	RU	Sberbank	285.555	₽907.500	₽747.400	<u>Profile</u>
VTB Bank 19	DE	RU		82.250	₽440.000	₽201.200	Profile
Gazprom Bank <sup>20</sup>	LU	RU	Gazprom	n/a	₽142.754	₽44.585	<u>Profile</u>

<sup>&</sup>lt;sup>6</sup> Bank of America Merill Lynch, Annual Report 2019 <sup>Z</sup> Values provided by Orbis (Group Figures) <sup>8</sup> Values provided by Orbis (Group Figures)

<sup>&</sup>lt;sup>9</sup> Values provided by WSJ (Group Figures) <sup>10</sup> Values provided by Orbis (Group Figures)

<sup>&</sup>lt;sup>11</sup> Values provided by WSJ (Group Figures)
<sup>12</sup> Values provided by WSJ (Group Figures)
<sup>13</sup> Values provided by Orbis
<sup>13</sup> Values provided by Orbis

<sup>14</sup> Values provided by WSJ (Group Figures)

<sup>15</sup> Values provided by WSJ (Group Figures) 16 Values provided by WSJ (Group Figures)

<sup>&</sup>lt;sup>17</sup> Values provided by WSJ (Group Figures)

<sup>18</sup> Values provided by WSJ (Group Figures)

<sup>&</sup>lt;sup>19</sup> VTB Bank, Annual Report 2019 <sup>20</sup> Gazprombank, Annual Report Index 2019

<u>Garanti Bank<sup>21</sup></u>	NL	TR	BBVA	18.784	<b>t</b> 42.045	<b>t</b> 6.241	<u>Profile</u>
T. Isbank <sup>22</sup>	DE	TR		24.053	<b>t</b> 22.771	<b>1</b> 4.486	<u>Profile</u>
<u>Akbank<sup>23</sup></u>	DE	TR		12.000	<b>ŧ</b> 16.938	<b>\$</b> 5.352	<u>Profile</u>
Yapi Kredi Bank <sup>24</sup>	NL	TR		16.631	<b>\$</b> 15.531	<b>\$</b> 3.600	<u>Profile</u>

### **Electronic Money Institutions:**

A number of international companies have set up electronic money institutions in Europe. Such payments entities usually are a part of larger international payments groups, or alternatively may be part of established ecommerce enterprises. Brexit has also resulted in many UK entities applying for licenses across the EU to keep servicing their clients located in the European Union.

Name	HQ for Europe	HQ Country	Group	Number of Employees	Net Turnover (Million)	Net Profit (Million)	LinkedIn
Airbnb Pay 25	LU	US	Airbnb	5.597	\$3.378	-\$4.585	n/a
Modulr Finance <sup>26</sup>	IE	UK		58	\$8,36	-\$3,07	<u>Profile</u>
Bilderlings Pay <sup>27</sup>	LV	UK		67	\$3,4	-\$18,93	<u>Profile</u>
Pingpong Europe <sup>28</sup>	LU	US	PingPong Global Solutions	n/a	\$3,19	\$0,0192	n/a
<u>DiPocket</u> <sup>29</sup>	LT	UK		60	\$1,58	-\$0,327	<u>Profile</u>
EML Payments 30	IE	AU		444	A\$11,43	A\$8,45	<u>Profile</u>
<u>Azimo</u> 31	NL	UK	Azimo Ltd	86	€17,57	-€1,62	<u>Profile</u>
<u>ISignThis</u>	CY	AU		n/a	n/a	n/a	<u>Profile</u>
Opal Transfer	LT	UK		n/a	n/a	n/a	<u>Profile</u>
Seven Seas LT	LT	CN		n/a	n/a	n/a	<u>Profile</u>
Pyrros Lithuania	LT	UK	Perniciem Limited	n/a	n/a	n/a	<u>Profile</u>
<u>3s.money</u>	LU	UK		n/a	n/a	n/a	<u>Profile</u>

<sup>&</sup>lt;sup>21</sup> Garanti Bank, Annual Report 2019

<sup>&</sup>lt;sup>22</sup> T. Isbank, Annual Report 2019

<sup>&</sup>lt;sup>23</sup> Akbank, Annual report 2019

<sup>&</sup>lt;sup>24</sup> Yapi Kredi, Annual Report 2019

<sup>&</sup>lt;sup>25</sup> Values provided by WSJ (Group Figures)

<sup>&</sup>lt;sup>26</sup> Values provided by Orbis

<sup>&</sup>lt;sup>27</sup> Values provided by Orbis

<sup>&</sup>lt;sup>28</sup> Values provided by Orbis

<sup>&</sup>lt;sup>29</sup> Values provided by Orbis

<sup>&</sup>lt;sup>30</sup> Values provided by WSJ (Group Figures)

<sup>&</sup>lt;sup>31</sup> Values provided by Orbis (UK Entity)

### **Payment Schemes:**

As far as payment schemes are concerned, there is no doubt that American foreign players are the undisputed leaders in Europe as a whole. Visa and Mastercard represented nearly 60% and 39%, respectively, of all credit card and prepaid card transactions in Europe in 2019. 32

Name	HQ for Europe	HQ Country	Group	Number of Employees	Net Turnover (Million)	Net Profit (Million)	LinkedIn
American Express 33	UK	US		64.500	\$47.020	\$6.759	<u>Profile</u>
<u>Visa</u> 34	UK	US		19.500	\$22.977	\$12.080	<u>Profile</u>
<u>Mastercard Europe</u> 35	BE	US		18.600	\$16.900	\$8.100	<u>Profile</u>
Discover Global Network <sup>36</sup>	UK	US	Discover Financial Services	17.000	\$13.989	\$1.957	<u>Profile</u>
Union Pay Internationals/Europe	FR	CN	Union Pay	n/a	n/a	n/a	<u>Profile</u>

### **Payment Service Providers:**

### **Payment Gateways**

The payment gateway space is highly competitive, and Europe's open stance to outside enterprise has attracted a number of non-European players, primarily from the US. This category also contains payment gateways from the UK, which used to operate freely throughout the EU, but are now excluded from continuing to do so in the same way. However, this has not stopped them from trying to maintain their foothold on mainland Europe.

### Gateway, processing and acquiring:

Name	HQ for Europe	HQ Country	Group	Number of Employees	Net Turnover (Million)	Net Profit (Million)	LinkedIn
Global Payments <sup>37</sup>	CZ	US	Global Payments	24.000	\$7.424	\$585	<u>Profile</u>
Stripe Payments International Holdings							
<u>Ltd</u> 38	IE	US	Stripe Inc.	195	\$544,67	-\$21,06	<u>Profile</u>
<u>Verifone</u> <sup>39</sup>	IE	US		27	\$470,47	\$6,13	<u>Profile</u>
<u>TNS</u> 40	IE	US		13	\$44,67	-\$2,28	<u>Profile</u>

<sup>&</sup>lt;sup>32</sup> Statista.com, Market share of payment card schemes in Europe in 2019

<sup>&</sup>lt;sup>33</sup> American Express, Annual Report 2019 (Group Figures)

<sup>&</sup>lt;sup>34</sup> Visa, Annual Report 2019 (Group Figures)

<sup>35</sup> Mastercard, Annual Report 2019 (Group Figures)

<sup>&</sup>lt;sup>36</sup> Discover Global Network Annual Report 2019 (Group Figures)

<sup>37</sup> Values provided by WJS (Group Figures)

<sup>38</sup> Values provided by Orbis

<sup>&</sup>lt;sup>39</sup> Values provided by Orbis (IE Entity)

<sup>40</sup> Values provided by Orbis (IE Entity)

EVO Payment Inc41	DE	US	EVO Payment Internation al	234	\$10,44	-\$1,34	<u>Profile</u>
Payxpert 42	ES	UK		22	\$1,35	\$0,07	<u>Profile</u>
Nuvei Corporation 43	CY	CA		n/a	C\$503,05	-C\$142,49	<u>Profile</u>
Elavon Financial Services <sup>44</sup>	IE	US	US Bancorp	2.129	n/a	€0,041	<u>Profile</u>

### Gateways only:

Name	HQ for Europe	HQ Country	Group	Number of Employees		Net Profit (Million)	LinkedIn
<u>Shopify</u>	IE	CA		7.000	\$2.929,49	\$319,51	<u>Profile</u>
Cybersource Ltd. 45	IE	UK	Cybersource Corp (Visa Inc)	142	\$44,17	\$1,83	<u>Profile</u>
Shift4 Payments Lithuania 46	LT	US	Shift4 Payments	115	\$6,06	\$0,25	<u>Profile</u>
Paymentwall Inc	DE	US		n/a	n/a	n/a	<u>Profile</u>
<u>Datatrans</u> <u>AG</u>	СН	СН		n/a	n/a	n/a	<u>Profile</u>
<u>Fondy</u>	UK	UK		n/a	n/a	n/a	<u>Profile</u>
<u>SecurionPay</u>	СН	СН		n/a	n/a	n/a	<u>Profile</u>

### Other PSPs:

Some of Europe's top payment players are from outside Europe, but when it comes to players that focus on the acquiring section only, domestic players seem to be better positioned to offer their services to merchants and offer the right mixture of payment options. However, this has not stopped some international parties from trying: notable players include SumUP, CPI and the European leader Worldpay (more details on Worldpay are provided in the "European International Players" section).

<sup>41</sup> Values provided by Orbis

<sup>&</sup>lt;sup>42</sup> Values provided by Orbis

<sup>&</sup>lt;sup>43</sup> Values provided by WSJ

<sup>44</sup> Values provided by Orbis

<sup>45</sup> Values provided by Orbis (UK Figures)

<sup>&</sup>lt;sup>46</sup> Values provided by Orbis

Manage	HQ for	HQ	<b>C</b>	Number of	Net Turnover	Net Profit	Pate de
Name	Europe	Country	Group Crane	Employees	(Million)	(Million)	LinkedIn
<u>CPI</u> 47	DE	US	Co.	3.100	\$3.283	\$133,6	<u>Profile</u>
SumUp	IE	UK		n/a	n/a	n/a	<u>Profile</u>

As far as third-party payment service providers (TPPs) are concerned, British players regularly obtain the largest market shares. This is most notably the case for Skrill.

Name	HQ for Europe	HQ Country	Group	Number of Employees	Net Turnover (Million)	Net Profit (Million)	LinkedIn
Six Group 48	LU	СН	Worldline	623	\$1.013	\$124,46	<u>Profile</u>
Skrill 49	IE	UK	PaySafe Group	82	\$325	\$59,9	<u>Profile</u>
<u>PPRO</u> 50	UK	UK	PPRO	129	\$47,3	-\$12	<u>Profile</u>
TOSHL, razvoj aplikacij, d. o.							
<u>O. 51</u>	SL	US	Toshl Inc	n/a	\$0,010	\$0,005	<u>Profile</u>

### **Other Payment Services:**

Western Union plays a major role in Europe. Its activity is a little different from that of the traditional Gateways, focusing primarily on the remittance sector. Similar actors include Inteli Express and Korona Pay.

Name	HQ for Europe	HQ Country	Group	Number of Employees	Net Turnover (Million)	Net Profit (Million)	LinkedIn
Western Union <sup>52</sup>	LT	US		11.000	\$4.824	\$744	<u>Profile</u>
Inteli Express Payment Institution S.A.	GR	GE		n/a	n/a	n/a	<u>Profile</u>
KoronaPay	CY	RU		n/a	n/a	n/a	n/a

<sup>&</sup>lt;sup>47</sup> CPI, Annual report 2019 (Group Figures)

<sup>48</sup> Values provided by Orbis
49 Values provided by Orbis (UK entity only)
50 Values provided by Orbis

<sup>&</sup>lt;sup>51</sup> Values provided by Orbis

<sup>&</sup>lt;sup>52</sup> Value provided by WSJ

### **Alternative Payment Methods:**

The segment most vulnerable to market fragmentation is certainly that of alternative payment methods. In this space, Non-European International players already have a majority market share throughout Europe. Between Paypal, Apple Pay, Google Pay and Alipay, there is little room left for European players at the pan-European level. European alternative methods tend to be more focused on a domestic market and will be spread across a couple countries within the EU without be present throughout. For more information on these alternative payment methods, see the country-specific sections.

Name	HQ for Europe	HQ Country	Group	Number of Employees	Net Turnover (Million)	Net Profit (Million)	LinkedIn
Apple Pay Ltd 53	IE	UK	Apple Inc	137.000	\$260.174	\$55.256	<u>Profile</u>
Google Pay <sup>54</sup>	IE	US	Alphabet	135.301	\$97.618	\$40.269	<u>Profile</u>
Amazon Pay <sup>55</sup>	LU	US	Amazon	88	\$327	\$10,20	<u>Profile</u>
Paypal <sup>56</sup>	LU	US		16	\$248	n/a	<u>Profile</u>
Alipay (EUROPE) 57	LU	CN	Alibaba Group	76	\$89,11	\$0,50	<u>Profile</u>
Facebook Payments 58	IE	US	Facebook	n/a	\$18,6	\$1,46	<u>Profile</u>
Clearpay 59	ES	AU	Afterpay	650	A\$199,85	-A\$19,78	<u>Profile</u>

<sup>&</sup>lt;sup>53</sup> Apple, Annual report 2019 (Group Figures)

<sup>&</sup>lt;sup>54</sup> Values provided by Orbis (Group Figures)

<sup>&</sup>lt;sup>55</sup> Amazon, Annual report 2019

<sup>&</sup>lt;sup>56</sup> Paypal, Annual report 2019

<sup>&</sup>lt;sup>57</sup> Values provided by Orbis

<sup>&</sup>lt;sup>58</sup> Values provided by Orbis

<sup>&</sup>lt;sup>59</sup> Values provided by Orbis (Group Figures)

### BaaS/PaaS:

Banking as a service and software as a service (BaaS/PaaS) companies are driven by scale. There are a large number of small companies and start-ups in the EU looking to make a name for themselves locally but who struggle to compete with foreign companies such as the Swiss company Temenos, or the American ACI Worldwide. Moorwand and Railsbank provide payment and banking-as-a-service products. They offer credit card issuing services, digital banking and acquiring services for banks, fintechs and other payment companies.

Name	HQ for Europe	HQ Country	Group	Number of Employees	Net Turnover (Million)	Net Profit (Million)	LinkedIn
Fisery 60	UK	US		44.000	\$14.852	\$958	<u>Profile</u>
			Fidelity National Information Services,				
FIS Global <sup>61</sup>	UK	US	Inc.	62.000	\$12.552	\$158	<u>Profile</u>
Refinitiv 62	UK	UK	LSEG	2.231	\$2.435	-\$74,79	<u>Profile</u>
<u>Finastra</u> <sup>63</sup>	IE	UK		>9.000	\$1.900	n/a	<u>Profile</u>
ACI Worldwide Inc 64	IE	US		3.768	\$1.294	\$73	<u>Profile</u>
CSG Systems International 65	UK	US		4.807	\$990,5	\$58,7	<u>Profile</u>
Temenos 66	СН	СН		7.854	\$972,0	\$181,1	<u>Profile</u>
Railsbank LT 67	LT	UK		46	\$3,59	-\$1,62	<u>Profile</u>
Moorwand LT 68	LT	UK		7	\$6,07	\$0,60	<u>Profile</u>
Chargebacks991	US	UK		n/a	n/a	n/a	<u>Profile</u>

<sup>&</sup>lt;sup>60</sup> Values provided by WSJ (Group Figures)

<sup>&</sup>lt;sup>61</sup> Values provided by WSJ (Group Figures)

<sup>&</sup>lt;sup>62</sup> Values provided by Orbis

<sup>63</sup> Numbers are from the company's profile available on its website https://www.finastra.com/sites/default/files/2020-08/finastra-company-profile.pdf

<sup>&</sup>lt;sup>64</sup> Values provided by WSJ (Group Figures)

<sup>&</sup>lt;sup>65</sup> Values provided by WSJ

<sup>&</sup>lt;sup>66</sup> Temenos, Annual Report 2019

<sup>&</sup>lt;sup>67</sup> Values provided by Orbis (Group Figures)

<sup>&</sup>lt;sup>68</sup> Values provided by Orbis (UK entity)

### **European International Players**

In this section, you will only find those European players headquartered in the EU with a presence both inside and outside the EU. Details on payments players headquartered outside the EU but with payments operations or subsidiaries within this bloc are provided in the above "Non-EU International Players" section. Domestic actors of the countries present in individual countries in the EU are outlined in separate individual country sections of the report, which you can find below.

### Banks<sup>69</sup>:

Many banks operating outside the European market in addition to their European operations are part of major banking groups from France, Germany, and the Benelux region, such as BNP Paribas, Société Générale, Raiffeisen Bank International AG, and ING. These groups have business in Europe but also in Africa, Asia, and North America.

In addition, many Spanish and Portuguese banking groups have an extra-European presence in Latin America and South America for historical reasons.

	HQ		Number of	Net Turnover	Net Profit	
Name	Country	Group	Employees	(Million)	(Million)	LinkedIn
		Banco				
<u>Openbank</u>	ES	<u>Santander</u>	201 - 500	€ 91.696	€ 1.152	<u>Profile</u>
Banco						
<u>Santander</u>	ES		196.419	€ 56.785	8.116	<u>Profile</u>
		Groupe BNP				
BNP Paribas	FR	Paribas	198.816	€ 44.597	€ 8.173	<u>Profile</u>
BBVA	ES		126.974	€ 31.061	€ 4.345	<u>Profile</u>
<u>Société</u>		Société Générale				
<u>Générale</u>	FR	Groupe	138.240	€ 24.800	€ 4.061	<u>Profile</u>
<u>Deutsche</u>						
Bank AG	DE		87.597	€ 23.838	-€ 5.265	<u>Profile</u>
<u>Crédit</u>		Groupe Crédit				D ::
<u>Agricole</u>	FR	Agricole	72.524	€ 20.339	€ 5.198	<u>Profile</u>
<u>ING</u>	NL		53.431	€ 18.261	€ 4.942	<u>Profile</u>
Rabobank	NL		43.822	€ 11.915	€ 2.203	<u>Profile</u>
Commerzbank	DE		48.512	€ 9.116	€ 744	<u>Profile</u>
<u>Caixa Bank</u>	ES		35.736	€ 8.605	€ 1.708	<u>Profile</u>
ABN Amro	NL		17.977	€ 8.605	€ 2.046	<u>Profile</u>
DZ Bank AG	DE		30.825	€ 7.225	€ 1.873	<u>Profile</u>

<sup>&</sup>lt;sup>69</sup> The financial figures presented in the tables are collected from annual reports of 2019 expect for Open Bank which have figures provided by Orbis.

<u>Intesa</u>						
SanPaolo	IT		84.774	€ 5.672	€ 4.172	Profile
	11		04.//4	€ 5.6/2	€ 4.1/2	<u>1 101110</u>
Banca Monte						
<u>dei Paschi di</u>			0.1.100			Drofile
<u>Siena</u>	IT		21.420	€ 5.672	-€ 1.033	<u>Profile</u>
CIC	FR	Groupe Crédit Mutuel Aliance Fédérale	19.983	€ 5.213	€ 1.457	<u>Profile</u>
Banco de						
Sabadell	ES		24.454	€ 3.622	€ 768	<u>Profile</u>
Raiffeisen	LO		21.101	C 0.022	C 7 00	
Bank International						
<u>AG</u>	AT		46.873	€ 3.412	€ 1.364	<u>Profile</u>
		Groupe Crédit				
LCL	FR	Agricole	16.749	€ 3.371	€ 533	<u>Profile</u>
<u>Bankia</u>	ES		15.609	€ 3.245	€ 542	<u>Profile</u>
<u>Unicredit</u>	IT		96.145	€ 3.021	€ 3.491	<u>Profile</u>
<u>Bank of</u>						
<u>Ireland</u>	IE		10.424	€ 2.836	€ 448	<u>Profile</u>
<u>Millennium</u> <u>BCP</u>	PT	BCP group	17.528	€ 2.263	€ 401	<u>Profile</u>
Caixa Geral						
de Depositos (CGD)	PT	CGD group	12.348	€ 1.464	€ 762	<u>Profile</u>
Bankinter	ES		8.531	€ 1.190	€ 550	Profile
Abanca	ES		5.525	€ 760	€ 405	Profile
			0.020	2700	C 700	
<u>Banca</u> <u>Mediolanum</u>	IT		2.872	€ 738	€ 565	<u>Profile</u>
BPCE <sup>70</sup>	FR	BPCE	105.000	€ 738	€ 363 € 101	Profile
Novo Banco		DFCE				Profile
INOVO DUFICO	PT		4.869	€ 541	-€ 1.066	1101110
<u>Unione di</u> <u>Banche</u>						
<u>Italiane</u>	IT		18.848	€ 367	€ 285	<u>Profile</u>
<u>Credito</u> <u>Emiliano</u>						
(Credem)	IT		6.300	€ 296	€ 201	<u>Profile</u>
N26 GmbH	DE		367	€ 44	-€ 40	Profile
Danske Bank	DK		22.006	kr48.114	kr15.072	Profile

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<sup>&</sup>lt;sup>70</sup> BPCE: Annual Report, 2019

Finally, some smaller banks listed on the table below operate outside Europe because they have part of their business in the United States or in non-EU countries. These banks are listed separately due to the differences in scale they have compared with the above banks.

Name	Hq Country	Group	Number of Employees	Net Turnover (Million €)	Net Profit (Million €)	LinkedIn
<u>Ulster Bank</u>	IE		2.237	642	4	<u>Profile</u>
Oney Bank	UK	Auchan	2.615	447	43,9	<u>Profile</u>
AXA Bank	FR		554	159	20	<u>Profile</u>
<u>Haitong Bank</u>	PT	Haitong Securities	364	117	8	<u>Profile</u>
BlueOrange Bank	LV		229	22	5,7	<u>Profile</u>
Bawag P.S.K.	AT		4.353	1	0,5	<u>Profile</u>

### **Payment Service Providers:**

### **Payment Gateways:**

In this very competitive market, some European players have succeeded in reaching an important global position. Some of them reached this international position through acquisitions from non-European companies such as iZettle and Bambora, which were acquired by PayPal and Ingenico (EU), respectively. Other gateways expanded their business by offering their services in other continents, such as Mollie, Adyen, Trustly, and Klarna, who offer their services in America. It is important to mention that there are some major gateways headquartered in the UK, and as a result of Brexit, they are now recorded in the "Non-EU International Players" section above.

### Gateway, processing, and acquiring:

	HQ		Number of	Net Turnover	Net Profit	
Name	Country	Group	<b>Employees</b>	(Million)	(Million)	LinkedIn
<u>Adyen</u>	NL		1.182	€2.656,8	€204	<u>Profile</u>
<u>Payvision</u>	NL	ING	185	€164	€2,4	<u>Profile</u>
<u>European</u>		First Data				
<u>Merchant</u>		and ABN				
<u>Services</u>	NL	Amro	130	\$34,1	\$6,93	<u>Profile</u>
	LV		72	\$5	-\$0,9	<u>Profile</u>
		Paypal				
<u>iZettle</u>	SE	Europe	485	kr13.014	kr9.812	<u>Profile</u>
<u>Bambora</u>	SE	Worldline	102	kr2.221	kr189	<u>Profile</u>
		Naspers				
		group				
<u>PayU</u>	NL	(SA)	3.000	n/a	n/a	<u>Profile</u>
<u>MoneyMatrix</u>	MT		>50	n/a	n/a	<u>Profile</u>
Computop	DE		>50	n/a	n/a	<u>Profile</u>
3C Payment		Planet				
<u>Luxembourg</u>	LU	Payment	11871	n/a	n/a	<u>Profile</u>

<sup>&</sup>lt;sup>71</sup> Value Provided by Craft

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<u>Truevo</u>					
<u>Payments Ltd</u>	MT	>50	n/a	n/a	<u>Profile</u>
<u>Unlimint</u>	CY	n/a	n/a	n/a	<u>Profile</u>

### Gateway only:

	HQ		Number of	Net Turnover	Net Profit	
Name	Country	Group	Employees	(Million)	(Million)	LinkedIn
<u>SIBS</u>	PT		429	\$253	\$34,9	<u>Profile</u>
CM.com	NL		300	€96 <sup>72</sup>	-€1,8	<u>Profile</u>
<u>Paydoo</u>	LT		6	€1,53	-€0,03	<u>Profile</u>
		Mobillca				
<u>Fortumo</u>	EE	sh	79	€35,7	€2,1	<u>Profile</u>
X Infotech	LV		110	€5,8	€1,3	<u>Profile</u>
<u>Mollie</u>	NL		300	n/a	-€0,7	<u>Profile</u>
		Diebold				
<u>AEVI</u>	DE	Nixdorf	173	n/a	n/a	<u>Profile</u>
<u>Famoco</u>	FR		100	n/a	n/a	<u>Profile</u>

### Other PSPs:

In Europe, the global trend towards omnichannel has been strongly accelerated by the health crisis of 2020. This phenomenon is leading to a change in the buyer market, forced to renew itself and offer additional payment services. This is illustrated by the Top 50 major European buyers: among them we find 29 European players, divided between major banks such as the French Crédit Agricole, Crédit Mutuel, BPCE, BNP Paribas, Société Générale and La Banque Postale, and players offering gateway services alongside payment processing, such as Adyen.

				Net		
Name	HQ Country	Group	Number of Employees	Turnover (Million)	Net Profit (Million)	LinkedIn
<u>Ecomm</u>	IE		119	€11,1	-€2,4	<u>Profile</u>
<u>Merchant</u>						
Solutions						
Weststein	IE		12	€0,9	€0,1	<u>Profile</u>
<u>PrimeiroPay</u>	LU		28	n/a	n/a	<u>Profile</u>
<u>Lyra Network</u>	FR		333	n/a	n/a	<u>Profile</u>

One of the biggest payment services providers, the French company Worldline, was recently granted an AISP and PISP license. The company offers services in more than 50 countries worldwide. Another French company, Edenred, is present in 46 countries worldwide. European representation in the Third Party Payment sector is dominated by three major players – Worldline, Smart2Pay and Edenred.

<sup>&</sup>lt;sup>72</sup> https://www.cm.com/cdn/web/file/investor-relations/CMcom2019annualresults.pdf

	HQ		Number of	Net Turnover	Net Profit	
Name	Country	Group	<b>Employees</b>	(Million)	(Million)	LinkedIn
<u>Smart2Pay</u>	NL	Nuvei	50	\$4,96	n/a	<u>Profile</u>
		Worldline				
<u>Worldline</u>	FR	Group	11.877	€2.382	€311	<u>Profile</u>
Edenred	FR		10.000	€1.626	€346	<u>Profile</u>
<u>equensWorldl</u>	NL	Worldline	3.212	€739	€70	<u>Profile</u>
<u>ine</u>		Group				
		Docler				
Escalion 73	LU	Holding	6	€2,7	€0,611	<u>Profile</u>
<u>Transfermate</u>	IE		5	n/a	n/a	<u>Profile</u>
<u>Limonetik</u>	FR		n/a	n/a	n/a	<u>Profile</u>

# **Other Payment Services:**

AirPlus is a licensed payment institution which provides payment services related to business trips in around 60 countries. Their services aim at facilitating the planning of business trips. For instance, the company issues virtual (Mastercard) credit cards allowing employees to pay for a particular travel-related service (hotel rooms, flight, cars, etc). AirPlus also provides Business accounts to help the company manage the travel expenses, and debit accounts in order to pay for the flights without paying the credit card related added fees. The company counts around 48.000 corporate customers.

				Net		
Name	HQ Country	Group	Number of Employees	Turnover (Million €)	Net Profit (Million €)	LinkedIn
	Country	Group	Lilipioyees	(Million €)	(Million E)	Linkeam
<u>Lufthansa</u>						
<u>AirPlus</u>		Deutsche				
<u>Servicekarte</u>		Lufthansa				
n GmbH <sup>74</sup>	DE	AG	1.319	n/a	n/a	<u>Profile</u>
<u>Koosmik</u>	LU		n/a	n/a	0,2	<u>Profile</u>

# Alternative payment methods:

	HQ		Number of	Net Turnover	Net Profit	
Name	Country	Group	<b>Employees</b>	(Million)	(Million)	LinkedIn
<u>Austria Card</u> 75	AT		227	€70	€1	<u>Profile</u>
<u>Klarna</u>	SE		2.248	kr7.154	kr902,4	<u>Profile</u>
<u>Trustly Group</u>	SE		292	kr2.201	kr1.152	<u>Profile</u>

<sup>&</sup>lt;sup>73</sup> Escalion: Annual Report 2019

<sup>74</sup> https://www.airplus.com/corporate/en/company/about-us/facts-figures/facts-and-figures.html

<sup>75 2018</sup> corporate accounts of AUSTRIA CARD-PLASTIKKARTEN UND AUSWEISSYSTEME GESELLSCHAFT M.B.H.

# BaaS/PaaS:

As mentioned previously, the BaaS/PaaS market is driven by scale, and it is centred around a number of major providers. Some providers also have additional licenses to provide payments services themselves. For example, Finastra is a company offering financial software in retail banking, payments, lending, and transaction banking. They provide services in more than 130 countries to around 8,600 customers. Among them, 90 of the top 100 banks worldwide and more than 30% of all US financial institutions <sup>76</sup>. Another example is Arvato Financial Solutions, a part of the Arvato-Bertelsmann group. The company's subsidiary, Arvato Payment Solutions GmbH, is a payment institution licensed in Germany. Arvato Financial Solutions provides services - such as clearing or payment gateway - in 15 countries, mostly in Europe but also in the US and Brazil. Another notable service is AfterPay: a payment gateway offering "buy now, pay later" solutions. Customers can pay the invoice received by email up to 14 days after the delivery. This service is available in the Benelux, DACH and Nordic countries only <sup>77</sup>.

Name	HQ Country	Group	Number of Employees	Net Turnover (Million)	Net Profit (Million)	LinkedIn
<u>D8</u>						
<u>Corporation</u>	LV		55	€3,5	€0,4	<u>Profile</u>
<u>Arvato</u>						
<u>Financial</u>						
<u>Solutions</u>	DE	Bertelsmann	>5.000	n/a	n/a	<u>Profile</u>
<u>Idemia</u>	FR		15.000	n/a	n/a	<u>Profile</u>
<u>PayinTech</u>	FR		38	n/a	n/a	<u>Profile</u>
<u>Netcetera</u>	AT		28	n/a	n/a	<u>Profile</u>
TAG pay	FR		>11	n/a	n/a	<u>Profile</u>
<u>Wynd</u>	FR		138	n/a	n/a	<u>Profile</u>
Algoreg	LU		1-10	n/a	n/a	<u>Profile</u>
Radar						
<u>Payments</u>	NL	BPC Group	n/a	n/a	n/a	<u>Profile</u>

<sup>&</sup>lt;sup>76</sup> https://www.finastra.com/about/corporate-information

<sup>77</sup> https://finance.arvato.com/en/solutions/payment-financing-services/online-payment/buy-now-pay-later2/



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WesternUnion WU Business Solutions

# **Regional Players**

This section outlines players that operate solely within the EU, but across multiple member states. Players with a presence both within and outside of the EU are outlined in the above two sections ("Non-EU International Players" and "European International Players"). Players who operate only within the confines of one domestic market are outlined in separate individual country sections of the report. This regional section is further subdivided as follows:

- Firms operating across a large area of the EU (Pan-European players)
- Firms operating within a defined geographical grouping within the EU (i.e. South Western Europe, South Eastern Europe, Eastern Europe, Benelux, Germany & France, Baltic countries or Nordic Countries)

### **Pan-European Players**

#### Introduction:

This section is dedicated to players who have a presence in several regions throughout Europe. It does not mean that they hold a presence in each member state, but rather that their presence transcends the regions that are outlined in the sections below. It includes many European banks, but also some Third-Party Payment Service Providers (TPPs), some merchant service providers and many gateways.

#### Banks:

Banks from all over Europe are eager to expand throughout the European market. Some of these players are reaching a significant size, such as Cassa Despositi e Prestiti (CDP), Mediobanca, FCA bank, and Crédit Mutuel.











Name	HQ Country	Group	Number of Employees	Net Turnover (Million €)	Net Profit (Million €)	LinkedIn
<u>Crédit Mutuel</u>	FR		82.794	17.685	3.858	<u>Profile</u>
<u>Cassa Despositi e</u> <u>Prestiti</u>	IT		33.695	5.004	3.410	<u>Profile</u>
<u>Mediobanca</u>	IT		5.010	2.430,22	601	<u>Profile</u>
<u>Pekao Bank</u>	PL		n/a	2.409	945	<u>Profile</u>
<u>Crédit Mutuel Arkea</u>	FR		9.976	2.158,63	365,27	<u>Profile</u>
FCA Bank	IT		2.280	790,54	467,08	<u>Profile</u>
Banca March	ES		1.889	436	125	<u>Profile</u>
PPF Banka	CZ		237	155	87	<u>Profile</u>
Orange bank	FR	Orange Group	780	45	-177	<u>Profile</u>

# **Payment Service Providers:**

There are four TPPs present throughout Europe who do not have a reach outside Europe, namely Monext, MyPos, Sogexia and EquensWorldline.

Name	HQ Country	Group	Number of Employees		Net Profit (Million €)	LinkedIn
SOGEXIA <sup>78</sup>	LU		>10	n/a	-0,07	<u>Profile</u>
Monext	FR	Arkéa	>200	n/a	n/a	<u>Profile</u>
<u>MyPos</u>	FR		>200	n/a	n/a	<u>Profile</u>

<sup>&</sup>lt;sup>78</sup> Sogexia Lux: Annual Report 2019

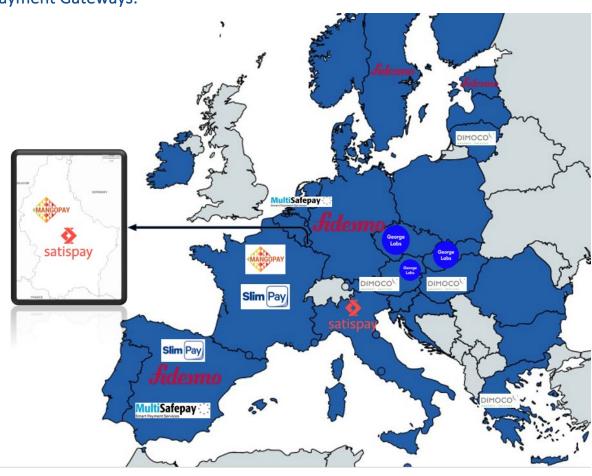
#### Other PSPs:

As far as merchant service providers are concerned, there are very few local and regional players. Very often domestic actors are responsible for supplying TPE merchants and managing their online payments. Among the Top 50 Acquirers in Europe, 36 are European Players, mostly banks providing services for their own country. However, there are some European players who are trying to break away, such as BigE, Tink, EuroWag and Vivawallet.



Name	HQ Country	Group	Number of Employees	Net Turnover (Million €)	Net Profit (Million €)	LinkedIn
W.A.G. payment solutions, a.s.	CZ	Mr Martin Vohanka	404	909	8	<u>Profile</u>
<u>VivaWallet</u>	GR		386	34	-4,12	<u>Profile</u>
<u>BigEDirect</u>	LU		44.106	n/a	n/a	<u>Profile</u>
<u>Tink</u>	SE		>200	n/a	n/a	<u>Profile</u>
<u>Oonex</u>	BE		11-50	n/a	n/a	<u>Profile</u>

# Payment Gateways:



Name	HQ Country	Group	Number of Employees	Net Turnover (Million €)	Net Profit (Million €)	LinkedIn
<u>Satispay Europe</u>	IT	Satispay	14	-1,98	-3,54	<u>Profile</u>
<u>Fidesmo</u>	SE		>10	n/a	n/a	<u>Profile</u>
<u>ViaFintech</u>	DE		28	n/a	n/a	<u>Profile</u>
George Labs	AT	Erste Bank	n/a	n/a	n/a	<u>Profile</u>
<u>JOOMPAY</u>	LU		n/a	n/a	n/a	<u>Profile</u>

### Gateway, processing and acquiring:

Name	HQ Country	Group	Number of Employees	Net Turnover (Million €)	Net Profit (Million €)	LinkedIn
<u>Dimoco</u>	AT		125	90	5	<u>Profile</u>
<u>MultiSafepay</u>	NL		50	48,4	4	<u>Profile</u>

### Gateway only:

Name	HQ Country	Group	Number of Employees	Net Turnover (Million €)	Net Profit (Million €)	LinkedIn
Mangopay	LU	Crédit Mutuel Arkéa	43	n/a	-3,21	<u>Profile</u>
SlimPay	FR		90	n/a	n/a	<u>Profile</u>

## Other Payment Services:

The French company Payfit is among the top 50 European fintech companies that are currently making a name for themselves. It offers software as a service to companies for the payroll payment system.

Name	Hq Country	Group	Number of Employees	Net Turnover (Million)		LinkedIn
Zimpler	SE		35	\$4,28	-\$1,69	<u>Profile</u>
<u>Payfit</u>	FR		456	n/a	n/a	<u>Profile</u>
Worldcore	CZ		>50	n/a	n/a	<u>Profile</u>
<u>Paystrax</u>	LT		14	n/a	n/a	<u>Profile</u>

### Alternative payment methods:

Paypal is the leading alternative payment method in Europe. However, many European companies are trying their hand at the market. ViaFintech, formerly Cash Payment Solutions GmbH, offers different cash payment solutions. One of them is <a href="ViaCash/Barzahlen">ViaCash/Barzahlen</a>. Through a barcode, it allows the consumer to withdraw or put money in a partner store. Among its partners, ViaCash counts N26, eon, Amazon or Bunq. The service has extended to 4 other countries: Switzerland, Greece, Austria and Italy.

### **Regional European Players**

### **South-Western Europe**

#### Introduction:

This section discusses regional players in Italy, Portugal, and Spain. The number of cash payments in these countries is still relatively high, although the Italian, Portuguese, and Spanish governments have imposed limits on the use of cash. The pandemic has strongly affected Spain and Italy at the beginning of 2020, which has further reduced the use of cash.

Following the lockdown, merchants have had to turn to digital payments to offer ecommerce services. However, despite this trend, this region is still lagging behind in terms of digital payments, compared to many other geographic regions within the EU.

#### Banks:

Many banks in the South-Western Europe region have a European and international presence. Examples are the Spanish group Santander and the Italian groups UniCredit and Mediobanca, Millennium BCP in Portugal, etc.

These countries are characterized by an increase in digitization. Therefore, banks must reposition themselves by offering digital solutions to their customers. The banks have had to develop their own digital wallet since contactless payments are very successful in these countries. This will be explained in more detail in the local part of this report.

#### **Payment Schemes:**

Concerning payment schemes, debit cards are preferred over credit cards in all three South-Western European countries.

The largest payment scheme for debit cards in Portugal and Spain is Maestro, while in Italy the most popular debit card payment scheme is PagoBancomat.

Finally, as far as credit cards are concerned, MasterCard, Visa and, in some regions, American Express are the most widely used.

#### **Payment Gateways:**

euPago is implemented in Portugal but it also offers services in Spain. They specialize in ecommerce payment solution for businesses.

Name	HQ country	Number of Employees			LinkedIn
<u>euPago</u>	PT	33	508	0,25	<u>Profile</u>

### Alternative payment methods:

Digital wallets are widely used in this region of Europe, all the more so with the emergence of the COVID pandemic.

PayPal and Stripe have a strong presence in these countries. For example in Italy, PayPal already had a market share of 31% in 2016<sup>79</sup>. In Spain, it accounts for 20% of ecommerce payments<sup>80</sup>. Stripe is positioned right after PayPal in this part of Europe.

Name	HQ country	Group	Number of Employees	Net Turnover (Million €)	Net Profit (Million €)	LinkedIn
		Cofidis				
		Participations				
		(Credit				
<u>Cofidis</u>	FR	Mutuel)	5.443	€1.354,89	€213,97	<u>Profile</u>
<u>Scalapay</u>	IE		n/a	n/a	n/a	<u>Profile</u>

### **South-Eastern Europe**

#### Introduction:

This section covers regional firms that cover the following countries: Croatia, Cyprus, Greece, and Malta. These regional firms have a strong foothold in the Balkans and can be found providing their services to nearby countries both inside and outside the EU. Some players even have a foothold in Western Europe, but the majority of their operations are still within South-Eastern Europe. Countries in South-Eastern Europe have a low GDP per capita compared to some other European countries and citizens still have a preference to pay with cash. Moreover, electricity, gas or oil supply, rent and mortgage, telephone bills, insurance policies or taxes are more often paid in cash than in other European countries, as highlighted by a European survey <sup>81</sup> in 2016. Regarding ecommerce, paying in cash on delivery remains current practice <sup>82</sup>. There are similarities between Greece and Cyprus on one side, and between Croatia and Malta on the other side. Several international actors, often American ones, have an office in Croatia or Malta in order to get access to the European market.

#### Banks:

Major Greek banks offer financial services in the Balkan area and in Cyprus. For instance, Eurobank Ergasias is settled in Greece, Cyprus, Serbia, Bulgaria, Luxembourg and United Kingdom<sup>83</sup>. The National Bank of Greece provides services in Greece and in Albania, Bulgaria, Cyprus, Malta, North Macedonia, Romania and Serbia through its subsidiaries<sup>84</sup>. The Bank of Cyprus has most of its activities in Cyprus, but is also present in Greece and Romania, and has representative offices in Russia, Ukraine and China. The Piraeus Bank is mainly active in Greece, Albania, Romania, Bulgaria and Ukraine<sup>85</sup>.

In Malta and Croatia, major Italian (Unicredit and Intesa Sanpaolo) or central European banks (Erste bank, OTP Bank) provide their services. We also notice the presence of the Russian Sberbank and Turkish banks, Yapi Kredi and AKBank.

<sup>&</sup>lt;sup>79</sup> https://www.statista.com/statistics/813278/distribution-of-paypal-e-payments-in-italy/

<sup>&</sup>lt;sup>80</sup> https://www.jpmorgan.com/merchant-services/insights/reports/spain

<sup>&</sup>lt;sup>81</sup> T*he use of cash by households in the euro area*, Henk Esselink, Lola Hernández

https://www.ecb.europa.eu/pub/pdf/scpops/ecb.op201.en.pdf

<sup>82</sup> https://ecommercenews.eu/online-payment-methods-europe/#cod &

https://www.researchgate.net/publication/336079830 Evolution of payment methods in Greece - Determinants of their use

<sup>83</sup> https://www.eurobank.gr/en/group/about-eurobank/strong-presence-in-6-countries

<sup>84</sup> https://en.wikipedia.org/wiki/National Bank of Greece#Branches https://www.nbg.gr/en/the-group/group-companies/nbg-point-services-abroad

<sup>85</sup> https://www.piraeusbank.gr/en/idiwtes/kanalia-eksypiretisis/diktio-eksipiretisis?cont=2

Name	HQ Country	Group	Number of Employees	Net Turnover (Million €)	Net Profit (Million €)	LinkedIn
Alpha Bank AE	GR		10.530	2.320	97	<u>Profile</u>
National Bank of Greece SA	GR		8.600	2.003	-237	<u>Profile</u>
Eurobank Ergasias Services and Holdings SA	GR		13.390	1.910	127	Profile
Piraeus Bank SA	GR		11.615	1.894		Profile
Bank of Cyprus	CY		3.672	698	-68	<u>Profile</u>



Note: countries of the South-Eastern region are in blue. Although Romania and Bulgaria are not considered part of this region in this report, Greek and Cypriot actors offer services there, as shown on the map.

### Payment Schemes:

In this area, debit cards have more success than credit cards. The payment schemes used in this area are the traditional Visa and Mastercard. Diners cards are popular in Croatia.

### **Payment Gateways:**

In Greece and Cyprus, actors offering money remittance (Inteli Express, Western Union, etc) are still quite popular. International actors, such as Asseco or Worldline (through EDPS in Greece and Avera in Croatia for example), offer payment services. Through Malta and Croatia, a lot of international payment services providers gets a payment institution or electronic money institution license enabling them to offer services across Europe.

### **Eastern Europe**

#### Introduction:

This section covers regional firms operating in the following countries: Poland, the Czech Republic, Austria, Hungary, Slovakia, Slovenia, Bulgaria and Romania. The first thing to note is that the countries in this region have different currencies. Therefore, it is not always easy to do cross-border trade within the region. However, in spite of this barrier, a large number of banks do business in several of these countries. There is significant consolidation happening in this region, with major regional players being acquired by the biggest European banks.

The second particularity of these countries is the proportion of cash used as a payment method. This proportion is as high as 60% in some Eastern European countries.

Finally, as far as electronic and mobile payments are concerned, this is an area with enormous potential. Romania, for example, is the country with the highest economic growth in Europe. We will see that in this country, the proportion of digital payments is 19%, while the proportion of card payments does not exceed 5%.

This upward trend in contactless payments can be found in all countries in this region. One of the reasons for this is that governments are encouraging a decrease in the use of cash in these countries.

#### **Banks:**



As seen in the table below, most of the banks serving Eastern Europe are in countries with large economies in the region, such as Poland and Austria.

In this table you can also see the big European banks such as the Italian group UniCredit, the French group Société Générale and the Belgium bank KBC. As explained in the introduction, this market is characterised by the presence of large European groups.

Name	HQ Country	Group	Number of Employees	Net Turnover (Million €)	Net Profit (Million €)	LinkedIn
Erste Group Bank	AT		49.381	9.770	2.152	<u>Profile</u>
OTP Bank	HU		39.971	3.654	1.246	<u>Profile</u>
PKO Bank	PL		n/a	1.961	507	<u>Profile</u>
<u>Československá obchodní</u> <u>banka</u>	CZ	KBC Bank	8.626	1.777	774	<u>Profile</u>
Mbank	PL		9.352	1.315	236	<u>Profile</u>
Komerční banka	CZ	Société Générale	8.351	1.294	597	<u>Profile</u>
<u>Alior Bank</u>	PL		n/a	970	59	<u>Profile</u>
UniCredit Bank Czech Republic and Slovakia	CZ	UniCredit	3.249	885	398	<u>Profile</u>
Moneta Money Bank	CZ		3.632	413	158	<u>Profile</u>
Oberbank AG	AT		2.004	345	216	<u>Profile</u>
J&T Banka	CZ		813	248	124	<u>Profile</u>
Hypo Noe Gruppe	AT		742	166	30	n/a
<u>Idea Bank</u>	PL		n/a	161	-8	<u>Profile</u>
<u>Fio Banka</u>	CZ		53	135	70	<u>Profile</u>
Alpha bank Romania	RO		2.053	129	16	<u>Profile</u>
<u>Equa Bank</u>	CZ		669	80	15	<u>Profile</u>
Kdb Bank Europe	HU		172	16	1	n/a
Kavosz Penzugyi Szolgaltatasokat Kozvetito zartkoruen Mukodo Reszvenytarsasag	HU		32	9	1	<u>Profile</u>

### **Payment Schemes:**

Concerning the payment schemes in these countries, we mainly find the U.S. ones such as Visa, MasterCard, and American Express. Preferences between debit and credit cards vary from country to country and will be explained in detail in the local section of the report.

### **Payment Service Providers:**

Concerning the Third-Party PSPs, the payee's PSPs, and the payment gateways, these will be explained in more detail in the local sections of the report. However, 2 TPPs in that area have expanded beyond their domestic markets, namely Trust Pay, a Slovakian company and Printec Group, a Romanian company.

Trust Pay offers business banking alternatives for ecommerce payments. As a service, it is possible to create a business account in its platform and acquire a prepaid card.

The Printec Group is the leader in the European area concerning the B2C transactions. They offer, for example, services for digital payments and provide ATMs to financial institutions.

Name	HQ Country	Group	Number of Employees	Net Turnover (Million €)	Net Profit (Million €)	LinkedIn
<u>Printec</u>		Printec				
Group	AT	Group	167	21	1,8	<u>Profile</u>
<u>Trust Pay.</u>	SK		n/a	10	2	<u>Profile</u>

## **Benelux, Germany & France**

#### Introduction:

The Benelux, France and Germany combined form the richest area in Western Europe. They represent a large part of the European payment market. Some foreign players come to settle in the region, often in Luxembourg, to leverage this region where ecommerce is growing quickly and where the purchasing power per capita is high.

It is important to point out that of all the regions in this report, this region is the least unified in terms of financial landscape: there are wide differences between all countries, and there are only a few players that fall neatly within the confines of this region. On the one hand this is because of the large amount of wealth: a lot of players that offer their services in this region are either more international, and will thus be included in the above sections. On the other hand, the markets and populations of these countries are so different that they also contain a lot of domestic players, which will be described in the local sections. However, for the sake of completeness we have opted to include this region to describe the few players that do only operate in this region.

#### Banks:

Many major French, Dutch and German banking groups extend beyond the region. In addition, there are a small number of regional players providing payments services primarily in niche areas.

Name	HQ Country	Group		Net Turnover (Million €)		LinkedIn
<u>Advanzia Bank</u>	LU		150	263,5	78,3	<u>Profile</u>

#### **Electronic Money Institutions:**

In these regions the main EMIs are local players. However, Crosscard operates at the regional level of Benelux, France and Germany.

Name	HQ Country	Group	Number of Employees	Net Turnover (Million €)	Net Profit (Million €)	LinkedIn
<u>Crosscard</u>	LU		50	n/a	n/a	<u>Profile</u>

### **Payment Service Providers**

#### Gateway, processing, and acquiring:

In this category there is CCV, which is present in Belgium, the Netherlands and Germany.

Name	HQ Country	Group	Number of Employees	Net Turnover (Million €)	Net Profit (Million €)	LinkedIn
CCV	NL		1.141	168,4	-4,2	<u>Profile</u>

#### Other PSPs:

10 of the top 50 largest acquirers in Europe, in terms of volume of Visa and Mastercard transactions, originate in this region. <sup>86</sup> These include the banks Crédit Agricole, Crédit Mutuel, BPCE, BNP Paribas, Société Générale and La Banque Postale on the one hand and purely acquiring players such as Worldline, EVO Payment International, and Payone on the other.

Another, more local player to the region is Snapswap, with their online platform for corporate payments and expense management, called Everest<sup>87</sup>. Everest offers corporate accounts with attached credit cards. Other than Everest, Snapswap also offers digital onboarding and ID verification solutions, called Snaprove<sup>88</sup>, and a white-label credit card programme.

Name	HQ Country	Group	Number of Employees	Net Turnover (Million €)		LinkedIn
Snapswap 89	LU		9	0,709	0,081	<u>Profile</u>

### Other Payment Services:

Sodexo also offers a payments service which allows its users to pay in supermarkets and restaurants for all expenses related to meals.

	Name	HQ Country	Group	Number of Employees		Net Profit (Million €)	LinkedIn
2	Sodexo Pass	FR	Sodexo	>1.000	n/a	n/a	<u>Profile</u>

#### **Alternative Payment Methods:**

The main alternative payment methods in this region are online banking e-payments or account-to- account payments. However, there are some players that are only present in the region but have a very important local market share. In the Netherlands iDEAL (a multi-bank online banking e-payment solution) has a marketshare of 69% (60% in 2019) in the online checkout of domestic and foreign webshops.

Payconiq is a widespread mobile payment application in Luxembourg and a payment scheme for debit cards in Belgium, under the name Bancontact. Another interesting player in the region is CarPay-Diem. This player offers a mobile platform for paying for petrol. It can be found in the Benelux, France and Germany.

<sup>86</sup> https://nilsonreport.com/upload/issues/1175 0036.pdf

<sup>87</sup> https://everestcard.com/

<sup>88</sup> https://snaprove.com/

<sup>89</sup> Snapswap: Annual Report 2019

Name	HQ Country	Group	Number of Employees	Net Turnover (Million €)	Net Profit (Million €)	LinkedIn
CarPay-						
<u>Diem</u>	LU		>10	n/a	n/a	<u>Profile</u>
Payconia	LU		131	n/a	n/a	<u>Profile</u>

### **Baltic Countries**

#### Introduction:

The Baltic states, specifically Estonia, Latvia, and Lithuania, can be seen as an entire consolidated market with a strong dominance of Swedish banks in the banking and payment sector. In addition, the Nordic influence is also present in the payment processing services where the big Danish payment service provider Nets operates the processing services for Swedish banks including SEB bank and Swedbank.

#### Banks:

SEB Bank, Swedbank, and to a lesser extent Op Corporate Bank, maintain a dominant position in all the Baltic States. However, domestic banks such as Luminor and Citadele for the most part were able to expand outside their domestic market in the Baltic states.

	HQ		Number of	Net Turnover	Net Profit	
Name	Country	Group	<b>Employees</b>	(Million)	(Million)	LinkedIn
<u>Luminor</u>						
<u>Bank</u>	EE		2.489	€365	€54	<u>Profile</u>
<u>Citadele</u>						
<u>Bank</u>	LV		1.369	€126	€37	<u>Profile</u>
Rietumu						
<u>Bank</u>	LV		701	€70	€23	<u>Profile</u>
<u>Op</u>						
<u>Corporate</u>		Ор				
<u>Bank</u>		Corporate				
<u>Baltics</u>	FI	Bank	35	€13	n/a	<u>Profile</u>
SEB Bank	SE	SEB Group	15.819	kr50.135	kr20.177	<u>Profile</u>
Swedbank	SE		15,218	kr45.960	kr19.709	<u>Profile</u>



# **Electronic Money Institutions:**

	HQ		Number of	Net Turnover	Net Profit	
Name	Country	Group	<b>Employees</b>	(Million €)	(Million €)	LinkedIn
<u>Paysera</u>	LT		118	9,6	1,9	<u>Profile</u>

# Payment Service Providers:

Most of regional gateways come from Estonia. They offer online payment solutions for ecommerce and payment other services over the three Baltic States. In addition, the Danish gateway Point Transactions System from the Verifone Group is also present in the Baltic states in addition to its Nordic market penetration.

### Gateway only:

Name	HQ Country	Group	Number of Employees	Net Turnover (Million €)	Net Profit (Million €)	LinkedIn
Maksekesk	, , , , , , , , , , , , , , , , , , ,	Cicop		(	(iviiiiion c)	
US	EE	Omniva	10	2,7	0,6	<u>Profile</u>
<u>EveryPay</u>	EE		12	0,6	-0,6	Profile
<u>Point</u>						
<u>Transactio</u>		Verifone				
<u>n System</u>	DK	Group	n/a	n/a	n/a	<u>Profile</u>



#### Other PSPs:

As mentioned before, Nets, the big Nordic payment processor, also operates in the Baltic states, offering processing and acquiring services for Baltic banks and more specifically Swedish banks operating in the Baltic states. In addition, domestic players including ASHBURN International and Electronic Payment Services also offer processing and acquiring services for banks and merchants.

				Net		
	HQ		Number of	Turnover	Net Profit	
Name	Country	Group	<b>Employees</b>	(Million €)	(Million €)	LinkedIn
Nets Group	DK		4.100	1.129,6	747,3	<u>Profile</u>
<u>Electronic</u>						
<u>Payment Solutions</u>	LT		44	3,7	0,3	<u>Profile</u>
<u>ASHBURN</u>						
<u>International</u>	LT		30	2,3	n/a	n/a



# Alternative payment methods:

Namo	HQ	Group	Number of Employees	Net Turnover (Million €)	Net Profit (Million €)	LinkedIn
Name	Country	Citadele	employees	(Million €)	(Million €)	Linkedin
<u>Klix</u>	EE	Bank	5	n/a	n/a	<u>Profile</u>

### **Nordic Countries**

#### Banks:

As with the Baltic states, the Nordic countries can be seen as a larger Nordic consolidated market. The Nordic countries, specifically Denmark, Finland, and Sweden, have many payment characteristics in common. Most of Nordic banks operate on a regional level which explains why there are so many banks are included in this section. In addition, other payment actors offering only credit card issuing services such as EnterCard and EuroCard also operate on the Nordic level.

Name	HQ Country	Group	Number of Employees	Net Turnover (Million)	Net Profit (Million)	LinkedIn
<u>Nordea</u>		Nordea		-		
<u>Bank</u>	FI	Group	29.000	€8.626	€1.542	<u>Profile</u>
<u>Jyske Bank</u>	DK		3.614	kr8.438	kr2.440	<u>Profile</u>
		SEB				
<u>SEB Bank</u>	SE	Group	15.819	kr50.135	kr20.177	<u>Profile</u>
<u>Handelsba</u>						
<u>nken</u>	SE		12.548	kr44.564	kr16.925	<u>Profile</u>
<u>Ikano Bank</u>	SE		1.067	kr6.410	kr465	<u>Profile</u>
Resurs						
<u>Bank</u>	SE		681	kr3.473	kr1.137	<u>Profile</u>
<u>Svea</u>						
<u>Ekonomi</u>						
<u>Group</u>	SE		2.036	kr3.162	kr479	<u>Profile</u>
<u>Easy Bank</u>						
<u>Norvegian</u>	NO		87	kr5.261	kr1.993	<u>Profile</u>
<u>Komplett</u>						
<u>Bank</u>	NO		130	kr1.115	kr1.176	<u>Profile</u>
Easy Bank	NO		24	n/a	kr65	<u>Profile</u>



# **Electronic Money Institutions:**

	HQ		Number of	Net Turnover	Net Profit	
Name	Country	Group	Employees	(Million)	(Million)	LinkedIn
Eurocard	FI	SEB Group	35	€20	n/a	<u>Profile</u>
<u>EnterCard</u>	SE	Swedba nk	466	kr4.195	kr1.059	<u>Profile</u>

# **Payment Service Providers:**

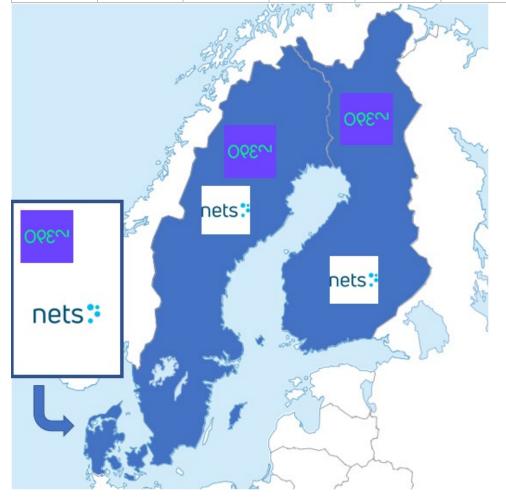
# Gateway only:

Name	HQ Country	Group	Number of Employees	Net Turnover (Million)	Net Profit (Million)	LinkedIn
<u>Point</u>						
<u>Transactio</u>		Verifone				
<u>n System</u>	DK	Group	n/a	n/a	n/a	<u>Profile</u>

### Other PSPs:

Nets is the main regional payment service provider operating in the Nordic and Baltic regions. It offers payment processing and acquiring services for merchants and major Nordic banks. In addition, OPENPOS (also known as OPENSOLUTION Nordic) offers point-of-sale payment terminals, acquiring, and processing services in the Nordic market for specific industries.

				Net		
Name	HQ Country	Group	Number of Employees	Turnover (Million)	Net Profit (Million)	LinkedIn
<u>Nets</u>	•		. ,		, ,	
<u>Group</u>	DK		4.100	€1.130	€747	<u>Profile</u>
<u>OPENPOS</u>	SE		141	kr274	-kr60	<u>Profile</u>



# Alternative payment methods:

Nordic countries share two alternative payment methods across their region. Firstly, the mobile payment service provided by Swedbank Pay that is available in Nordic countries where Swedbank offers payment services. Secondly, MobilePay is a mobile payment method used in Denmark and Finland. The app is more popular among Danes, 67% 90 of whom use it daily. In Finland, MobilePay is used only by 14.5% 91 of the population.

	HQ		Number of	Net Turnover	Net Profit	
Name	Country	Group	<b>Employees</b>	(Million)	(Million)	LinkedIn
		Danske				
<u>MobilePay</u>	DK	Bank	48	kr79.499	-kr158	<u>Profile</u>
		PayEx				
<u>Swedbank</u>		Group/Swe				
<u>Pay</u>	SE	dbank	441	kr1.250	-kr140	<u>Profile</u>



 $<sup>^{90}</sup>$  https://www.clearhaus.com/features/mobile-pay/  $^{91}$  https://www.mobilepay.dk/about

# **National Players**

This section looks in detail at players operating solely within the confines of one domestic European market. Players operating regionally within the EU, or internationally are described in previous sections ("Non-EU International Players", "European International Players", "Regional Players")

#### **Austria**

#### Introduction

The Compound Annual Growth Rate (CAGR) for digital payments in Austria is estimated at 21.9% between 2020 and 2024. According to the European Payments Council, card payments are the most widely used contactless payments, with a market share of about  $38\%^{92}$ . In 2019, the number of debit cards was 10 million in 2018 while the number of credit cards was 3.6 million  $^{93}$  for a population of 9 million.

The number of contactless payments using PIN-less credit or debit cards (Near Field Communication) has grown by 300% in 2019. This growth rate is mainly due to the arrival of the COVID pandemic in Austria. However, this type of contactless payment is only valid for amounts not exceeding €50 per transaction. Mobile payments are the second-most commonly used ecommerce payment method in Austria, just behind card payments. The market share of digital wallets in the ecommerce sector is 16% <sup>94</sup>.

In contrast to this upward trend in contactless payments, the number of credit transfers, direct debits, and cash payments continues to decline in the Austrian market. Banks in Austria are also consolidating as a result of the digital revolution.

#### Banks:

According to the European Banking Federation, the Austrian banking sector will grow to 0.3% above the European average in 2018 and 2019 <sup>95</sup>. However, despite this growth, the number of Austrian banks continues to decline over the years. The banking sector will have 573 banks in 2020. In addition, according to the Federal Ministry Republic of Austria, many banks have a regional presence and began their geographic expansion into Hungary, the Czech Republic and Slovakia in the 1990s <sup>96</sup> (see also the Regional Players section).

In 2018, the largest bank in Austria, in terms of total assets, is the subsidiary of UniCredit, with a market share of 11.83% <sup>97</sup>. The bank also has a strong presence in Central and Eastern Europe. The had approximately 16,4 million customers in 2019 <sup>98</sup>.

Erste Group Bank is the second largest bank in Austria with a market share of 8,31% 99.

In third place is Raiffeisen Bank International with a market share of  $7,95\%^{100}$ . This bank is the central institution of the Raiffeisen banking group in Austria. The group also has two subsidiaries with a strong presence in Austria: Raiffeisen Bank Niederösterreich and Raiffeisen-Landesbank-Steiermar. The group has more than 16,7 million customers  $^{101}$ .

<sup>92</sup> https://www.europeanpaymentscouncil.eu/news-insights/insight/austrian-payment-landscape-where-innovation-meets-tradition

<sup>93</sup> https://www.statista.com/statistics/1096702/credit-card-and-debit-card-number-in-austria/

<sup>94</sup> https://www.jpmorgan.com/merchant-services/insights/reports/austria

<sup>95</sup> https://www.ebf.eu/austria/

<sup>96</sup> https://www.bmf.gv.at/en/topics/financial-sector/structure-of-the-austrian-financial-sector.html

<sup>97</sup> https://thebanks.eu/banks/10569/market share)

<sup>98</sup> https://www.dnb.com/business-directory/company-profiles.erste\_group\_bank\_ag.ff89cbc111d72d14c6a47012d62abaca.html

<sup>99</sup> https://thebanks.eu/banks/10099/market share

<sup>100</sup> https://thebanks.eu/banks/10143/market share

<sup>101</sup> https://www.rbinternational.com/en/who-we-are.html

Austria's second largest credit institution is the Volksbank with more than 1.1 million private consumers <sup>102</sup>. Furthermore, BAWAG is an international Austrian bank and operates, among others, in the UK, France and Germany. The bank has a market share of 4,39% in Austria and is one of the oldest banks in this country. The bank Oesterreichische Kontrollbank AG is also active nationwide which has a market share of 2,98% <sup>103</sup> in Austria. Austrian Banks Oberbank and HYPO NOE Gruppe have regional presence in countries such as Hungary, the Czech Republic and Solvakia, as described in the previous regional section. Volksbank has more than 1,1 million private consumers <sup>104</sup> in Austria, and also has significant international presence. Furthermore, BAWAG is an international Austrian bank and operates, among others, in the UK, France and Germany. The bank has a market share of 4,39% in Austria and is one of the oldest banks in this country.

Deutsche bank, one of the leading banks in Germany and Europe, also has a strong presence in Austria. The Sberbank Europe Group is also headquartered in Austria.

		Number of	Net Turnover	Net Profit	
Name	Group	<b>Employees</b>	(Million €)	(Million €)	LinkedIn
<u>UniCredit Bank</u>					
<u>Austria AG</u>	UniCredit	5.301	2.024	710	<u>Profile</u>
<u>Volksbank</u>		30.496	740	148	<u>Profile</u>
<u>Oesterreichische</u>					
Kontrollbank AG		505	159	51	<u>Profile</u>
<u>Paybox Bank</u>		50	11	0,769	<u>Profile</u>
Raiffeisen Bank					
<u>Niederösterreich</u>	Raiffeisen Group	n/a	n/a	n/a	<u>Profile</u>
Raiffeisen-					
<u>Landesbank</u>					
<u>Steiermark</u>	Raiffeisen Group	n/a	n/a	n/a	<u>Profile</u>
Alpenbank AG		n/a	n/a	n/a	<u>Profile</u>

#### **Payment Schemes:**

Card payments are still the most common type of payment in Austria. Debit cards are the most widely used cards in Austria. There are several kinds of debit cards in Austria, including Visa Debit, MasterCard Debit, Maestro, Laser, Switch or Solo <sup>105</sup>. According to a study by Oesterreichische Nationalbank, Austrians use debit cards for 14% of all transactions <sup>106</sup>. When it comes to credit cards, MasterCard, American Express, Visa, and Diners Club are the most widely used.

#### **Payment Service Providers:**

Founded in 2013 as heidelpay, Unzer is a licensed payment service provider <sup>107</sup> that provides both in-store and online POS solutions for the retail industry, travel industry, and digital industry. Unzer's payment solutions accept a vast variety of payment methods, stretching from a wide selection of card payments and wallets to direct transfer, purchase by invoice, and their own solutions. <sup>108</sup> Unzer also provides other services, such as risk and liquidity management, fraud prevention, and virtual accounts.

<sup>&</sup>lt;sup>102</sup> https://www.relbanks.com/europe/austria/volksbank-ag<sup>103</sup> https://thebanks.eu/banks/9907/market share

<sup>&</sup>lt;sup>103</sup> https://thebanks.eu/banks/9907/market share

<sup>104</sup> https://www.relbanks.com/europe/austria/volksbank-ag

<sup>105</sup> https://debitcardcarhire.com/austria-car-hire-with-a-debit-card/vienna-airport/

<sup>106</sup> https://www.oenb.at/en/Payment-Processing/Card-Payments/Cards/Use-in-Austria.html

<sup>107</sup> https://www.unzer.com/de/ueber-unzer/

<sup>108</sup> https://www.unzer.com/de/zahlungsmethoden/

Name	Group	Number of Employees	Net Turnover (Million €)	Net Profit (Million €)	LinkedIn
<u>Unzer Austria</u>	<u>Optimal</u>				
<u>GmbH</u>	<u>Payments</u>	41	23	0,508	<u>Profile</u>

### Gateways, processing and acquiring:

Credi2 is a fintech startup based in Austria offering online payment solutions aimed at banks, payment institutions, consumers and merchants.

Name	Group	Number of Employees	Net Turnover (Million €)	Net Profit (Million €)	LinkedIn
s-IT Solutions					
<u>Austria</u>	Erste Bank	890	302	0,414	<u>Profile</u>
Credi2		n/a	n/a	n/a	<u>Profile</u>

#### Other PSPs:

Name	Group	Number of Employees	Net Turnover (Million €)	Net Profit (Million €)	LinkedIn
<u>PSA Austria</u>		50	231	n/a	<u>Profile</u>
<u>ConCardis</u>	Nets Group	9	2	0,403	<u>Profile</u>

### Alternative payment methods:

The market has traditionally been less attractive for alternative payment methods than other European countries due to the large market share of card payments in Austria. The picture is now shifting somewhat as a result of growth rate of the contactless payment market. Paypal is the most used wallet in Austria. Samsung Pay and Apple Pay are also gaining market share, with the former currently in the lead as a result of the late arrival of Apple Stores in the country in 2018. The payment solution of the Raffeisen Group, the BankomatKarte Mobil application, is also available. The EPS ecommerce application is a payment application for the ecommerce market. This application has been created in connection with the Austrian banks and the Government.

Bank	Digital Wallet
Erste Bank	Erste Wallet
Raiffeisen Group	CardMobile
BAWAG PSK	BAWAG APP
Oberbank	Oberbank Wallet

Name	Group	Number of Employees	Net Turnover (Million €)	Net Profit (Million €)	LinkedIn
<u>BankomatKarteMobil</u>		n/a	n/a	n/a	n/a

### **Belgium**

#### Introduction:

The number of cash payments in Belgium declined in 2020. Contactless payment was not widely used in Belgium, but pickup-in-store increased 9Tdue to the pandemic and reached 36% in August 2020.

The ecommerce market in Belgium will grow considerably in the coming years, with some estimates expecting a growth of 8,5% by 2021. This market increase is explained on the one hand by the coronavirus and on the other hand by the increase in the employment rate in Belgium. In spite of this growth rate, Belgians are buying less online than the European average. Approximately 15% of all ecommerce transactions in Belgium are now completed on a mobile device <sup>109</sup>.

However, the most widely used payment method for online payments is Payconiq Bancontact and credit cards such as MasterCard and Visa, which collectively represent 35% of online spending. Money transfers account for 13% of online payments, <sup>110</sup> and are primarily handled through online banking services. This is followed by PayPal, the third preferred online payment method for Belgians, representing a share of 12%. <sup>111</sup>

#### Banks:

According to the European Banking Federation, the main characteristic of the Belgium banking market is the variety of players, coming from different markets abroad. In addition, in 2019, there were 2,739 bank branches in Belgium <sup>112</sup>.

The largest bank in Belgium is BNP Paribas Fortis, which counted more than 3,6 million customers <sup>113</sup>. The bank has a strong presence in the Belgian economy with a market share of more than 23,28% <sup>114</sup>. BNP Paribas Fortis has created a subsidiary Fintro, which serves individuals, self-employed and small businesses on the Belgian market. Moreover, Hello Bank is the mobile bank of BNP Paris Fortis, which is also operational in Belgium <sup>115</sup>. KBC Group is the second largest bank with 3,7 million clients in Belgium <sup>116</sup>, which represented approximately 18,65 % of the Belgian market share in 2019 <sup>117</sup>. This company particularly targets individuals and small and medium sized businesses.

In the third place comes Belfius, which has more than 3,7 million customers <sup>118</sup>, which represented 15,70 % in 2019. <sup>119</sup> However, the company comes second in the retail bank insurer sector. It is also a leader in mobile banking with 1,3 million customers in this branch. In addition, Belfius provides its own wallet for its customers. The holders can pay directly within the bank's trusted online banking environment. <sup>120</sup>

ING Belgium comes fourth, with a share in the retail banking sector of 14,31 % in 2019  $^{121}$ .

 $<sup>{\</sup>color{red}^{109}}\ https://www.jpmorgan.com/merchant-services/insights/reports/belgium$ 

<sup>110</sup> https://www.expatica.com/be/finance/banking/cash-credit-and-mobile-payments-the-most-popular-means-of-payment-in-belgium-

<sup>&</sup>lt;sup>111</sup> https://www.expatica.com/be/finance/banking/cash-credit-and-mobile-payments-the-most-popular-means-of-payment-in-belgium-1751061/

<sup>112</sup> https://www.ebf.eu/belgium/

<sup>113</sup> https://www.advratings.com/europe/top-banks-in-belgium

<sup>114</sup> https://thebanks.eu/banks/10665/market share

<sup>115</sup> https://bnpparibas.be/fr/bnp-paribas/marques-et-filiales/

<sup>116</sup> https://www.advratings.com/europe/top-banks-in-belgium

<sup>117</sup> https://thebanks.eu/banks/10708/market share

<sup>118</sup> https://www.advratings.com/europe/top-banks-in-belgium

<sup>119</sup> https://thebanks.eu/banks/10679

 $<sup>{\</sup>color{red}\underline{^{120}}\,https://www.paymentwall.com/payment-methods/Belgium}}$ 

<sup>121</sup> https://thebanks.eu/banks/10704/market share

Argenta is the 5<sup>th</sup> largest bank in Belgium with 1,75 million consumers <sup>122</sup> and 4,08 % market share. All other banks in Belgium together account for 23,98% of the Belgian market share <sup>123</sup>.

In addition, there is an acceleration of neobanks in 2019 in Belgium. N26 grew its user base by 200% in Belgium between 2018 and 2019, while Revolut has also entered the market, with a 60% increase in Belgian users over the same period.  $^{124}$ 

Name	Group	Number of Employees	Net Turnover (Million €)	Net Profit (Million €)	LinkedIn
BNP Paribas Fortis	BNP Paribas	11.639	4.792	2.618	<u>Profile</u>
KBC Group		37.629	4.619	2.489	<u>Profile</u>
ING Belgium	ING Group	8.504	2.363	749	<u>Profile</u>
<u>Belfius</u>		6.525	1.900	636	<u>Profile</u>
Alpha Credit	BNP Paribas	408	425	59	<u>Profile</u>
Argenta Group		1.030	291	174	<u>Profile</u>
Crelan		2.772	274	70	<u>Profile</u>
Bpost banque	Bpost	278	205	27	<u>Profile</u>
<u>BeoBank</u>	Crédit Mutuel Nord Europe	1.036	202	9	<u>Profile</u>
VDK bank		273	59	16	<u>Profile</u>
Banque CPH		200	49	21	<u>Profile</u>
<u>MeDirect</u>		24	13	1	<u>Profile</u>
<u>Fintro</u>	BNP Paribas	n/a	n/a	n/a	<u>Profile</u>
<u>Hello Bank !</u>	BNP Paribas	>321	n/a	n/a	<u>Profile</u>

### **Payment Schemes:**

In 2019, the total number of debit cards in Belgium was 33,830,149, while the number of credit cards was 6.096.165 for a population of 11,6 million. <sup>125</sup> Bancontact is the most used card payment in Belgium with approximately 1,6 billion transactions made using this payment method, whereas VISA/Mastercard and Maestro reached 300 million transactions combined in the online space. Bancontact has partnerships with many of major banks including KBC, Belfius Bank, Fortis Bank, Fintro, and ING Bank.

Name	Group	Number of Employees	Net Turnover (Million €)	Net Profit (Million €)	LinkedIn
<u>Bancontact</u>					
<u>Payconia</u>		32	21	-1	<u>Profile</u>

<sup>122</sup> https://www.advratings.com/europe/top-banks-in-belgium

<sup>123</sup> https://thebanks.eu/banks-by-country/Belgium

<sup>124</sup> https://www.d-rating.com/post/2020/01/16/digital-client-experience-of-retail-banks-in-belgium-part-2-usage-status

<sup>125</sup> https://www.statista.com/statistics/1096734/credit-card-and-debit-card-number-in-belgium/

### **Payment Service Providers:**

Isabel Group offers many solutions in this sector. It is one of the leading fintech companies in Belgium and is a service provider for business users. They offer a wide range of financial solutions for companies.

First, there is ISABEL6, a partner of 25 Belgian banks, which offers access to all professional accounts on the same application. <sup>126</sup> They also offer IBANITY, a financial services integration platform which can build a bridge between banks and TPPs. <sup>127</sup> They also offer other solutions such as Ponto or Zoomit.

Skrill, Ingenico, and Edenred are also present on the Belgian market.

Name	Group	Number of Employees	Net Turnover (Million €)	Net Profit (Million €)	LinkedIn
<u>Isabel Group</u>		178	70	8	<u>Profile</u>

### Gateway, processing and acquiring:

Name	Group	Number of Employees	Net Turnover (Million €)	Net Profit (Million €)	LinkedIn
<u>Loyaltek</u>		21	6,61	0,06	<u>Profile</u>

#### Other PSPs:

For payee's payment service providers, the market appears relatively fragmented and primarily composed of small actors. International actors such as Verifone are also present.

Name	Group		Net Turnover (Million €)	Net Profit (Million €)	LinkedIn
<u>Paynovate</u>		9	0,675	0,007	<u>Profile</u>

### **Alternative Payment Methods:**

As mentioned above, traditional Belgian banks offer their own electronic payment solutions. This is the case of Belfius, which offers Belfius Direct Net for secure online payments from a smartphone or tablet. Other banks offer similar online payment services such as ING Home'Pay from ING, SaferPay from BNP Paribas or KBC Payment button with Mollie.

The American players are also very present on this market, with PayPal in first position (As explained above, PayPal has a market share of 12% of the online payment market). Stripe, Skrill and Braintree are also used in Belgium.

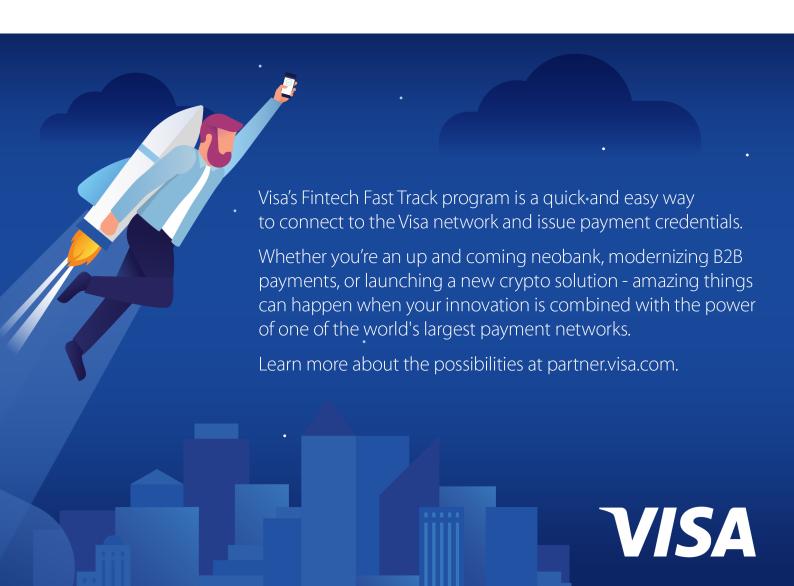
Other European players are present in the market such as Adyen, GiroPay, IcePay and SOFORT Group, Multisafepay, Mollie and Worldline.

<sup>126</sup> https://www.isabel.eu/fr/ebanking/banks.html

<sup>127</sup> https://www.isabelgroup.eu/en/solutions/ibanity/

Finally, at the beginning of 2019, about 150.000 Belgians have Apple Pay and 35.000 have Google Pay. <sup>128</sup> However, following the increase in the rate of contactless payments due to Covid, it is very likely that these rates have increased.

Bank	Digital Wallet
Belfius	Belfius Direct Net
	KBC/CBC Payment
KBC Bank	Button
ING Groep	ING Home'Pay
Banque CPH	MyCPH Mobile
Argenta	Argenta App
BNP Paribas	SaferPay



## Bulgaria 129

#### Introduction:

Bulgaria is a country of almost 7 million inhabitants, and while it is part of the European Union since 2007, it is not part of the euro area. Its currency is the Bulgarian lev (BGN). The country's GDP amounted to 119 billion BGN in 2019 (or 60,8 billion euros <sup>130</sup>) which gives a GDP per capita of 16.973 BGN (or 8.677 €) <sup>131</sup>. Since 2015, the number of payments per capita with cards issued by resident PSPs has increased by 159% <sup>132</sup>, to reach 28,8 per capita per year in 2019 <sup>133</sup>. This figure still remains far below the European Union average of 168,3 in 2019. Around 80% <sup>134</sup> of these card payments were made with debit cards.

#### Banks:

Among the 25 <sup>135</sup> credit institutions on the Bulgarian market, 5 are branches of banks of euro-area credit institutions. The largest banks in Bulgaria are DSK Bank which is a subsidiary of the Hungarian OPT Bank, Unicredit Bulbank whose parent company is the Italian Unicredit SPA, and United Bulgarian Bank, the subsidiary of KBC Group. Banks offer various financial services.

		Number of	Net Turnover	Net Profit	
Name	Group	<b>Employees</b>	(Million €)	(Million €)	LinkedIn
<u>Unicredit</u>					
<u>Bulbank AD</u>	Unicredit SPA	4.142	493	206	<u>Profile</u>
<u>DSK Bank</u>	OPT Bank				
<u>PLC</u>	PLC	6.777	489	158	<u>Profile</u>
<u>First</u>					
<u>Investment</u>					
Bank AD		2.825	272	71	<u>Profile</u>
	Eurobank				
	Ergasias				
<u>Eurobank</u>	Services and				
<u>Bulgaria AD</u>	Holdings SA	3.383	264	109	<u>Profile</u>
<u>United</u>	KBC Groep				
<u>Bulgarian</u>	NV/KBC				
<u>Bank - UBB</u>	Groupe SA	2.845	208	77	<u>Profile</u>
	Raiffeisen				
<u>Raiffeisenba</u>	Bank				
nk (Bulgaria)	International				
<u>EAD</u>	AG	2.784	176	64	n/a
<u>Central</u>	ICA Invest				
<u>Cooperative</u>	Capital				
<u>Bank AD</u>	Anstalt	2.001	99	17	<u>Profile</u>
	Tirona				
TBI Bank EAD	Limited	1.493	95	23	<u>Profile</u>

 $<sup>\</sup>underline{^{129}}$  All numbers in the tables are from Orbis and for the year 2019

<sup>&</sup>lt;sup>130</sup> Authors' conversion using the average exchange rate 1.956 BGN/EUR available at Statistical Data Warehouse, ECB,

https://sdw.ecb.europa.eu/reports.do?node=1000001946 131 Statistical Data Warehouse, ECB,

https://sdw.ecb.europa.eu/reports.do?node=1000001946<sup>132</sup> Authors' calculations based on numbers from the Statistical Data Warehouse https://sdw.ecb.europa.eu/reports.do?node=1000001390

<sup>&</sup>lt;sup>131</sup> Statistical Data Warehouse, ECB, https://sdw.ecb.europa.eu/reports.do?node=1000001946<sup>132</sup> Authors' calculations based on numbers from the Statistical Data Warehouse https://sdw.ecb.europa.eu/reports.do?node=1000001390

<sup>132</sup> Authors' calculations based on numbers from the Statistical Data Warehouse https://sdw.ecb.europa.eu/reports.do?node=1000001390
133 Statistical Data Warehouse, ECB, https://sdw.ecb.europa.eu/reports.do?node=1000001390

 <sup>134</sup> Authors' calculations based on numbers from the Statistical Data Warehouse https://sdw.ecb.europa.eu/reports.do?node=1000001946
 135 Statistical Data Warehouse, ECB 2019 https://sdw.ecb.europa.eu/reports.do?node=1000001946

<u>Investbank</u>					
<u>PLC</u>		n/a	39	1	n/a
<u>Allianz Bank</u>					
<u>Bulgaria AD</u>	Allianz SE	690	n/a	n/a	<u>Profile</u>

### **Electronic Money Institutions:**

The number of EMIs licensed in Bulgaria went from 2 in 2015 to 6 in 2019 <sup>136</sup>. National players offer money remittance services and card issuance facilities, as well as acquiring and online payment services. Among them, Easypay offers money remittance services and issues cards.

Name	Group	Number of Employees	Net Turnover (Million €)	Net Profit (Million €)	LinkedIn
Easypay AD		1.013	25	1	<u>Profile</u>
<u>SafeCharge</u>					
<u>Bulgaria</u>	Nuvei				
<u>EOOD</u>	Corporation	122	6	-2	<u>Profile</u>
	Intera				
	Financial				
<u>Paynetics AD</u>	Services AD	32	1	-0,6	<u>Profile</u>
	Transact				
	Europe				
<u>Transact</u>	Holdings				
Europe EAD	OOD	59	0,001	4	<u>Profile</u>

### **Payment Schemes:**

Visa and Mastercard are used in Bulgaria for both credit and debit. There is one national payment scheme, <u>Bcard</u>. Which offers credit, debit and prepaid cards.

### **Payment Service Providers:**

The local player, Datecs Payment Technology, offers POS solutions to merchants in Bulgaria.

Name	Group	Number of Employees	Net Turnover (Million €)	Net Profit (Million €)	LinkedIn
<u>DATECS</u>					
<u>PAYMENT</u>					
<u>TECHNOLOG</u>	DATECS				
Y EAD	OOD	7	n/a	n/a	<u>Profile</u>

### Other Payment Services:

Borica AD is a clearing house and payment services provider responsible for the processing of the national payment scheme.

		Number of	Net Turnover	Net Profit	
Name	Group	Employees	(Million €)	(Million €)	LinkedIn
Borica AD		122	22	5	<u>Profile</u>

<sup>&</sup>lt;sup>136</sup> Statistical Data Warehouse, ECB, 2019 https://sdw.ecb.europa.eu/reports.do?node=1000001946

### Croatia 137

#### Introduction:

Croatia is a Balkan country of around 4 million inhabitants. It is the last country to join the European Union in 2013. Croatia is not part of the euro area and its currency is the Croatian Kuna (HRK). However, the country hopes to be able to join the euro area soon  $^{138}$ . In 2019, Croatia had a GDP of 400 billion HRK (or 53,93 billion euros  $^{139}$ ) which is equals a GDP per capita of 98.373 HRK (or  $13.261 \, ^{140}$ )  $^{141}$ . In 2015, 56,2 payments were made per capita with cards issued by resident PSPs  $^{142}$ . In four years, this number has increased by 68,7%  $^{143}$  and reached 94,8 card payments per capita in 2019. In 2019, 9,306 cards were issued by Croatian PSPs. Among them, 6,837 were equipped with a debit function only, and 1,560 others had a delayed debit function.

#### **Banks:**

There are 21 credit institutions in Croatia <sup>144</sup>. The 2 largest banks in Croatia are two subsidiaries of Italian banks: Privredna Banka, part of Intesa Sanpaolo; and Zagrebacka Banka, part of Unicredit. Indeed, there are many foreign banks such as the Austrian Addiko Bank, Erste Bank, and Raiffeisen Bank, the Hungarian OPT Bank, and the Russian Sberbank. Large national banks include Agram Banka, Hrvatska Postanska Bank and Podravska Banka. Banks offer traditional financial services, as well as foreign currency exchange accounts. They allow customers to own euros, besides kuna, and to pay in the currency they prefer in Croatia and in Europe.

Name	Group	Number of Employees	Net Turnover (Million €)	Net Profit (Million €)	LinkedIn
Zagrebacka Banka	UniCredit				
<u>DD</u>	S.p.A.	5.317	770	235	<u>Profile</u>
	Intesa				
<u>Privredna Banka</u>	Sanpaolo				
Zagreb DD	S.p.A.	4.902	656	233	<u>Profile</u>
Erste &					
Steiermarkische Bank	Erste Group				
<u>DD</u>	Bank AG	3.274	431	131	<u>Profile</u>
	Raiffeisen				
	Bank				
Raiffeisenbank Austria	International				
<u>DD</u>	AG	2.019	275	56	<u>Profile</u>

<sup>&</sup>lt;sup>137</sup> All numbers in the tables are from Orbis and for the year 2019

https://sdw.ecb.europa.eu/reports.do?node=1000004120<sup>141</sup> Statistical Data Warehouse, ECB, 2019

https://sdw.ecb.europa.eu/reports.do?node=1000004120 142 Statistical Data Warehouse, ECB, 2019

https://sdw.ecb.europa.eu/reports.do?node=1000001390

<sup>&</sup>lt;sup>138</sup> Wikipedia https://fr.wikipedia.org/wiki/Euro et Croatie <sup>139</sup> Authors' calculations based on numbers from the Statistical Data Warehouse, ECB, using the average exchange rate in 2019 7.418 HKR/EUR available at

https://sdw.ecb.europa.eu/reports.do?node=1000004120 140 Authors' calculations based on numbers from the Statistical Data Warehouse, using the average exchange rate in 2019: 7.418 HKR/EUR https://sdw.ecb.europa.eu/reports.do?node=1000004120 141 Statistical Data Warehouse, ECB, 2019 https://sdw.ecb.europa.eu/reports.do?node=1000004120 142 Statistical Data Warehouse, ECB, 2019 https://sdw.ecb.europa.eu/reports.do?node=1000001390

<sup>&</sup>lt;sup>139</sup> Authors' calculations based on numbers from the Statistical Data Warehouse, ECB, using the average exchange rate in 2019 7.418 HKR/EUR available at https://sdw.ecb.europa.eu/reports.do?node=1000004120 <sup>140</sup> Authors' calculations based on numbers from the Statistical Data Warehouse, using the average exchange rate in 2019: 7.418 HKR/EUR

<sup>140</sup> Authors' calculations based on numbers from the Statistical Data Warehouse, using the average exchange rate in 2019: 7.418 HKR/EUR https://sdw.ecb.europa.eu/reports.do?node=1000004120<sup>141</sup> Statistical Data Warehouse, ECB, 2019 https://sdw.ecb.europa.eu/reports.do?node=1000004120 <sup>142</sup> Statistical Data Warehouse, ECB, 2019 https://sdw.ecb.europa.eu/reports.do?node=1000001390

<sup>&</sup>lt;sup>141</sup> Statistical Data Warehouse, ECB, 2019 https://sdw.ecb.europa.eu/reports.do?node=1000004120 <sup>142</sup> Statistical Data Warehouse, ECB, 2019 https://sdw.ecb.europa.eu/reports.do?node=1000001390

<sup>142</sup> Statistical Data Warehouse, ECB, 2019 https://sdw.ecb.europa.eu/reports.do?node=1000001390

 <sup>143</sup> Authors' calculations based on numbers from the Statistical Data Warehouse https://sdw.ecb.europa.eu/reports.do?node=1000001390
 144 Statistical Data Warehouse, ECB, 2019 https://sdw.ecb.europa.eu/reports.do?node=1000004121

OTP Banka Hrvatska	OPT Bank				
<u>DD</u>	PLC	2.318	220	78	<u>Profile</u>
<u>Hrvatska Postanska</u>					
Bank DD		1.281	119	20	<u>Profile</u>
Addiko Bank DD	Addiko Bank				
<u>Zagreb</u>	AG	1.059	109	21	<u>Profile</u>
	Sberbank				
<u>Sberbank DD</u>	Europe AG	484	51	12	<u>Profile</u>
<u>Podravska Banka</u>		232	20	3	<u>Profile</u>
Agram Banka DD					
<u>Zagreb</u>		195	19	5	n/a

# **Electronic Money Institutions:**

Two telecom companies, A1 Hrvatska and Hrvatski Telekom, have EMI licenses. Aircash, a fintech, offers e-wallet services. Erste Card issues Diners, Visa and Mastercard cards, as well as an e-wallet.

Name	Group	Number of Employees	Net Turnover (Million €)	Net Profit (Million €)	LinkedIn
Nume	Kroatien	Limployees	(Million e)	(Million e)	Linkedin
	Beteiligung				
	sverwaltun				
	g GmbH &				
<u>A1 Hrvatska</u>	Telekom				
D.O.O.	Austria AG	1.920	453	29	<u>Profile</u>
	Privredna				
	Banka				
PBZ Card D.O.O.	Zagreb DD	244	117	22	<u>Profile</u>
Erste Card Club	Erste Group				
DOO	Bank AG	288	107	19	<u>Profile</u>
AIRCASH D.O.O.		5	0,67	0,59	<u>Profile</u>
<u>Hrvatski Telekom</u>	Deutsche				
<u>d.d.</u>	Telkom AG	n/a	n/a	n/a	<u>Profile</u>

# **Payment Schemes:**

Visa and Mastercard are the major payment schemes in Croatia. Debit, credit, and prepaid cards are issued. Diners cards are also issued by Erste Card Club.

### **Payment Service Providers:**

CorvusPay is a payment institution offering payment gateway services and has recently received a PISP license in Croatia.

Name	Group		Net Turnover (Thousand €)		LinkedIn
Corvus Pay DOO		6	50	1	<u>Profile</u>

### Gateway, processing and acquiring:

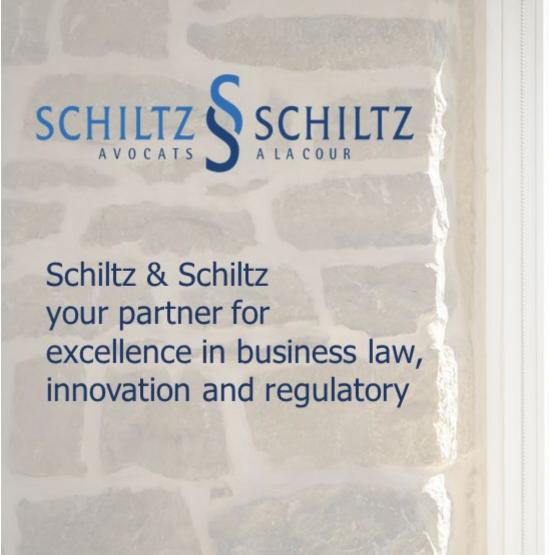
Monri Payments is part of the Payten/Asseco Group and offers POS and payment gateway services to merchants. Payten offers a wide range of payment services. Primex Payments is a payment institution licensed in Croatia and part of the American group Global Primex. B-Payment (Borgun) has a subsidiary in Croatia.

		Number of	Net Turnover	Net Profit	
Name	Group	<b>Employees</b>	(Million €)	(Million €)	LinkedIn
Payten D.O.O.	Asseco	107	17	2	<u>Profile</u>
<u>Primex</u>					
<u>Payments</u>	Global				
<u>D.O.O.</u>	Primex	10	0,5	0	<u>Profile</u>
<u>B-Payment</u>	Borgun				
<u>D.O.O</u> .	HF	8	0,2	-0,2	<u>Profile</u>
<u>Monri Payments</u>					
<u>D.O.O.</u>	Asseco	10	1	-0,1	<u>Profile</u>

### Alternative payment methods:

NTH Mobile offers payment solutions via mobile: SMS payments, carrier billing, etc.

Name	Group	Number of Employees	Net Turnover (Million €)	Net Profit (Million €)	LinkedIn
NTH Mobile	NTH				
<u>D.O.O.</u>	Group	64	6	0,09	<u>Profile</u>



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# Cyprus<sup>145</sup>

#### Introduction:

In 2019, Cyprus had a GDP of 22 billion euros for 880 thousand inhabitants, thus a GDP per capita of 24.925 $\in$ , below the average of 31.210 $\in$  <sup>146</sup> of the Euro area <sup>147</sup>.

In 2019, the number of payments per capita made with cards issued by resident PSPs in Cyprus was  $96,8^{148}$ . Although this is below the average of the euro area (136), it has increased by  $85\%^{149}$  since 2015. Around  $78\%^{150}$  of card payments were made with a debit card. According to a survey in 2016, Cypriots made on average 1,4 transactions with cash per day, against 0,2 with cards  $^{151}$ . Around 70% of respondents declared that they use cash to pay their telephone bills. Taxes, insurance policies, electricity, gas or oil supplies are also often paid in cash.

#### Banks:

Cyprus has provided licenses to  $11^{152}$  credit institutions and 29 credit institutions have activities in Cyprus in total. By total assets and turnover, the two largest banks are Bank of Cyprus and Hellenic Bank. Cyprus is also serviced by foreign banks, such as the Greek banks Alpha Bank, National Bank of Greece and Eurobank Ergesias, or the French bank Société Générale.

		Number of	Net Turnover	Net Profit	
Name	Group	<b>Employees</b>	(Million €)	(Million €)	LinkedIn
	Bank of				
<u>Bank of</u>	Cyprus				
<u>Cyprus</u>	Holdings	3.235	648	-92	<u>Profile</u>
<u>Hellenic</u>					
<u>Bank</u>		3.015	406	108	<u>Profile</u>
RCB Bank Ltd		350	115	32	<u>Profile</u>
	Eurobank				
	Ergasias				
<u>Eurobank</u>	Services and				
<u>Cyprus</u>	Holdings SA	390	106	44	<u>Profile</u>
<u>Astrobank</u>		581	87	17	<u>Profile</u>
Alpha Bank	Alpha Bank				
<u>Cyprus</u>	AE	683	78	11	n/a
<u>National</u>					
Bank of	National				
<u>Greece</u>	Bank of				
(Cyprus)	Greece SA	249	20	-1	<u>Profile</u>
Cyprus					
<u>Developmen</u>					
<u>t Bank</u>		143	17	-0,9	<u>Profile</u>

<sup>&</sup>lt;sup>145</sup> All numbers in the tables are from Orbis and for the year 2019, unless stated otherwise.

<sup>&</sup>lt;sup>146</sup>https://ec.europa.eu/eurostat/tgm/graph.do?tab=graph&plugin=1&language=en&pcode=sdg 08 10&toolbox=type

<sup>&</sup>lt;sup>147</sup> Statistical Data Warehouse, ECB, https://sdw.ecb.europa.eu/reports.do?node=1000001974

<sup>148</sup> Statistical Data Warehouse, ECB, https://sdw.ecb.europa.eu/reports.do?node=1000001390

<sup>&</sup>lt;sup>149</sup> Authors' calculations based on numbers from the Statistical Data Warehouse, ECB

<sup>&</sup>lt;sup>150</sup> Authors' calculations based on numbers from the Statistical Data Warehouse, ECB

<sup>&</sup>lt;sup>151</sup> The use of cash by households in the euro area, Henk Esselink & Lola Hernández, 2017

https://www.ecb.europa.eu/pub/pdf/scpops/ecb.op201.en.pdf

<sup>152</sup> Statistical Data Warehouse, ECB https://sdw.ecb.europa.eu/reports.do?node=1000001974

<u>Société</u>					
<u>Générale</u>	Societe				
<u>Bank -</u>	Generale				
<u>Cyprus</u>	Group	111	15	2	
	Sievert				
	Larsson				
<u>Ancoria</u>	Scholarship				
<u>Bank</u>	Foundation	83	4	-3	<u>Profile</u>

## **Electronic Money Institutions:**

In 2019, there were 13 EMI licensed in Cyprus compared to 7 EMI in 2017<sup>153</sup>. Firstly, Safecharge Limited is part of Safecharge (Nuvei Group) and offers merchant payment services (POS, ecommerce, etc). The group offers acquiring, processing and gateway services worldwide.

The formerly "CardPay" now operates under the name Unlimint. They are headquartered in London and offer acquiring and issuing payment services, allowing business to accept payment solutions. The company also offers white-label cards. ISignThis, an international player, has an EMI licensed subsidiary in Cyprus.

IPayz provides businesses with solutions to pay customers, expenses and salaries. The platform allows to manage the expenses and to pay in 45 different currencies from the same account. Oropay and NETinfopay are two e-wallet providers.

Sureswipe operates under the name Revsto and offers, among others, an e-wallet for customers and a payment gateway for merchants.

Name	Group	Number of Employees	Net Turnover (Million €)	Net Profit (Million €)	LinkedIn
<u>Safecharge</u>	Nuvei		(	(	
Limited 154	Corporation	5	88	6	<u>Profile</u>
iSignThis e-					
money 155	iSignThis	n/a	2	-0,6	<u>Profile</u>
CSC24seven.	CSCBANK				
<u>com Itd</u>	SAL	30	1,7	0,04	n/a
<u>Unlimint</u>	Unlimint	>100	n/a	n/a	<u>Profile</u>
IPS Solutions					
<u>Ltd</u>	PSI Limited	n/a	n/a	n/a	n/a
	NET INFO				
<u>NETInfoPAY</u>	PLC	n/a	n/a	n/a	n/a
Oro Pay LTD		n/a	n/a	n/a	<u>Profile</u>
<u>Sepaga EMI</u>					
<u>Limited</u>		>10	n/a	n/a	<u>Profile</u>
<u>Sureswipe</u>					
EMI PLC		n/a	n/a	n/a	n/a
<u>Koronapay</u>					
<u>Europe</u>					n/a
<u>Limited</u>		n/a	n/a	n/a	

<sup>153</sup> https://sdw.ecb.europa.eu/reports.do?node=1000001974

<sup>&</sup>lt;sup>154</sup> Numbers are from 2018 accounts

<sup>155</sup> Numbers are from 2018 accounts

# **Payment Schemes:**

Cypriot banks offer debit and credit cards, usually Mastercard and Visa.

# Payment Service Providers:

# Gateway, processing and acquiring:

JCC Payment Services is a payment institution providing a wide range of services to merchants. Their services include payment instalments, payment gateway, POS terminals, etc.

		Number of	Net Turnover	Net Profit	
Name	Group	<b>Employees</b>	(Million €)	(Million €)	LinkedIn
<u>JCC</u>	Bank of				
<u>Payment</u>	Cyprus				
<u>Systems</u>	Holdings	>50	n/a	n/a	<u>Profile</u>
	Silvergate				
<u>BigWallet</u>	Technologies				
<u>Payments</u>	Limited	>2	n/a	n/a	<u>Profile</u>

# Other Payment Services:

Cashline is a PSP offering money remittance services and FX.

		Number of	Net Turnover	Net Profit	
Name	Group	Employees	(Million €)	(Million €)	LinkedIn
<u>Cashline</u>		30	n/a	n/a	n/a

# Alternative payment methods:

Name	Group	Number of Employees	Net Turnover (Million €)	Net Profit (Million €)	LinkedIn
TFI Markets					
<u>Limited</u>		>11	n/a	n/a	<u>Profile</u>

# **Czech Republic**

#### Introduction:

The Czech Republic still has a very high rate of cash usage, which still accounts for 45% of online transactions <sup>156</sup>. This takes the form of customers ordering online but to pay in cash in the store. However, cash transactions have been declining in recent years.

There are some areas where payments technology is advancing rapidly in the Czech Republic. Digital payments are expected to increase at a Compound Annual Growth Rate (CAGR) of 19,5% between 2020 and 2024 <sup>157</sup>. Next to cash, bank transfers are a common mode of payment. Contactless payments are also widely used where card payments are made – making up approximately seventy percent of all expenditures paid by cards in the Czech Republic <sup>158</sup> – making the country the leader in this form of payment.

As for card payments at Point-of-Sale terminals, approximately 790 million transactions were made by this method in 2018, compared to 2015, when that number was 159,9 million  $^{159}$ . There were 196,7 thousand Point-of-Sale terminals in 2019  $^{160}$ . Contactless card payments recorded a CAGR of 9,9% between 2015 and 2019, representing a number of 11,9 million in  $2019^{161}$ . Mobile payments and digital wallets have also grown rapidly, with this type of transaction having an estimated CAGR of 33% between 2020 and  $2024^{162}$ .

Traditional banks are therefore having to reposition themselves rapidly and offer more digital services.

#### **Banks:**

According to the European Banking Federation, in 2019 there were 49 licensed banks. Moreover, the size of the Czech Republic banking sector increased by about 4% between 2018 and 2019 and he volume of customer deposits reached CZK 4.739,3 billion <sup>163</sup>.

The top bank in the Czech Republic is Česká Spořitelna. It is a subsidiary of the Austrian Erste Group. The bank has more than 5,3 million customers and offers services for companies, individuals, municipalities and cities <sup>164</sup>.

In second place comes the bank Československá Obchodní Banka, a subsidiary of the Belgian group KBC. The bank is active in the Czech and Slovak territories. The CSOB and Postovni sporitelna are the two brand retailers of this bank.

In third place comes Komercní Banka, which is present not only in the Czech Republic, but also in Central and Eastern Europe. It is part of the French group Société Générale. This bank serves more than 1,5 million customers and offers services to companies and individuals <sup>165</sup>.

UniCredit Bank Czech Republic and Slovakia, part of the Italian Unicredit Group, is also very active in the Slovak and Czech Republic markets, as well as the Austrian Raiffeisenbank Group. The ING and Commerzbank groups are also well established in the Czech Republic.

<sup>&</sup>lt;sup>156</sup> https://www.jpmorgan.com/merchant-services/insights/reports/czech-republic

https://www.statista.com/outlook/296/132/digital-payments/czechia

<sup>158</sup>https://www.europeanpaymentscouncil.eu/news-insights/insight/country-profile-payment-habits-czech-republic

<sup>159</sup> https://www.statista.com/statistics/445007/number-of-cashless-payments-in-czech-republic/

https://www.statista.com/statistics/444529/number-of-pos-terminals-czech-republic/

<sup>&</sup>lt;sup>161</sup> https://www.businesswire.com/news/home/20200925005214/en/Czech-Republic-Cards-and-Payments-Report-2020-Analysis-Opportunities-and-Risks-2015-2023---ResearchAndMarkets.com

 $<sup>{\</sup>color{red}^{\underline{162}}\, https://www.statista.com/outlook/331/132/mobile-pos-payments/czechia}$ 

https://www.ebf.eu/czech-republic/

<sup>164</sup> https://www.contactcenterworld.com/company/ceska-sporitelna.aspx

<sup>&</sup>lt;sup>165</sup> https://www.zoominfo.com/c/komercni-banka/81741094

Name	Group	Number of Employees	Net Turnover (Million €)	Net Profit (Million €)	LinkedIn
Š 1/					
<u>České</u> <u>spořitelně</u>	Erste Bank	9.872	1.647	699	<u>Profile</u>
Komerční banka	Société Générale	8.351	1.294	597	<u>Profile</u>
Darika	Generale	0.551	1.274	377	<u>1101116</u>
<u>Air Bank</u>		775	145	60	<u>Profile</u>
<u>Českomoravská</u>					
<u>stavební</u> <u>spořitelna</u>		n/a	109	37	<u>Profile</u>
INIC Parale		240	0.4	11	Drofile
<u>ING Bank</u>		340	94	11	<u>Profile</u>
Commerzbank		434	87	4	<u>Profile</u>

# **Payment Schemes:**

The main payment schemes are Visa, Mastercard/Eurocard, Maestro, and American Express. UnionPay cards are also accepted at some merchants in this country.

Debit cards are the most widely used type of card. The 2018 CAGR for debit card payments was 19,2%. Conversely, credit cards and prepaid cards are not popular in the Czech Republic, with a penetration rate of 13,1 cards per 100 individuals <sup>166</sup>.

#### **Payment Service Providers:**

Third Party Payment Service Providers include BestPay, Paynovatio and W.A.G. payment solutions. The latter is present throughout Europe.

Name	Group	Number of Employees	Net Turnover (Million €)	Net Profit (Million €)	LinkedIn
<u>BestPay</u>		7	n/a	n/a	<u>Profile</u>
<u>Paynovatio</u>	Epurse Group	n/a	n/a	n/a	n/a

Firstly, there are the banks that offer their own eWallet as a result of the digital revolution facing the Czech Republic. For example, ČSOB was the first bank to launch its own eWallet, under the name NaNákupy", allowing contactless payments. The Austrian group did the same, with its RaiPay service, present in the Czech Republic. Other examples include Komerční banka's Moje Platba application and mPenize of mBank.

There are also a number of regional and local players such as Worldcore (which is present in the European market), Exactly, FairPlay Pay, T-Mobile, ThePay, and GoPay.

 $\frac{166}{https://www.globenewswire.com/news-release/2019/05/07/1818098/0/en/Forecasts-for-the-Payments-Landscape-in-the-Czech-Republic.html}$ 

# Gateway, processing and acquiring:

Name	Group	Number of Employees	Net Turnover (Million €)	Net Profit (Million €)	LinkedIn
	MR TIGRAN				
<u>Fairplay Pay</u>	<u>TAMAZYAN</u>	4	25	-62	<u>Profile</u>
<u>Exactty</u>		n/a	n/a	n/a	<u>Profile</u>

# Gateway only:

		Number of	Net Turnover	Net Profit	
Name	Group	<b>Employees</b>	(Million €)	(Million €)	LinkedIn
<u>GoPay</u>	Worldline	7	480	99	<u>Profile</u>

#### Other PSPs:

TrustPay, the Slovakian company, offers Third-Party Payment services on the Czech market. In addition, Komerční banka, in <sup>alliance</sup> with Worldline develops products and services for Czech trader<sup>167</sup>.

# Alternative payment methods:

As far as American companies are concerned, Mastercard has launched MasterPass in this market. Paypal and Google Pay are also present. Apple Pay was launched in 2019 in the Czech Republic. The Dutch company PayU is also present.

Name	Group	Number of Employees	Net Turnover (Million €)	Net Profit (Million €)	LinkedIn
<u>Codium Pay</u>		n/a	5	7	n/a
<u>ThePay</u>		7	n/a	n/a	<u>Profile</u>

167 https://fr.worldline.com/fr/home/newsroom/press-releases-investors/2016/pr-2016 09 30 02.html

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#### **Denmark**

#### Introduction:

The Danish market is typical of the Nordic region in that it is characterised by a high internet penetration and a very low usage of cash. Nationals mainly use debit cards, with 1,7 billion transactions in 2019. Credit cards are also used, but are less common, representing 31 million transactions <sup>168</sup>. In addition to traditional card payments, mobile and app-based payments are widely used in Denmark, especially apps developed by the Danske bank including its banking app and MobilePay.

#### Banks:

The biggest Bank in Denmark is Danske Bank. The bank is present in other countries in Europe, but its major market remains Denmark, representing 71% of Danske Bank's operations <sup>169</sup>. They issue debit and credit cards from Mastercard and debit cards co-branded Visa and Dankort. Concerning mobile payments and wearables, they offer payment services from MobilePay, Apple Pay, Google Pay, Fitbit, and Garmin Pay.

The second largest bank in Denmark is Nykredit. As with Danske Bank, they issue credit Mastercard and debit cards co-branded Visa and Dankort, and offer also mobile payment solutions through MobilePay, Google Pay, Appel Pay, Fitbit, and Garmin Pay.

Thirdly, Jyske bank is another Danish bank offering different credit cards from Mastercard, different Visa debit cards and Dankort debit cards. In combination with those cards, Jyske Bank offers mobile payment solutions such as Visa Mobile and the other mobile payment solutions cited above.

The fourth bank in Denmark is the Finnish Nordea Bank. Denmark represents 28% of Nordea's activities, i.e., its second largest market after Finland <sup>170</sup>. They offer Visa and Dankort debit cards and Mastercard credit cards that can also be linked to mobile payment solutions.

Other domestic smaller banks are also present in Denmark, offering a range of Mastercard and Visa debit and credit cards, along with a variety of mobile payments solutions.

Other foreign banks are also present in Denmark - particularly major Swedish banks including Handelsbanken, Swedbank, SEB Bank, Resurs Bank and Ikano Bank. SEB Bank issues its MasterCard credit cards through Eurocard while Swedbank issues its MasterCard credit cards through EnterCard. Finally, international fintechs such as Revolut, N26 and Monese are also present on the Danish market.

			Number of	Net Turnover	Net Profit	
Name	HQ	Group	<b>Employees</b>	(Million)	(Million)	LinkedIn
		Nordea				
Nordea DK	FI	Group	7.904	€2.588	€424	<u>Profile</u>
		Danske				
<u>Danske Bank</u>		Bank				
<u>DK</u>	DK	Group	10.970	kr62.939	kr6.879	<u>Profile</u>
Nykredit Bank	DK		900	kr4.238	kr1.288	<u>Profile</u>
<u>Sydbank</u>	DK		2.030	kr3.861	kr853	<u>Profile</u>
Spar Nord						
<u>Bank</u>	DK		1.549	kr3.280	kr1.059	<u>Profile</u>

<sup>168</sup> Data from StatBank of Danmark (data do not include transactions from ecommerce and ATM cash withdrawals)

<sup>&</sup>lt;sup>169</sup> Danske Bank annual report 2019

<sup>&</sup>lt;sup>170</sup> Nordea annual report 2019

<u>Arbejdernes</u>						
<u>Landsbank</u>	DK		1.122	kr2.197	kr544	<u>Profile</u>
Ringkjoebing						
<u>Landbobank</u>	DK		652	kr2.176	kr978	<u>Profile</u>
<u>Sparekassen</u>						
<u>Kronjylland</u>	DK		731	kr1.431	kr432	<u>Profile</u>
<u>Vestjysk Bank</u>	DK		378	kr1.056	kr478	<u>Profile</u>
<u>SEB Bank DK</u>	SE	SEB Group	327	kr2.907	kr1.590	<u>Profile</u>
		Handalsba				
<u>Handelsbank</u>		nken				
en DK	SE	Group	600	kr2.288	kr1.009	<u>Profile</u>

#### **Payment Schemes:**

Most traditional American payment schemes are present in Denmark including MasterCard, Visa and American Express. In addition, Denmark has its own debit card payment scheme called Dankort and developed by Nets Denmark A/S. Nowadays, Dankort debit cards are cobranded with Visa debit cards which allows Danish to make purchases abroad and in shop where Dankort is not accepted. Dankort is the most popular payment scheme used by 85% of the Danish population <sup>171</sup>. Dankort is also available on mobile app which allows the Danes to make purchases through mobile payments <sup>172</sup>. Dankort transactions represented in 2018 68% of annual Danish transactions while MasterCard and Visa transactions represented only respectively 18% and 14% <sup>173</sup>.

		Number of	Net Turnover	Net Profit	
Name	Group	<b>Employees</b>	(Million)	(Million)	LinkedIn
<u>Dankort</u>	Nets Group	n/a	n/a	n/a	<u>Profile</u>

#### Payment Service Providers:

Gateway, Processing and Acquiring:

Name	Group	Number of Employees	Net Turnover (Million)	Net Profit (Million)	LinkedIn
<u>Nets DK</u>	Nets Group	n/a	€490	€307	<u>Profile</u>
<u>Inpay</u>		36	-kr7,9	-kr6,2	<u>Profile</u>

#### Gateway only:

International players are present, such as Adyen, Verifone, Worldpay, Stripe, Trustly, Bambora and Paymill. In addition, Danish domestic gateways such as Point Transaction System from Verifone Group and Nets that are operating on the Nordic and Baltic regions, while more local players are mainly operating in Denmark. Those include Uniwire, Altapay, Paylike, Reepay and QuickPay offering payment solutions and Inpay offering low-cost payment transfers.

<sup>171</sup> https://www.multisafepay.com/be fr/solutions/methodes-de-paiement/dankort

<sup>172</sup> https://www.dankort.dk/privat

<sup>&</sup>lt;sup>173</sup> Worldpay Global Payment report 2020

		Number of	Net Turnover	Net Profit	
Name	Group	<b>Employees</b>	(Million)	(Million)	LinkedIn
<u>Altapay</u>		47	kr40	-kr69,5	<u>Profile</u>
<u>quickPay</u>		17	kr8,1	kr6,3	<u>Profile</u>
Reepay		8	n/a	-kr1,7	<u>Profile</u>
<u>Paylike</u>		3	n/a	kr1	<u>Profile</u>
<u>Unwire</u>		34	n/a	kr2,8	<u>Profile</u>

#### Other PSPs:

The main acquirer and payee's payment service provider in Denmark is Clearhaus. This payment institution provides payment processing and settlement services for online merchants. Clearhaus has a major position on the Danish market. With their 20% market share, they currently serve twenty thousand customers spread over 33 European countries <sup>174</sup>.

		Number of	Net Turnover	Net Profit	
Name	Group	<b>Employees</b>	(Million €)	(Million €)	LinkedIn
<u>Clearhaus</u>		58	3,4	-0,023	<u>Profile</u>

#### Alternative payment methods:

Denmark is characterised by its wide range of mobile payment solutions. As mentioned above, international alternative payment methods such as Google Pay, Apple Pay, Amazon Pay and Paypal are already well-implemented in the Danish market. However, Denmark has implemented Nordic regional players as well, such as MobilePay, a Danish mobile payment solution also used in Finland. Other Nordic players such as Klarna and Viabill are present in the country. Both are "buy now pay later" (BNPL) methods.

		Number of	Net Turnover	Net Profit	
Name	Group	Employees	(Million)	(Million)	LinkedIn
<u>ViaBill</u>		11	kr75	kr24,8	<u>Profile</u>
<u>MobilePay</u>					
<u>DK</u>	MobilePay	48	n/a	-€21	<u>Profile</u>

<sup>174</sup> https://www.clearhaus.com/about/

#### **Estonia**

The Estonian payment market is characterized by a high usage of cards and other non-cash payments. Card payments are the preferred non-cash payment method amongst the Estonians, taking up 67,6% of all non-cash payments. This is followed by credit transfers with 30,2% and other payment methods taking up only 2,3%. The market is subject to strong influences from the Nordic countries and neighbouring Baltic countries.

#### Banks:

The Estonian banking sector has a strong Nordic influence. First, Swedbank has the strongest position in the banking sector with almost 40% of market share <sup>175</sup>. They issue Mastercard debit and credit cards. They also offer mobile contactless payment through their own Swedbank app and support e-wallets such as Apple Pay, Google Pay, Fitbit Pay, and Garmin Pay. SEB Bank issues Visa and Mastercard debit and credit cards. They also offer mobile contactless payments through their SEB mobile app. Citadele Banka is a regional bank from Latvia and also offers payment services in Estonia. They issue Visa credit and debit cards, and mobile payment methods through Apple Pay and the Citadele mobile app.

In addition to foreign banks, Estonian banks have a significant position in the Estonian banking sector and operate also on a regional level. First, Luminor Bank is the biggest Estonian bank also operating in the other Baltic countries. They issue Visa debit and credit cards. Coop Bank, LHV Bank, and Tallinn Business Bank issue MasterCard credit and debit cards and operate only in Estonia. Inbank is another Estonian bank offering financial services and payment services through Inpay. They issue MasterCard credit cards linked to the Inpay app. They also offer mobile payments through Apple Pay.

Name	Group	Number of Employees	Net Turnover (Million €)	Net Profit (Million €)	LinkedIn
<u>Swedbank AS</u>		2.392	406,7	205,9	<u>Profile</u>
AS SEB Pank		1.019	173,6	100,4	<u>Profile</u>
AS LHV PanL		449	47,4	27,1	<u>Profile</u>
<u>InBank AS</u>		184	32,8	10	<u>Profile</u>
Coop Pank AS		273	23,9	5,5	<u>Profile</u>
AS TBB Pank		69	4,6	-0,8	<u>Profile</u>
<u>Luminor Bank</u>					
AS		577	n/a	n/a	<u>Profile</u>

#### **Electronic Money Institutions:**

Local players such as Wallester provide only issuing services and issue only Visa credit cards without any additional payment services.

Finally, Estonia has also foreign electronic money institutions such as PaySera from Lithuania, which has setup an office in Estonia.

Name	Group	Number of Employees	Net Turnover (Million €)	Net Profit (Million €)	LinkedIn
<u>Wallester</u>		19	0,3	-0,8	<u>Profile</u>
<u>Paysera EE</u>		4	0,1	-0,1	<u>Profile</u>

#### **Payment Schemes:**

International payment schemes in Estonia are Visa and MasterCard. Estonia has no additional payment schemes specific to its domestic market.

<sup>175</sup> https://corporatefinanceinstitute.com/resources/careers/companies/top-banks-in-estonia/

#### **Payment Service Providers:**

Worldline is present on the Estonian market through its Latvian branch, Worldline Latvia, that provides ATMs for some banks in Estonia <sup>176</sup>.

#### Gateway only:

Estonia has a local start-up operating only in Estonia called PayTailor. They provide a payment solution platform that accepts online payments for merchants and businesses.

Regional players are also present in Estonia, such as EveryPay and Maksekeskus. EveryPay helps merchants to accept and process card payments from Visa and MasterCard, as well as bank payments from major Estonian Banks including SEB Bank, Sedbank, LHV, Luminor, and Citadele Bank, as well as alternative payments from Paypal. They also offer acquiring services used by Swedbank, SEB Bank, and LHV. Maksekeskus is a gateway part of Omniva Group operating in the Baltic region that accepts bank payment, card payments, mobile payments, and other online payment solutions for ecommerce.

Name	Group	Number of Employees	Net Turnover (Million €)	Net Profit (Million €)	LinkedIn
<u>PayTailor</u>		2	0,02	-0,01	<u>Profile</u>

#### Other PSPs:

The main transaction processor in Estonia is the Estonian branch of Nets, a Danish payment service provider operating in the Nordics and in the Baltic countries. It manages the whole payment system in Estonia connecting the international payment schemes with the local Estonian banks <sup>177</sup>. In addition, as mentioned above, EveryPay provides also processing and acquiring services for banks.

# Alternative payment methods:

Among alternative payment methods, foreign American gateways such as PayPal, Google Pay and Apple Pay are used in Estonia. Telia Eesti has developed an e-wallet app called mTasku that aggregates all the bank and loyalty cards of consumers and enables customers to pay with their phone directly. Fortumo also offers mobile payments that charge the purchase directly on the phone bill of the customer. Their headquarter is located in Estonia but operates worldwide.

#### BaaS / SaaS:

Advapay is a technology and consultancy provider for banks and fintechs that offers integrated banking and payments services. They operate mainly in Estonia. Another banking-as-a-service provider is Pocopay, which soon will be launching with a new range of services.

		Number of	Net Turnover	Net Profit	
Name	Group	<b>Employees</b>	(Million €)	(Million €)	LinkedIn
<u>Advapay</u>		17	0,8	0,4	<u>Profile</u>
	Pocosys				
<u>Pocopay</u>	(Opera)	11	n/a	n/a	<u>Profile</u>

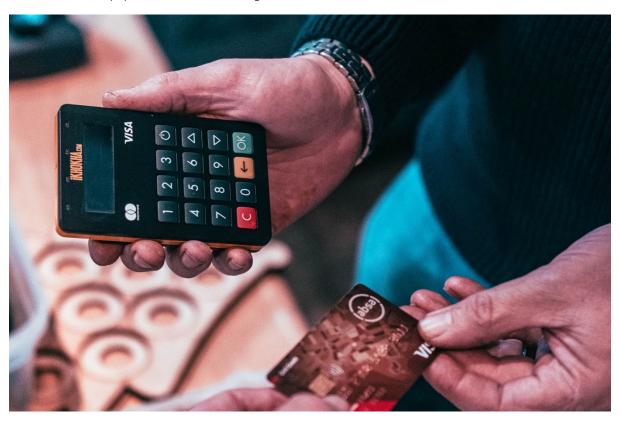
<sup>&</sup>lt;sup>176</sup> https://www.eestipank.ee/en/payments/card-payment-system

<sup>177</sup> https://www.eestipank.ee/en/payments/card-payment-system

#### **Finland**

#### Introduction:

As with other Nordic countries, Finland has very low cash usage and a strong preference for electronic payments. Concerning ecommerce, the most-used electronic payment in Finland is online bank transfer through PayTrail or Trustly, followed by debit card payments. In addition Finland also uses mobile payments with MobilePay from Denmark and credit-based payments offered by Klarna from Sweden <sup>178</sup>. They also developed their own e-wallet payment solutions including Siirto and Siru Mobile.



#### Banks:

The Finnish banking sector is characterized by a few large Finnish banks operating internationally and regionally throughout the Nordics, and several smaller banks operating only on the domestic market. In addition to those Finnish banks, other Nordic banks such as Danske Bank, SEB Bank, Handelsbanken, Komplett Bank and Bank Norwegian. Danske Bank has a significant market share on the Finnish banking market around  $10\%^{179}$ , and offers issuing and acquiring services, Norwegian banks issue only credit cards without additional payment services.

The two biggest banks in Finland are OP Corporate Bank and Nordea Bank. OP Corporate has a market share of  $35,5\%^{180}$ . The bank issues Visa credit and debit cards and MasterCard credit cards. They also offer bills and e-invoices payments, mobile payments from Siirto. They developed also their own mobile payment method called Pivo available only for OP customers and is directly linked to the OP bank account and its bank card. In second

<sup>178</sup> https://www.about-payments.com/ecommerce-markets/which-online-payment-methods-to-accept-in-finland#:~:text=Finnish%20online%20shoppers%20prefer%20to,card%20brand%20VISA%20and%20MasterCard.

<sup>179</sup> https://www.ebf.eu/finland/

<sup>180</sup> https://www.ebf.eu/finland/

place, Nordea has a market share of 25,4% <sup>181</sup>. The bank issues MasterCard credit and debit cards and mobile payment solutions from Apple Pay, Google Pay, Siirto, and Nordea Wallet.

Smaller banks are also present on the Finnish market offering a mix of debit and credit cards from Mastercard and Visa, along with other electronic payment methods like Google Pay, Apple Pay, Garmin Pay, and Fitbit Pay. One bank, Aktia Bank, also offers mobile payment services with its own Aktia Wallet.

Finally, Finland has also online banks and electronic money institutions such as Revolut, N26, and Monese, as well as domestic players such as Holvi Payment Services, which is licensed as a payment institution. It offers online payment accounts and issues MasterCard credit cards for businesses.

				Net		
			Number of	Turnover	Net Profit	
Name	HQ	Group	Employees	(Million)	(Million)	LinkedIn
Nordea Fl	FI	Nordea Group	9.368	€2.110	€198	<u>Profile</u>
<u>Op</u>						
<u>Corporate</u>						
<u>Bank</u>	FI		2.675	€1.165	€332	<u>Profile</u>
<u>Aktia Bank</u>	FI		776	€218	€62	<u>Profile</u>
<u>S-Pankki</u>	FI		592	€168	€24	<u>Profile</u>
<u>Alandsban</u>						
<u>ken</u>	FI		469	€134	€26	<u>Profile</u>
POP						
<u>Pankki</u>	FI		735	€124	€21	<u>Profile</u>
<u>Oma</u>						
<u>Säästöpan</u>						
<u>kki</u>	FI		279	€91	€27	<u>Profile</u>
<u>Danske</u>		Dankse Bank				
<u>Bank Fl</u>	DK	Group	1.843	kr5.083	kr445	<u>Profile</u>
<u>Handelsba</u>		Handelsbanken				
<u>nken Fl</u>	SE	Group	506	kr2.021	kr1.015	<u>Profile</u>
SEB Bank FI	SE	SEB Group	281	kr1.899	kr953	<u>Profile</u>
Resurs		Resurs Bank				
<u>Bank Fl</u>	SE	Group	98	kr550	kr239	<u>Profile</u>
<u>Ikano Bank</u>						
<u>FI</u>	SE	Ikano Group	21	kr335	-kr2	<u>Profile</u>

#### **Payment Schemes:**

The traditional American payment schemes are widespread in Finland including Visa, Mastercard and American Express. There is no payment scheme specific to Finland.

#### **Payment Service Providers:**

#### Gateway, processing and acquiring:

Concerning online payment solutions, Finland has international foreign gateways such as Stripe, Adyen, Braintree, Worldline, Worldpay, Verifone, Paymill and Skrill. However, Finland also has its own domestic online payment solution, Paytrail, developed by Nets Group. The payment institution serves currently more than ten thousand merchants around Europe.

<sup>181</sup> https://www.ebf.eu/finland/

Name	Group		Net Turnover (Million €)		LinkedIn
<u>Paytrail PLC</u>	Nets Group	n/a	n/a	n/a	<u>Profile</u>

#### Other PSPs:

One Finnish payment service provider distinguish itself in Finland. Enfuce is an innovative PSP providing payment services and banking services for banks, fintechs, and merchants. Concerning payments, they issue prepaid, debit, and credit cards and process transactions from Apple Pay, Google Pay, and Samsung Pay. They also offer open banking services for financial institutions and fintechs to deliver financial and banking services compliant with PSD2. Enfuce is a local Finnish PSP offering card issuance, electronic payments and open banking services.

		Number of	Net Turnover	Net Profit	
Name	Group	Employees	(Million €)	(Million €)	LinkedIn
<u>Enfuce</u>		40	5,2	-2	<u>Profile</u>
<u>Holvi</u>					
<u>Payment</u>					
<u>Services</u>		103	3	-17	<u>Profile</u>

#### Alternative payment methods:

There is widespread usage of e-wallet payment methods and mobile payments in Finland. This includes American international players such as Apple Pay, Amazon Pay, Google Pay, Fitbit Pay, Garmin Pay, and PayPal, and smaller local payment methods such as MobilePay, Siirto, Siru Mobile, Klarna, Trustly, and Mash.

MobilePay is used by more than 800.000 Finns, 14,5% of the Finnish population <sup>182</sup>. Siirto and SiruMobile, on the other hand, are smaller start-ups, increasing in popularity as Finnish banks start to link those services with their own financial services.

Name	Group	Number of Employees	Net Turnover (Million €)	Net Profit (Million €)	LinkedIn
<u>Mash</u>		147	28,4	182,3	<u>Profile</u>
<u>SiruMobile</u>		n/a	1,5	0,2	<u>Profile</u>
<u>Siirto</u>		1	0,0006	0,0002	n/a

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 $<sup>\</sup>underline{^{182}\ https://qvik.com/news/guide-mobile-payments-finland-2018/}$ 

#### France<sup>183</sup>

#### Introduction:

Cash was still the most widely used means of Payment in France in 2019<sup>184</sup>, both in shops and between private individuals. Cash accounted for 59% of these transactions, while card payments accounted for only 35%. Cash usage has however declined significantly since 2016.

However, since the health crisis of Covid-19, the French have reduced the use of cash. There is increasing interest In the use of bank cards: 69% of French people say they prefer to use a card to pay for their daily purchases (only 49% in the euro zone) <sup>185</sup>.

For non-cash transactions, and particularly in ecommerce, card payments largely dominate. According to the Banque de France <sup>186</sup>, there were 24.851 million transactions in France in 2019 for a total value of 28.521 billion euros. This transaction volume increased by 7% compared to 2018 and is mainly driven by electronic payments (mainly by card). Among these transactions, there were 14.485 million card payments, i.e. just over 58% of the total number of non-cash payments, which is higher than the European average. However, in terms of amount and transactions, card payments represent only 20,9% of the total amount transacted in 2019. According to J.P.Morgan <sup>187</sup>, the average French person owns only 0,94 credit/debit cards.

The two other cashless payment methods preferred by the French are credit transfers and direct debits (respectively 17% and 18% of the transaction volume in 2019).

The increase in card payments in France has also led to growth in contactless payment. According to the Banque de France, contactless payments increased 17-fold between 2015 and 2019 and now account for around 31% of the number of in-store payments by card.

#### Banks:

In 2019, there were 339 banks in France with a total of 36.619 branches in the country. Among these, there were about 166 commercial banks, 70 branches of foreign banks, and 96 cooperative and savings banks. As far as banks in France are concerned <sup>188</sup>, in terms of the number of professional and private clients, the 5 largest are:

- 1. The Crédit Agricole with 51 Million Customers
- 2. BNP Paribas with 33 Million Customers
- 3. Société Générale with 31 Million Customers
- 4. Groupe BPCE with 30 Million Customers
- 5. La Banque Postale with 10.7 Million Customers

<sup>&</sup>lt;sup>183</sup> All Further Table Information is coming from Orbis and Annual Reports

<sup>184</sup> https://www.lafinancepourtous.com/2020/12/18/paiement-les-francais-utilisent-moins-les-especes/

<sup>185</sup> https://www.leparisien.fr/economie/argent-les-francais-paient-de-moins-en-moins-en-especes-03-12-2020-8411977.php

<sup>186</sup> https://www.banque-france.fr/sites/default/files/media/2020/12/18/cmps 2019 fr.pdf

https://www.jpmorgan.com/merchant-services/insights/reports/france 188

https://www.culturebangue.com/bangues/classement/bangues-francaises/

<sup>188</sup> https://www.culturebanque.com/banques/classement/banques-francaises/

The characteristic feature of this market is the very low penetration of foreign banks. In fact, the first major foreign bank to enter France is  $HSBC^{189}$  and it represents only 800.000 customers. However, in 2018, there were than  $347^{190}$  players with a banking licence in France.

Name	Crown	Number of	Net	Net Prefit	Linkadla
Name	Group	Employees	Turnover	Net Profit	LinkedIn
<u>La Banque</u>					
<u>Postale</u>	La Poste	5.321	€5.929	€786	<u>Profile</u>
	Groupe Crédit du				
<u>Crédit du Nord</u>	Nord	7.494	€1.843	€328	<u>Profile</u>
Crédit Coopératif		1.953	€382	€38	<u>Profile</u>
Carrefour Banques 191	Groupe Carrefour	1.535	€308	€17	<u>Profile</u>
	Groupe				
<u>Fiobank</u>	Casino	223	€165	€11	<u>Profile</u>
Banque BCP		502	€100	€22	<u>Profile</u>
Banque de Savoie		297	€46	€8	<u>Profile</u>
Banque Delubac					
<u>&amp; CIE</u>		214	€35	€21	<u>Profile</u>
<u>Themis Bank</u>		122	€27	€3	n/a
Monabana	Crédit Mutuel	191	€21	-€9	<u>Profile</u>
Banque Chalus		135	€14	n/a	<u>Profile</u>
	Groupe				
Floa Bank 192	Casino	223	\$184,84	\$12,71	<u>Profile</u>
Crédit Agricole	Groupe Crédit				
<u>Payment service</u>	Agricole	>500	n/a	n/a	<u>Profile</u>

<sup>189</sup> La Tribune : HSBC pourrait stopper la banque de detail en france, 19/09/19
190 https://banksdaily.com/world/France
191 Values provided by Orbis (Group Figures

#### **Payment Schemes:**

The lead payment scheme in France is domestic, namely the Carte Bancaire group. In 2019 this group had issued 71 million cards and processed 13 billion transactions, accounting for more than 60% of card payments <sup>193</sup>. Carte Bancaire cards serve as both credit and debit cards. Visa also has a key position in the French credit card market with 40 million cards in circulation. They have a partnership with the French consortium "Cartes Bancaires for co-branded cards. Mastercard additionally share a part of that market by accounting for 24% of online purchases in France in 2015 using a credit card.

Name	Group	Number of Employees	Net Turnover (Million €)	Net Profit (Million €)	LinkedIn
Groupe Carte Bancaire 194	GIE CB	87	34,2	n/a	n/a

#### **Payment Service Providers:**

In terms of Third-Party Payment Service Providers, the main player in France is the French company Worldline, which has become one of the world's leading players, especially after its acquisition of Ingenico. Other players such as Edenred and Monext are also important players in France as well as abroad. Nevertheless, a number of local actors, such as Frenchsys and Treezor, are also present in France. <sup>195</sup>

Name	Group	Number of Employees	Net Turnover (Million €)	Net Profit (Million €)	LinkedIn
<u>Frenchsys</u>		>10	n/a	n/a	<u>Profile</u>
	Societe Générale		n/a	n/a	
<u>Treezor</u>	Group	>50			<u>Profile</u>

#### Other PSPs:

The market is relatively fragmented, with many relatively small local players offering a variety of services and products, from TPE installation to online payment management services. France is also home to 8 of the 50 largest acquirers <sup>196</sup> in Europe in terms of volume of Visa and Mastercard transactions. These include the banks Crédit Agricole, Crédit Mutuel, BPCE, BNP Paribas, Société Générale and La Banque Postale on the one hand and purely acquiring players such as Worldline on the other.

Name	Group	Number of Employees	Net Turnover (Million €)	Net Profit (Million €)	LinkedIn
Natixis Payment Solutions	ВРСЕ	574	316	50	<u>Profile</u>
Afone Payment 197	Afone Group Company	147	9,6	n/a	<u>Profile</u>

<sup>193</sup> https://www.ingenico.be/fr/payments/carte-bancaire

<sup>194</sup> Cartes Bancaires: Annual Report 2019

<sup>195</sup> https://askwonder.com/research/french-market-what-s-breakdown-online-card-payments-1-know-split-credit-card-vs-f0ez01h0w

<sup>196</sup> https://nilsonreport.com/upload/issues/1175 0036.pdf

<sup>&</sup>lt;sup>197</sup> Afone Payment: Annual Report

<u>Tiller Systems</u>		170	n/a	n/a	<u>Profile</u>
<u>Synalcom</u>		>50	n/a	n/a	<u>Profile</u>
AVEM		1.500	n/a	n/a	<u>Profile</u>
<u>Déjà Mobile</u>		40	n/a	n/a	<u>Profile</u>
	Crédit Mutuel				
<u>Qonto</u>	Arkéa	170	n/a	n/a	<u>Profile</u>

# **Alternative Payment Methods:**

Paypal, Google Pay, Amazon Pay, Apple Pay and Alipay are the major gateways in, and others, there is not much room for local actors. However, the main French actors are: Paylib, Lyf Pay and Lydia Solution.

Name	Group	Number of Employees	Net Turnover (Million)	Net Profit (Million)	LinkedIn
<u>Hipay</u> 198	Hipay Group	196	\$39,18	-\$6,46	<u>Profile</u>
Dalenys 199	Groupe BPCE	41	\$4,04	\$0,13	<u>Profile</u>
<u>Paylib</u>		>10	n/a	n/a	<u>Profile</u>
<u>Lydia Solution</u>		>50	n/a	n/a	<u>Profile</u>
<u>JDC</u>		800	n/a	n/a	<u>Profile</u>

# BaaS / SaaS:

Name	Croup	Number of Employees	Net Turnover (Million €)	_	LinkedIn
Nume	Group	Employees	(Million €)	€)	Linkeam
<u>Upstream Pay</u>		n/a	n/a	n/a	<u>Profile</u>

<sup>&</sup>lt;sup>198</sup> Values provided by Orbis (Group Figures)

<sup>&</sup>lt;sup>199</sup> Values provided by Orbis (Group Figures)

# **Germany**

#### Introduction:

Cash remains the favourite payment method in Germany. Cash is mostly used for small transactions <sup>200</sup> and the 50€ banknote is still the most used in the daily life <sup>201</sup>. In 2017, cash payments amounted to 74,3% of all transactions, representing 47,6% in total volume, followed by debit cards with respectively only 18,4% and 34%. However, the number of cash transactions have decreased by 9,4% since 2011 while debit card transactions have increased by 37,31% <sup>202</sup>. The number of cards per capita is also rising, with a preference for debit cards. There were respectively 0,36 and 1,45 credit and debit cards per capita in 2010, against 0,52 and 1,61 in 2019 <sup>203</sup>. The increasing use of cards in transactions might be amplified by the COVID-19 crisis.

Numbers from 2019 show that among non-cash transactions, direct debit was preferred (45,4%), followed by credit transfer (27,6%), cards (26%) and e-money  $(0,1\%)^{204}$ . Germany had the highest relative level of direct debit transactions (euro zone average: 22%), and the second lowest of cards transactions (euro zone average: 48%).

In 2019, the Deutsche Bundesbank issued 58% of banknotes of the Eurosystem <sup>205</sup>. Among these 58% issued, only 10% were used for transactions inside Germany while 30% were put aside by Germans. Cash is thus also used as way to store value. On average, Germans had €107 in their wallets and €1.364 kept at home in 2018 <sup>206</sup>. The same study of the Deutsche Bundesbank has tried to understand the motives of using cash in payment transactions. It appeared that cash payment is faster and cheaper than card payment at the checkout. It takes 22 seconds to pay in cash against 29 seconds for card with PIN.



The ecommerce market in Germany is estimated to have a value of €73 billion with an expected growth of 7,3% per year up to 2021<sup>207</sup>. With a smartphone penetration of around 70% and 57,7<sup>208</sup> million of smartphone users

<sup>&</sup>lt;sup>200</sup> A Perspective on German Payments, McKinsey

<sup>&</sup>lt;sup>201</sup> Facts and figures about cash, last update March 2020, Deutsche Bundesbank

<sup>&</sup>lt;sup>202</sup> Authors' calculations based on numbers from the Deutsche Bundesbank

<sup>&</sup>lt;sup>203</sup> Number of credit cards and debit cards per capita in Germany from 2010 to 2019, Statista

https://www.statista.com/statistics/1098137/credit-cards-and-debit-cards-per-capita-in-germany/

<sup>&</sup>lt;sup>204</sup> Payment statistics: 2019, ECB https://www.ecb.europa.eu/press/pr/stats/paysec/html/ecb.pis2019~71119b94d1.en.htm

<sup>&</sup>lt;sup>205</sup> Facts and figures about cash, last update March 2020, Deutsche Bundesbank

<sup>&</sup>lt;sup>206</sup> https://www.bundesbank.de/en/tasks/topics/german-households-store-large-amounts-of-cash-838306

<sup>&</sup>lt;sup>207</sup> 2019 J.P. Morgan Global Payment Trends: E-commerce payments trends: Germany, JP Morgan

<sup>&</sup>lt;sup>208</sup> Statista https://www.statista.com/statistics/461801/number-of-smartphone-users-in-germany/

in Germany in 2019, Germans prefer to use mobile devices to shop online. Around 25% of Germans have used mobile payments and 15% have transferred money to a peer from a mobile <sup>209</sup> according to PWC. Germans under 30 years old have a higher tendency to use mobile payments (46%) and peer-to-peer mobile money transfers (31%). The same PWC study has highlighted different fears that might prevent Germans from using mobile payments. They worry about identity theft (74%) and getting their phone stolen and misused to make mobile payments (77%). They are also afraid that mobile payments could incentivise them to buy more quickly (69%).

#### Banks:

In 2019, Germany had  $1.533^{210}$  credit institutions. There are three major types of banks in Germany: the savings banks, the cooperative banks, and the commercial banks.

Firstly, the commercial banks. The largest German bank is the Deutsche Bank AG. This bank offers financial services globally. The company is a card issuer and acquiring bank. Since the sale of Deutsche Card Services to Evo Payment International in 2012, the two institutions have a partnership regarding merchant acquiring and related activities <sup>211</sup>. Deutsche Postbank AG, operating in retail banking, and norisbank GmbH, operating in direct retail banking, are popular banks in Germany and part of the Deutsche Bank AG group. Deutsche Bank AG has around 1.680 branches in Germany.

Another major bank in Germany is Commerzbank AG. It also offers financial services worldwide. The company is an issuer and an acquirer; and has a long-term partnership with equensWorldline for its acquiring and processing services. One of its subsidiaries, Comdirect, is a direct bank with more than 2,7 million <sup>212</sup> of customers.

There are also major foreign actors such as Unicredit (IT) through its subsidiary HypoVereinsbank (UniCredit Bank AG), ING (NL) through ING DiBa, Santander (S) through Santander Consumer Bank AG, Credit Mutuel (F) through Targo Bank, and BNP Paribas Fortis (F) through the brand Consors Finanz.

The savings banks are represented by the Sparkassen-Finanzgruppe (DSGV). There are currently around 400<sup>213</sup> savings banks in Germany and 6 Landesbanken<sup>214</sup>: SaarLB, Landesbank Baden-Württemberg (LBBW), Bayerische Landesbank (BayernLB), Norddeutsche Landesbank Girozentrale (Nord/LB), Landesbank Hessen-Thüringen Girozentrale (Helaba) and Landesbank Berlin AG. These banks are part of the German public banking system, where the banks are controlled by state actors, though they are not fully publicly owned. Initially, there was one Landesbank per state but some merged. Each Landesbank was functionning as a central bank for the savings banks

of the state. Step by step, their roles have evolved. BayernLB for instance offers financial services to corporates, financial institutions and real-estate customers, besides its role as central bank for the Bavarian Savings banks. Helaba provides financial services to companies, banks and institutions; and plays the role of central bank for the Savings banks of Hessen, Thüringen, Nordrhein-Westfalen and Brandenburg. DekaBank and Deutsche Kredit Bank AG are also part of the group. The savings banks issue girocards, Mastercard and Visa cards. They have also developed a partnership with Apple Pay: the Sparkassen cards can be selected as means of payment within Apple's wallet.

In 2018, the former HSH Nordbank became a private commercial bank under a new name: Hamburg Commercial Bank AG. The association of cooperative banks in Germany is the "Bundesverband der Deutschen Volksbanken und Raiffeisenbanken" (Genossenschaftliche

Finanzgruppe Volksbanken Raiffeisenbanken)<sup>215</sup>. It aims at defending the interests of its more than 840 members and developing a common strategy inside the group. It also provides support on legal, commercial or

<sup>&</sup>lt;sup>209</sup> Mobile Payment Report 2019, PWC https://www.pwc.de/de/digitale-transformation/pwc-studie-mobile-payment-2019.pdf

<sup>&</sup>lt;sup>210</sup> Statistical Data Warehouse, ECB, 2019 https://sdw.ecb.europa.eu/reports.do?node=1000001967

<sup>211</sup> https://www.evopayments.us/deutsche-bank-and-evo-reach-agreement-for-sale-of-deutsche-card-services/

<sup>212</sup> https://www.comdirect.de/cms/ueberuns/en/unternehmen/index.html

<sup>&</sup>lt;sup>213</sup> Deutsche Kreditwirtschaft: https://die-dk.de/en/about-us/german-savings-banks-association/

<sup>214</sup> https://de.wikipedia.org/wiki/Landesbank

https://www.bvr.de/p.nsf/index.xsp

financial matters. Its members, all independent, include among others, the Volksbanken and the Raiffeisenbanken, the 11 Sparda banks, DZ Bank AG, Bausparkasse Schwäbisch Hall AG and the PSD-Bankengruppe. DZ Bank AG is the largest cooperative bank and one of the largest banks in Germany. It is owned by smaller local cooperative banks. The Sparda banks have launched its TEO, a multibanking app, allowing customers to make money transfers from their mobile phones.

In 2015, Ausburger Aktienbank, a direct bank offering only B2B services, acquired a direct retail bank. Netbank is a card issuer and offers acquiring services to merchants in partnership with SumUp.

The banking landscape has recently seen the arrival of new kinds of banks. One of them is N26 GmbH. It is a mobile bank offering private and business accounts and issues Mastercard. They operate on an international scale. Customers can now even take a credit up to €25.000 and withdraw cash in a partner shop (such as Rewe or DM) through Cash26. Customers can also create a shared bank account, on which up to 10 other people can add or withdraw money; or make peer-to-peer money transfers. Apple Pay and Google Pay accept N26 cards to carry out mobile payments. SolarisBank is a technology company offering Banking-as-a-Service and holder of a banking license. FidorBank offers quite similar services as N26 GmbH. This other mobile bank offers private and business accounts, issues Mastercard and allows the withdrawal of cash through Fidor Cash. Both institutions also offer electronic payment solutions and integration with large electronic payment methods like Apple Pay and Google pay. Both also provide loan functionalities, sometimes via partners.

		Number of	Net Turnover	Net Profit	
Name	Group	Employees	(Million €)	(Million €)	LinkedIn
<u>Deutsche</u>					
Bank AG		26.271	13.097	-19.685	<u>Profile</u>
<u>Commerzba</u>					
<u>nk</u>		32.792	7.396	188	<u>Profile</u>
<u>HypoVereins</u>					
<u>bank</u>					
(UniCredit	UniCredit				
Bank AG)	SPA	12.194	5.024	810	<u>Profile</u>
DZ Bank AG		5.288	2.124	394	<u>Profile</u>
	DSGV: 50%;				
	Deka				
	Erwerbsgesel				
<u>DekaBank</u>	Ischaft: 50%	4.723	1.733	209	<u>Profile</u>
<u>Degussa</u>					
Bank AG		882	187	39	<u>Profile</u>
<u>Augsburger</u>					
<u>Aktienbank</u>		387	62	-4	n/a
N26 GmbH		367	44	-40	<u>Profile</u>
SolarisBank					
<u>AG</u>	FinLeap	292	20	-23	<u>Profile</u>
<u>Fidor Bank</u>					
<u>AG</u>	BPCE SA	108	11	0	<u>Profile</u>

#### **Electronic Money Institutions:**

There were 8<sup>216</sup> EMIs licensed in Germany in 2019, while there were only 4 EMIs in 2014.

Firstly, there are the EMIs acting as payment service providers. Among them, First Data GmbH, whose parent company is Fiserv (First Data Corporation). First Data offers a wide range of payment services to financial institutions and acquirers. Then, Payone GmbH is part of the group Worldline and offers payment services (POS, ecommerce payment gateway) to merchants. Another licensed EMI is Concardis GmbH. Besides Germany, the company is also active in Austria and Switzerland and counts more than 160,000 customers. It provides payment acquiring services (POS, payment gateway, etc) to merchants. VR Payment is part of DZ Group and takes care of the payment services for its partners (i.e. cooperative banks or sales organizations) in Germany. It offers a broad range of services to merchants (card issuance, POS, online payment gateway, etc).

Oher EMIs include B2Mobility GmbH. The company provides businesses in Europe with white-label gift cards, employees' benefits, and fuel and fleet cards. Zalando Payments GmbH is also an EMI and is the payment arm of the famous online apparel retailer Zalando.

Finally, PayCenter GmbH offers online bank accounts for private and corporate customers, as well as girocard or prepaid Mastercard.

Name	Group	Number of Employees	Net Turnover (Million €)	Net Profit (Million €)	LinkedIn
<u>Concardis</u>	Nets Topco 1				
<u>GmbH</u>	SARL	331	568	0	<u>Profile</u>
Payone GmbH	Worldline	1.034	510	n/a	<u>Profile</u>
	First Data				
<u>First Data</u>	Corporation				
<u>GmbH</u>	(FISERV US)	394	248	38	<u>Profile</u>
<u>Zalando</u>					
<u>Payments</u>					
<u>GmbH</u>	Zalando SE	202	23	0	<u>Profile</u>
<u>PayCenter</u>					
<u>GmbH</u>		49	7	0,13	<u>Profile</u>
<u>B2Mobility</u>					
<u>GmbH</u>	BP PLC	2	0,3	n/a	n/a
VR Payment					
<u>GmbH</u>	DZ Bank AG	305	n/a	4	<u>Profile</u>
Novalnet AG		20	n/a	n/a	<u>Profile</u>

#### **Payment Schemes:**

As mentioned above, Germans prefer cash over cards and debit cards are preferred over credit cards. In 2019, there were 165 million<sup>217</sup> of cards in Gemany. Mastercard, Visa and American Express are classic payment schemes used in Germany. There is one major national payment scheme managed by the EURO Kartensystem GmbH: the girocard. This card has two other functions: Geldkarte and Girogo.

• <u>Geldkarte</u> is a prepaid card, used to pay small amounts. The card can be refilled up to €200.

<sup>&</sup>lt;sup>216</sup> Total number of e-money institutions in Germany from 2013 to 2017, Statista https://www.statista.com/statistics/993773/number-of-e-money-institutions-in-germany/

<sup>&</sup>lt;sup>217</sup> A Perspective on German Payments, McKinsey

- Girogo is a prepaid contactless card, used to pay small amounts up to €25. The card can also be refilled up to €200.
- <u>Girocard</u> is a debit card heavily used in Germany. Some girocards are also equipped with a contactless chip, allowing payment up to €50. It is issued by most German banks, often co-branded Mastercard (Maestro), Visa (V-Pay) or JCB. Banks have currently issued more than 100 million girocards and 75 million <sup>218</sup> of them have the contactless function. In 2019, the number of transactions with girocard reached 4.5 billion (+19%). However, the card is mostly used to pay small amounts as the average amount paid was €46.86 (-5.1%).

Note: Euro Kartensystem<sup>219</sup> GmbH is a joint venture of German banks which are part of the German Banking Industry Committee (Deutsche Kreditwirtschaft).

Name	Group	Number of Employees	Net Turnover (Million €)	Net Profit (Million €)	LinkedIn
<u>EURO</u>					
<u>Kartensystem</u>					
<u>GmbH</u>		35	n/a	n/a	<u>Profile</u>

#### **Payment Service Providers:**

There are different types of TPP. On an international level, equensWorldline is also present in Germany. On a more local level, VÖB-ZVD Processing, whose parent company is Deutsche Bank AG, holds a PSP and a PISP & AISP license. The company processes online and cards payments and manages ATMs transactions. There are actors such as Check24 Kontomanager. This local player owns a AIS and PIS license. The app allows the management of different bank accounts. BankSapi is a technology company offering banking-as-a-service through its AIS & PIS license.

		Number of	Net Turnover	Net Profit	
Name	Group	<b>Employees</b>	(Million €)	(Million €)	LinkedIn
<u>VÖB-ZVD</u>	Deutsche				
<u>Processing</u>	Bank AG	84	26	n/a	n/a
<u>BANKSapi</u>					
<u>Technology</u>					
<u>GmbH</u>		15	n/a	n/a	<u>Profile</u>

#### Gateway, processing and acquiring:

Payment gateways offer merchants the integration of these payment solutions on the merchant's website. Among them, the international players, Wallee AG, EVO Payment International GmbH (the subsidiary of EVO Payment Inc and holder of a PSP license) and Computop GmbH. Often, they also offer complete Payee's PSP solutions (e.g. POS). At the national level, there is Unzer e-com GmbH, formerly HeidelPay, a licensed PSP. Unzer offers both the integration of payment solutions online and in physical stores. Then, GiroSolutions, a subsidiary of the DSGV Group, allows corporates or public institutions to offer different payment solutions. Especially, GiroSolutions takes care of the acquiring and processing for its partner Giropay. Finally, Better Payment Germany is a PSP also offering white-label gateway solutions.

<sup>&</sup>lt;sup>218</sup> https://www.girocard.eu/media/girocard press release annual figures 2019.pdf

<sup>&</sup>lt;sup>219</sup> https://www.eurokartensysteme.de/

Name	Group	Number of Employees	Net Turnover (Million €)	Net Profit (Million €)	LinkedIn
	Unzer Group				
<u>Unzer e-</u>	GmbH &				
com GmbH	AnaCap	84	16	2	<u>Profile</u>
GiroSolution					
<u>GmbH</u> <sup>220</sup>	DSGV Group	>10	5	n/a	<u>Profile</u>
Better					
<u>Payment</u>					
Germany					
<u>GmbH</u>		>10	n/a	n/a	<u>Profile</u>

# Gateway only:

Name	Group	Number of Employees	Net Turnover (Million €)	Net Profit (Million €)	LinkedIn
Paymill GmbH		>10	n/a	n/a	<u>Profile</u>

#### Alternative payment methods:

Germany has several online payment solutions such as the local Paydirekt or the international Paypal, Amazon Pay or Klarna. In 2014 Klarna bought Sofort GmbH and its online payment method based on customers banking details. The service is currently known as Sofort/Pay Now (Klarna) 221. Paydirekt serves around 3.5 million of customers in Germany.

Name	Group	Number of Employees	Net Turnover (Million €)	Net Profit (Million €)	LinkedIn
	Commerzba				
	nk AG, DZ				
	Bank AG,				
	Gizs GmbH &				
<u>Paydirekt</u>	C.O. KG	91	n/a	-3	<u>Profile</u>
Sofort GmbH	Klarna	159	n/a	n/a	<u>Profile</u>
	Arvato				
	Financial				
<u>Afterpay</u>	Services Ltd.	n/a	n/a	n/a	n/a

# BaaS / SaaS:

Star Finanz-Software Entwicklung und Vertriebs GmbH is part of DSGV Group and supplies its customers with IT products (gateways, payment solutions, etc). It also manages the functioning of Giropay.

VIMpay, the mobile app from the payment provider and card processor Petafuel (in partnership with the EMI PayCenter), is a multibanking payment app.

Another actor is AirPlus International. The company is a PSP and card issuer.

<sup>&</sup>lt;sup>220</sup> 2018 corporate accounts

<sup>221</sup> https://www.klarna.com/pay-now/business/sell-with-sofort/

Name	Group	Number of Employees	Net Turnover (Million €)	Net Profit (Million €)	LinkedIn
Nume	SWM	Lilipioyees	(Million C)	(Million C)	Linkeam
	Treuhand				
UMT United	AG				
Mobility	Wirtschaftspr				
Technology	üfungsgesells				
<u>AG</u>	chaft	24	13	1,1	<u>Profile</u>
All about					
cards (S&K					
<u>Solutions</u>					
GmbH & Co.					
KG)		50	n/a	n/a	<u>Profile</u>
<u>Arvato</u>					
<u>Payment</u>					
Solutions				_	
<u>GmbH</u>		2	n/a	n/a	<u>Profile</u>
Star Finanz-					
<u>Software</u>	Finanz				
Entwicklung	Informatik GmbH & Co.				
und Vertriebs GmbH	KG	211	n/a	n/a	Profile
ACI	NG	211	ri/d	Ti/u	<u>FTOILE</u>
Worldwide	ACI				
(Germany)	Worldwide				
<u>GmbH</u>	Inc	94	n/a	n/a	Profile
Petafuel		, ,	. 1,7 G	. 1,7 G	<u> </u>
GmbH		76	n/a	n/a	<u>Profile</u>
<u>Lufthansa</u>				, -	
AirPlus	Deutsche				
<u>Servicekarte</u>	Lufthansa				
n GmbH	AG	1.032	n/a	n/a	<u>Profile</u>

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# Greece<sup>222</sup>

#### Introduction:

Greece counts 10,7 million inhabitants and had a GDP of 187 billion euros in 2019 (17,500€ per capita) <sup>223</sup>. Hard hit by the financial crisis of 2008, the country has returned to growth since the end of 2017 <sup>224</sup> and still operates primarily on a cash basis. Almost every payment transaction was made in cash in 2010, with the share of cash in total payment transaction amounting to 99% <sup>225</sup>. In 2004, this share was even slightly higher, with 99.5%. From 2014 to 2019, the share of cash has decreased to 75.2% <sup>226</sup>. In 2016, Greeks made 1.6 daily transactions in cash on average, compared to 0.2 transactions by card <sup>227</sup>. This tendency might also be explained by the fact that many employees in Greece receive their salary in cash and thus, also tend to pay their electricity bills, insurance, or taxes in cash, more than most European countries, as highlighted by a survey in 2016 <sup>228</sup>.

<sup>&</sup>lt;sup>222</sup> All numbers in the tables are from Orbis and for the year 2019

<sup>223</sup> Statistical Data Warehouse, ECB, 2019 https://sdw.ecb.europa.eu/reports.do?node=1000001970

<sup>224</sup> European Banking Federation https://www.ebf.eu/greece/

<sup>&</sup>lt;sup>225</sup> Share of cash in total payment transactions in Greece from 2004 to 2019, Statista https://www.statista.com/statistics/1094976/cash-use-in-greece/

https://www.ekathimerini.com/224243/article/ekathimerini/business/cash-still-king-for-the-majority-of-greek-consumers-

employers<sup>227</sup>The use of cash by households in the euro area, Henk Esselink & Lola Hernández, 2017

https://www.ecb.europa.eu/pub/pdf/scpops/ecb.op201.en.pdf

<sup>&</sup>lt;sup>227</sup>The use of cash by households in the euro area, Henk Esselink & Lola Hernández, 2017

https://www.ecb.europa.eu/pub/pdf/scpops/ecb.op201.en.pdf

<sup>&</sup>lt;sup>228</sup> The use of cash by households in the euro area, Henk Esselink & Lola Hernández, 2017

https://www.ecb.europa.eu/pub/pdf/scpops/ecb.op201.en.pdf

In 2019, the average number of payments with cards issued by resident PSPs per capita was 73.9, far below the average of the euro area (136) and the EU (168.3)<sup>229</sup>. However, this number has increased by 455% since 2015, while the increases for the euro area (+55.25%) and the EU (+53.98%) are smaller<sup>230</sup>. Debit cards were the most commonly used card payment method: around 62 card payments per capita<sup>231</sup>.

Among cashless payments, Greeks pay by cards (58,4%) or credit transfers  $(26\%)^{232}$ . E-money (2.5%) is slightly preferred to direct debits (2,1%). Although not very frequent, cheques (0.4%) are still used. Compared to 2016, the use of cards has increased by 24% while the use of credit transfers has decreased by 42,3%  $^{233}$ . The use of cheques and direct debits have both decreased.

Since 2015, the number of POS terminals in Greece has strongly increased. In 2015, there were 219,071 POS terminals provided by resident PSP compared to 750.175 in  $2019^{234}$ .

#### Banks:

In 2019, there were  $15^{235}$  credit institutions licensed in Greece, and 16 other credit institutions from the euro area. The three largest banks in Greece are National Bank of Greece SA, Piraeus Bank SA, and Alpha Bank AE. Another major bank is Eurobank Ergasias. There are a few cooperative banks, such as the Cooperative Bank of Drama or the Cooperative Bank of Chania. In 2020, the neobank Praxia Bank, founded in 2017, was bought by Viva Wallet<sup>236</sup>, a Greek EMI.

Some banks offer their own digital wallets. Alpha Bank has introduced its e-wallet "myAlpha", the National Bank of Greece has "i-bank Pay" and Piraeus Bank offers "winbank pay".

There are a lot of international banks offering services in Greece, such as HSBC, Citibank, Deutsche Bank, BNP Paribas, ABN Amro, etc. The online bank Revolut also offers services and currently counts more than 115.000 customers in Greece<sup>237</sup>.

	_	Number of	Net Turnover	Net Profit	
Name	Group	<b>Employees</b>	(Million €)	(Million €)	LinkedIn
<u>Alpha Bank</u>					
<u>AE</u>		6.969	2.022	55	<u>Profile</u>
<u>Piraeus Bank</u>					
SA		10.843	1.759	27	<u>Profile</u>
<u>National</u>					
<u>Bank of</u>					
<u>Greece SA</u>		8.468	1.705	6	<u>Profile</u>
<u>Eurobank</u>					
<u>Ergasias</u>					
Services and					
<u>Holdings SA</u>		7.929	1.420	31	<u>Profile</u>

<sup>229</sup> Statistical Data Warehouse, ECB https://sdw.ecb.europa.eu/reports.do?node=1000001390

https://sdw.ecb.europa.eu/reports.do?node=1000001390

<sup>&</sup>lt;sup>230</sup> Authors' calculations based on numbers from the Statistical Data Warehouse, ECB,

<sup>&</sup>lt;sup>231</sup> Authors' calculations based on numbers from the Statistical Data Warehouse, ECB,

https://sdw.ecb.europa.eu/reports.do?node=1000001970

<sup>&</sup>lt;sup>232</sup> Payments statistics: 2019, ECB

<sup>&</sup>lt;sup>233</sup> Authors' calculations based on numbers from the Statistical Data Warehouse https://www.ecb.europa.eu/press/pdf/pis/pis2016.pdf & https://www.ecb.europa.eu/press/pdf/pis/ecb.pis2019 annex~473dedbe56.en.pdf?a9641ae02cf86f4463cb3ecb134fb500

<sup>&</sup>lt;sup>234</sup> Statistical Data Warehouse, ECB 2019 https://sdw.ecb.europa.eu/reports.do?node=1000001970

<sup>&</sup>lt;sup>235</sup> Statistical Data Warehouse, ECB 2019 https://sdw.ecb.europa.eu/reports.do?node=1000001970

<sup>&</sup>lt;sup>236</sup> Information can be found on https://www.fintechfutures.com/2020/01/viva-wallet-buys-greeces-first-digital-challenger-praxia-bank/ and https://www.crunchbase.com/acquisition/vivawallet-acquires-praxia-bank--5033a6b3

<sup>&</sup>lt;sup>237</sup> http://www.disrupteurope.eu/news/fintech/369-revolut-topup-greece-card

<u>Attica Bank</u>					
<u>S.A.</u>		741	73	5	<u>Profile</u>
<u>Pancretan</u>					
<u>Cooperative</u>					
<u>Bank</u>		461	36	4	n/a
Cooperative					
Bank of					
<u>Chania Syn.</u>					
<u>P.E.</u>		280	25	2,5	<u>Profile</u>
<u>Aegean</u>	Mirnus				
<u>Baltic Bank</u>	Limited	95	13	-0,6	<u>Profile</u>
<u>Optima Bank</u>					
<u>SA</u>		283	13	-4	<u>Profile</u>
<u>Vivabank</u>					
<u>Single</u>					
<u>Member</u>					
<u>Banking SA</u>		226	-1	-73	<u>Profile</u>

# **Electronic Money Institutions:**

There are three EMI-licensed entities in Greece: Viva Payments, Tora Wallet, and Cosmote Payments <sup>238</sup>. Viva Payments offers payment services under the name Viva Wallet across many countries in Europe. The company provides acquiring services to merchants, such as payment gateway (to accept online payments) or contactless POS. The company also issues debit cards for private or business customers, and provides an e-wallet.

Cosmote is telecommunications company. Cosmote Payments issue Mastercard: The credit card Cosmote World Mastercard or the prepaid card Cosmote Mastercard. These cards are also offered by the National Bank of Greece. Cosmote also provide its prepaid Mastercard issuers with an app allowing them to refund the card or make payments.

Name	Group	Number of Employees	Net Turnover (Million €)	Net Profit (Million €)	LinkedIn
<u>Viva</u>					
<u>Payments</u>		142	29	-1	<u>Profile</u>
	OPAP				
	Investment				
<u>Tora Wallet</u>	Limited	n/a	2	-1,5	<u>Profile</u>
	Hellenic				
	Telecommun				
	ications				
<u>Cosmote</u>	Organization				
<u>Payments</u>	S.A.	9	0	-0,014	<u>Profile</u>

# **Payment Schemes:**

Traditional payment schemes are found in Greece: Mastercard and Visa, both offering debit, credit and prepaid cards, sometimes with the contactless function. Diners Club credit cards are also offered by Alpha Bank. Banks also offer bonus cards.

<sup>&</sup>lt;sup>238</sup> https://www.bankofgreece.gr/en/main-tasks/supervision/supervised-institutions

# **Payment Service Providers:**

Cardlink is a payment services provider licensed in Greece. The company offers acquiring services to merchants. Besides POS terminals, the company provides a payment gateway allowing customers to pay with different cards (Visa, Mastercard, Diners, etc). or to pay via a link if the merchant does not own an ecommerce website. Cardlink is strongly implemented in Greece as it offers POS services to more than 250.000 merchants, and ecommerce gateway to more than 10.000 merchants<sup>239</sup>.

Name	Group	Number of Employees	Net Turnover (Million €)	Net Profit (Million €)	LinkedIn
	Quest				
<u>Cardlink</u>	Holdings S.A.	110	34	2,6	<u>Profile</u>



#### BaaS / SaaS:

Paylink, the brand name of Worldbridge, is a payment institution active in money remittance. The company is part of Western Union. Another one, also offering money remittance services is Access Payment Institution. Argo Change is another PSP offering money transfer (GMT, MoneyGram and Argo Payments).

Printec, part of Ivicon Group, is active in Greece, as well as in countries in Western and Southern Europe. The company provides IT technologies for payment transactions at ATMs, POS, ecommerce, etc.

<sup>239</sup> https://cardlink.gr/en/

Name	Group	Number of Employees	Net Turnover (Million €)	Net Profit (Million €)	LinkedIn
<u>Printec Hellas</u>					
<u>Single</u>	Ivicon				
Member S.A.	Limited	190	33	2	<u>Profile</u>
Worldbridge	Western				
<u>- Payment</u>	Union				
<u>Institution</u>	Financial				
<u>S.A.</u>	Services Inc	76	11	1,6	<u>Profile</u>
Access					
<u>Payment</u>					
Services SA		n/a	n/a	n/a	n/a
Argo					
<u>Payment</u>					
<u>Services</u>		n/a	n/a	n/a	n/a

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# Hungary<sup>240</sup>

#### Introduction:

Hungary is a country of just under 10 million inhabitants in Eastern Europe, and is not part of the euro zone, its currency is the Forint. Hungary's preferred method of payment for day-to-day transactions remains cash in 2019, with cash payments still accounting for 62.5% <sup>241</sup> of the annual transaction volume. The remaining 47,5% of transactions conducted by non-cash payment methods are split as follows <sup>242</sup>:

1. Card payments: 56% market share

2. Mobile payments: 23% market share

3. Prepaid card payments: 10% market share

4. Bank Transfer: 9% market share

5. E-wallet: 2% market share.

Card payments are growing in Hungary with a Compound Annual Growth Rate (CAGR) of almost  $19\%^{243}$ . In 2019, there were approximately 8.6M cards issued, or about 0.8 per person. Of these cards,  $84,6\%^{244}$  were debit cards. Online transactions are also growing rapidly, with a  $19\%^{245}$  CAGR.

#### **Banks:**

The largest local banks are subsidiaries of regional or pan-European banks. These include the subsidiaries of KBC, Erste Bank, Unicredit, and Raffeisen. Hungary, however, is home to the parent company of one of the largest banks in the region: OTP bank, the country's largest bank in terms of market share and total assets.

Name	Group	Number of Employees	Net Turnover (Million €)	Net Profit (Million €)	LinkedIn
K&H Bank	KBC	3.499	511,8	153,6	<u>Profile</u>
Eerste Bank Hungary	Erste Group	3.174	478,7	182,5	<u>Profile</u>
<u>Unicredit Bank</u> <u>Hungary</u>	Unicredit Group	1.744	390	154,9	<u>Profile</u>
MKB Bank		2.026	298,2	133,3	<u>Profile</u>
Raiffeisen Bank	Raffeisen	2.742	282,5	62,9	<u>Profile</u>
Budapest bank		3.006	263,5	34,9	<u>Profile</u>
<u>CIB Bank</u>	Intesa san paolo	2.145	185,9	40,4	<u>Profile</u>
Sopron bank	Grawe Bankengruppe	165	12,5	1,9	<u>Profile</u>

# **Electronic Money Institutions:**

Barion Payment is a mobile payment application broadly used in Hungary. It has the "Electronic Money Issuer" license since 2009 and has been licensed by the central bank of Hungary.

<sup>&</sup>lt;sup>240</sup> All numbers in tables are coming from Orbis

<sup>&</sup>lt;sup>241</sup> https://www.giiresearch.com/report/gd633382-payments-landscape-hungary-opportunities-risks.html

<sup>242</sup> https://www.paymentwall.com/payment-methods/Hungary

<sup>&</sup>lt;sup>243</sup> https://www.giiresearch.com/report/gd633382-payments-landscape-hungary-opportunities-risks.html

<sup>&</sup>lt;sup>244</sup> https://www.giiresearch.com/report/gd633382-payments-landscape-hungary-opportunities-risks.html

<sup>&</sup>lt;sup>245</sup> https://www.giiresearch.com/report/gd633382-payments-landscape-hungary-opportunities-risks.html

Name	Group	Number of Employees	Net Turnover (Million €)	Net Profit (Million €)	LinkedIn
Barion Payment.		24	1,41	-0,69	<u>Profile</u>

#### **Payment Schemes:**

The market leaders in payment schemes are Visa, Mastercard and Diners Club for credit cards, <sup>246</sup> and Maestro and Visa debit for debit cards.

# **Payment Service Providers:**

Foreign players such as Skrill and Worldline are in the majority. There is one local player, Capsys.

Name	Group	Number of Employees		Net Profit (Million €)	LinkedIn
<u>Capsys</u>		46	10,7	1,9	n/a

# Alternative Payment Methods:

Paypal leads the market with more than  $70\%^{247}$  market share, however there is a local player, B-Payment.

Name	Group	Number of Employees		Net Profit (Million €)	LinkedIn
B-PAYMENT		>50	n/a	n/a	<u>Profile</u>

# **Settlement Agents:**

All card payments in Hungary must be cleared through the Giro actor.

Name	Group	Number of Employees		Net Profit (Million €)	LinkedIn
GIRO		n/a	n/a	n/a	n/a

 $<sup>{\</sup>color{red}^{246}https://www.paymentwall.com/payment-methods/Hungary}}$ 

<sup>247</sup> https://www.datanyze.com/market-share/payment-processing--26

#### Ireland<sup>248</sup>

#### Introduction:

Ireland is a country of just under 5 million inhabitants, located west of the United Kingdom. Despite being one of the smallest countries in the Eurozone, Ireland <sup>249</sup> has the fastest growing economy in the Eurozone and the third highest GDP per capita in the world. According to the ECB <sup>250</sup>, there were 1.87 billion transactions in Ireland in 2019. Cash is used for day-to-day payments in almost 60% of cases at various Irish POS. Non-cash payments are split as follows <sup>251</sup>:

1. Credit card payments: 56%.

2. Mobile payments: 23%.

3. Payment by prepaid cards: 10%.

4. Payment by bank transfer: 9%.

5. E-wallet: 2%.

The number of cards issued in Ireland in 2019 is around 7.6 million, which represents more than one credit card per capita. There is a very high penetration of non-EU players in Ireland. Indeed, we can find big American banks like Wells Fargo and J.P. Morgan, some Canadian banks like the Bank of Montreal, and of course English banks like Barclays. Ireland also attracts American gateways like Paypal, Western Union, and Facebook Payment.

#### Banks:

According to the European Banking Federation (EBF <sup>252</sup>), there were 58 players with a banking licence in 2019. As mentioned above, these banks include many of the major US and Canadian banks operating in Ireland. However, the 5 largest banks in Ireland in terms of total assets are Bank of Ireland, Allied Irish Banks (AIB), Barclays, Ulster Bank Ireland and Permanent TSB.

Name	Group	Number of Employees	Net Turnover (Million €)	Net Profit (Million €)	LinkedIn
Allied Irish Banks					
Group		9.520	2.674	364	<u>Profile</u>
<u>Permanent TSB</u>		2.379	413	30	<u>Profile</u>
	BNP				
BNP Paribas Ireland	Paribas	>10.000	79,9	66	<u>Profile</u>
KBC Bank Ireland	KBC	>1.000	9,9	32	<u>Profile</u>
Wexford Credit					
<u>Union</u>		54	6,2	3,6	<u>Profile</u>
Clonmel Credit					
<u>Union</u>		38	7	4,5	n/a

# **Payment Schemes:**

<sup>&</sup>lt;sup>248</sup> All numbers in tables are coming from Orbis

<sup>&</sup>lt;sup>249</sup> https://www.adyen.com/knowledge-hub/guides/global-payment-methods-guide/local-payment-methods-in-europe#germany

<sup>&</sup>lt;sup>250</sup> European Central Bank: Payment Statistics, April 2020, , retrieved from ECB

<sup>&</sup>lt;sup>251</sup> https://www.paymentwall.com/en/payment-methods/ireland

 $<sup>\</sup>frac{252}{\text{https://www.ebf.eu/ireland/\#:}} \times \text{text=The\%20} \\ \text{Irish\%20government\%20} \\ \text{has\%20majority,by\%20} \\ \text{the\%20end\%20of\%202019.} \\ \text{the\%20end\%200of\%202019.} \\ \text{the\%20end\%200of\%202019.} \\ \text{the\%20end\%200of\%202019.} \\ \text{the\%20end\%200of\%202019.} \\ \text{the\%20end\%200of\%202019.} \\ \text{the\%20end\%200of\%202019.} \\ \text{the\%20end\%202019.} \\ \text$ 

The market leaders in payment schemes are Visa, Mastercard, American Express and Diners Club for credit cards, and Maestro and Visa debit for debit cards <sup>253</sup>.

# **Payment Services Providers:**

The local actors are Brite:Bill and Fexco Merchant Service.

Name	Group	Number of Employees	Net Turnover (Million €)	Net Profit (Million €)	LinkedIn
BRITE:BILL		62	n/a	n/a	<u>Profile</u>
Fexco Merchant			n/a	n/a	
<u>Service</u>		1.385			<u>Profile</u>

# Other PSPs:

In Ireland, the main acquirers are banks. The Top 50 largest acquirers in Europe the Irish AIB Merchant Services <sup>254</sup>. Foreign players are also included, such as the American companies Elavon and J.P. Morgan Merchant Services, along with UK firms also present in Ireland such as Barclays and World Pay.

Name	Group	Number of Employees	Net Turnover (Million €)	Net Profit (Million €)	LinkedIn
	AIB				
AIB Merchant Service	GROUP	95	n/a	n/a	<u>Profile</u>
Payzone Ireland		>50	n/a	n/a	<u>Profile</u>
J.P. Morgan Merchant Service	J.P. Morgan	n/a	n/a	n/a	<u>Profile</u>

#### Alternative Payment Methods:

Major American international players like Paypal, Western Union and even Facebook Payments have a European base in Ireland. Paypal and Stripe are leading this market with almost 40% market share each. <sup>255</sup>

 $<sup>{}^{\</sup>underline{253}}\, \underline{https://www.ireland.com/en-us/about-ireland/must-know-information/money-in-ireland/must-know-in-ireland/must-know-in-ireland/must-know-in-ireland/must-know-in-ireland/must-know-ireland/must-$ 

<sup>&</sup>lt;sup>254</sup> https://nilsonreport.com/upload/issues/1175 0036.pdf

<sup>255</sup> https://www.datanyze.com/market-share/payment-processing--26/Ireland/ingenico-epayments

#### Italy

#### Introduction:

The Italian ecommerce sector is the 5th fastest growing in Europe after the UK, Germany, France, and Spain. <sup>256</sup> The Compound Annual Growth Rate (CAGR) of Italian ecommerce represents about 1/3 of the market share and is likely to increase in the coming years <sup>257</sup>. The CAGR has increased from 28% to 33% between 2018 and 2021. It is therefore a very attractive market, just like Spain <sup>258</sup>.

The digitization of the banking sector has accelerated sharply in recent years. By 2019, the share of customers accessing digital banking services has reached 80%. As a result, more and more Italian banks are offering their own digital wallet. In Italy, there were about 113 banks in 2019. However, between 2008 and 2019, the number of bank branches decreased by 29%. <sup>259</sup> The combined uptake of digital banking services and reduction in bank branches is a good illustration of changing trends in banking services in the country.



Cash payments are however still widely used throughout the country, especially for small transactions. However, this is decreasing because of the Covid pandemic  $^{260}$ . The Italian government has also limited the maximum cash expenditure in a given transaction to EUR 2000 in July 2020, and will revise this value downwards to EUR 1000 in January 2022  $^{261}$ . This may lead to a further reduction in the use of cash for transactions.

The number of contactless payments increased to 58.7 million in 2018 from 14 million in 2014. This represents a CAGR of 43.1% <sup>262</sup>. Credit transfers, direct debit and mobile wallets are growing strongly on the Italian market. Conversely, the share of payment cards has decreased in recent years in Italy, although this payment method is till the most widely used in this country. In 2019, there were 57 million debit cards and 27 million credit cards in 2019, <sup>263</sup> and the total number of card payments was 84.3 million <sup>264</sup>.

<sup>259</sup> https://www.ebf.eu/italy/

<sup>259</sup> https://www.ebf.eu/italy/

<sup>259</sup> https://www.ebf.eu/italy/

<sup>&</sup>lt;sup>259</sup> https://www.ebf.eu/italy/

<sup>&</sup>lt;sup>260</sup> https://www.reuters.com/article/italy-economy-cash-idUSKBN26T0Q7

<sup>&</sup>lt;sup>261</sup> https://www.europarl.europa.eu/doceo/document/P-9-2020-000369 EN.html

<sup>&</sup>lt;sup>262</sup> https://store.globaldata.com/report/fs0169ci--payments-landscape-in-italy-opportunities-and-risks-to-2022/

https://www.statista.com/statistics/1096815/credit-card-and-debit-card-number-in-italy/

https://www.statista.com/statistics/444385/number-of-payment-cards-italy/

#### Banks:

In 2019, Italy's banking industry consisted of 113 active players  $^{265}$ . The leading bank in Italy is the bank Intesa Sanpaolo with a market share of 19.31% when comparing its total assets with other banks.  $^{266}$  It has approximately 11.8 million customers in Italy  $^{267}$  but is also very present internationally, making it one of the most successful banks in the European Union. In 2019, it is the bank with the largest number of bank offices in Italy, with 24.300 branches  $^{268}$ .

The second largest bank in Italy is the Unicredit bank with about 25 million customers <sup>269</sup>. It has about 14,40% market share, based on its total assets <sup>270</sup>. In 2020, this bank had 2.622 bank offices in Italy <sup>271</sup>. It also has a strong presence in Germany and Austria since the bank has partnered with Wordline in these countries to manage payment processing activities <sup>272</sup>. The bank also has an international presence in the United States, Japan and China.

In third position is Cassa Depositi e Prestiti (CDG), which is very successful in Italy. Its market share is 13,41%. Next is the bank BPM, which is the result of the merger between Banco Popolare and Banca Popolare di Milano. It has a market share of 5,64% in Italy <sup>273</sup>. It should also be pointed out that this bank has income from its Italian custodian activities at BNP Paribas, which is also very present in this market. Monte dei Paschi di Siena and UBI Banca, two banks with an international presence, come next with market shares of 4,36% and 4,26% respectively. <sup>274</sup>

The 8th largest bank in Italy is BPER banca. This bank is the result of the merger of Banca Popolare di Modena, Banca Cooperativa di Bologna and later Banca Popolore di Cesena. This bank has a market share of 2,39%. <sup>275</sup> Next comes the MedioBanca, with a market share of 2,29%. Both banks are present throughout Europe. Banca Mediolanum, present internationally, has a market share of only 0,90% in Italy <sup>276</sup>. At the local level, there are also the Italian Post Office, Banca Carige, ICCREA Banca,

and Credito Emilino of the Credem Group. French groups such as the Crédit Agricole group are present in the region through one of its subsidiaries under the name of Credit Agricole Italia. The group has also set up a joint venture with Fiat Chrysler Automobiles Italy to create FCA bank. The BNP Paribas group is also implemented there under the subsidiary Banca Popolare di Songrio. The Santander group, Deutsche Bank and Group ING bank are also present in Italy.



<sup>&</sup>lt;sup>265</sup> https://www.ebf.eu/italy/

<sup>&</sup>lt;sup>266</sup> https://thebanks.eu/banks/16008/market\_share

<sup>&</sup>lt;sup>267</sup> https://www.advratings.com/europe/top-banks-in-italy

<sup>&</sup>lt;sup>268</sup> https://www.statista.com/statistics/587358/top-10-banks-by-number-of-branches-in-italy/

<sup>&</sup>lt;sup>269</sup> https://www.advratings.com/europe/top-banks-in-italy

<sup>&</sup>lt;sup>270</sup> https://thebanks.eu/banks/16062/market share

https://www.statista.com/statistics/587358/top-10-banks-by-number-of-branches-in-italy/

https://fr.worldline.com/fr/home/newsroom/press-releases-general/2020/pr-2020 02 27 01.html

<sup>&</sup>lt;sup>273</sup> https://thebanks.eu/banks/18787/market\_share

<sup>&</sup>lt;sup>274</sup> https://thebanks.eu/banks/16064/market\_share

<sup>275</sup> https://thebanks.eu/banks/16022/market share 276 https://thebanks.eu/banks/15614/market share 277

https://www.statista.com/statistics/813216/number-of-pagobancomat-cards-in-italy/

<sup>&</sup>lt;sup>276</sup> https://thebanks.eu/banks/15614/market share <sup>277</sup> https://www.statista.com/statistics/813216/number-of-pagobancomat-cards-in-italy/

Name	Group	Number of Employees	Net Turnover (Million €)	Net Profit (Million €)	LinkedIn
<u>Poste Italiane</u>		489	844	610	<u>Profile</u>
Banco BPM		21.013	781	781	<u>Profile</u>
	Crédit				
Credit Agricole Italia	Agricole	9.167	467	326	<u>Profile</u>
	Santander				
Santander customer bank	bank	859	402	135	<u>Profile</u>
<u>FinecoBank</u>		1.208	383	288	<u>Profile</u>
Banca Carige		3.823	345	-876	<u>Profile</u>
<u>Iccrea Bank</u>		21.703	309	244	<u>Profile</u>
CheBanca!	Mediobanca	1.347	291	17	<u>Profile</u>
Banca Nazionale del					
<u>Lavaro</u>	BNP Paribas	12.399	241	176	<u>Profile</u>
Banca Popolare di Songrio		3.238	194	139	<u>Profile</u>
	London				
Cassa di Compensazione	Stock				
<u>e Garanzia</u>	Exchange	65	79	53	<u>Profile</u>
Banca Piccolo Credito	Gruppo				
<u>Valtellinese</u>	Creval	3.461	30	56	<u>Profile</u>

#### **Payment Schemes:**

The PagoBancomat payment scheme is the most widely used payment system in Italy. The number of debit cards issued by this provider was 37 million in 2016  $^{277}$ , with 51,100 ATMs across the country  $^{278}$ . As for credit cards in Italy, Visa, MasterCard, and American Express are present, but CartaSi is the most used credit card for online transactions. CartaSi comes from the Nexi Group and has a 53% market share for credit cards <sup>279</sup>.

Name	Group	Number of Employees	Net Turnover (Million €)	Net Profit (Million €)	LinkedIn
<u>Cartasi</u> <sup>280</sup> (Group					
figures)	Nexi Group	1.232	1.119	106	<u>Profile</u>
Bancomat		47	15	1,7	<u>Profile</u>

# **Payment Service Providers:**

#### Gateway, processing and acquiring:

The pagoPA payment gateway is a new payment platform created in 2019 in Italy. Its growth rate is very significant and was 20% in 2019<sup>281</sup> although the company's figures are not yet available.

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<sup>277</sup> https://www.statista.com/statistics/813216/number-of-pagobancomat-cards-in-italy/

<sup>278</sup> https://www.statista.com/statistics/813232/number-of-bancomat-atms-in-italy/

<sup>279</sup> https://icepay.com/payment-methods/cartasi-credit-card/ 280 Group Figures

Name	Group	Number of Employees	Net Turnover (Million €)	Net Profit (Million €)	LinkedIn
<u>pagoPA</u>		36	n/a	n/a	<u>Profile</u>

# Gateway only:

Another large payment gateway is the Nexi Group who provides the Nexi Pay Solution. It is one of the largest payment processors in Italy. In 2020, this company acquired the SIA group for 4.6 billion euros<sup>282</sup>. Following this acquisition, the company is on track to become one of the leaders in Europe.

Name	Group	Number of Employees	Net Turnover (Million €)	Net Profit (Million €)	LinkedIn
Nexi (Group figures)	Nexi Group	1.232	1.119	106	<u>Profile</u>
<u>Alberici</u>		44	8	n/a	<u>Profile</u>

#### **Alternative Payment Methods:**

Italian banks have developed their own digital wallet and payment gateways.

Bank	Digital Wallet		
Poste Italiane	PostePay		
UniCredit	UniCredit Bulbank		
UBI Banca	UBIPay		
BNL Banca	BNL Pay		
Intesa SanPaolo	XME Wallet		
Mediolanum banca	Mediolanum Wallet		
BPER Banca	Smart BPERCard		

Jiffy, from SIA Group, is one of the most popular services in Italy. This service, which enables person-to-person payments, had more than 5 million users in Italy in 2019. <sup>283</sup>

BancomatPay, which has integrated Jiffy's services following an agreement between the two companies.

American firms are also present in Italy. PayPal has a market share of 12% for online transactions. Apple Pay, Google Pay and AmazonPay are also widely used in this country.

Name	Group	Number of Employees	Net Turnover (Million €)	Net Profit (Million €)	LinkedIn
<u>Jiffy</u>	SIA Group	3.551	721	95	<u>Profile</u>
<u>GestPay</u>	Banca Sella	2.118	390	35	<u>Profile</u>
<u>Bancomat Pay</u>	Bancomat	47	15	1,7	<u>Profile</u>
<u>Tinaba</u>	Banca Profilo	21	11	-6	<u>Profile</u>

<sup>&</sup>lt;sup>283</sup> https://www.globalbankingandfinance.com/digital-payments-over-5-million-users-for-jiffy-in-italy/

<sup>283</sup> https://www.globalbankingandfinance.com/digital-payments-over-5-million-users-for-jiffy-in-italy/

#### Latvia

#### Introduction:

Cash usage has significantly decreased in the past few years in Latvia. In August 2020, 68% of all transactions were done through non-cash payments <sup>284</sup>. Latvians use mainly debit cards and use credit cards less frequently.

#### Banks:

Swedbank is the major bank in the Latvian payment market with a 51% market share <sup>285</sup> followed by SEB Bank. They issue Mastercard credit and debit cards and offer mobile payments through their banking apps. Swedbank supports digital wallets such as Google Pay, Apple Pay, Garmin Pay and Fitbit Pay. Other foreign banks operate on the Latvian market such as Luminor Bank but have a less significant position than the Swedish banks. Luminor Bank issues Visa credit and debit cards.

The remaining banks are domestic players operating internationally such as BlueOrange Bank, regional players in the Baltics such as Citadele Bank, Rietumu Bank, and Industra Bank, and banks operating locally in Latvia. This latter group includes Regionala Investiciju Bank, Baltic International Bank, Expo Bank, LPB Bank, Signet Bank, Rigensis Bank, and PrivatBank. They all issue MasterCard credit and debit cards except PrivatBank and Rietumu Bank, which use Visa debit and credit cards.

Name	HQ	Number of Employees	Net Turnover (Million €)	Net Profit (Million €)	LinkedIn
<u>Swedbank</u>					
LV	SE	1.611	201,8	96,2	<u>Profile</u>
SEB Bank LV	SE	918	113,2	49,6	<u>Profile</u>
<u>Baltic</u>					
<u>International</u>					
<u>Bank</u>	LV	86	13,9	-3,4	<u>Profile</u>
LPB Bank	LV	201	14,7	6,4	<u>Profile</u>
<u>Rigensis Bank</u>	LV	94	16,5	7,1	<u>Profile</u>
<u>PrivatBank</u>	LV	211	14,2	-6,5	<u>Profile</u>
Regionala					
<u>Investiciju</u>					
<u>Bank</u>	LV	159	11,2	3,6	<u>Profile</u>
<u>Industra</u>					
<u>Bank</u>	LV	195	8,4	-4,7	<u>Profile</u>
<u>Signet Bank</u>	LV	101	8,4	1	<u>Profile</u>
<u>Expobank</u>	LV	63	3,5	-0,8	<u>Profile</u>
<u>Luminor LV</u>	EE	887	n/a	n/a	<u>Profile</u>

#### **Electronic Money Institutions:**

Latvia is also home to several electronic money institutions, including LatCard, which issues MasterCard prepaid cards linked with payment accounts, and Transact Pro, which issues MasterCard credit, debit, prepaid, and virtual cards for businesses. TransactPro is also the card issuer of SAVA.card, a MasterCard credit card for individuals from ViaSMS. Other EMIs from Lithuania are also present in Latvia including Paysera and Vialet, along with a number of newly licensed EMIs which have developed a Latvian presence to maintain access to the EU market following Brexit.

<sup>&</sup>lt;sup>284</sup> https://www.bank.lv/en/tasks/payment-systems/payment-radar

<sup>&</sup>lt;sup>285</sup> Swedbank annual report 2019

Name	HQ	Number of Employees	Net Turnover (Million €)	Net Profit (Million €)	LinkedIn
SAVA.card	LV	22	6,4	0,4	<u>Profile</u>
<u>LatCard</u>	LV	14	0,2	-0,3	<u>Profile</u>
<u>Paysera LV</u>	LT	4	0,1	0	<u>Profile</u>
Coinfide	LV	1	0,01	0,01	<u>Profile</u>

#### **Payment Schemes:**

Latvia does not have a specific domestic payment scheme. The American payment schemes including Visa and MasterCard are present in Latvia.

Payment Service Providers:

With regard to online payment solutions, Estonian players including Maksekeskus and domestic gateways notably Royal Pay Europe are available. Infotech and Klix, a payment gateway developed by Citadele Bank, also provide online payments services.

#### Other PSPs:

Worldline and EBA Clearing are the most significant players in the market.

#### Alternative payment methods:

In addition to traditional card payments, Latvians use also alternative payment methods such as Paypal and mobile payment methods. Mobilly offers, among other things, mobile payments for public transport tickets and other public services. In the same way, Rigas Karte is an electronic payment institution that provides an e-wallet payment solution for mobility payments and other small purchases in public institutions. Finally, Monea is another mobile payment mothed that allows person to person payment transactions directly through the mobile number of the customer.

Name	Group	Number of Employees	Net Turnover (Million €)	Net Profit (Million €)	LinkedIn
	Rigas				
<u>Rigas Karte</u>	Satiksme	12	22,3	5,3	n/a
<u>Mobilly</u>		29	1,5	0	<u>Profile</u>
Monea		4	0,1	-0,2	<u>Profile</u>

#### BaaS / SaaS:

D8 Corporation, which is headquartered in Latvia, offers BaaS / SaaS solutions internationally.

#### Lithuania

#### Introduction:

The use of cash as a payment method is still relatively popular in Lithuania, with 48,8% of all payments were made using cash as of  $2019^{286}$ . The issuing of payment cards has also declined from 4,3 million cards issued in 2009 to 3,2 million in  $2019^{287}$ . On the other hand, the usage of cash payments has also seen a decline from 86,2% in 2009 to 48,8% in  $2019^{288}$ .

The payment market in Lithuania has also experienced an increase of FinTech firms from United Kingdom setting up offices in the country to keep their access to the European market after Brexit. Many FinTech firms have opted for Lithuania as their European headquarters due to the accommodating licence application process there.

#### Banks:

Lithuania is largely dominated by two Swedish banks - namely Swedbank (which has a 50% share of the payment market <sup>289</sup>) and SEB Bank (which also has a major share). In addition, other regional banks operating in the Baltic region are present on the Lithuanian market, including Citadele Bank from Latvia and Luminor Bank from Estonia. Both issue Visa debit and credit cards linked to a mobile banking app that also offers mobile payments.

The remaining part of the market is partially shared by three traditional domestic banks only operating on a local level. They include Siauliu Bank, Medicinos Bank, and Lietuvos Centrinė Kredito Unija. Other online banks have also emerged during the last few years offering only online banking services. Those include domestic players such as European Merchant Bank, Mano Bank, and foreign online banks such as Revolut, which has established a licensed banking entity in Lithuania to keep access on the European market.

		Number of	Net Turnover	Net Profit	
Name	HQ	Employees	(Million €)	(Million €)	LinkedIn
Swedbank LT	SE	2.114	257,3	118,8	<u>Profile</u>
SEB Bank LT	SE	1.618	221,9	117,5	<u>Profile</u>
<u>Siauliu Bank</u>	LT	831	106,3	51,5	<u>Profile</u>
<u>Medicos</u>					
<u>Bank</u>	LT	352	19,7	3,9	<u>Profile</u>
<u>Mano Bank</u>	LT	34	2,3	n/a	<u>Profile</u>
<u>Luminor LT</u>	EE	1.025	n/a	n/a	<u>Profile</u>
<u>Lietuvos</u>					
<u>Centriné</u>					
<u>Kredito Unija</u>	LT	77	n/a	n/a	<u>Profile</u>
<u>European</u>					
<u>Merchant</u>					
<u>Bank</u>	LT	31	n/a	-0,01	<u>Profile</u>

#### **Electronic Money Institutions:**

During the last few years, Lithuania has experienced a major shift in the financial and payment sector. Due to Brexit, many fintechs moved from United Kingdom in favour of Lithuania to get a secure access to the European market. This access is translated in banking-, electronic money institution-, and payment institution licences. In

<sup>&</sup>lt;sup>286</sup> https://www.statista.com/statistics/444394/number-of-payment-cards-lithuania/

<sup>&</sup>lt;sup>287</sup> https://www.statista.com/statistics/444394/number-of-payment-cards-lithuania/

<sup>&</sup>lt;sup>288</sup> https://www.statista.com/statistics/1095087/cash-use-in-lithuania/

<sup>&</sup>lt;sup>289</sup> Swedbank annual Report 2019

particular, it is the electronic money institution licence that UK FinTech firms have applied for in Lithuania. In 2019, Lithuania has issued 115 electronic money institution and payment institution licences<sup>290</sup>.

EMIs offer a wide range of financial services. Trustcom Financial issues MasterCard debit cards linked to an online banking account for individuals and businesses.

Finolita offers IBAN accounts to merchants and provides payment processing services in collaboration with its sister company PXP Financial, a British gateway accepting more than hundred online payment methods. Vialet is another EMI that offers IBAN accounts for private and business customers. It also issues MasterCard cards associated with the current account. Globalnetint offers a personal e-wallet that aggregates all funds in one software. This software supports SEPA and SWIFT transfers.

Foxpay is an alternative payment method with an EMI license that allows merchants to accept online payments through payment cards, QR codes, and invoices. In addition, it also provides business accounts through their mobile Foxpay or their website.

Name	Group	Number of Employees	Net Turnover (Million €)	Net Profit (Million €)	LinkedIn
Globalnetint	0.00%	20	2,03	n/a	<u>Profile</u>
<u>Vialet</u>		3	2	0,19	<u>Profile</u>
<u>TrustCom</u>		3	0,93	n/a	<u>Profile</u>
<u>Financial LT</u>					
<u>Finolita</u>		15	0,83	-0,30	<u>Profile</u>
<u>Walleto</u>		1	0,53	n/a	<u>Profile</u>
<u>FoxPay</u>		11	0,52	-0,05	<u>Profile</u>
ConnectPay		19	0,19	-0,41	<u>Profile</u>
Tesla Pay LT		10	0,04	n/a	<u>Profile</u>
<u>Bankera</u>	Era Finance	100	0,02	n/a	<u>Profile</u>
<u>Contomobile</u>	Forbis Group	4	0,02	n/a	<u>Profile</u>

#### **Payment Schemes:**

There is no specific domestic payment scheme in this market. The traditional debit and credit payment schemes from MasterCard and Visa are available.

#### **Payment Service Providers:**

Regional actors are present, for instance the Estonia gateway Maksekeskus. Cardinity is a domestic gateway that enables merchants to accept debit and credit card payments from Visa and MasterCard, mobile payments, and also provides processing services.

Name	Group	Number of Employees	Net Turnover (Million €)	Net Profit (Million €)	LinkedIn
<u>Cardinity LT</u>		8	1,6	0	<u>Profile</u>

#### Other PSPs:

ASHBURN International is a payment service provider that sells POS terminals in the Baltic states. It also processes payments to big Baltic acquiring banks such as SEB, Swedbank, Luminor and Citadele Bank. Similarly, Electronic Payment Solutions provides POS terminals from Ingenico and acquiring and processing services

through data processer such as Elavon and Nets for big Baltic banks including Swedbank, SEB and Luminor. Shift4 Payments Lithuania is the Lithuanian branch of an American payment service provider that offers payment processing services and POS terminals.

#### Other Payment Services:

Moorwand and Railsbank are British payment companies that have set up a subsidiary in Lithuania to keep access to the European market.

#### Alternative payment methods:

Large American international players are present on the Lithuanian market. They include PayPal, Apple Pay, Amazon Pay and Google Pay.



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#### Luxembourg

#### Introduction:

With 3.66289 billion transactions in 2019, Luxembourg is above all characterised by a very high proportion of payments made via e-money, representing more than 90% of local payments. These payments are made through the 127 credit institutions, the 9 Electronic Money institutions and the 15 other PSPs in the country, making Luxembourg a focal hub for key players in the European payment landscape. This has also attributed to a flourishing network of FinTechs operating from and within Luxembourg.

Another characteristic of the country is that the proportion of domestic payments have a volume of only 9% compared to cross-border payments 290.

In terms of payment methods for digital payments, the payment methods can be ranked in order of preference of the Luxembourg population291:

1. Mobile payments: 51%

2. Card payment: 37%

3. Payment by e-wallet: 10%

4. Pre-paid card payment: 1%

5. Payment by bank transfer: 1%

The major players in mobile payment are often foreign, including Paypal, Apple Pay, Amazon Pay, AliPay, but also some more local players such as Payconiq, which has seen major growth domestically, benefiting from Luxembourg as a regionally payment hub.

As far as card payments are concerned, a characteristic of Luxembourg is the number of cards per inhabitant. According to J.P. Morgan292, there are about 4,35 credit or debit cards per inhabitant, reflecting the high use of contact-less payments to the benefit of local payment players.

#### Banks:

Most of the banks present in Luxembourg are subsidiaries of foreign banks such as BNP Paribas or ING, however there is one important Luxembourg bank in the country: BCEE. There are also some neo-banks that offer merchant account acquisition services such as SOGEXIA and card issuing services such as CrossCard.

One key actor in Luxembourg is Banking Circle, a fully licensed bank servicing payment companies and banks. Banking Circle provides banking services via a platform that enables companies to easily conduct international B2B payments, while also offering everything from settlement and virtual accounts to FX services.

Name	Group	Number of Employees	Net Turnover (Million €)	Net Profit (Million €)	LinkedIn
	BNP				
BGL BNP Paribas <sup>291</sup>	Paribas	2.915	15.151	345,0	<u>Profile</u>
<u>Banque Internationale à</u>					
Luxembourg		1.890	686,8	n/a	<u>Profile</u>
BCEE 292		1.862	603,5	183,9	<u>Profile</u>
	Société				
Société Générale Luxembourg <sup>293</sup>	Générale	1.000	517	0,23	<u>Profile</u>
ING Luxembourg 294	ING	750	323,3	101,3	<u>Profile</u>
Banking Circle 295		131	186,3	-10,3	<u>Profile</u>
Raiffeisen Luxembourg <sup>296</sup>		666	176,5	17,3	<u>Profile</u>
Banque BCP		n/a	n/a	n/a	<u>Profile</u>

#### **Payment Schemes:**

The market leaders in payment schemes for credit cards are Visa, Mastercard, American Express, and Diners Club. For debit cards, Visa debit is the most commonly used scheme. <sup>297</sup>

#### **Payment Service Providers:**

At the level of Third-Party Payment Service Providers, we find mainly foreign players, or their Luxembourg subsidiaries. This includes Six Group, a subsidiary of Worldline. But Luxembourg also has some local players that operate on a Pan-European or International scale. Such players are Sogexia, which operates on a Pan-European scale, and Escalion, which operates outside of Europe as well.

<sup>&</sup>lt;sup>292</sup> BCEE: Annual Report 2019payppaypro

<sup>&</sup>lt;sup>293</sup> Société Générale Lux: Annual Report 2019

<sup>&</sup>lt;sup>294</sup> ING Lux: Annual Report 2019

<sup>&</sup>lt;sup>295</sup> Banking Circle Lux: Annual Report 2019

<sup>296</sup> https://www.raiffeisen.lu/fr

<sup>297</sup> https://www.paymentwall.com/payment-methods/luxembourg

#### **Alternative Payment Methods:**

Luxembourg is often the country in which the main international gateways are set up. This is notably the case for Paypal, Amazon Pay and AliPay, SATISPAY but also more recently for Airbnb Pay. Even though Luxembourg is heavily influenced by large international players, the also has some local ones. One example is Mpulse which offers a pay-by-SMS system.

Name	Group	Number of Employees		_	LinkedIn
MPULSE SA 298		9	n/a	0,023	<u>Profile</u>

#### BaaS / SaaS:

Luxhub is an open banking API platform founded in 2018 by BCEE, BGL BNP Paribas, Banque Raiffeisen, and POST Luxembourg and offers API technologies to financial institutions and FinTechs<sup>299</sup>. Finologee is also a Luxembourgish digital platform for the financial industry offering onboarding, KYC and API solutions.<sup>300</sup>

Name	Group	Number of Employees	Net Turnover (Million €)		LinkedIn
Luxhub <sup>301</sup>		29	3,85	-1,16	<u>Profile</u>
Finologee 302		35	n/a	0,364	<u>Profile</u>

<sup>&</sup>lt;sup>298</sup> Mpulse : Annual Report 2019

<sup>&</sup>lt;sup>299</sup> https://www.luxhub.com/turning-challenges-into-opportunities

<sup>300</sup> https://finologee.com/about/

<sup>301</sup> Luxhub: Annual Report 2019

<sup>302</sup> Finologee: Annual Report 2019

#### Malta<sup>303</sup>

#### Introduction:

Malta counts 505 thousand inhabitants. Malta joined the European Union in 2004 and the euro area in 2008 $^{304}$ . In 2019, the country had a GDP of 13 billion euros, in other words, a GDP per capita of €26,529 $^{305}$ .

As in other European countries, especially in Southern Europe or Balkans, cash is widely used. The Central Bank of Malta's survey on payment habits revealed that in 2018, 86,7%, 69,1% and 46,0% of households used cash to pay for groceries, consumables and non-consumables, respectively. <sup>306</sup> Furthermore, 59,3% of households in Malta paid their utility bills in cash in 2018. <sup>307</sup>

Regarding non-cash payments, in 2019, 56.8% of all non-cash transactions were made with a card, and 20.9% via credit transfers  $^{308}$ . In 2019, there were 90.2 payments per capita made with cards issued by resident PSPs  $^{309}$ . This number has increased by 86%  $^{310}$  since 2015.

#### Banks:

There were  $25^{311}$  banks operating in Malta in 2019. The largest bank is the Bank of Valletta. Turkish banks Yapi Kredi and Akbank also have branches in Malta.

		Number of	Net Turnover	Net Profit	
Name	Group	<b>Employees</b>	(Million €)	(Million €)	LinkedIn
Bank of					
<u>Valletta plc</u>		1.823	266	63	<u>Profile</u>
	HSBC				
HSBC Bank	HOLDINGS				
Malta p.l.c.	PLC	1.271	153	21	<u>Profile</u>
APS Bank					
<u>P.L.C.</u>		396	58	20	<u>Profile</u>
Lombard bank					
Malta p.l.c.		931	56	10	<u>Profile</u>
BNF Bank p.l.c.		207	23	3	<u>Profile</u>
	Anteilsverw				
<u>Sparkasse</u>	altungsspar				
<u>Bank Malta</u>	kasse				
plc	Schwaz	90	15	4	<u>Profile</u>
<u>Akbank TAS</u>	Akbank TAS	n/a	0	232	<u>Profile</u>
	Ferratum				
<u>Ferratum Bank</u>	(Malta)				
plc	Holding	n/a	n/a	n/a	<u>Profile</u>
<u>Yapi Kredi</u>					
<u>Malta Ltd</u>	Yapi Kredi	8	n/a	n/a	<u>Profile</u>

<sup>&</sup>lt;sup>303</sup> All numbers in the tables are from Orbis and for the year 2019, unless stated otherwise

<sup>306</sup> https://www.centralbankmalta.org/file.aspx?f=92775

<sup>306</sup> https://www.centralbankmalta.org/file.aspx?f=92775

<sup>306</sup> https://www.centralbankmalta.org/file.aspx?f=92775

<sup>307</sup> https://www.centralbankmalta.org/file.aspx?f=92775

<sup>&</sup>lt;sup>308</sup> Payments statistics: 2019, ECB

<sup>309</sup> Statistical Data Warehouse, ECB, https://sdw.ecb.europa.eu/reports.do?node=1000001390

<sup>&</sup>lt;sup>310</sup> Authors' calculations based on numbers from the Statistical Data Warehouse, ECB

<sup>311</sup> Statistical Data Warehouse, ECB https://sdw.ecb.europa.eu/reports.do?node=1000001976

#### **Electronic Money Institutions:**

Considering Malta is one of the smaller countries in the European Union, by size, it does house quite a few players with an Electronic Money Institution license. These players offer a wide range of services, stretching from issuing of accounts and payment cards to e-wallets, payment gateways, and money remittance.

		Number of	Net Turnover	Net Profit	
Name	Group	Employees	(Thousand €)	(Thousand €)	LinkedIn
<u>Insignia</u>	Insignia				
<u>Cards</u>	International				
<u>Limited</u>	Limited	n/a	2.763	-233	n/a
	ASIACITI TRUST				
<u>Nobel</u>	GROUP				
<u>Financial Ltd</u>	LIMITED	>200	912	-231	<u>Profile</u>
	MTACC				
MTACC Ltd	HOLDING LTD	n/a	698	267	n/a
<u>Papaya</u>					
<u>Ltd</u> 312		>11	204	-1.137	<u>Profile</u>
Em@ney plc		>50	n/a	n/a	<u>Profile</u>
<u>Paymentworl</u>					
<u>d Europe</u>					
<u>Limited</u>	Paymentworld	20313	n/a	n/a	<u>Profile</u>
<u>handi.cash</u>					
<u>Limited</u>		n/a	n/a	n/a	n/a

#### **Payment Schemes:**

Debit and credit cards from Mastercard or Visa are available in Malta.

#### **Payment Service Providers:**

Some international players, such as Trust Payments, have European payment subsidiary in Malta. Maxpay is a payment gateway in Malta.

Name	Group	Number of Employees	Net Turnover (Million €)	Net Profit (Million €)	LinkedIn
	Махрау		(**************************************	(common of	
<u>Maxpay</u>	Holding				
<u>Limited</u>	Limited	>50	n/a	n/a	<u>Profile</u>

#### Others Payment services:

RS2 is a major payment software provider allowing banks or payment institutions to process payments.

		Number of	Net Turnover	Net Profit	
Name	Group	<b>Employees</b>	(Million €)	(Million €)	LinkedIn
RS2 Software plc		350	22,21	-1,63	<u>Profile</u>

<sup>312</sup> Numbers are from 2018 accounts

<sup>313</sup> Value is from Paymentworld



## Smart Corporate Payment Solutions

Loyalty\*

Funds disbursement

Employee benefits

Card to
Card/
Account\*

Di

Card issurance for Fls

Open banking

Gift cards Cashless events

b2b.dipocket.org

#### The Netherlands

#### Introduction:

In 2019, there were 7,02 billion point-of-sale transactions made in the Netherlands, where 67% were made debit card and 32,5% by cash  $^{314}$ . The remaining 0,5% represents the credit card transactions.

Card payments have increased by 9,9% from 2018 to 2019. Contactless card payments are widespread and have increased by 69% in  $2019^{315}$ . A significant proportion of these payments were made through smartphones and wearables (with built-in NFC-chip). Dutch wearables transactions represented 33% of all such transactions in Europe in  $2019^{316}$ .

Person-to-person payments represented 568 million transactions and were mostly done with cash (54.1%) and electronically  $(44,9\%)^{317}$ .

There were 258 million ecommerce transactions in the Netherlands in 2019, valued at EUR 25,8 billion <sup>318</sup>. Most of their online transactions were done on computers (61%) while 22% of payments are made on smartphones and 15% on tablet <sup>319</sup>.

All those aspects explain why the Dutch payment system is attractive for new payment actors. First, the debit card penetration is relatively high and continues to increase over time at the expense of cash payments. In addition to debit cards payments, new alternative payment methods such as mobile payments and wearables have emerged on the market and are gaining in popularity. However, credit card penetration is not expected to increase due to the Dutch cultural background, which is opposed to credit cards. Secondly, the same trend can be observed for P2P payments giving multiple business opportunities in P2P mobile payments and other e-wallets. Finally, the market size of the Dutch ecommerce presents multiple opportunities for businesses such as online payment service provider, gateways, and payment processors.

#### **Banks:**

Three major banks share the retail banking sector.

First, ING NL takes the leading position with a market share of 40%<sup>320</sup>. They offer payment accounts with several payment methods such as debit and credit cards, mobile payments, and wearables. They issue mainly Maestro debit cards and since 2018 they have started to issue Vpay debit cards<sup>321</sup>. ING also issues MasterCard credit cards and is an iDEAL issuer and acquirer. Concerning mobile payment methods, ING offers services from Payconiq - a gateway from ING Group offering mobile payments and e-wallets, ING Mobile payment, developed in the ING mobile banking app, and Apple Pay that can be activated and directly linked to the ING mobile banking app. ING Group has also invested in other start-ups such as Cobase in partnership with Nordea and Crédit Agricole SA, as well as Payvision, an international gateway operating worldwide. Cobase is a tradename of Financial Transaction Services BV and operates as a multibank platform offering payment and treasury services for corporates. Secondly, Rabobank has a 30% market share <sup>322</sup>. They offer payment accounts, online banking services and issue Maestro debit cards, Visa and MasterCard credit cards, and is an iDEAL issuer and acquirer. They also offer mobile payment services through the Rabowallet app.

<sup>314</sup> Dutch Payment Association: Facts and figures on the Dutch payment system in 2019

<sup>&</sup>lt;sup>315</sup> Dutch Payment Association: Facts and figures on the Dutch payment system in 2019

<sup>316</sup> https://newsroom.mastercard.com/eu/press-releases/wearable-payments-are-taking-off-across-europe-eightfold-increase-in-transactions-in-just-a-year/

<sup>&</sup>lt;sup>317</sup> Dutch Payment Association: Facts and figures on the Dutch payment system in 2019

<sup>318</sup> https://www.thuiswinkel.org/nieuws/4358/nederlandse-consumenten-geven-online-25-8-miljard-uit-in-2019

<sup>&</sup>lt;sup>319</sup> Dutch Payment Association: Facts and figures on the Dutch payment system in 2019

<sup>320</sup> https://www.banken.nl/nieuws/21731/ranglijst-grootste-nederlandse-banken-

 $<sup>\</sup>underline{2019\#: ``: text=ING\%20 is\%20 de\%20 grootste\%20 bank, wat\%20 dat\%20 betreft\%20 weinig\%20 verrassingen.}$ 

<sup>321</sup> https://www.banken.nl/nieuws/20817/ing-debetkaarten-nu-ook-beschikbaar-met-v-pay-van-visa,

https://www.ing.nl/particulier/betalen/passen/betaalpas/index.html

<sup>322</sup> https://www.banken.nl/nieuws/21731/ranglijst-grootste-nederlandse-banken-

 $<sup>\</sup>underline{2019\#:^\sim: text=ING\%20 is\%20 de\%20 grootste\%20 bank, wat\%20 dat\%20 betreft\%20 weinig\%20 verrassingen.}$ 

Thirdly, ABN Amro has a 20% market share <sup>323</sup> and offers payment accounts by issuing Maestro debit, MasterCard credit cards, and is an iDEAL issuer and acquirer. They also offer mobile payments through Apple Pay, and wearables. As for ING, Apple Pay is directly activated and linked with the ABN Amro mobile banking app. They also developed Tikkie, an additional app that allows to send payment request via messages, QR codes, email, and WhatsApp which works in conjunction with iDEAL. In addition, ABN Amro and First Data share a joint venture called European Merchant Service. EMS is a gateway operating at the European level offering online and offline payment solutions. Finally, International Card Services (ICS), an independent subsidiary of ABN Amro Group, offers outsourcing services for issuing Visa and Mastercard credit cards. Foreign banks such as Deutsche Bank issuing corporate MasterCard credit cards <sup>324</sup> and Maestro debit cards 325 and Handelsbanken issuing Maestro debit cards and Mastercard credit cards go through ICS for the credit card issuing service 326. However, while Deutsche Bank offers only corporate services and is an iDEAL acquirer, Handelsbanken offers retail payment accounts with mobile payment through their mobile banking app and is an iDEAL issuer.

The last 10% comprises smaller Dutch banks such as Triodos Bank, issuing only Maestro debit cards and iDEAL payment services, Volksbank and its subsidiaries including SNS Bank, ASN Bank, and Regio Bank issuing Maestro debit cards and Visa credit cards through ICS. Volksbank is also an iDEAL acquirer and issuer.

In addition to traditional banking players, emerging Dutch fintechs have emerged in the Dutch payment landscape, such as Knab, issuing maestro debit cards, MasterCard credit cards through ICS, and American Express. Knab is an online bank developed by Aegon Bank Group that offers business and private payment accounts, online payment requests through the Knab mobile banking app and is an iDEAL issuer. Bunq is another online bank issuing Maestro debit, MasterCard credit cards and iDEAL payment services. In addition, Bunq offers additional services such as payment transfers through Wise, mobile payments with Google Pay and Apple Pay, online cards and offering iDEAL payment services as a collecting payment service provider (CPSP)<sup>327</sup>.

Finally, foreign fintech players such as Revolut and N26 are also present in the Netherlands offering their online banking.

Name	Group	Number of Employees	Net Turnover (Million €)	Net Profit (Million €)	LinkedIn
<u>De Volksbank</u>		3.648	929	275	<u>Profile</u>
<u>Triodos Bank</u>		1.493	292	39	<u>Profile</u>
International Card Service	ABN Amro	464	92	55	<u>Profile</u>
Bunq		150	4	-14	<u>Profile</u>
SNS Bank	De Volksbank	1.669	n/a	n/a	<u>Profile</u>
ASN Bank	De Volksbank	181	n/a	n/a	<u>Profile</u>
Regio Bank	De Volksbank	156	n/a	n/a	<u>Profile</u>
<u>Knab</u>	Aegon Bank	479	n/a	n/a	<u>Profile</u>

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<sup>323</sup> https://www.banken.nl/nieuws/21731/ranglijst-grootste-nederlandse-banken-

<sup>2019#:~:</sup>text=ING%20is%20de%20grootste%20bank,wat%20dat%20betreft%20weinig%20verrassingen.

<sup>&</sup>lt;sup>324</sup>https://www.deutschebank.nl/nl/content/producten en services corporate and investment banking cash management local cmc products deutsche bank corporate card.html

<sup>325</sup>https://www.deutschebank.nl/nl/content/producten en services corporate and investment banking cash management local cmc products deutsche bank debit card.html

<sup>326</sup> https://www.handelsbanken.nl/nl/particulier/betalen

<sup>322</sup> https://www.ideal.nl/en/glossary/#:~:text=A%20CPSP%20is%20a%20payment,checkout%20systems%20for%20iDEAL%20payments.

#### **Payment Schemes:**

Debit cards are widely used in the Netherlands. All major American payment schemes are present on this market including VISA, MasterCard and American Express. However, Maestro and Vpay are the most used in the domestic market. In addition, the Dutch market has developed its own online multibank online banking payment scheme called iDEAL from Currence BV. It represents €53,4B of transactions globally in 2019 and has 60 of market share in the Dutch ecommerce whereas credit card payments for instance represent only 11% <sup>328</sup>. The remaining market share is held by other payments institutions listed in the Payment Gateway subsection.

#### **Payment Service Providers:**

Foreign international players such as PPRO and Worldline Group are present. Ingenico acquired Global Collect services BV in 2014 and PaySquare BV, which was acquired by Worldline in 2016. There are several Dutch players present on international level, such as Smart2Pay and Adyen. Smart2Pay offers more than 200 payment methods globally and has a worldwide coverage. The last Dutch fintech to notice is Bitsafe, licensed as an Electronic Money Institution, trading as Verotel International BV. They issue MasterCard debit cards connect to their Bitsafe accounts. It includes CardBilling, GayCharge, and Bill. All four payment processors are directly linked with a Bitsafe account which is automatically opened when choosing one of its services. Finally, foreign fintech players such as Monese, Rewire, Wise, and Azimo are also present in the Netherlands offering their online banking and payment services. Azimo originally from UK settled a subsidiary in the Netherlands to keep the access to the European Market and its licence of EMI.

Name	Group	Number of Employees	Net Turnover (Million €)	Net Profit (Million €)	LinkedIn
<u>Verotel</u> <u>International</u>		19	n/a	n/a	<u>Profile</u>

#### **Payment Gateways**

Several payment institutions position themselves between the payment methods and the web shop, offering a wide range of payment services to merchants. Some of them also take charge of merchant acquiring and processing services. Those gateways comprise foreign international players such as iSignthis, Verifone, Worldpay, GWK Travelex and Credorax Bank, and Dutch international player including Adyen, Mollie, PayU and Payvison. Those players operate on an international level that goes beyond Europe, while other gateways focus on the European market. Those players include the European Merchant Service, CCV Group and Multisafepay. Moreover, smaller gateways are doing business on a regional level such as CM Payments and Pay. present mainly in the Benelux region.On a national level, the Netherlands has national gateways that offer their own online payment services in response to the Dutch ecommerce market.

Name	Group	Number of Employees	Net Turnover (Million €)	Net Profit (Million €)	LinkedIn
	Arvato Financial				
<u>AfterPay</u>	Solutions	90	28,3	4,5	<u>Profile</u>
Online Payment					
<u>Platform</u>	Mediamedics	17	7,4	n/a	<u>Profile</u>
Ease2pay		10	0,2	-0,9	<u>Profile</u>
<u>Buckaroo</u>		80	n/a	0,5	<u>Profile</u>
<u>lcepay</u>		22	n/a	n/a	<u>Profile</u>
<u>PayPro</u>	PayPro Holdings	6	n/a	n/a	<u>Profile</u>
<u>Digiwallet</u>	TargetMedia	10	n/a	n/a	<u>Profile</u>

<sup>328</sup> Dutch Payment Association: Annual Report 2017

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<u>Margento</u>	64	n/a	n/a	<u>Profile</u>
Pay.	126	n/a	n/a	<u>Profile</u>

Buckaroo offers more than 40 national and international payment methods through its platform and operates for more than 5000 Dutch corporations and businesses. They offer classic payment methods such as iDEAL, Visa, American Express, and MasterCard, popular mobile payments, especially Tikkie and Payconiq, and post-payment methods including AfterPay and Klarna. Icepay offers more than 20 payments methods such as credit, debit cards and micropayment. Online Payment Platform, Digitwallet from TargetMedia, and PayPro are smaller companies offering local payment solutions.

#### **Other Payment Services:**

In addition to traditional payment institutions, other actors have developed banking as a service and payment as a services solution to response to the need of a fully integrated solution for payments. those actors include Bankingblocks, FiveDegrees, and WL Payments.

#### Alternative payment methods:

There are several large international players present in the Netherlands, such as Google Pay, Amazon Pay, Paypal, Alipay, Klarna, Sofort, and Trustly <sup>329</sup>, but also emerging local businesses such as AfterPay, a trade name developed by Arvato Finance B.V. AfterPay offer "buy now pay later" services when purchasing online. and send an email to the customer with the invoice when they have received the order. The invoice has to be reimbursed within 14 days after sending the email and is compatible with the iDEAL payment method. AfterPay has gained in popularity and reached the €450M in transactions annually in 2018 <sup>330</sup>

Other Dutch payment methods include ease2pay, which is a e-money institution offering e-wallet and mobile payment services, primarily implemented currently for parking tickets and refuelling services. The service is already well-implemented for parking tickets and refuelling: the app is accepted in more than seven hundred petrol stations spread over 140 cities in the Netherlands. Ease2pay has a close partnership with Texaco, Tango, and Rabobank. Secondly, another payment provider of mobile payment services is Margento, offering mobile payment, e-wallet services, and money transfer services.

More traditional Dutch payment methods such as Acceptgiro and Incassomachtigen - called mandates in English- are still used in the country. Both are products from Currence -the same company as iDEAL- but with the convenience of electronic payments, the usage of those products is declining. Therefore, TargetMedia BV offers online payment products such as QR-Kassa, E-Acceptgiro and E-Facturen as an online alternative to those traditional payment methods.

		Number of transactions 332
Name	Number of Employees 331	(Million)
<u>iDEAL</u>	37	524
<u>TargetMedia</u>	10	250
<u>Incassomachtigen</u>	37	0,49
<u>AfterPay</u>	90	6,25
Ease2pay	10	0,27
<u>Acceptgiro</u>	37	11

https://www.about-payments.com/ecommerce-markets/which-online-payment-methods-to-accept-in-netherlands

<sup>331</sup> Data from orbis in 2019

Data from orbis in 2019

<sup>332</sup> Number of 2018 available on Dutch Payment Association: Facts and figures on the Dutch payment system in 2019, http://www.targetmedia.eu/en/site/about, Currence annual report, Ease2pay investor presentation 2018 and 2019,

<u>Margento</u>	64	n/a
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#### BaaS / SaaS:

Name	Group	Number of Employees	Net Turnover (Million €)	_	LinkedIn
Ginger Payments		n/a	n/a	n/a	<u>Profile</u>



#### **Poland**

#### Introduction

Poland is the largest economy in Eastern Europe and remains the third most cash consuming country in Europe, despite the downward trend in this type of payment. The share of cash in retail payments has decreased from 98% in 2005 to 57% in 2018<sup>333</sup>.

Digital payments had a growth rate of 48% in 2019. This is due to the growth of ecommerce, which is increasing by more than 25% per year, according to the Tap2pay report <sup>334</sup>.

In terms of online payments, the most widely used payment method is transfer by bank, representing a 31% market share of online payments in 2019. Card payments for online purchases represent only 24% market share and cash payments  $15\%^{335}$ .

Due to the high level of digitalization in Poland, banks have had to offer online banking solutions, which have become the preferred online method of payment for Poles, according to the Adyen report<sup>336</sup>. As far as card payments are concerned, the trend in Poland is that they are on the rise. This can be explained by the new technologies of electronic payments and contactless payments. The number of credit cards in Poland in 2018 reached 6 million, while debit cards reached 37 million<sup>337</sup>.

Finally, contactless payment machines are on the rise in this country. There were about 10,000 in 2011, which increased to 354.000 in  $2015^{338}$ . Most of these contactless payments are made using cards. However, as far as mobile payments are concerned, these eWallets represented a 17% market share for Polish ecommerce  $^{339}$ .

In terms of online banking, approximately 37,4 million people have access to online banking via a banking application, representing an increase of 15,2% compared to 2018<sup>340</sup>.

#### Banks:

In 2019, Poland had 30 commercial banks, 25 branches of credit institutions, and 538 cooperative banks. The largest bank in Poland is PKO bank. It also has branches in the Czech Republic and Germany. This bank offers financial services to companies, retailers, and private individuals. In addition, through its iPKO service, it offers electronic banking services. It serves about 9 million customers<sup>341</sup>.

Poland's second largest banking group is Bank Pekoa, with more than 5 million customers<sup>342</sup>. The bank also offers retail banking services throughout many European countries. The UniCredit group has a 6,28% holding in the shares of the bank.<sup>343</sup>.

Santander Bank Polska is the third largest bank in Poland, acquired in 2010 by the Spanish-headquartered institution. This bank has more than 3,5 million customers <sup>344</sup>. Then there is the mBank, with 5.348 thousand customers <sup>345</sup>. The bank is also present in 2 other markets: the Czech Republic and Slovakia. The bank offers services to companies, retailers, and individuals. It also offers digital services and mobile transactions.

<sup>333</sup> https://www.statista.com/statistics/1102052/poland-cash-and-cashless-payments-in-the-number-of-retail-payments/

<sup>334</sup> https://tap2pay.me/online-payments-trends-in-poland/

<sup>335</sup> https://www.statista.com/statistics/435756/ecommerce-popular-payment-methods-poland/

 $<sup>\</sup>frac{336}{\rm https://www.adyen.com/knowledge-hub/guides/global-payment-methods-guide/local-payment-methods-in-europe\#thenetherlands}$ 

<sup>337</sup> https://www.statista.com/statistics/1097152/credit-card-and-debit-card-number-in-poland/

<sup>338</sup> https://store.globaldata.com/report/vr1066mr--the-cards-and-payments-industry-in-poland-emerging-trends-and-opportunities-to-2019/

<sup>339</sup> https://tap2pay.me/online-payments-trends-in-poland/

<sup>340</sup> https://www.ebf.eu/poland/

 $<sup>\</sup>underline{^{341}\,\text{https://www.vmware.com/content/dam/digitalmarketing/vmware/en/pdf/customers/vmware-pko-bp-bank-case-study-english.pdf}$ 

<sup>342</sup> https://media.pekao.com.pl/en/pr/437497/bank-pekao-sa-strong-growth-of-operating-results-supported-by-the-high

<sup>343</sup> https://en.wikipedia.org/wiki/Bank Pekao

<sup>344</sup> https://corporatefinanceinstitute.com/resources/careers/companies/top-banks-in-poland/

<sup>345</sup> https://www.mbank.pl/en/annual-report/2016/about-mbank-group/#mBank-Group-at-a-glance

The ING Group is also present in Poland under the subsidiary ING bank Slaski as well as the German group Deutsche Bank under the name Deusche Bank Polska. BNP Paribas also has a subsidiary in this market called BGZ BNP Paribas, as well as the Crédit Agricole group under the subsidiary Crédit Agricole Bank Polska.

There are also a number of smaller banks including Millenium Bank, Getin Noble Bank, Alior Bank, Bank Handlowy, Bank Pocztowy, Bank Ochrony Srodowiska, Nest bank and SGB Bank.

Name	Group	Number of Employees	Net Turnover (Million €)	Net Profit (Million €)	LinkedIn
Santander bank	Ологр	р.о,ооо	(	(	
<u>Polska</u>	Santander	n/a	2.229	572	<u>Profile</u>
ING bank Slaski	ING Groep	8.135	1.363	236	<u>Profile</u>
BGZ BNP Paribas	BNP Paribas	n/a	1.125	144	<u>Profile</u>
Bank Millennium		n/a	829	131	<u>Profile</u>
Bank Handlowy W					
<u>Warszawie</u>	Citibank	3.071	526	112	<u>Profile</u>
Getin Noble Bank		4.701	249	-138	<u>Profile</u>
<u>Nest bank</u>		1.271	157	-47	<u>Profile</u>
Bank Ochrony					
<u>Srodowiska</u>		n/a	143	16	<u>Profile</u>
<u>Bank Polskiej</u>					
<u>SpoldzielczosciBank</u>					
<u>Polskiej</u>					
<u>Spoldzielczosci</u>		997	97	6	<u>Profile</u>
Deutsche Bank	Deutsche				
<u>Polska</u>	Bank	n/a	84	1	<u>Profile</u>
<u>SGB Bank</u>		n/a	83	5	<u>Profile</u>
Bank Pocztowy		1.410	79	4	<u>Profile</u>

#### **Payment Schemes:**

As mentioned in the introduction, debit cards are preferred over credit cards. The most popular credit cards issued in Poland are those issued by PKO bank. However, other banks such as BNP Paribas Polska also offer this type of cards. In addition, Visa, MasterCard and American Express are the most widely used payment schemes on the Polish market.

#### **Payment Service Providers:**

Name	Group	Number of Employees	Net Turnover (Million €)	Net Profit (Million €)	LinkedIn
<u>PayLane</u>		17	0,38	0,57	<u>Profile</u>

#### Gateway only:

Name	Group	Number of Employees	Net Turnover (Million €)	Net Profit (Million €)	LinkedIn
<u>mPay</u>		13	3	0,003	<u>Profile</u>
Przelewy24	NETS TOPCO 1 SARL	n/a	0,018	-8	<u>Profile</u>
<u>SkyCash</u>		n/a	n/a	n/a	<u>Profile</u>
Straal		n/a	n/a	n/a	Profile

#### Other PSPs:

Name	Group	Number of Employees	Net Turnover (Million €)	Net Profit (Million €)	LinkedIn
<u>PosPay</u>		n/a	46	10	n/a
<u>eCard</u>	NETS TOPCO 1 SARL	41	7	1	<u>Profile</u>
<u>ESC</u>		26	2	0,029	<u>Profile</u>
<u>PaybyNet</u>		n/a	n/a	n/a	<u>Profile</u>

Alternative payment methods:

Polish banks offer a variety of digital wallets. In addition, reports indicate that 41% of ecommerce transactions are made through Tap2Pay, followed by DotPay, Paypal, PayU and Przelewy24. <sup>346</sup> Apple Pay and Google Pay are also present in Poland.Then, Blik alone represents a market share of 25%. Blik mobile means of payment with a system integrated into the banking applications of Polish banks, also has a 25% market share.

Bank	Digital Wallet
PKO bank	iPKO
Santander bank Polska	Santander Mobile
Pekoa Bank	PeoPay
mBank	mBank Mobile
Bank Millennium	Millennium App
Alior Bank Spolka Akcyjna	Alior Mobile
Getin Noble Bank	Getin Mobile

<sup>346</sup> https://tap2pay.me/online-payments-trends-in-poland/

Name	Group	Number of Employees	Net Turnover (Million €)	Net Profit (Million €)	LinkedIn
Allegro Pay	Allegro	1.969	560	93	<u>Profile</u>
<u>DotPay</u>	NETS TOPCO 1 SARL	49	12	3	<u>Profile</u>
	Krajowy Integrator				
<u>Tpay</u>	Płatności S.A	35	7	0,55	<u>Profile</u>
<u>YetiPay</u>		3	0,103	0,009	<u>Profile</u>
<u>BLIK</u>		n/a	n/a	n/a	n/a



We tailor the right strategy on our clients' needs and objectives by working out the most efficient process to raise their impact with regulators and decision makers in Europe.

- Daily/weekly or monthly watch on the issues of interest carefully selected together with our clients
- Regulatory expertise of existing and forthcoming legislation
- Stakeholders' mapping

- Strategy and message development
- Client representation with key stakeholders in Brussels, Frankfurt, Strasbourg or Paris
- Engagement strategies.
- Licensing applications





#### **Portugal**

#### Introduction:

Cash as a payment method in retail payments has decreased 12% from 2014 to  $2019^{347}$ . This may be attributed to the reduction of the maximum value of cash payments imposed by the government: from 2017, the amount of cash per transaction has been limited to €3,000 for residents and €10,000 for non-residents <sup>348</sup>. The aim of the Portuguese government is to promote electronic payments. The share of cash money in retail payments in Portugal was 37% in 2019 <sup>349</sup>, which is considerably lower compared to other countries within the European Union.

Debit cards are the most widely used method of payment in Portugal and accounted for 94.2% of the total value of card payments in 2018<sup>350</sup>. In this environment, banks are also developing their own mobile and digital wallet applications to compete with the large American companies.

Further, according to JP Morgan, Portugal is poised to become one of the fastest growing ecommerce markets in Europe by 2019.

Mobile payments are expanding rapidly, and the market is expected to experience a Compound Annual Growth Rate (CAGR) of 21% between 2020 and 2024 <sup>351</sup>. In addition, online bank transfers still represent 10%-15% of all online payments. <sup>352</sup>

#### Banks:

In 2019, the Portuguese banking system consisted of 148 institutions, including 60 banks, 85 mutual agricultural credit banks and three savings banks. Of all these institutions, the five largest banks accounted for 77 per cent of total assets.<sup>353</sup>

The largest bank in Portugal is the Caixa Geral de Depositos (CGD) with more than 3.8 million users. <sup>354</sup> The bank provides banking services to individuals and businesses. It also offers specialized financial services, banking, investment services and insurance.

The second largest bank in Portugal is the bank BCP, with about 4.3 million consumers <sup>355</sup>. The bank offers retail, private, corporate, and investment banking products and services and have an international presence.

In third position is Banco Santander Totta, a subsidiary of the Santander Group, one of the largest banks in Spain. This bank has approximately 4.7 million customers <sup>356</sup>. We also find the presence of other Spanish banks such as a branch of CaixaBank or Bankinter. Next, comes NOVO Banco, which is also present internationally in New York and London. Novo Banco is the acquirer of bankrupt bank Banco Espirito Santo (BES).

In fifth position, we find the bank BPI which is the subsidiary of the large Spanish company: CaixaBank. It has about 1.7 customers in 2019.

The French group, Crédit Agricole, also has a considerable presence on the Portuguese market and has about 1 million customers <sup>357</sup>. Other French players such as BNP Paribas are also implemented on this market. At the

<sup>347</sup> https://www.statista.com/statistics/1095491/cash-use-in-portugal/

<sup>348</sup> https://apnews.com/press-release/pr-businesswire/c4e73e055d5642f39574b2dd23137cb3

<sup>349</sup> https://www.statista.com/statistics/1095491/cash-use-in-portugal/

<sup>350</sup> https://apnews.com/press-release/pr-businesswire/c4e73e055d5642f39574b2dd23137cb3

<sup>351</sup> https://www.statista.com/outlook/331/147/mobile-pos-payments/portugal#market-users

a52 https://www.about-payments.com/ecommerce-markets/which-online-payment-methods-to-accept-in-portugal

<sup>353</sup> https://www.ebf.eu/portugal/

<sup>354</sup> https://www.advratings.com/companies/caixa-geral-de-depositos

<sup>355</sup> https://www.ide.go.jp/English/Data/Africa file/Company/mozambique04.html)

<sup>356</sup> https://www.advratings.com/europe/top-banks-in-portugal

<sup>357</sup> https://www.advratings.com/europe/top-banks-in-portugal

local level, there are also large Portuguese banks such as EuroBic, Haitong bank, Banco BIG, Banco ActivoBank and BancoCTT.

Neobanks such as N26 and Revolut are also present in this market.

Name	Group	Number of Employees	Net Turnover (Million €)	Net Profit (Million €)	LinkedIn
<u>Banco Santander</u>	Banco				
<u>Totta</u>	Santander	4.444	1.336	489	<u>Profile</u>
Banco BPI	Caixabank	4.840	767	327	<u>Profile</u>
<u>EuroBic</u>		1.482	224	61	<u>Profile</u>
<u>BIG Banco de</u>					
<u>Investimento Global</u>		288	91	42	<u>Profile</u>
Banco CTT		397	47	-8	<u>Profile</u>
Banco ActivoBank	Millennium BCP	177	29	8	<u>Profile</u>

#### **Payment Schemes:**

Debit Cards are the most widely used means of payment in Portugal and accounted for 94.2% of the total value of card payments in 2018. Visa is the most popular credit card company in Portugal. Mastercard, American Express, and Discover are also present in this market.

#### **Payment Service Providers:**

#### Gateway, processing and acquiring:

Name	Group	Number of Employees	Net Turnover (Million €)	Net Profit (Million €)	LinkedIn
<u>Multibanco</u>	<u>SIBS</u>	429	15	12	<u>Profile</u>

#### Other PSPs:

Name	Group	Number of Employees	Net Turnover (Million €)	Net Profit (Million €)	LinkedIn
<u>PagaQui</u>	•	33	508	0,245	<u>Profile</u>
Reduniq	Unicre	231	74	16	<u>Profile</u>

#### Alternative payment methods:

As mentioned in the introduction, digital payment is a growing market in Portugal. Most banks have their own digital solution.

After card payments, the Portuguese use the MultiBanco application and PayPal. The services offered by MultiBanco are cash deposit, check order and bank transfers. Google Pay is also available in Portugal through digital banks such as N26, Revolut and Bunq. It is also the case with Apple Pay. For instance, Banco Santander Portugal launched Apple Pay for its customers.

Bank	Digital Wallet		
Caixa Geral de Depositos			
(CGD)	CGP Mobile		
Millennium BCP	App Milennium		
Banco Santander Totta	Santander App		
Novo Banco	NB Smart App		
Banco BPI	BPI Mobile App		
Banco ActivoBank	ActivoBank App		
Banco EuroBic	EuroBic App		

		Number of	Net Turnover	Net Profit	
Name	Group	<b>Employees</b>	(Million)	(Million)	LinkedIn
<u>PayShop</u>		40	\$12,1	\$3,48	<u>Profile</u>
Easypay – Instituição de					
<u>Pagamento</u>		17	\$3,43	\$0,36	<u>Profile</u>
MEO Wallet	Altice	>500	n/a	n/a	<u>Profile</u>



#### Romania<sup>358</sup>

#### Introduction:

In 2019, the number of transactions in Romania was 2,45 billion, which represents 6,7 million transactions per day  $^{359}$ . The preferred means of payment for Romanians in 2020 was still cash, but this trend is declining in favour of online banking and card payments. According to the ECB, more than 18 million cards were issued in Romania in 2019, which is an increase of 40% compared to 2010  $^{360}$ . For online payments in 2019, the preferred means of payment for Romanians are the following  $^{361}$ :

1. Prepaid cards: 70%.

2. Mobile payments: 19%.

3. E-wallet: 6%.

4. Card payments: 4%.

5. Bank transfers: 1%.

#### **Banks:**

The most important Romanian banks are Banca Comercială Română (BCR), and Transilvania which is a subsidiary of the French Société Générale BRD, shares 40% of the market. There are also subsidiaries of players that are widespread in Central and Eastern Europe such as Raiffeisen, OTP bank and Unicredit.

On the Romanian card market, the market leader is the Transilvania <sup>362</sup> bank with 4 million cards issued (about 25% of the market) and about 10 transactions passing through their bank every second. Transilvania Bank shares 40% of the market with BRD and Banca Comercială Română (BCR).

Name	Group	Number of Employees	Net Turnover (Million €)	Net Profit (Million €)	LinkedIn
<u>Transilvania Bank</u>		9.690	987	38	<u>Profile</u>
Banca Comerciala Romania		676	782	123	<u>Profile</u>
BRD-Groupe Société Générale	Société Générale	7.356	683	313	<u>Profile</u>
<u>Raiffeisen Bank</u>	Raiffeisen	4.962	575	174	<u>Profile</u>
<u>Unicredit Bank</u>	Unicredit	3.357	451	133	<u>Profile</u>
OTP Bank Romania		1.520	114	14	<u>Profile</u>
<u>First Bank</u>		955	105	24	n/a
Garanti BBVA	BBVA	1.050	84	23	<u>Profile</u>
<u>Libra Internet bank</u>		865	68	24	<u>Profile</u>
Banca Romaneasca		1.038	46	-3	<u>Profile</u>

<sup>358</sup> All the numbers in the tables are coming from Orbis

<sup>359</sup> European Central Bank, Payment Statistics, April 2020, retrieved from ECB

<sup>360</sup> https://www.paymentwall.com/en/payment-methods/romania

<sup>&</sup>lt;sup>361</sup> https://www.paymentwall.com/en/payment-methods/romania

<sup>&</sup>lt;sup>362</sup> https://www.bancatransilvania.ro/news-files/whitepaper-trends-on-the-romanian-payments-market-generated-by-the-pandemic/bt white paper payment market trends may 2020.pdf

Credit Europe Bank					n/a
(Romania)		758	46	12	
<u>Idea Bank</u>		381	33	3	<u>Profile</u>
CEC Bank		6.006	29	79	<u>Profile</u>
<u>Vista Bank Romania</u>	Vista Bank	283	13	-3	n/a
Crédit Agricole Bank	Groupe Crédit				
<u>Romania</u>	Agricole	277	12	-2	<u>Profile</u>
Porshe Bank					
<u>Romania</u>		42	6	1	<u>Profile</u>
Banca Transilvania		2.153	n/a	n/a	<u>Profile</u>
<u>Patria Bank</u>		710	n/a	n/a	<u>Profile</u>

#### **Payment Schemes:**

As in many countries, the market leaders in payment schemes are Visa, Mastercard, American Express and Diners Club for credit cards, and Maestro and Visa debit for debit cards <sup>363</sup>.

#### **Payment Service Providers:**

As far as payee's payment service providers are concerned, the trend is the same: although there are a few national players like Zebrapay or Danubius, the majority of players are foreign, such as Worldline and Skrill.

Name	Group	Number of Employees	Net Turnover (Million €)	Net Profit (Million €)	LinkedIn
<u>Zebrapay</u>		17	19	0,2	<u>Profile</u>
<u>Danubius Exim</u>		43	10	1	n/a
Netopia Payments		19	n/a	n/a	<u>Profile</u>

#### Alternative payment methods:

Skrill, Paypal, and Braintree are also present in Romania.

Name	Group		Net Turnover (Million €)		LinkedIn
<u>Speed Transfer</u>		202	n/a	2	n/a

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 $<sup>{\</sup>color{red}\underline{^{363}}https://www.paymentwall.com/payment-methods/romania}}\\$ 

#### Slovakia<sup>364</sup>

#### Introduction:

Slovakia is an Eastern European country with a population of just over 5.4 million in 2019. In 2019, there were just over 2 billion <sup>365</sup> transactions annually in Slovakia, i.e. between 5 and 6 million daily transactions. The most commonly used method of payment on a day-to-day basis is cash, still representing 63.4% <sup>366</sup> of payments in 2018. However, the trend is towards card payments. The preferred means of non-cash payments in 2019 for Slovaks are <sup>367</sup>:

- 1. Mobile payments at 45%.
- 2. Prepaid card payments at 33%.
- 3. Credit card payments at 17%.
- 4. Bank transfers at 2%.
- 5. E-wallets at 3%.

In 2019, card transactions accounted for just over  $25\%^{368}$  of the total year's transaction volume, and there were approximately 90 cards per 100 individuals. The cards preferred by the Slovaks are debit cards. In fact, in 2018,  $89.4\%^{369}$  of the cards issued were debit cards.

#### **Banks:**

In Slovakia, cards are mainly issued by banks. The largest in the country are subsidiaries of large foreign European banks such as OTP Bank (Hungary), Unicredit (Italy), Eerste bank (Austria), ING (Netherlands), or KBC (Belgium). However, there are 2 Slovak banks among the 10 largest in the country, namely PrivatBanka and Primabanka.

Name	Group	Number of Employees	Net Turnover (Million €)	Net Profit (Million €)	LinkedIn
<u>Slovenska Sporteľna</u>	Eerste Bank	4.081	601	17	<u>Profile</u>
<u>Tatra Banka</u>	Raffeisen	3.868	473	13	<u>Profile</u>
<u>Prima Banka</u>	-	865	82	17	<u>Profile</u>
OTP Banka Slovakia	OTP bank	680	45	2	<u>Profile</u>
<u>Privatbanka</u>	-	192	28	9	<u>Profile</u>
Slovenska Zarucna a Rozvojova Banka	-	208	23	79	n/a
<u>CSOB Stavebna</u>					
<u>Sporitelna</u>	KBC Group	123	5	1	<u>Profile</u>
ING Bank Slovakia	ING	75	n/a	n/a	<u>Profile</u>
BKS Bank Slovakia	BKS bank	38	n/a	n/a	<u>Profile</u>

<sup>&</sup>lt;sup>364</sup> All numbers in tables are coming from Orbis

<sup>&</sup>lt;sup>365</sup> European Central Bank: Payment Statistics, April 2020, retrieved from ECB

<sup>366</sup> https://www.reportlinker.com/p05342346/Payments-Landscape-in-Slovakia-Opportunities-and-Risks-to.html

<sup>&</sup>lt;sup>367</sup> https://www.paymentwall.com/payment-methods/Slovakia#

<sup>&</sup>lt;sup>368</sup> European central bank: Payment Statistics, April 2020, retrieved from ECB

<sup>&</sup>lt;sup>369</sup> https://www.reportlinker.com/p05342346/Payments-Landscape-in-Slovakia-Opportunities-and-Risks-to.html

BNP PARIBAS Slovakia	BNP Paribas	225	n/a	n/a	<u>Profile</u>
MBANK Slovakia	Mbank	75	n/a	n/a	<u>Profile</u>
<u>Unicredit Bank Slovakia</u>	Unicredit	750	n/a	n/a	<u>Profile</u>
<u>Vseobecna Uverova</u>	Intesa san				
<u>Banka</u>	paolo	3.500	n/a	n/a	<u>Profile</u>
	Société				
Komercni Banka	Générale	38	n/a	n/a	<u>Profile</u>

#### **Payment Schemes:**

As in many countries, the market leaders in payment schemes are Visa, Mastercard, American Express, and Diners Club for credit cards <sup>370</sup> and Maestro and Visa debit for debit cards.

#### **Payment Service Providers:**

At the level of third-party payment service providers, international players such as Skrill and Worldline are present in Slovakia, but there are also some local players such as 24-PAY.

			Net	Net	
			Turnover		
		Number of	(Million	(Million	
Name	Group	<b>Employees</b>	€)	€)	LinkedIn
24-PAY		>10	0.419	0,027	Profile

#### **Payment Gateways:**

Name	Group	Number of Employees		(Million	LinkedIn
Payout.		>10	0,945	0,018	<u>Profile</u>

#### **Alternative Payment Methods:**

Foreign players are in the majority in Slovakia. Paypal (52,8%), Stripe (18,4%) and Braintree (16.1%) represent more than  $87\%^{371}$  of the gateways market. This leaves little room for other local players.

<sup>370</sup> http://www.slovakiasite.com/banks.php

<sup>371</sup> https://www.datanyze.com/market-share/payment-processing--26/Slovakia/paypal-market-share

#### Slovenia<sup>372</sup>

#### Introduction:

In 2019, Slovenia's GDP amounted to 48 billion euros for its 2.089.000 inhabitants, in other words a GDP per capita of 22.983€<sup>373</sup>. The country joined the eurozone in 2007, less than three years after joining the European Union<sup>374</sup>. In 2019, the number of payment transactions made per capita with cards issued by resident PSPs was 110,9<sup>375</sup>. This number has increased by 54%<sup>376</sup> since 2015 but remained lower than the euro area average (136 in 2019). Around 2,5%<sup>377</sup> of these transactions were made with credit cards. Cash is still more used than cards, as in most countries of the euro area. Slovenia, however, is very close to the European average, with 1,3 transactions in cash and 0,3 in cards per person and per day according to a survey in 2016<sup>378</sup>.

From 2015 to 2019, the number of payment accounts provided by credit institutions remained quite stable, around 2,46 million, while the number of e-money accounts went from 23,2 thousand to 36,8 thousand. The number of e-money accounts provided by EMIs went from 7,9 thousand in 2016 to 104,7 thousand in 2019<sup>379</sup>.

#### Banks:

In 2019, there were 17<sup>380</sup> credit institutions operating in Slovenia offering traditional financial services. By total assets, the three largest banks are Nova Ljubljanska Banka, Nova Kreditna Banka and SKB Banka - which is part of the Hungarian OPT Bank. Some international players offer services in Slovenia through their subsidiary, such as the Italian UniCredit and Intesa San Paolo, the Austrian Addiko and BKS or the Russian Sberbank.

Name	Group	Number of Employees	Net Turnover (Million €)	Net Profit (Million €)	LinkedIn
Nova					
<u>Ljubljanska</u>					
Banka D.D.		5.878	546	201	<u>Profile</u>
Nova					
<u>Kreditna</u>					
<u>Banka</u>	AIF VIII Euro				
Maribor D.D.	Leverage, LP	1.364	202	62	<u>Profile</u>
SKB Banka	OTP Bank				
<u>DD</u>	PLC	910	127	54	<u>Profile</u>
<u>Intesa</u>					
<u>Sanpaolo</u>	Intesa				
Bank D.D.	Sanpaolo	n/a	81	23	<u>Profile</u>
<u>Unicredit</u>					
<u>Banka</u>					
<u>Slovenija DD</u>	Unicredit SPA	571	80	32	<u>Profile</u>
<u>Gorenjska</u>	Brokersko-				
<u>Banka D.D.</u>	Dilersko				
<u>Kranj</u>	Drustvo M&V	491	67	44	<u>Profile</u>

<sup>&</sup>lt;sup>372</sup> All numbers in the tables are from Orbis and for the year 2019

<sup>375</sup> Statistical Data Warehouse, ECB, 2019 https://sdw.ecb.europa.eu/reports.do?node=1000001390

<sup>375</sup> Statistical Data Warehouse, ECB, 2019 https://sdw.ecb.europa.eu/reports.do?node=1000001390

<sup>375</sup> Statistical Data Warehouse, ECB, 2019 https://sdw.ecb.europa.eu/reports.do?node=1000001390

<sup>&</sup>lt;sup>376</sup> Authors' calculation based on numbers from Statistical Data Warehouse, ECB https://sdw.ecb.europa.eu/reports.do?node=1000001390

<sup>&</sup>lt;sup>377</sup> Authors' calculation based on numbers from the Statistical Data Warehouse, ECB

https://sdw.ecb.europa.eu/reports.do?node=1000001979

<sup>&</sup>lt;sup>378</sup> The use of cash by households in the euro area, Henk Esselink & Lola Hernández, 2017

https://www.ecb.europa.eu/pub/pdf/scpops/ecb.op201.en.pdf

<sup>&</sup>lt;sup>379</sup> Statistical Data Warehouse, ECB, 2019 https://sdw.ecb.europa.eu/reports.do?node=1000001979

<sup>380</sup> Statistical Data Warehouse, ECB, 2019 https://sdw.ecb.europa.eu/reports.do?node=1000001979

	Investments				
	AD Beograd				
Addiko Bank	Addiko Bank				
<u>D.D.</u>	AG	355	54	18	<u>Profile</u>
<u>Sberbank</u>					
<u>Banka DD</u>	Sberbank	382	47	10	<u>Profile</u>
<u>Banka</u>	Privatstiftung				
<u>Sparkasse</u>	Karntner				
<u>DD</u>	Sparkasse	283	37	6	<u>Profile</u>
BKS Bank					
AG, Bancna					
<u>Podruznica</u>	BKS Bank AG	n/a	n/a	n/a	<u>Profile</u>

#### **Electronic Money Institutions:**

In 2019, two EMIs were licensed in Slovenia: Telekom Slovenije, a telephone company, and mBills <sup>381</sup>. MBills offers an e-wallet -which is now compatible with Apple Pay- and issues mBills Mastercard. Another entity is Eligma, who are planning to be granted an EMI license by the Bank of Slovenia in 2021. <sup>382</sup> Eligma operates under the name GoCrypto and offers a range of POS-solutions for merchants to enable them to accept crypto currency in-store or online. The solution also gives the merchant the opportunity to receive settlements in the merchants preferred currency.

Name	Group	Number of Employees	Net Turnover (Million €)	Net Profit (Million €)	LinkedIn
<u>Telekom</u>					
<u>Slovenije</u>	Republika				
<u>D.D.</u>	Slovenija	3.429	680	1,2	<u>Profile</u>
Mbills Druzba					
<u>za Izdajo</u>					
<u>Elektronskeg</u>					
<u>a Denarja in</u>	Petrol,				
<u>Placilne</u>	Slovenska				
Storitve,	Energetska				
<u>D.O.O.</u>	Druzba, D.D.	13	0,3	-1,7	<u>Profile</u>
<u>GoCrypto</u>	Eligma Ltd.	11-50	n/a	n/a	<u>Profile</u>

#### **Payment Schemes:**

Mastercard, Visa, American Express, and Diners Club are used in Slovenia. There are national payment schemes: Activa, Karanta and BA/Maestro<sup>383</sup>. They are often co-branded with traditional payment schemes.

#### **Payment Service Providers:**

Toshl, the European subsidiary of the American Toshl Inc, was founded in May 2019 in Slovenia. The company has received the AISP license and provides its customers with a finance app allowing to monitor expenses and banks accounts.

The international player Worldline also offers services in Slovenia.

<sup>&</sup>lt;sup>381</sup> National Bank of Slovenia https://www.bsi.si/en/financial-stability/institutions-under-supervision/electronic-money-institutions

<sup>382</sup> https://gocrypto.com/en/eligma-to-become-one-of-europes-first-crypto-projects-with-an-e-money-license/

<sup>383</sup> https://www.bsi.si/en/payments-and-infrastructure/payment-systems/multilateralni-kliring-activa & https://paymentyearbooks.com/products/slovenia-2017-2018

#### **Payment Gateways:**

Payten offers various IT payment services to payment and financial institutions and merchants, including ecommerce payment gateway or issuing and acquiring solutions.

		Number of	Net Turnover	Net Profit	
Name	Group	Employees	(Million €)	(Million €)	LinkedIn
<u>Payten,</u>					
<u>Informacijske</u>					
<u>resitve in</u>					
storitve,	Asseco				
<u>D.O.O.</u>	Poland S.A.	30	4,3	0,5	<u>Profile</u>

#### Other PSPs:

There are only two licensed PSPs in Slovenia. The first one is Erste Card, a subsidiary of Erste Bank. Erste Card mainly offers Diners Club cards. The second one is the telecom operator A1 Slovenia. Bankart is a clearing house and payment processor in Slovenia<sup>384</sup>. Its shareholders are major Slovenian banks – Nova Ljubljanska Banka, Nova Kreditna Banka, SKB Banka, and Intesa Sanpaolo Bank. The company manages payments transactions at POS, ATMs, and online payments. The company is also active in 5 other countries: Serbia, Bosnia, Kosovo, Macedonia and Albania.Printec, part of Printec Group, and Halcom, part of Constellation Inc, are two software companies offering broad range of services to merchants and payment institutions.

Name	Group	Number of Employees	Net Turnover (Million €)	Net Profit (Million €)	LinkedIn
<u>A1 Slovenija,</u>					
<u>telekomunikacijske</u>					
storitve, d. d.		561	212	12	<u>Profile</u>
<u>Bankart Procesiranje</u>					
<u>Placilnih</u>					
<u>Instrumentov DOO,</u>					
<u>Ljubljana</u>		204	32,5	3	<u>Profile</u>
	Constellati				
<u>Halcom Sistemi Za</u>	on				
<u>Placilne Storitve</u>	Software				
<u>D.D.</u>	Inc	93	8,9	2,2	<u>Profile</u>
<u>Printec S.I.</u>					
<u>Informacijska</u>	Ivicon				
<u>Tehnologija, D.O.O.</u>	Limited	27	5	0,2	<u>Profile</u>
Erste Card					
<u>poslovanje s</u>	Erste				
kreditnimi karticami,	Group				
<u>d. o. o.</u>	Bank AG	>50	n/a	n/a	<u>Profile</u>

<sup>384</sup> https://www.bsi.si/en/payments-and-infrastructure/payment-systems/poravnava-kartic & https://www.bankart.si/



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#### **Spain**

#### Introduction:

The use of non-cash payment methods in Spain is growing. As of 2019, non-cash payments accounted for 47% of the total payment transactions. This is an increase of 31%-points since 2004 <sup>385</sup>. There has also been a major shift towards card payments as the preferred non-cash payment method, with a share of 57,5% of all non-cash payments transactions in 2018 being made with cards. It is an increase of 18,5% since 2008. In the same period has the use of direct debits decreased from 42,9% in 2008 to 24,4% in 2018 <sup>386</sup>.

As far as cash payments are concerned in ecommerce, in 2020, this method of payment was limited to  $3\%^{387}$ . This can be explained by the fact that the government has decided to limit these payments to €1,000 in December 2017 <sup>388</sup>. The decrease in cash payments in Spain can also be explained by the Covid pandemic, which hit the Spanish market very hard. Cash is still more used in the rural areas.

In terms of card payments in the ecommerce market, 51% of the Spanish population used a debit or credit card to shop online <sup>389</sup>. About 37 million credit cards were issued in 2018 in Spain (representing a 45% market share of card payments), while the number of debit cards issued was 48 million <sup>390</sup>. The two most popular payment schemes are Visa and MasterCard.

Finally, for the mobile payments and digital wallets, according to JP Morgan, the mobile commerce market is will acquire a Compound Annual Growth Rate (CAGR) of 22% up to 2021<sup>391</sup>. Android is the most used smartphone in Spain and represents 88,2% of the market share while Apple's represents only 8,3% of the Spanish market share <sup>392</sup>. U.S. applications can also be found in the growing Spanish market. In first position we find PayPal with 20% of market share in the ecommerce payment market, according to JP Morgan's report.

#### Banks:

The banking sector counted 52 private banks, 2 savings banks, and 61 cooperative banks <sup>393</sup> in Spain. In addition, many banks in Spain provide their own payment services.

The leading bank in Spain is Banco Santander, with 140 million customers <sup>394</sup>. Santander is an international player, being present in the United States, Germany, Portugal, Poland, England and, like other Spanish banks, in Latin America, Mexico and Chile.

The second largest bank in Spain is Banco Bilboa Vizcaya Argentaria (BBVA) with about 78 million customers <sup>395</sup>. The bank is also well established in Latin America, especially Argentina.

Caixa Bank comes in third position with 15,7 million customers. The bank is present on the international market and has a dominant position in Portugal with more than 2 million customers. The Banco de Sabadell comes next, with 11 million consumers in Spain and also implemented in the international market. Next come the banks Bankia with 8,1 million customers <sup>396</sup>, and Abanca, who are present in Germany, Switzerland, Portugal, France

<sup>385</sup> https://www.statista.com/statistics/1095523/cash-use-in-spain/

<sup>&</sup>lt;sup>386</sup> https://www.euro-area-statistics.org/classic/payment-statistics?lg=en

<sup>387</sup> https://www.statista.com/statistics/434264/ecommerce-popular-payment-methods-spain/

<sup>388</sup> https://www.equinoxmagazine.fr/2016/12/28/payer-liquide-espagne/

<sup>389</sup> https://www.statista.com/statistics/434264/ecommerce-popular-payment-methods-spain/

<sup>&</sup>lt;sup>390</sup> https://www.statista.com/statistics/1097171/credit-card-and-debit-card-number-in-spain/

<sup>391</sup> https://www.jpmorgan.com/merchant-services/insights/reports/spain

 $<sup>\</sup>frac{392}{\text{https://www.statista.com/statistics/1097171/credit-card-and-debit-card-number-in-spain/}}{393} \text{ https://www.ebf.eu/spain/statistics/1097171/credit-card-and-debit-card-number-in-spain/}}}$ 

<sup>393</sup> https://www.ebf.eu/spain/

<sup>394</sup> https://www.advratings.com/europe/top-banks-in-spain

<sup>395</sup> https://www.advratings.com/europe/top-banks-in-spain

<sup>&</sup>lt;sup>396</sup> https://www.advratings.com/europe/top-banks-in-spain

and Latin America as well as Brazil and Venezuela. Bankinter is the sixth largest bank in Spain <sup>397</sup>, and Unicaja is also a large bank in Spain with 3 million customers <sup>398</sup>.

Apart from European and international banks, Spain has many local banks, which operate in a very fragmented market. Among the largest in the country are Cajamar Caja Rural group, Kutxabank and Liberbank. Finally come banks such as Arquia, Cecabank, Bankoa and, EVO Banco.

Online banks such as N26, Revolut and Bunq are also implemented in Spain.

Name	Group	Number of Employees	Net Turnover (Million €)	Net Profit (Million €)	LinkedIn
Name	Стоор	Limployees	(Million C)	(Million C)	Linkeam
<u>Kutxabank</u>		5.822	1.191	412	<u>Profile</u>
<u>Unicaja Banco</u>		6.337	1.119	172	<u>Profile</u>
Cajamar Caja Rural		4.331	778	66	Profile_
<u>Liberbank</u>		3.716	776	110	<u>Profile</u>
<u>Cajasur Banco</u>	Kutxabank	1.757	230	22	<u>Profile</u>
<u>CecaBank</u>		474	221	45	<u>Profile</u>
<u>Arquia Bank</u>		153	44	10	<u>Profile</u>
<u>Bankoa</u>	Crédit Agricole	273	43	8	<u>Profile</u>
EVO banco	Bankinter	558	14	30	<u>Profile</u>

#### **Electronic Money Institutions:**

		Noushanat	Net	No L Des CL	
Name	Group	Number of Employees			
NULLE	GIOUD	EIIIDIOAGE2	I (WIIIIOH E)	I (MIIIIOII E)	LIIIKEUIII
				-7	

#### **Payment Schemes:**

According to Adyen, 85% of the Spanish population has at least one debit or credit card  $^{399}$ . The payment schemes available in Spain are Visa, MasterCard, Discover, American Express, and JBC. However, as mentioned above, the most widely used payment schemes are Visa or MasterCard  $^{400}$ . Debit cards are preferred in the country, representing approximately 55% of the payment cards in Spain  $^{401}$ .

#### **Payment Service Providers:**

<sup>&</sup>lt;sup>397</sup> https://www.advratings.com/europe/top-banks-in-spain

<sup>398</sup> https://www.advratings.com/europe/top-banks-in-spain

<sup>399</sup> https://www.adyen.com/knowledge-hub/guides/global-payment-methods-guide/local-payment-methods-in-europe#russia

<sup>400</sup> https://merchantmachine.co.uk/visa-mastercard-amex/

 $<sup>^{401}</sup>$  https://www.statista.com/statistics/1097171/credit-card-and-debit-card-number-in-spain/

			Net		
		Number of	Turnover	Net Profit	
Name	Group	Employees	(Million €)	(Million €)	LinkedIn
Commercegate		7	451	0,19	<u>Profile</u>
	Joint venture				
<u>Santander Elavon</u>	Santander and				
Merchant Services	Elavon	59	49	6	<u>Profile</u>

#### Gateway, processing and acquiring:

Redsys is an important player in Spain. It provides solutions for the ecommerce market and digital payments. Verifone, the U.S. payee's payment service provider is also strongly implemented in Spain.

Name	Group	Number of Employees	Net Turnover (Million €)	Net Profit (Million €)	LinkedIn
<u>Redsys</u>		590	180	9	<u>Profile</u>
<u>Sefide</u>		8	0,77	0,02	<u>Profile</u>

#### Gateway only:

There are several smaller players which are illustrated in the table below such as SeQura and Technoactivity.

Name	Group	Number of Employees	Net Turnover (Million €)	Net Profit (Million €)	LinkedIn
<u>Technoactivity</u>	MYMOID	6	0,45	-0,54	<u>Profile</u>
<u>SeQura</u>		41	7	0,7	<u>Profile</u>

#### Other PSPs:

Ingeteam, in a new partnership with Ingenico, is providing electric vehicle charging card payments in Spain. Some banks such as Bankia or BBVA bank also supply PoS terminals.

Name	Group	Number of Employees	Net Turnover (Million €)	Net Profit (Million €)	LinkedIn
Ingeteam		4.108	676	16	Profile

#### Alternative payment methods:

PayPal is still the preferred alternative payment method for the Spanish market with a market share of 20 percent of market share in the ecommerce payment market <sup>402</sup>. Apple Pay, Google Pay and Amazon Pay are available in Spain.

The main traditional banks have also created their owned digital wallet and their payment gateways. This is illustrated in the first table.

There is also Bizum, a payment services provider launched by Spanish banks in 2016 to allow users to conduct Person-to-Person payments through a smartphone  $^{403}$ .

Digital wallet	Bank
Caixa Wallet	CaixaBank
BBVA Wallet	BBVA
Sabadell Wallet	Banco de Sabadell
PagoMóvil	Cajamar Caja Rural
EVO Wallet	EVO Banco
CajasurPay	Cajasur Banco
Santander Wallet	Banco Santander
Bankinter Wallet	Bankinter
KutxabankPay	Kutxabank

Name	Group	Number of Employee s	Net Turnover (Million €)	Net Profit (Million €)	LinkedIn
	CaixaBank electroni				
<u>MoneyToPay</u>	c Money	4	8,62	1,11	<u>Profile</u>
<u>Technoactivity</u>	MYMOID	6	0,45	-0,5	<u>Profile</u>
<u>PecunPay</u>		12	1	-0,6	<u>Profile</u>
<u>Up Aganea</u>		6	-1,3	-1	<u>Profile</u>
<u>Bizum</u>	CaixaBank	13	n/a	n/a	<u>Profile</u>

-

 $<sup>\</sup>frac{403}{\rm https://www.european payments council.eu/news-insights/insight/bizum-spanish-instant-mobile-payment-solution}$ 

#### Sweden

#### Introduction:

Cash usage in Sweden declined to 9% in  $2020^{404}$ . This decrease is mainly due to the emergence of new alternative credit-based payment methods developed by Swedish fintechs such as Klarna and Trustly, and the convenience of mobile payments offered by Swish. The *buy-now-pay-later* payment methods are very popular in Sweden, representing 25% of the annual online payments  $^{405}$ .

#### Banks:

Swedish banks are mainly operating on the Nordic and Baltic region. Those major regional players include Skandinaviska Enskilda Banken (SEB Bank), Handelsbanken, and Swedbank.

SEB Bank issues MasterCard debit and credit cards. They also offer payment methods through wearables with Fitbit, Garmin, Samsung, and Fidesmo, as well as mobile payment through Samsung Pay, Apple Pay, and Swish.
Handelsbanken issues MasterCard debit and credit cards and Maestro debit cards. They also offer mobile payments through Samsung Pay, Apple Pay, and Swish. Finally, Swedbank issues MasterCard debit and credit cards. They also offer mobile payments through Google Pay, Samsung Pay, Apple Pay, Swish, and Masterpass and wearable payments through Fidesmo Pay, Fitbit Pay and Garmin Pay.

SEB Bank and Swedbank have also specific subsidiaries (EnterCard and Eurocard respectively) that issue credit cards in Sweden and in other Nordic countries. Other issuers such as CarPay from Volvofinans Bank and Edenred issue only credit cards in Sweden.

Other regional banks from other Nordic countries are also present, such as Nordea Bank from Finland, Danske Bank from Denmark, and EasyBank from Norway.

In addition, smaller Swedish regional banks such as Ikano Bank, Resurs Bank, and Forex bank operate in the Nordics and cover a significant market share of the Swedish banking sector. Ikano Bank issues only Visa credit card and does not offer additional

payment services. On the other hand, Resurs Bank issues MasterCard credit cards and Maestro debit cards and store cards in collaboration with their partner stores. Forex Bank issues Visa credit and debit cards and offer mobile payments through Swish.



Smaller banks are also present, operating only in Sweden. They include Länsförsäkringar, Westra Wermlands Sparbank, and ICA Banken. Westra Wermlands Sparbank is an independent bank but has a close collaboration with Swedbank and offers the same range of payment services. ICA Banken issues MasterCard debit and credit cards, Maestro debit cards, and mobile payments through Swish and Samsung Pay. Länsförsäkringar is a very popular Swedish bank that has more than 3.9 million customers 406. They issue MasterCard credit and debit cards and mobile payments through Swish, Samsung Pay, Google Pay, Fitbit Pay, and Garmin Pay.

<sup>404</sup> https://sweden.se/business/cashless-society/

<sup>405</sup> Worldpay Global Payment report 2020

<sup>406</sup> Länsförsäkringar website: https://www.lansforsakringar.se/skaraborg/other-languages/english/about-lansforsakringar/#:~:text=Banking%20services%20are%20offered%20primarily,customers%20of%20the%20L%C3%A4nsf%C3%B6rs%C3%A4kringar%20Alliance

Managa	шо	Current	Number of	Net Turnover	Net Profit	linka alka
Name	HQ	Group	Employees	(Million)	(Million)	LinkedIn
<u>Nordea</u>		Nordea		5 000 /	- 1 10	
<u>Sweden</u>	FI	Group	6.712	€.2304	€442	<u>Profile</u>
<u>Danske</u>						
<u>Bank</u>		Danske				
<u>Sweden</u>	DK	Bank	1.479	kr5.093	kr2.844	<u>Profile</u>
<u>Handelsba</u>		Handelsba				
<u>nken</u>		nken				
<u>Sweden</u>	SE	Group	3.841	kr22.192	kr14.823	<u>Profile</u>
<u>Ikano Bank</u>		Ikano Bank				
Sweden	SE	Group	512	kr3.124	kr13	<u>Profile</u>
Resurs						
<u>Bank</u>		Resurs Bank				
Sweden	SE	Group	437	kr1.603	kr765	<u>Profile</u>
<u>Swedbank</u>						
<u>Sweden</u>	SE	Swedbank	3.610	kr2.637	kr13.568	<u>Profile</u>
<u>Forex Bank</u>	SE		833	kr1.232	kr96	<u>Profile</u>
<u>ICA</u>						
<u>Banken</u>	SE		423	kr1.227	kr105	<u>Profile</u>
<u>Länsförsäkr</u>						
<u>ingar</u>	SE		576	kr4.027	kr1.440	<u>Profile</u>
<u>Westra</u>						
<u>Wermland</u>						
<u>s Sparbank</u>	SE		100	kr357	kr195	<u>Profile</u>
<u>Svea</u>		Svea				
<u>Ekonomi</u>		Ekonomi				
<u>Sweden</u>	SE	Group	494	kr1.474	n/a	<u>Profile</u>
<u>Volvofinan</u>		Volvofinans				
<u>s Bank</u>	SE	Group	239	kr6.336	kr13	<u>Profile</u>
<u>Edenred</u>		Edenred				
<u>Sweden</u>	FR	Group	49	kr122	kr19	<u>Profile</u>
SEB Bank		SEB Bank				
<u>Sweden</u>	SE	Group	8.013	n/a	n/a	<u>Profile</u>

Finally, international fintechs are such as Revolut, N26, Monese and Wise are present also on the Swedish market.

#### **Payment Schemes:**

Sweden has no native payment scheme, rather using American payment schemes including Visa, MasterCard and American Express.

#### **Payment Service Providers:**

#### Gateway and Acquiring:

Concerning online payment solutions, big foreign international players are present in Sweden. They include Stripe, Adyen, Worldpay, Braintree, Paymill, and Worldine. However, Sweden also has Swedish gateways operating on international level such as iZettle (part of PayPal) operating in Europe and America, and Bambora (part of Worldline Group). There are also gateways operating on the regional Nordic level. They include Swedbank Pay and Payex Group. Finally, DIBS Payment from Nets in Denmark is a regional player also offering gateway and acquiring services which enables Visa and MasterCard payments, as well as DIBS invoices online.

				Net		
			Number of	Turnover	Net Profit	
Name	HQ	Group	Employees	(Million €)	(Million €)	LinkedIn
<u>Nets</u>						
<u>Sweden</u>	DK	Nets Group	4.100	114	62	<u>Profile</u>

#### Other PSPs:

Tink is a Swedish company operating on a European level present in 14 European countries that offers financial services that allows banks and fintechs to develop a wider range of banking and payment services. They initiate invoices and P2P transactions through their own app without opening several banking apps at the same time, improving the journey of the customer.

#### Alternative payment methods:

International American mobile and e-wallet payment solutions such as Apple Pay, Google Pay, Amazon Pay, Samsung Pay, and PayPal are present in Sweden. Wearables are also very common payment methods. They include American players such as Garmin Pay and Fitbit Pay, as well as a Swedish start-up called Fidesmo Pay. Sweden is also the origin country of many international alternative payment methods including Trustly and Klarna. On the domestic level, Sweden has also its own mobile payment app called Swish, which was developed in partnership with the six largest banks of Sweden i.e. Danske Bank, Handelsbanken, Länsförsäkringar, Nordea, SEB, and Swedbank. Swish is a very popular payment method and has more than 7,7 million users. They offer online and in-store payments for particulars and businesses and P2P mobile payments through QR codes and payment requests.

In addition, smaller companies offer other payment methods such as Accumulate that offers a fully integrated mobile payment platform allowing contactless payments, online payments, P2P payments, and other payments. Paynova offers pay-after-delivery services playing the role of intermediary between the merchant and its customers during transactions.

Name	HQ	Group	Number of Employees	Net Turnover (Million)	Net Profit (Million)	LinkedIn
		Danske Bank,				
		Handelsbanke				
		n,				
		Länsförsäkring				
		ar, Nordea, SEB				
<u>Swish</u>	SE	and Swedbank	12	kr134	kr18	<u>Profile</u>
<u>Paynova</u>	SE		31	kr40	-kr38	<u>Profile</u>
<u>Accumulate</u>	SE		n/a	kr0,6	-kr15	<u>Profile</u>

# **Glossary**

Term	Definition
Payment gateway	A service that helps merchants initiate ecommerce, in-app, and point of sale
	payments for a broad variety of payment methods. The gateway is not
	directly involved in the money flow; typically it is a web server to which a
	merchant's website or POS system is connected. A payment gateway often
	connects several acquiring banks and payment methods under one system.
Payment processor	A system that connects to a shopper's bank and a merchant's bank in order
	to make a payment transaction on behalf of a merchant. Usually, a payment processor obtains the payment information from a payment gateway.
Acquirer (or Acquiring bank)	A bank or a financial institution which acquires funds for its merchant from a
Acquirer (or Acquiring bank)	shopper. To accept card payments, an acquirer should be licensed by
	corresponding card networks and either partner with a payment processor,
	or be a payment processor itself. Some PSPs may operate as an acquirer as
	well.
Issuer (or Issuing bank)	A bank or financial institution which offers payment cards to consumers on
	behalf of card networks such as Visa, MasterCard, or American Express.
	These are typically major commercial banks.
Payment Service Provider (PSP)	A company which combines the functions of both a payment gateway and a
	payment processor, can connect to multiple acquiring and payment
	networks. Additionally it can be an acquirer and provide risk assessments
	and other financial services.
	Important reasons for a merchant to do business with a PSP are:
	- a single technical connection for all the payment methods that are offered
	to the consumer on the web; (gateway)
	- access to local payment methods in defined countries;
	- a single administrative connection (reporting);
	- a single settlement procedure with an agreed frequency;
	- usually, fewer contracts are needed, compared to having individual
	connections to acquirers. The PSP acts as the 'super merchant', being able
	to offer lower fees because of its purchasing power at the acquirers;
	- access to specialist knowledge concerning the payment process;
	- risk management and fraud prevention tools are provided and regularly
Parking as a Comitee (Page)	updated  BaaS players offer complete banking processes, such as payments or credit,
Banking as a Service (BaaS)	as a service through modern API-driven platforms.
ePayments-as-a-service (PaaS)	PaaS players operate cloud-based platforms to provide specialized services,
ci dyments as a service (i das)	such as card issuing, payments clearing, cross-border payments,
	disbursements, and e-commerce gateways. Companies wishing to offer
	these services can integrate these platforms via application programming
	interfaces (APIs). The ability to rapidly add or replace specific solution
	providers is key to this model, as it allows companies to realize the "fast
	follower" vision of capitalizing on best-of-breed solutions.
Payment Schemes	Payment schemes determine the technical norms and rules for conducting
	payment operations. They enable the management of the operations of the
	payment processes. These technical rules and standards are restrictions that
	determine how money is to be transferred between the payment institutions. Notable payment schemes include Mastercard and Visa.
Electronic Money Institution (EMI)	EMIs may store, conduct, and issue electronic money. This monetary value
Lieut Offic Moriey Histitution (EMI)	can be reused later for other electronic payments.
Payment Methods	Payment methods refer to the entire set of means through which shoppers
- aymone memous	can pay for their purchases
Credit card	Credit cards are issued to cardholders, after which a revolving account is
	created by the issuer, granting a line of credit to the cardholder. The
	cardholder can then borrow money for payment to a merchant. For credit
	cards, we distinguish two different types of schemes: the three-corner
	model (closed and exclusive scheme, e.g AMEX, Diners Club, Discover) and

	the four-corner model (open and inclusive scheme, e.g Mastercard, Visa, UnionPay, RuPay)
Debit card	Traditionally facilitating offline payments, debit cards are also used increasingly online, as well. They function almost the same way as a credit card, but without several risks of debt.
E-wallet	An e-wallet is a digital tool (software or app) for consumers to store their money or payment methods. It stores credentials of e.g debit, credit cards, and alternative payment methods. Some e-wallets also store loyalty programmes.
Account-to-Account	Account-to-Account schemes, also referred to as Online Banking e-Payments, are a type of payments network designed to facilitate online bank transfers. In an Account-to-Account scheme, the consumer is authenticated in real-time by the consumer's financial institution. The availability of funds is validated in real-time, and the consumer's financial institution provides guarantee of the payment to the merchant in case the payment is made as a credit transfer (push payment): i.e. the consumer/buyer initiates the payment. The merchant receives a real-time guarantee so (s)he can continue with the fulfilment process. The actual funds arrive later (D+1), according to the SEPA Credit Transfer Scheme.
Direct debit	There are no card scheme networks involved in the SEPA Direct Debit (SDD) Core scheme. All communication happens directly between banks. To set up payments by SDD, the payer must complete a mandate to the merchant. This mandate contains bank-approved wording that makes it clear the payer is setting up an authorisation for the merchant to debit their account. The interface for completing the SDD instruction is controlled by the merchant, which then sends the direct debit initiation to the bank. The SDD core scheme can be used for single (one-off) or recurring direct debit collections. Direct debit offers a relatively inexpensive payment method to merchants.
Invoice/Instalment	Can refer to two types of invoice payments: open invoice (payment after delivery) and instalment payments (a series of payments that a buyer makes instead of a lump sum to compensate the seller).
Direct carrier billing	Direct carrier billing implies making a payment for goods or services, which is charged to the customer's mobile phone account, either to the monthly bill (for customers with a contract) or as a debit from prepaid credit. Presently, online purchases of digital content (games, music, video, e-books, and ringtones), charity donations, TV voting, and competitions are the primary use case for direct carrier billing.

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