Key Players in the EU Payments Landscape



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Thank you note



This project research could not have been done without the groundwork of five bright students of the Solvay Brussels School of Economics and Management. Guillaume Bouillon, Marianna Sele, Marian Vlad Grigoruta, Siam Bonmariage, and Simone Pio Saurio have delivered a considerable amount of research with greatest seriousness and a true intellectual curiosity under the supervision of Mona Degrève and Professor Hugues Pirotte who brought his academic excellence to this study.





The PA 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.

All the financial data in the tables are retrieved from the Orbis database for the year 2021.

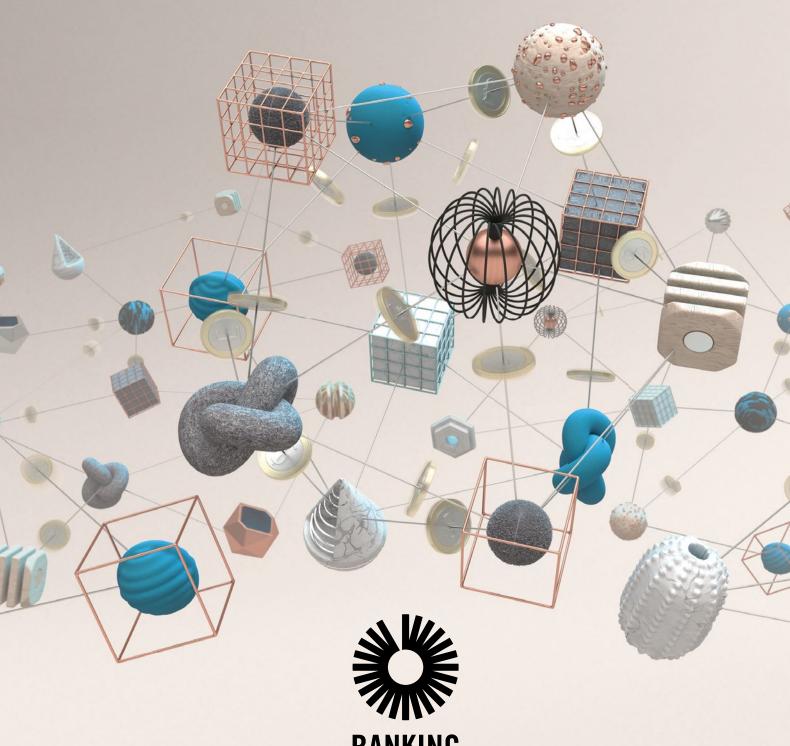
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Finally, we would like to thank Vlad Macovei, senior editor at The Paypers, for editing the Executive Summary. For more reports on payments, banking, ecommerce, or fraud, check out <u>The Paypers' website</u>.



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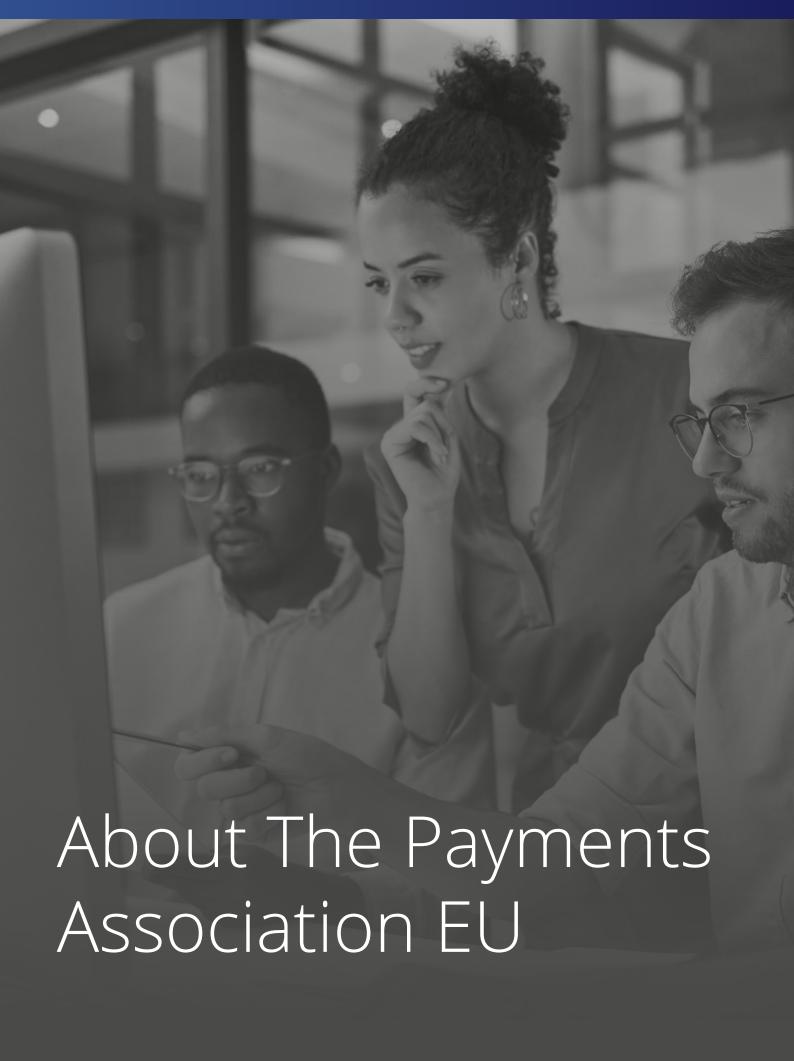
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Making Payments Work

The 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. PA 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 brochure.

PA EU builds on the international network of our London-based sister organisation, The Payments Association (TPA), consisting of over 200 members from across the payments value chain; including payments schemes, banks and issuers, merchant acquirers, PSPs, retailers, and more. Collectively, members of the PA 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.

The PA EU provides the payments community with:

- · A forum in which to learn, collaborate and do business with contacts you would not otherwise have met;
- A view on pain points that your peers encounter and act upon, such as access to bank accounts, changing industry standards, new regulations and open banking;
- · A perspective that is ahead of the curve, so you can develop products and services in line with what is coming down the road;
- Opportunities to speak to regulators, tap into the heart of central government and engage with authorities to affect change across the wider industry.

Who should join the Payments Association EU community?



Central Banks



Banks & Issuers



Acquirers & ISOs



Government Bodies



Regulators



FinTechs & PayTechs



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TPPs-AISPs PISPs & ASPSPs



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Payments Service Providers



Card Schemes



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Our community

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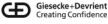


























































Our Scale-Up Members







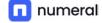


















Why join the Payments Association EU?

If you're going to really prosper in payments, you need access. You need to know the right people. And you need to be on the pitch and make your voice heard.

You also need the freshest news and the latest thinking, and a pool of partners and prospects in which to fish. And you need influence over the future landscape so that when you get there, you thrive.

As a member of the Payments Association EU you will move your business from reactive to proactive to predictive. From follower to leader. Gaining first mover advantage or a competitive edge. And you will avoid investing in no-hope technology or from incurring a regulator's wrath.



Business Development

Establish new relationships, partnerships and sales leads while achieving faster time to market, through active participation and engagement in PA EU networking events, projects, activities and publications.



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Obtain enhanced credibility, brand awareness and boost your personal and corporate profile by associating yourself with the PA FU.



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Gain a competitive advantage, establish thought leadership and ensure your team are up to date with priority access to market intelligence, insight and educational resources. publications.



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Benefit from the PA' EUs negotiating power and partnerships to maximise use of your budgets and identify cost savings.

The Payments Association EU

Thibault de Barsy Vice-Chairman & General Manager "The Lhoft", 9 Rue du Laboratoire, 1911 Luxembourg Phone +352 621 355923 Email thibault.de.barsy@thepaymentsassociation.eu Website: www.thepaymentsassociation.eu



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More people are transacting online than ever before, with 92% of consumers expecting a frictionless and secure experience while shopping online¹.

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Executive Summary



The payments industry in Europe has undergone significant changes in recent years, driven, on the one hand, by the growth of ecommerce and increasing use of smartphones, and, on the other hand, by increased regulatory efforts and geopolitical factors. These changes have led to the emergence of new players and increased regulatory oversight.

The widespread adoption of digital payments is a notable trend in the European payments industry. This shift towards mobile payment solutions and contactless payment methods has been driven by their user-friendly and convenient nature, making them a preferred choice for consumers.

To support the growth of digital payments, there has been ongoing investment in payment infrastructure, including the development of new payment networks and the rollout of faster payment systems. This investment has helped to create a more seamless and efficient payment environment for businesses and consumers.

At the same time, the payments industry in Europe is subject to stringent regulatory oversight, including the Payment Services Directive 2 (PSD2) and the General Data Protection Regulation (GDPR). These regulations have helped to create a more secure and transparent payments environment for consumers and businesses alike.

The rise of fintech companies has also had a significant impact on the payments industry in Europe. These new players are challenging traditional banks and payment providers by offering more convenient and cost-effective payment solutions. This has led to increased competition and innovation in the industry, which is ultimately beneficial for consumers and businesses.

In general, the payments sector in Europe is experiencing growth and competition thanks to the introduction of new technologies and creative solutions. Nevertheless, it also confronts obstacles such as security concerns and adherence to regulatory requirements that will impact its progress in the future. As the payments landscape continues to transform, it is probable that we will witness further innovation and upheaval within the industry in Europe.

The evolving global landscape is presenting both traditional players and disruptors with fresh opportunities to attract customers, introduce novel solutions, and capture larger portions of the market. In other words, the payments industry is undergoing a reshuffling of chess pieces.

The objective of this whitepaper is to provide a better understanding of the multifaceted payments industry. Part 1 of the whitepaper offers an overview of the payments ecosystem, highlighting the diverse stakeholders and detailing the payment service providers. Additionally, Part 1 examines the transformation of the conventional payments model and the various catalysts and enablers of change. It concludes with an analysis of the current industry trends and market insights from a European perspective. In Part 2, we delve deeper into the specifics of the European payments landscape, scrutinising the players and characteristics of the sector.

Our analysis comprises three distinct levels of inquiry. Initially, we examine the payments industry on a global scale, identifying non-European organisations that conduct business within the EU. Next, we shift our attention to European entities that operate in non-European nations, despite being headquartered in Europe. Finally, we offer a regional perspective that highlights various players, followed by a comprehensive overview of the different countries within the region. We summarise the domestic payment representatives for each country within the European Union and provide country-specific observations.

It is important to note that many European payment providers can belong to multiple categories. For instance, payment service providers (PSPs) that have a significant market share in their home country and operate in neighbouring countries could be categorised under both the domestic and regional sections. The aim of this analysis is to furnish our readers with an all-encompassing overview of the payments industry, encompassing all its changes and advancements.

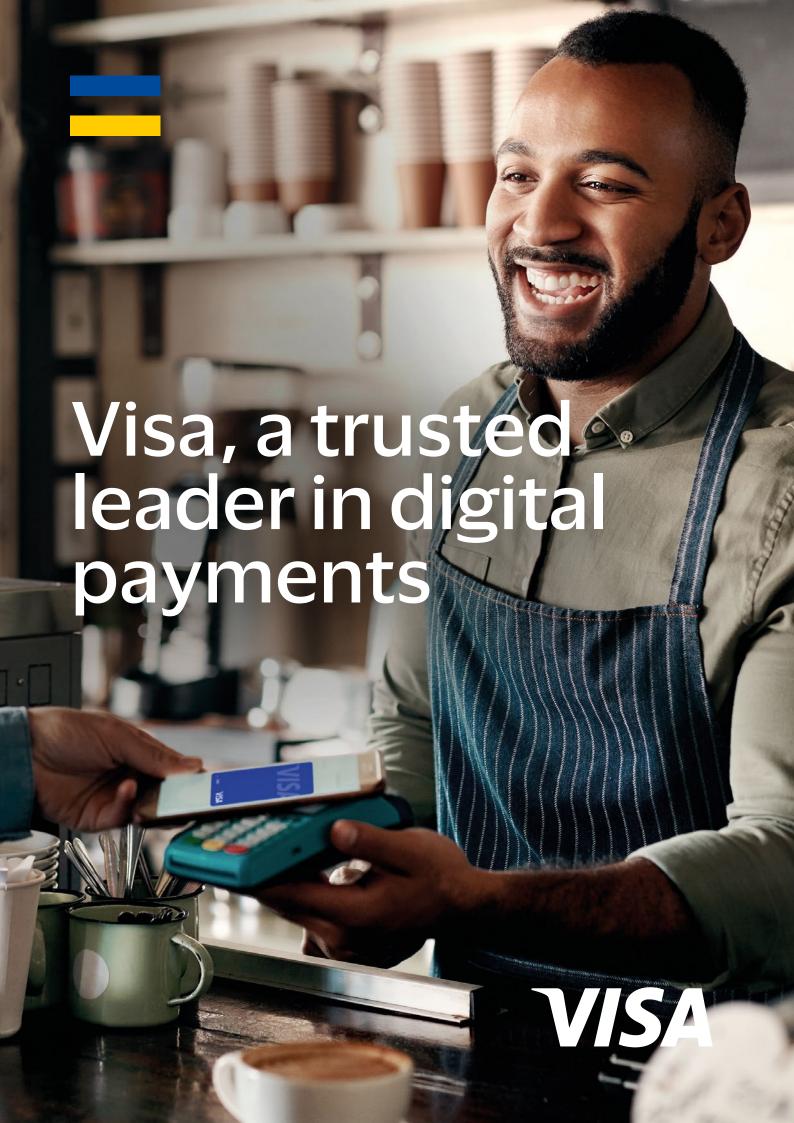
Conclusions

As highlighted in Part 2 of this whitepaper, every country within the European continent has its distinct payment landscape. The European payment ecosystem is highly varied, and although the EU mandates all members to comply with a specific regulatory framework, it is in the individual countries and regions that most of the innovation takes place.

Despite PSD2 being intended to drive innovation in payments, there is a disparity in the players' adoption across Europe. The UK dominates the Open Banking market, with around 40% of all registered TPPs in Europe, while Europe lags due to fragmentation in technical standards and interfaces and banks' reluctance to adopt the account-to-account payment infrastructure.

The financial crisis of 2008, Brexit, COVID-19, and the war in Ukraine have disrupted Europe, preventing regulation harmonisation. Although PSD2 introduced innovative features in payment services, it also raised concerns related to personal data protection. In 2020, the European Data Protection Board released guidelines aligning PSD2 with GDPR, aimed at increasing data protection guidelines. Strong Customer Authentication is a crucial part of PSD2 that has an impact on customer journeys and proved to be a key differentiator across the payments landscape. In May 2022, the European Commission initiated consultations on the Open Finance and data sharing framework for the financial industry and introduced a public consultation to determine how PSD2 applies and impacts the payments sector. These initiatives demonstrate a clear intention to harmonise regulations and level the playing field.

Vlad Macovei Senior Editor The Paypers





Deloitte

Payments constitute an indispensable element of any financial transaction, assuming a crucial role in the seamless operation of the economy, as both customers and financial institutions heavily rely on payments for their daily operations.

As businesses reassess their operational models, consumer preferences, and digital identity, the opportunities and challenges in the payments industry increasingly transcend borders. The realm of payment solutions continues to offer opportunities for growth and innovation, attracting different new entrants.

To seize these opportunities and gain insights into how Payments can be enhanced to meet to the evolving needs of customers and financial institutions, comprehending the role of payments in the financial industry is essential. While **Open Banking** is reshaping the boundaries of payment services, diverse **drivers of change and new trends** are underpinning significant shifts across the industry. To adapt to these changes, **collaborations and partnerships are emerging among players**.

Open Banking, supported by PSD2, disrupting the banking traditional Value Chain

As a result of the development of new technologies and changing customer demand over the past years, new players and new payment solutions have arisen: **the use of third party services when performing payment transactions is now increasingly common.**

In view of these changes, in May 2020, the Commission's Retail Payments Strategy announced the launch of a review of the application and impact of the Payment Services Directive II (PSD2), gathering inputs from stakeholders to determine whether PSD2 objectives have been met and what changes could be needed.

As part of the consultation, the European Commission has issued a report with suggestions for future evolutions of PSD2. These suggestions, could be seen as an important indicator of the main updates we can expect to see under the PSD2 review. Future evolutions will seek to strengthen the resilience and autonomy of the EU payments market.

Other evolutions are expected as follows:

- Ensure consistent application among Member States by adoption closer coordination between supervisions and central banks in the EU
- Address competition imbalances through closer cooperation between antitrust authorities and information exchange
- Consolidate PSD2 and EMD2 to reduce legal uncertainty regarding different requirements between PSPs and e-money institutions
- Clarification of the SCA requirements and transactions in scope
- Adopt consistent definitions to diminish legal uncertainty regarding the activities covered by PSD2
- Improve customer protection, addressing new security risks such as social engineering, with a focus on vulnerable segments

Drivers of changes in the Payments ecosystem

Drivers of change are the customer expectations that trigger a player to develop or adopt a new payment method or feature.

In today's payment industry, Payment services must be easy to use with a user friendly interface and quick mobile integration. **Customers demand expedient, secure transactions that are easy to track.** Functionality is key, including linkage to bank accounts and digital wallet options. Affordability is also important, with low or no-cost options, financial savings, and access to investments. **In addition to these drivers of change, incorporating new technologies is essential for improving security, speed, and convenience.**

Growing demand for better cross-border payment solutions, and the response of Instant Payments

The increased globalization and increase in e-commerce are highlighting the need for better and cost-effective cross-border payments. Most of the current existent solutions have interoperability issues between different countries. The creation of a pan-European payment solution and the adoption of Instant Payments could address this need.

Instant/Real-Time Payments are expected to grow...

Initially centered around domestic payments, Real-time and Instant Payments, based on the European Payments Council's SEPA Instant Credit Transfer scheme (SCT Inst), are evolving into the B2B and cross-border segment to meet customer demand.

Instant Payments are currently still at the level of commoditized service but are bound to be transformed into a strategic imperative for financial institutions.

This evolution will be supported by a regulatory basis: the European Commission has published its legislative proposal on Instant Payments as amendments of the SEPA regulation and Cross-border payments codification regulation.

Even outside SEPA (with SCT Inst), SWIFT proposes solutions to make payment almost instant and has launched a messaging service that enables instant payments to be made in Europe via the SWIFT network.

We identify the 3 pillars below as priorities in the set-up of Instant Payments for a financial institution:



Compliance function within financial institutions must evolve to support these fast-processed payments.

...meanwhile the EPI initiative is slowing down

The European Payments Initiative (EPI), when created in 2020, was pursuing the goal to provide a European solution competing with the major US Payments Providers by building a unified pan-European payment system (as long with the offer of a card for consumers and merchants across Europe, a digital wallet and P2P payments).

But the initial plan has been scrapped: since 2020 no visible progress has been made and the ambition to have a viable platform capable of rivalling the major US payment providers has reduced significantly, meaning that VISA and Mastercard still have a clear playground for the coming years.

Card evolutions

Today, cash is mainly used for low value day-to-day transactions or when there is not another alternative. Nevertheless, cards are increasingly being used for low value transactions, especially in the young segments of the population.

In recent years, the use of cards has been steadily increasing. The main reasons for this shift are increased security, better budget control and convenience.

In response, key payment card technologies are changing the payments experience with contactless cards, dynamic cryptograms (traditional code is replaced with a mini screen displaying a code) and fingerprint sensors (using fingerprints to validate payments).

Alternatives, such as e-money transactions and digital wallets are also increasing

E-money is an electronic store of monetary value on a technical device. Digital wallets allow to store payment cards in a smartphone or smartwatch. These methods are frequently easier, since they use biometric identification, instead of a PIN code.

The current macroeconomic environment is challenging BNPL business model viability

As more financial institutions were looking to include Buy Now Pay Later solutions (BNPL) as part of their service with the aim of competing with fintechs, the awareness of the risks that BNPL structures may pose to consumers started to rise, challenging the business model viability.

The European Commission has concluded that BNPL should be covered under the revised Consumer Credit Directive.

Under the new rules, the BNPL providers will be required to ensure that consumers have easy access to all necessary information about the credit and its total costs, and that the BNPL providers will be required to assess the consumer's ability to repay the credit (ex-ante).

Established players, such as Mastercard and Visa have launched their own BNPL solutions, with a focus on consumer protection. For instance, a Mastercard debit card enable the consumer to receive a "Zero Liability Protection" meaning that the consumer is not responsible if a bad actor adds its card to a buy now, pay later transaction fraudulently.

Payment infrastructure is being modernised

The modernization of payments in Europe is set as an public policy objective by the European Central Bank.

To achieve the different points raised above, payments systems and services are going through continuous improvement. A concrete example is the use of the new messaging standard ISO 20022 for the T2-TS consolidation project, forcing European banks to adapt their strategies. As T2-T2s went live on 20 March 2023, harmonization is achieved through a move to the ISO 20022 message standard.

Compliance, transaction monitoring, and collaboration remain a focus

Compliance, including transaction monitoring should remain at the core of the Payments strategy

Risks can present themselves from a technology angle, but can also appear from a people and process perspective.

As Payments process and settle faster, a robust risk management organisation is needed to tackle risks.

The IBAN-Name Check technology is a concrete example on how to implement this strategy: it consists of an intelligent algorithm that can be easily integrated into the financial institution through an API in the online environment, to check if the name entered matches the IBAN.

Collaboration can create a strategic advantage

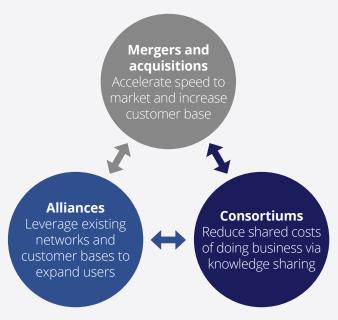
Customers demand personalization, that can be created by making available different payment options (*debit card, credit card, digital wallets, BNPL*) and different payment terms (*e.g., payback time period, currency*).

The combination of financial data and non-financial data can unlock new revenue streams and enhance customer experience.

The correct use of data will allow to better fulfill client needs, creating personalized experiences adapted to the client's particular situation and tastes. Partnerships can help payment firms to enhance customer experience, especially with short time-to-market.

In order to provide state-of-the-art experiences, different market players can engage in strategic partnerships as it is unlikely to be able to provide all these services in-house.

A concrete example regarding transaction monitoring is the agreement between the five largest Dutch banks ABN AMRO, ING, Rabobank, De Volksbank, and Triodos Bank which are now combining forces. Supported by Deloitte they have founded TMNL (Transaction Monitoring Netherlands): the first institution in the world to jointly monitor the transactions of multiple banks with advanced analytics techniques such as network analytics and anomaly detection.



The payments industry is undergoing a significant transformation, and advancements are predicted to continue in the foreseeable future. To keep up with the changing customer preferences and technological innovations, players need to stay informed and adapt to the latest trends. Find out more about **our view on the Payments industry** through the following article.

Our view on the Payments industry



Alexandre Havard

Partner at Deloitte Luxembourg Banking Consulting

Alexandre joined Deloitte in 2015, and currently serves as Partner in Consulting for the Banking sector. He is in charge of the Payments capabilities of Deloitte and has led many projects not only in Luxembourg, but also in France and Monaco. Alexandre has in-depth knowledge of payments regulations, market infrastructure initiatives, and also specializes in operational tax topics. He is now leading services around QI, FATCA, CRS, DAC8 and CESOP for Deloitte Solutions, the regulated entity of Deloitte in Luxembourg.

Alexandre is the Chair of the Digital Economy and Open Finance working group at the Association of Bankers and Banks of Luxembourg (ABBL) and Vice-Chair of the Payments Cluster.

The payments ecosystem is shifting quickly, disrupting the traditional payments model and value drivers. As a result, expectations for instant transactions and embedded payments are growing. At Deloitte, how have you seen the industry evolve over the past year?

In 2022, Luxembourg's payments industry has experienced a period of regulatory calm, allowing players to concentrate their efforts toward consolidating existing services, optimizing their internal processes, and penetrating new markets.

Despite this quieter regulatory period, **projects** aiming to modernize payment infrastructures have impacted banks, such as with the recent T2-T2S consolidation project, which went live in March 2023. At the same time, we are closely monitoring several key topics, including initiatives related to Instant Payments and Open Finance while the European Commission conducted multiple consultations to form a strategic action plan.

Looking ahead, another set of topics that are less consumer-centric will also impact the Payments industry in the coming months. For instance, CESOP reporting requirements which will require new data transmission should take effect on 1 January 2024. Payment Service Providers (PSPs) will therefore need to transmit their first information by 30 April 2024. The forthcoming year will require focus on these new requirements, with particular attention on ISO 20022, as the deadline for SWIFT draws near.

How did the payments industry regulatory landscape change in 2022, and what impact did it have on the industry as a whole?

Despite the absence of significant regulatory changes, the European Commission is actively involved in creating a unified regulatory framework for Payments, embedded in the Eurosystem's retail payments strategy. After conducting consultations, the Commission will adopt a legislative proposal on the review of PSD2 in the second quarter of 2023.

In addition, the fight against money laundering and fraud remains at the heart of regulatory concerns; even though we strive for openness and instantaneity, risk management remains crucial. It is illustrated with implementation of international AML sanctions, or with the questions arising about consumer protection through the PSD2 review consultation. Further evolutions should be anticipated as concrete solutions to protect players are developed; for instance, IBAN-Name Check protects the payer without compromising the privacy of the payee by helping to prevent fraudulent and misdirected transfers.

In light of the evolution of Open Finance and new fintechs entering the market, what opportunities and challenges do you foresee?

The acceleration of fintech disruption has been tangible over the past year. Markets mainly oriented towards retail banking, such as France, Belgium, Germany, among others, have witnessed numerous alliances between and acquisitions of fintechs by banks. However, initiatives in the field of private banking are fewer; acquisitions are not common, and partnerships that could enable banks to accelerate the service implementation through fintechs are under-developed. Solutions aimed at the private banking and asset management market remain limited in banks without capacity to launch their own projects on their own and that need to work together to pool their efforts. In other cases, private and small banks need to opt for external partners who can aggregate white-label needs and offer them "as a service" to the banks.

At the same time, we also have examples of partnerships that have worked quickly and effectively in Luxembourg. In 2022, LUXHUB and Vermeg announced a partnership to exchange custodian data to reduce friction and operational costs for life insurance companies.

Where does Luxembourg stand in terms of Instant Payments, and how do you see them impacting the wider financial industry?

At the European level, Instant Payments are becoming the new normal and are strongly pushed by the European Commission. They have evolved from an incentive from SEPA and the ECB to an upcoming regulation for SEPA members: on 26 October 2022, the European Commission published its legislative proposal on Instant Payments as amendments of the SEPA regulation and cross-border payments codification regulation. The initiative should streamline the retail payments market and unlock instant payment advantages for EU citizens and businesses.

According to the ECB, most retail banks have either implemented an Instant Payments solution or are in the process of doing so. Other banks are also starting to explore the subject and must be prepared to initiate substantial IT developments once they are included in the Instant payments scope. The challenges that banks will encounter may depend on the final version of the forthcoming regulation. Nonetheless, in Luxembourg, concerns persist around IBAN-Name Check, the free provision of the service, and interconnectivity in a country where a significant proportion of payments are cross-border, which is not the case of other European countries.

However, the "Study on the payment attitudes of consumers in the euro area" completed in 2022 by the European Central Bank (ECB) highlights promising results for the Grand Duchy: Luxembourg has the highest perceived availability regarding Instant Payments. Instant Payments are being recognized more and more as important to a whole range of players; even outside SEPA, SWIFT proposes solutions to make payments almost instant.

In 2022, did mobile payments and contactless payment methods lead to the decline of traditional payment methods like cash and credit cards?

Quite the contrary, as the ECB study shows that card payments at the point of sale (POS) increased in Europe and were the **most frequently used method in 2022 in four euro area countries, including Luxembourg**. At the European level, the study reveals that cash use slightly decreased but remained the most frequently used payment method at the POS (followed by cards), but cash also remains the dominant means of payment in person-to-person (P2P) transactions. Although payments with mobile apps have increased in recent years, their share in POS payments was still relatively low.

Meanwhile, the ambition of the European Payments Initiative (EPI), initiated by twelve major banks and financial institutions to provide a standardized digital payment solution for various retail use cases in Europe, has reduced significantly – which impacts the overall goal of achieving a single payment system across Europe.

Cards continue to evolve and have a positive outlook for the future, as seen with the replacement of the V Pay card by VISA Debit in Luxembourg. VISA Debit gradually established itself as one of most used daily payments in the Grand Duchy, allowing for wider acceptance around the world. Request-to-pay functionality is among developments still to come. For example, Mastercard is working on its request-to-pay solution, a digital bill presentment and messaging solution that allows billers to request payments through a payers' banking app. This solution supports Faster Payments, and real-time receipt of funds. To go further, Mastercard is collaborating with a Core Banking System editor to enable real-time, end-to-end processing and secure communication between buyers and payers.

With new use cases and technologies impacting the payments industry, how does Deloitte adapt to stay ahead of the curve?

To stay competitive in the rapidly changing payments landscape, we believe that payment players need to be agile, innovative, and customer-centric. **This means continually adapting to emerging use cases and technologies.** Our experienced payments team recognize the importance of innovation, efficiency, and security in the payments landscape and leverage their deep industry knowledge to provide customized solutions that help our clients transform their payments operations.

Deloitte's global team specifically dedicated to payments provides end-to-end capabilities. This global approach enables companies to offer a wide range of alternative delivery channels and enhance customer experience and positions us as a leading and influential player in the industry.

Through our current engagements, we support our clients not only for regulatory projects, but also for the ideation of new products, the identification of new revenue streams, and the definition of business models. We are constantly increasing our services offerings to support banks and PSPs payment operations.

By providing our clients innovative products and advice borne of experience with a wide range of clients, our consultants ensure our clients maintain a strong foothold in this quickly evolving industry.



This part looks in detail at the actors and characteristics of the European Payments Ecosystem. The first focus of this section is an analysis of the payments industry from an international perspective, gathering non-European international players that operate in the European Union, as well as Europebased international players that have their headquarters in the EU but also operate in countries outside of Europe. In the second part of the section, the different regions and their actors will be highlighted, followed by a detailed analysis of the different countries included in the region.

International Players

Non-EU International Players

This section provides details on payment players headquartered outside the EU but with payment operations or subsidiaries within the EU. Players that are headquartered in the EU but have payment operations or subsidiaries outside 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, EU laws are open to international players and there is a strong free trade mentality, allowing major international payment players to set up shop and quickly gain market share.

As far as payment schemes are concerned, there is no doubt that American foreign players are the undisputed leaders in Europe as a whole. In 2021, Visa and Mastercard represented nearly 57% and 43%, respectively, of the market share in Europe¹. Moreover, Visa's European volume accounts for only 20% of its total volume, while Mastercard's accounts for 32%².

The foreign giants mainly comprise 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 payments leaders? This section attempts to identify those foreign international players operating in the European market.

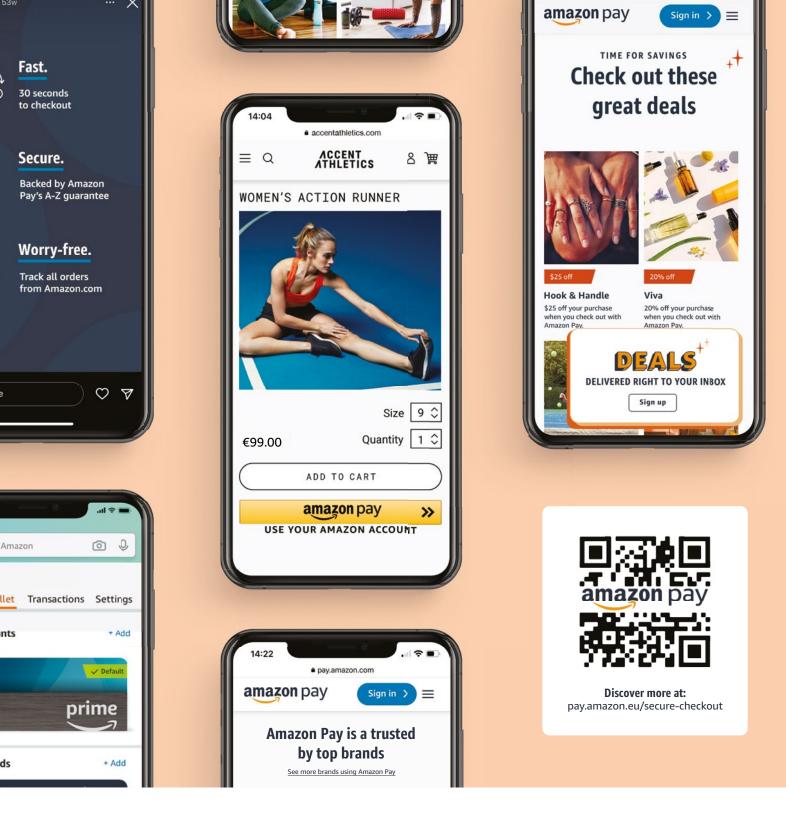
Banks



European banks continue to dominate their home markets versus non-EU giants such as HSBC, J.P. Morgan, Citibank and Barclays. However, these big foreign banks have a foothold in some European countries through extensive branch and subsidiary networks, as Wells Fargo and J.P. Morgan have done in Ireland.

https://nilsonreport.com/publication_chart_and_graphs_archive.php

² https://www.barrons.com/articles/mastercard-stock-visa-downgrades-51651257323





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¹ "Amazon Pay transactions took an average of 70 seconds, 41 percent faster than the average of 119 seconds. – PYMTNS.com Buy Button Report 2022.", August 2022.

² Amazon Pay data, Q4 2017. Tens of millions of customers in more than 170 countries have used Amazon Pay to transact.

British banks are now outside of the EU because of Brexit, but they continue to maintain and develop business in the EU space via "hubs" such as Ireland or Luxembourg. In this respect, the most relevant are Barclays Bank, HSBC Bank and Revolut.

Barclays Bank supports the European needs of global corporates with a cutting-edge, unified banking platform across Europe, harmonised transaction and reporting formats, unified pricing and servicing models across Europe, and support across standard and regional electronic channels³.

The second largest bank in Europe in terms of assets is the British bank HSBC. It is a multinational investment bank and financial services holding company. It has about 3.900 offices in 65 countries and territories in Africa, Asia, Oceania, Europe and North and South America, and has about 38 million customers in total.

Additionally, the multinational bank Citigroup has operated in Europe as Citibank Europe plc since 1988 through their headquarters in Ireland. Since January 2016, Citi is the only EU-passported bank, with branches in 22 countries, and is therefore regulated by the European Central Bank⁴. Worldwide, it provides its services to 160 countries, or approximately 200 million customers⁵.

Finally, even though Revolut is headquartered in the UK, it continues to operate in Europe through its subsidiary in Lithuania. The global neobank offers daily banking, saving and investment solutions. In 2022, it reached 25 million retail customers and continues its expansion in several regions of the world, notably New Zealand, Mexico and India.

Banks	Group	Number of employees	Revenue (Million €)	Net Income (Million €)	LinkedIn
JP Morgan Chase & Co	JP Morgan Chase & Co	264.986	107.827,09	42.707,92	<u>Link</u>
<u>Citibank NA</u>	Citigroup Inc.	178.681	47.119,89	16.265,23	<u>Link</u>
HSBC Holdings PLC	HSBC Holdings Plc	220.000	46.440,04	12.972,80	<u>Link</u>
Barclays PLC	Barclays Plcs	81.600	26.331,86	8.570,90	<u>Link</u>
Revolut	Revolut Group Hodings Ltd	2.158	242,94	-225,32	<u>Link</u>

Source: Orbis | 2021 Financials

Electronic Money Institutions

Several international companies have set up electronic money institutions in Europe. Such payments entities are usually part of larger international payments groups or may alternatively be part of established e-commerce enterprises.

Brexit has also resulted in many UK entities applying for licences across the EU to keep servicing their clients located in the European Union. One of the most relevant is EML Payments.

EML provides an innovative global payment solutions platform, with years of experience in delivering innovative and secure payment solutions. Its portfolio offers innovative payment technology solutions for pay-outs, gifts, incentives, rewards and supplier payments. EML issues mobile, virtual and physical card solutions to some of the largest corporate brands around the world, processes billions of dollars in payments each year and manages more than 1.100 programmes across North America, Europe and Australia.

In 2021, EML decided to extend its range of services by acquiring Sentenial, an open banking enabler⁶, now called Nuapay, and offers its services in 20 European countries⁷.

ЕМІ	Group	Number of employees	Revenue (Million €)	Net Income (Million €)	LinkedIn
EML Payments	EML Payments Limited	n/a	152,36	-3,18	<u>Link</u>

Source: Orbis | 2021 Financials

³ https://www.barclayscorporate.com/international-corporate-banking/europe/

⁴ https://www.citigroup.com/citi/about/countries-and-jurisdictions/ireland.html

⁵ https://www.businesswire.com/news/home/20211214005234/fr/

⁶ https://www.businesswire.com/news/home/20210929006014/en/EML-Completes-the-Acquisition-of-Sentenial-and-Enters-the-Open-Banking-Market-In-Europe

⁷ https://www.businesswire.com/news/home/20220524005293/en/EML-Open-Banking-Expands-Into-20-New-Countries-To-Complete-Its-Coverage-Of-Europe





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Payment Service Providers



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 to offer the right mixture of payment options. However, American PSPs such as Global Payments, Verifone, Stripe, Worldpay (FIS), and Braintree (Paypal) are highly relevant in the European landscape.

US company Global Payments is a leading worldwide provider of payment technology and software solutions. It provides payment services directly to merchants and indirectly through other financial organisations. Its technology-enabled services also support integrated payments, e-commerce and omnichannel services.

Verifone makes it simple to revolutionise customer journeys by providing a single, unified, global platform that enables seamless payment experiences – anywhere, anytime and with any payment method. It has a growing footprint of over 35 million devices in more than 150 countries. Verifone is one of the world's largest POS terminal vendors and a leading provider of payment and commerce solutions with 46% of the world's non-cash transactions being processed on its systems.

Co-founded by two Irish brothers, the US company Stripe is a payment processor that allows businesses to accept and manage online payments. Its platform provides tools for payments, subscriptions, fraud prevention, and more. Stripe has become increasingly relevant in the EU payments market due to its ease of use, flexibility, and ability to integrate with a wide range of e-commerce platforms and third-party services.

Fidelity National Information Services (FIS) acquired Worldpay in 2019, and it now operates as a subsidiary of FIS. Worldpay by FIS is a leading payment processing company in the European Union. It offers a wide range of payment solutions, including card payments, mobile payments, and online payments. Its services cater to various industries, including retail, healthcare, and gaming. However, in February 2023, FIS announced that it was spinning off its Merchant Solutions business back into standalone merchant acquirer Worldpay⁸.

PSP	Group	Number of employees	Revenue (Million €)	Net Income (Million €)	LinkedIn
<u>Fiserv</u>	Fiserv Inc.	44.000	14.326,32	1.177,82	<u>Link</u>
Global Payments	Global Payments Inc.	25.000	7.525,83	852,43	<u>Link</u>
Stripe Payments Europe	Stripe Inc.	1.048	1.982,52	-23,43	<u>Link</u>
<u>Verifone</u>	Francisco Partners Feeder	5.600	1.607,64	-149,36	<u>Link</u>
Worldpay from FIS	Fidelity National Information Services Inc.	3.898	1.282,59	-34,79	<u>Link</u>

Source: Orbis | 2021 Financials

⁸ https://www.forbes.com/sites/danielwebber/2023/02/23/worldpays-spinoff-is-the-latest-sign-of-merchant-acquirings-changing-challenges/



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Payment Networks

Concerning card schemes, American foreign players are the undisputed leaders in Europe as a whole. Visa is historically the winner in terms of European market share. In 2015, it had more than 60% of all credit card and prepaid card transactions in Europe, although this is decreasing to the benefit of Mastercard. In 2021, Visa and Mastercard represented nearly 57% and 43%, respectively, of the market share in Europe¹⁰.

When comparing the four big international card brands available (Visa, Mastercard, Amex and Diners Club), Visa's importance in Europe declined between 2019 and 2020 while the market kept growing to reach 4.000 trillion dollars in 2021¹¹.

Finally, in 2020, Visa had 58% of the market share, while Mastercard had 41%. It should be noted, however, that this market share is solely based on the number of purchase transactions done with Visa, Mastercard, American Express or Diners Club only, as domestic solutions were not included. This is effectively saying that Visa ranks higher than Mastercard regarding global network cards¹². Moreover, Visa's European volume accounts for only 20% of its total volume, while Mastercard's accounts for 32%¹³.

Card Schemes	Group	Number of employees	Revenue (Million €)	Net Income (Million €)	LinkedIn
American Express Co	American Express Company	64.016	38.069,03	7.020,13	<u>Link</u>
<u>Visa Inc</u>	Visa Inc.	n/a	30.067,69	15.343,65	Link
Mastercard	Mastercard	24.000	16.826,77	7.669,96	Link

Source: Orbis | 2021 Financials

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 the domestic market and will be spread across a couple of countries within the EU without being present throughout. To scale their importance, in 2022 PayPal, for example, was used in more than 80% of online PoS in 13 different European countries¹⁴.

Additionally, 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. The remittance sector is still relevant. The inflows and outflows of remittance were around 50 billion euros in 2020, with 53% of the remittance intra Europe¹⁵.

Payment Methods	Group	Number of employees	Revenue (Million €)	Net Income (Million €)	LinkedIn
Paypal Holdings, Inc.	Paypal Holdings, Inc.	30.900	22.400,66	3.680,91	<u>Link</u>
Alipay.com Co Ltd	Hangzhou Yun Bo Investment Consulting Co. Ltd.	1.151	10.275,28	306,69	Link
Western Union	Western Union Co. (The)	10.500	4.477,13	711,46	<u>Link</u>
Apple Pay	Apple	n/a	n/a	n/a	<u>Link</u>
Google Pay	Google	n/a	n/a	n/a	<u>Link</u>

Source: Orbis | 2021 Financials

^{9 &}lt;u>https://balancingeverything.com/credit-card-market-share/</u>

¹⁰ https://nilsonreport.com/publication_chart_and_graphs_archive.php

¹¹ https://nilsonreport.com/mention/1640/1link/

¹² https://www.statista.com/statistics/619376/market-share-purchase-volume-of-credit-card-brands-europe/

¹³ https://www.barrons.com/articles/mastercard-stock-visa-downgrades-51651257323

¹⁴ https://www.statista.com/statistics/1264955/global-paypal-adoption/

¹⁵ https://ec.europa.eu/eurostat/statistics-explained/index.php?title=Personal_remittances_statistics#EU_remains_a_net_payer_in_personal_remittances_to_the_rest_of_the_world

EU International Players

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

Introduction

Many European players have made their way outside the continent and have become major international actors. Of the 100 largest banks in the world in terms of assets, more than 25% are EU institutions. France is especially well represented with BNP Paribas and Crédit Agricole in the top 10¹⁶.

Aside from banks, some European fintechs have also reached international renown in the past few years. The Dutch player Adyen is among the most valuable fintechs in the world and is already a platform of choice for many businesses. The recent implementation of the platform in Mexico, with the offering of its full end-to-end solution in the country, shows the company's ambition to continue its international expansion¹⁷. Klarna, the Swedish BNPL leader, is yet another example of EU influence abroad.

Banks



Source: Orbis | 2021 Financials

Europe remains a stronghold in the field of banking, and this is reflected internationally.

The largest bank in the EU with an international presence is BNP Paribas, with total assets of 2,91 trillion US\$. This French multinational banking group is the second largest in Europe (behind HSBC), operating in 65 countries on five continents¹⁸. It is considered a systemically important bank by the Financial Stability Board and is one of the ten largest banks in the world¹⁹. After the sale of Bank of the West to BMO Financial Group in 2021, it is said that the French group might be interested in buying ABN Amro, one of the Netherlands' largest banks. Insiders report that the idea was suggested in a meeting between BNP executives and Dutch government officials in 2022, although it seems that no detailed talks emerged from this discussion²⁰.

- 16 https://www.spglobal.com/marketintelligence/en/news-insights/latest-news-headlines/the-world-s-100-largest-banks-2022-69651785
- 17 https://www.adyen.com/press-and-media/adyen-brings-unified-commerce-offering-and-local-acquiring-to-mexico
- 18 https://finance.yahoo.com/news/16-biggest-banks-world-140941624.html
- 19 https://www.fsb.org/2022/11/2022-list-of-global-systemically-important-banks-g-sibs/
- 20 https://www.ft.com/content/6a1b4500-bc09-4dcb-a7ac-a5fbb58242b9





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Crédit Agricole Group, also based in Paris, is the world's largest cooperative financial institution²¹ and tenth largest bank with total assets of 2,67 trillion US\$. It consists of a network of 2512 local banks, 39 regional banks and a central institute²².

Spain's largest bank, Banco Santander S.A., operates under the trade name Santander Group. It is largely known for its banking operations, particularly across Europe, but is a multinational financial services company. Banco Santander is among the 20 largest banks in the world²³ and, like many of the giants on this list, it is considered a systemically important bank by the Financial Stability Board²⁴. On its website, the bank emphasises its willingness to offer its services in a sustainable and inclusive way and to fight climate change by financing ecological projects and decarbonising its portfolio. In 2022, the Dow Jones Sustainability Index ranked it in the top 2% of the most sustainable banks in the world and in the top 3 in Europe²⁵.

Société Générale is a multinational investment bank and financial services company. It is the fourth largest French bank by balance sheet with 1,7 trillion US\$ in total assets²⁶. On 1 January 2023, the group announced the creation of its new retail bank "SG", the result of the merger of retail banks Société Générale and Groupe Crédit du Nord. The project, which started in 2020, aims to improve customer satisfaction and become a benchmark for the French market. All branches should be unified under the same banner by the end of 2025, starting with 1.000 points of sale in 2023. Around 10 million customers should benefit from this merger.²⁷

Deutsche Bank, founded in 1870, is a multinational investment bank and financial services company with a network that spans 56 countries through 1572 branches. It is a universal bank with four major divisions: Investment Bank, Corporate Bank, Private Bank and Asset Management^{28 29}.

Banks	Group	Number of employees	Revenue (Million €)	Net Income (Million €)	LinkedIn
Axa SA	Parent company	92.398	96.826,00	7.507,00	<u>Link</u>
Banco Santander SA	Parent company	197.070	48.846,00	9.653,00	<u>Link</u>
BNP Paribas	Groupe BNP Paribas	189.765	44.256,00	9.880,00	Link
BPCE Group	Parent company	98.727	25.936,00	4.285,00	Link
Société Générale	Parent company	131.293	25.804,00	6.338,00	Link
Deutsche Bank AG	Deutsche Bank Group	82.969	25.596,00	2.510,00	Link
Banco Bilbao Vizcaya Argentaria	Parent company	110.432	24.267,00	5.618,00	Link
Credit Agricole SA	Groupe Crédit du Nord	75.711	23.031,00	6.849,00	Link
Intesa Sanpaolo	Parent company	97.698	22.293,00	4.043,00	Link
ING Bank NV	ING Groep NV	57.660	18.516,00	4.898,00	<u>Link</u>
UniCredit SpA	Parent company	78.571	17.239,00	1.570,00	Link
Cooperatieve Rabobank U.A.	Parent company	43.361	12.888,00	3.692,00	Link
Caixabank. SA	Parent company	49.762	11.601,00	5.229,00	Link
Commerzbank AG	Parent company	46.218	9.729,00	354,00	<u>Link</u>
ABN AMRO Bank NV	The state of the Netherlands	19.957	7.737,00	1.234,00	Link

Source: Orbis | 2021 Financials

²¹ https://www.statista.com/statistics/870187/largest-financial-cooperatives-worldwide-total-assets/

²² https://www.credit-agricole.com/en/group/group-structure

https://www.spglobal.com/marketintelligence/en/news-insights/latest-news-headlines/the-world-s-100-largest-banks-2022-69651785

https://www.fsb.org/2022/11/2022-list-of-global-systemically-important-banks-g-sibs/

²⁵ https://www.santander.com/en/press-room/press-releases/2022/12/santander-among-the-worlds-most-sustainable-banks-in-the-dow-jones-sustainability-index-2022

https://www.spglobal.com/marketintelligence/en/news-insights/latest-news-headlines/the-world-s-100-largest-banks-2022-69651785

²⁷ https://www.societegenerale.com/fr/actualites/communiques-de-presse/le-groupe-societe-generale-annonce-la-creation-de-sa-nouvelle-banque-de-detail-en-france-sg

²⁸ https://www.db.com/who-we-are/

²⁹ https://www.db.com/what-we-do/

Electronic Money Institutions

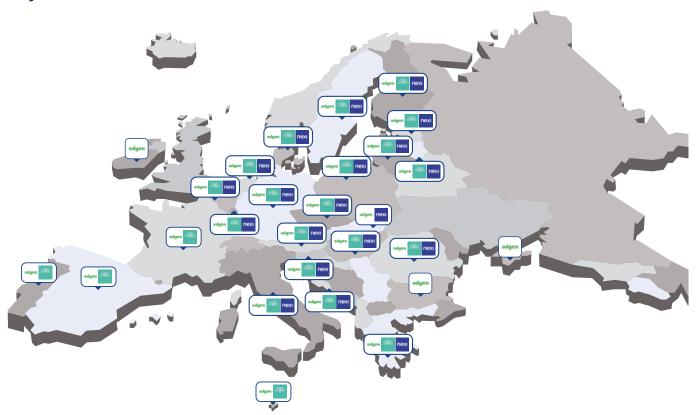
Another major player in the field is the French company Edenred, which is present in 45 countries worldwide and specialises in providing payment solutions for specific uses such as meal vouchers, gift cards and mobility cards³⁰.

AirPlus is a licensed payment institution that provides business travel payment services in over 56 countries. Its services aim to facilitate business travel planning. For example, the company issues virtual credit cards (Mastercard) allowing employees to pay for a particular travel-related service (hotel rooms, flights, cars, etc.). AirPlus also offers business accounts to help the company manage travel expenses and debit accounts to pay for flights without paying the extra credit card fees. The company has about 49.000 business customers.³¹

ЕМІ	Group	Number of employees	Revenue (Million €)	Net Income (Million €)	LinkedIn
Edenred	Parent company	9.161	1.627,00	313,00	<u>Link</u>
<u>Lufthansa AirPlus Servicekarten</u>	Deutsche Lufthansa	1.032	n/a	n/a	<u>Link</u>

Source: Orbis | 2021 Financials

Payment Service Providers



In this very competitive market, some European players have succeeded in reaching an important global position, especially in the field of PSPs. Adyen, Worldline, and Nexi are international players and are by far the leaders in Europe.

Adyen is a Dutch company founded in Amsterdam in 2006. The company provides an all-in-one financial platform with end-to-end payment solutions and works with large companies around the globe such as H&M, Uber, McDonald's and Microsoft³². In 2022, the company launched some new embedded financial products "Capital", "Accounts" and "Issuing". The suite allows companies to manage their cash advances, bank accounts and card issuing as a single ecosystem. These new financial management tools are essentially aimed at SMBs looking for customisable, practical solutions for the management of their financials³³.

One of the largest payment service providers, the French company Worldline offers services in over 50 countries worldwide and in a vast number of fields: retail, energy, financial institutions, manufacturing, mobility, and digital business, to cite a few. It is the number one European payment processor, first merchant acquirer in continental Europe and fourth largest payment player in the world³⁴. Following the acquisition of Ingenico in 2020, the company proceeded to a divestment of its Terminals business to focus on core payment services³⁵.

- 30 https://www.edenred.com/fr/groupe/edenred-en-bref
- 31 https://www.airplus.com/world/en/our-solutions/airplus-payment-tools/airplus-product-suite/airplus-product-suite.html
- https://www.adyen.com/customers
- 33 https://thepaypers.com/payments-general/adven-launches-embedded-financial-products
- https://worldline.com/en/home/top-navigation/about-worldline/who-we-are.html
- 35 https://worldline.com/en/home/top-navigation/about-worldline/who-we-are.html

Nexi is the 6th largest merchant acquirer worldwide according to the Nilon report. The company processed more than 18 billion transactions in 2021. It operates in strong partnership with around 150 partner banks, serving around 900.000 merchants and managing more than 43 million payment cards. In March 2022, a merger and integration took place between Nexi, Nets and Sia, leading to the strengthening of the Nexi group. The principal reasons behind the shareholders' agreement with Sia were growth in terms of scale and an international dimension. This deal marks a step towards digitalising payments, as Italy is more reliant on cash than any other European country. Moreover, Italy presents massive levels of tax evasion in Europe and digital payments could be a way to reduce this. Furthermore, Nexi was able to increase in size as online purchases intensified during the pandemic and consumers moved away from using physical cash. The new group will be the largest group in Europe by number of merchants served (2 million), number of cards (120 million) and number of transactions executed each year (21 billion)³⁶.

PSP	Group	Number of employees	Revenue (Million €)	Net Income (Million €)	LinkedIn
<u>Adyen</u>	Parent company	2.180	5.981,54	469,72	<u>Link</u>
Worldline	Parent company	20.711	4.898,00	-751,40	<u>Link</u>
Nexi	Parent company	9.929	1.544,51	51,73	<u>Link</u>

Source: Orbis | 2021 Financials

Banking-as-a-Service

Solaris is a technology company holding a banking licence. It has built an API-based white-label Banking-as-a-Service (BaaS) platform to power startups in the digital economy³⁷. Following the acquisition of Contis in July 2021, Solaris has been working to integrate Contis' platform into its own embedded finance offering and to combine the teams of the previously separate businesses. Through the merger, Solaris gained an e-money licence in the UK to add to its EU licences in Germany and Lithuania³⁸.

Headquartered in Luxembourg, Banking Circle is an important BaaS company focusing on B2B global banking services. It is a fully licensed bank and offers services to payment and e-money businesses and banks of any size for them to seize opportunities in the payments industry. Banking Circle serves over 250 financial institutions, and in the first three quarters of 2022 the Luxembourg bank exceeded a total annual payment volume of 332 billion €. This indicates that it is processing more than 10% of Europe's B2C e-commerce flow, based on the number of inbound payments processed and new market size according to Worldpay's 2022 Global Payments Report.

Treezor is a subsidiary of the Société Générale Group. It is a Principal Member of the Mastercard network³⁹. In 2022, the company continued its partnership with Mastercard with a view to extending its development across Europe. This collaboration gives Treezor access to Mastercard's whole infrastructure and new services such as Open Banking and credit services⁴⁰.

Banking-as-a-Service	Group	Number of employees	Revenue (Million €)	Net Income (Million €)	LinkedIn
Solarisbank AG	Parent company	693	48,01	-41,63	<u>Link</u>
Banking Circle	Banking Circle	291	23,95	-19,59	<u>Link</u>
Treezor	Société Générale Groupe	n/a	n/a	n/a	<u>Link</u>

Source: Orbis | 2021 Financials

Alternative Payment Methods

New ways of paying have emerged all around Europe. These are the biggest players in this sector.

Klarna was founded in Stockholm, Sweden, and is a pioneer and giant in the Buy Now Pay Later (BNPL) industry. It offers products and services to consumers and retailers in the areas of payments, social shopping and personal finance. The company was awarded as the world's second and Europe's highest-valued private fintech in 2021 after it had raised 639 million US\$, reaching a market value of 45,6 billion US\$⁴¹. Although Klarna was expected to continue its growth, the company, together with other fintechs, faced a massive downturn in 2022, causing its value to plummet to 6,7 billion US\$, a far cry from the 60 billion US\$ expected the year before. Fortunately, the company managed to close a major financing round of 800 million US\$⁴² in that same period through new and pre-existing investors.

- 36 https://www.bscapitalmarkets.com/nexi-ndash-sia-a-crucial-merger-for-a-new-european-leader-in-the-paytech-industry.html
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- 38 https://www.pymnts.com/emea/2022/contis-brand-retires-following-embedded-finance-merger-with-solaris/
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- 41 https://sifted.eu/articles/klarna-second-valuable-fintech/
- 42 https://www.altfi.com/article/9520_klarna-to-bag-800m-funding-at-58bn-value-as-value-drops-nearly-eight-fold



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Trustly is a Swedish company providing direct account-to-account payments through its digital platform. The company is a preferred payment method in e-commerce, financial services, iGaming and travel industries and works with well-known companies from the financial landscape such as Ingenico and Multisafepay. Its activities reach over 525 million customers in Europe, Australia and South and North America⁴³. To take part in the BNPL trend, Trustly launched FlexPay in 2022, a product allowing merchants to configure deferred payment settlements and giving customers the opportunity to defer their payments.⁴⁴

Riverty is the result of the recent merger of AfterPay, Paigo and Arvato Financial Solutions. The company's portfolio of solutions includes parking payments, BNPL payment methods and "Back in Flow", a solution whose aim is to help people handle their pending bills.45

Local Payment Methods	Group	Number of employees	Revenue (Million €)	Net Income (Million €)	LinkedIn
Klarna Bank	Klarna Holding	4.789	1.343,66	-692,86	<u>Link</u>
Trustly Group	Parent company	429	187,75	31,55	<u>Link</u>
Riverty Administration Services	Choice Europe	n/a	n/a	n/a	<u>Link</u>

Source: Orbis | 2021 Financials

https://www.trustly.net/about-us

 $[\]underline{\text{https://www.trustly.net/press/2022/02/trustly-introduces-flexpay-by-trustly--a-deferred-settlement-product-for-flexible-payments}$

https://www.riverty.com/en/



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EU Players

Benelux

Introduction

Benelux is a densely populated and economically thriving region. It represents almost 15% of the total population of Western Europe⁴⁶ and 17% in terms of nominal GDP⁴⁷, which makes it an important market for financial institutions.

The Netherlands is characterised by a highly concentrated banking sector, as the five largest banks in the country (ING, Rabobank, ABN Amro, De Volksbank and NIBC Bank) hold 85% of the total assets⁴⁸.

Luxembourg is especially influenced by foreign actors. As a matter of fact, 92% of banks are foreign players from neighbouring countries such as France, Germany and Great Britain⁴⁹. Luxembourg is one of the largest fund industries in Europe as well as an international finance centre, on account of its openness to foreign actors.

While Belgium is also influenced by foreign actors, the Belgian banks together hold approximately 50% of the market. Notably, Belgium is home to global financial companies, including SWIFT, Euroclear, Bank of NY Mellon and Mastercard Europe.

In terms of payments, it is notable that the three countries of the region have a low cash usage when compared to most European countries. The regional player Payconiq is a major player in the three countries of the region, but this is where the similarities end.

Banks



BNP Paribas and ING are the two banks that dominate the Benelux region.

The largest bank in the Netherlands, ING operates in over 40 countries around the world and is particularly well implemented in Belgium and Luxembourg. The fourth largest bank in Belgium⁵⁰ and sixth largest in Luxembourg in terms of assets⁵¹, the bank offers services in retail banking, business banking, private banking, wholesale banking, financial leasing and assets management⁵².

- 46 https://www.worldometers.info/population/countries-in-europe-by-population/
- 47 https://countryeconomy.com/countries/groups/european-union
- 48 https://www.statista.com/statistics/737276/leading-banks-with-domestic-origins-in-the-benelux-by-total-assets/
- 49 https://www.statista.com/statistics/706377/share-of-foreign-banks-in-the-benelux-by-country/
- 50 https://thebanks.eu/countries/Belgium/major_banks
- 51 https://thebanks.eu/countries/Luxembourg/major_banks
- 52 https://www.ing.com/About-us/Profile/ING-at-a-glance.htm

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60 payconiq





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BNP Paribas Fortis is the Belgian branch of French group BNP Paribas and is the result of the sale of Fortis Bank to BNP Paribas after the 2008 financial crisis. It is Belgium's largest bank, representing 22,2% of the market with 252,82 billion US\$ in total assets, and provides all classic services, from retail & business banking to asset management.⁵³ The bank is also active in Luxembourg through its BGL BNP Paribas branch (previously Fortis Banque Luxembourg) which is Luxembourg's second largest bank in terms of assets.⁵⁴

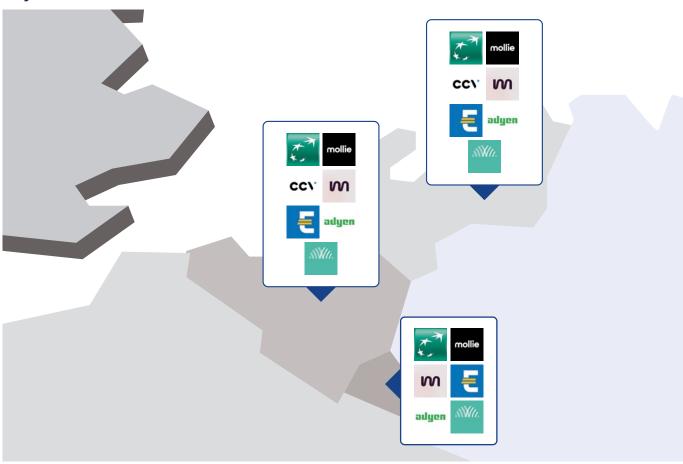
Other smaller banks such as the Belgian bank Argenta and the sustainable bank Triodos are also active in the region.

In terms of neobanks, it is worth noting that N26, Bung and Revolut are also highly present in the region.

Banks	Group	Number of employees	Revenue (Million €)	Net Income (Million €)	Linkedin
BNP Paribas	Groupe BNP Paribas	189.765	44.256,00	9.880,00	Link
ING Bank NV	ING Groep NV	57.660	18.516,00	4.898,00	Link
Argenta Spaarbank	Investar SA	859	655,86	181,04	Link
Triodos Bank NV	Triodos Bank NV	1.715	341,95	50,76	Link

Source: Orbis | 2021 Financials

Payment Service Providers



Described in more detail in the EU International Players section, Adyen was initially launched in the Netherlands and quickly became a renowned international player, processing hundreds of billions of euros in volume every year and working with partners as big as Facebook and Microsoft. Similarly, the leader Worldline is an international player but is visible in the region as it holds a high share of the Benelux processing market.

Axepta BNP Paribas Benelux is a subsidiary of French bank BNP Paribas. In 2021, Axepta BNP Paribas took over a part of Ingenico's in-store activities in Belgium. The acquisition concerned the merchant acquiring business in Belgium and Luxembourg and made Axepta the number two payment service provider in Belgium.⁵⁵

⁵³ https://thebanks.eu/banks/10665

⁵⁴ https://thebanks.eu/countries/Luxembourg/major_banks

⁵⁵ https://www.bnpparibasfortis.com/NEWSROOM/PRESS-RELEASE/AXEPTA-BNP-PARIBAS-ANNOUNCES-THE-CLOSING-OF-THE-ACQUISITION-OF-INGENICO%27S-IN-STORE-ACTIVITIES-IN-BELGIUM

Other companies originated in the Benelux region and are highly present in two or three of the countries in the region. This is the case of CCV, MangoPay, Mollie and European Merchant Services. These companies also operate beyond the regional borders.

PSP	Group	Number of employees	Revenue (Million €)	Net Income (Million €)	Linkedin
Adyen N.V	Parent company	2.180	5.981,54	469,72	<u>Link</u>
CCV Group B.V.	CCV Group B.V.	1.008	150,14	4,27	<u>Link</u>
Mangopay S.A.	Advent International	66	64,49	-8,18	<u>Link</u>
Mollie Holding B.V.	Parent company	418	53,24	-70,85	<u>Link</u>
Axepta BNP Paribas Benelux	BNP Paribas	26	10,53	-5,03	<u>Link</u>
European Merchant Services	Fiserv Inc	103	n/a	0,39	<u>Link</u>

Source: Orbis | 2021 Financials

Local & Alternative Payment Methods

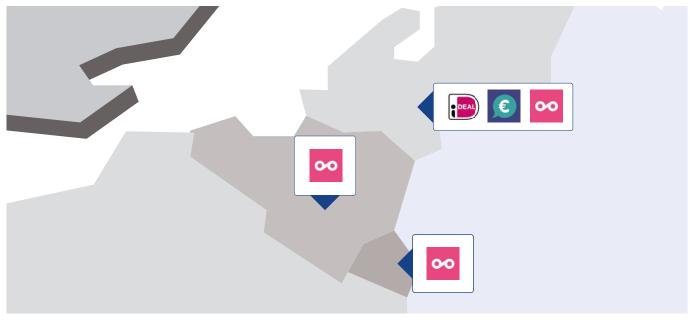
Payconiq is a Luxembourg-based company specialised in account-to-account mobile payments and payment processing. Registered as an authorised payment institution in Luxembourg, the company is also active in Belgium and the Netherlands. It is worth mentioning that, although very popular in Belgium, the Payconiq app was discontinued in the Netherlands in 2022. Nonetheless, the company will stay active in the country by focusing on its payment processing activities⁵⁶. In 2021, the Dutch company Currence announced a new collaboration with Payconiq as a technological partner for the launch of "iDEAL 2.0", an improved version of the Netherlands' most popular online payment scheme iDEAL, scheduled in early 2022⁵⁷.

In Luxembourg, Payconiq managed to partner with BCEE, BGL BNP Paribas, BIL, POST, ING and Raiffeisen. These six partner banks issue the Payconiq supported apps to their customer base. In Belgium, Payconiq is available through more than 20 different banks.

While Payconiq is a highly popular payment method for online and in-store purchases in Belgium and Luxembourg, Tikkie is the most popular payment method in the Netherlands. Developed by the Dutch bank ABN Amro, Tikkie allows users to send an online payment request (a 'tikkie') via WhatsApp or email, for instance. The receivers of a "tikkie" can then pay via iDeal by clicking on the link provided. The Tikkie app was used by over 7 million people in the country in 2021. Due to the widespread use of the brand name, 'tikkie' is now also used in the Netherlands as a generic name for any form of online payment request.

Local Payment Methods	Group	Number of employees	Revenue (Million €)	Net Income (Million €)	Linkedin
Payconiq International S.A.	Independent company	n/a	n/a	n/a	<u>Link</u>
Currence iDEAL B.V.	ABN Amro Bank NV	n/a	n/a	n/a	<u>Link</u>

Source: Orbis | 2021 Financials



⁶ https://siliconcanals.com/news/startups/payconiq-discontinue-netherlands/

⁵⁷ https://www.currence.nl/en/nieuws/payconiq-technology-partner-ideal/

Belgium

Introduction

Fuelled by the COVID-19 crisis and new emerging technologies, Belgium is pursuing its shift towards a cashless society. While the number of digital transactions is expected to double between 2022 and 2027⁵⁸, cash withdrawals are plummeting, with a decrease of almost 50% between 2015 and 2020⁵⁹, and only 13% to 16% of Belgians prefer to make payments in cash.⁶⁰ It is no surprise that the pandemic was the major driver of this trend. In 2019, only 30% of Belgians had experienced contactless payment. This number increased to 70% in 2022⁶¹.

The cashless transition is also accelerated by the new obligation in Belgium to offer electronic means of payment. By 1 July 2022, all businesses must offer their customers at least one electronic means of payment. Companies are, nonetheless, free to choose the solution that best fits their economic situation and clientele.⁶²

In terms of payment card schemes, Bancontact is by far the leader on the Belgian market. By the end of 2020, Bancontact payment cards held 80% of the market share of payment schemes and, in November 2022, Bancontact Payconiq reached 2 billion payments in a single year for the first time ever, twice as much as 12 years earlier, in 2010.⁶³ As will be discussed in the section on local payment methods, Bancontact Payconiq is the preferred online payment method, followed by Visa (11%), Mastercard (4%) and American Express (1%).⁶⁴

Banks

The banking sector in Belgium is characterised by a variety of players active in different market segments. Another feature of the sector is its high degree of international openness. As a matter of fact, out of the 81 banks established in Belgium as of March 2021, 63% were branches and subsidiaries of foreign companies while 19% had Belgian majority ownership.⁶⁵

The four leading Belgian banks are BNP Paribas Fortis, KBC, Belfius and ING Belgium.⁶⁶

BNP Paribas Fortis holds 22,2% of the Belgian market in terms of total assets.⁶⁷ It is a subsidiary of the French banking group BNP Paribas. The bank provides services in retail and private banking, public banking, corporate banking and investment banking.⁶⁸ Fintro is a division of the bank that mainly serves private individuals, but also the self-employed and small and medium-sized enterprises on the Belgian market.⁶⁹ However, BNP Paribas Fortis also serves other kinds of customers such as high-net-worth individuals, Belgian and European corporations, public entities and local authorities.⁷⁰ The bank has its own mobile bank called Hello Bank! In early 2021, in collaboration with Visa, BNP Paribas released the Visa Debit Card, supposedly more widely accepted than Maestro, Mastercard's debit card. It is worth emphasising that BNP Paribas was also the first bank to include ApplePay, Google Pay and Garmin Pay.⁷¹

The second largest bank is KBC, which has 18,83% of the market. The KBC is an acronym for Kredietbank ABB Insurance CERA Bank. With 3,8 million local customers, the bank mainly targets individuals as well as small and medium-sized businesses. KBC was the first major Belgian bank to offer the Instant Card Service. This service allows customers who apply for a new debit card to receive their new digital card in KBC Mobile. It is also a leader in mobile banking. According to an international study conducted by Sia Partners on 155 mobile applications in 22 countries, the KBC mobile application is in third position in terms of service, innovation and user-friendliness, just behind the British neobank Revolut and Intesa Sanpaolo, Italia's largest bank. It outperformed Belfius' app which fell from second to seventh place. Furthermore, KBC was labelled "Best digital performer" in Europe in 2022 by D-Rating, an agency specialised in the rating of companies' digital performance.

- 58 https://www.statista.com/outlook/dmo/fintech/digital-payments/belgium#transaction-value
- 59 https://www.sia-partners.com/en/news-and-publications/from-our-experts/evolution-cashless-society-belgium-0
- 60 https://www.paymentscardsandmobile.com/belgian-population-makes-massive-shift-to-digital-payments/
- 61 https://www.paymentscardsandmobile.com/belgian-population-makes-massive-shift-to-digital-payments/
- 62 https://economie.fgov.be/en/themes/sales/payments/obligation-offer-electronic
- 63 <u>https://www.bancontactpayconiq.com/en/news/for-the-first-time-ever-the-number-of-bancontact-and-payconiq-electronic-payments-made-in-a-calendar-year-exceeds-the-2-billion-mark</u>
- 64 https://www.statista.com/statistics/816436/leading-brands-in-payment-cards-in-belgium/
- 65 https://www.statista.com/topics/5860/banking-in-belgium/#topicOverview
- 66 https://www.ebf.eu/belgium/
- 67 https://thebanks.eu/articles/banks-in-Belgium
- 68 https://www.advratings.com/EUROPE/TOP-BANKS-IN-BELGIUM
- 69 https://www.fintro.be/
- 70 https://www.advratings.com/EUROPE/TOP-BANKS-IN-BELGIUM
- 71 https://www.lecho.be/entreprises/banques/bnp-paribas-fortis-opte-pour-les-cartes-visa-debit/10281586.html
- 72 https://thebanks.eu/articles/banks-in-Belgium
- 73 https://www.advratings.com/EUROPE/TOP-BANKS-IN-BELGIUM
- 74 https://www.tijd.be/ondernemen/banken/kbc-en-belfius-scoren-op-wk-voor-bankapps/10420031.html
- 75 https://newsroom.kbc.com/kbc-labelled-best-digital-performer-in-europe-by-d-rating-thanks-to-its-strong-digital-performance-in-retail-banking



Belfius is the third largest Belgian bank, with a market share of 15,16%. Formerly known under the name of Dexia, the bank has been owned by the Belgian government since 2015. Despite its slight fall in Sia Partners' ranking, Belfius is still a leader in mobile banking. In 2022, together with Proximus, Belfius announced the launch of Banx, a new banking app which allows customers to measure the impact of their transactions on the environment. Through Doconomy, a Swedish company providing tools to businesses in order to fight climate change, users can access a dashboard showing their CO2 production based on their transactions and obtain rewards in partner companies. The companies of the production based on their transactions are companies.

ING Belgium, which is a subsidiary of Dutch banking group ING Group, is in fourth position. The bank's market share stands at 12,08%.⁷⁸

Alongside these four leaders are a multitude of smaller local players such as Argenta, VDK Bank, Crelan, EuropaBank, AXA Bank, Beobank, etc. December 2021 was an important month in the banking sector. BNP Paribas Fortis announced the extension of its long-term collaboration with Bpost bank by acquiring another 50% of the company's shares, becoming the 100% shareholder of Bpost bank. This operation was made with a view to integrating Bpost bank's brand into BNP Paribas Fortis in 2024. Similarly, Crelan Group acquired AXA Bank. While this acquisition makes no difference for Crelan and AXA Bank customers, as both banks will continue to work separately for now, the aim is to merge the two into a single entity labelled under Crelan in 2024.

In addition, the use of neobanks is increasing. In a 2019 study, D-Rated had concluded that neobanks had a minor disruptive effect in terms of digital proposal. Three years and a global pandemic later, conclusions might have changed. Between 2020 and 2022, the number of neobank users almost doubled, going from 170.000 to 320.000 and might double again by 2027. Transaction value, for its part, has already quadrupled since 2019. Neobanks in use in Belgium include Revolut, N26, the Dutch Bunq as well as Aion Bank, which is headquartered in Brussels. Aion bank already had more than 30.000 customers in March 2021. and was recognised as one of the top competitors in digital value creation in Europe in 2022, the second in Belgium.

- 76 https://thebanks.eu/articles/banks-in-Belgium
- 77 https://www.belfius.be/about-us/dam/corporate/press-room/press-articles/downloads/fr/2021/Proximus_Belfius%20_Communiqu%C3%A9%20Banx%2005%2010%202021.pdf
- 78 https://thebanks.eu/articles/banks-in-Belgium
- 79 https://www.bnpparibasfortis.com/newsroom/press-release/bpost-and-bnp-paribas-fortis-confirm-new-seven-year-commercial-partnership
- 80 https://www.brusselstimes.com/210412/bpost-bank-brand-will-be-integrated-into-bnp-paribas-fortis-from-2024
- 81 https://www.crelan.be/fr/particuliers/newsroom/crelan-et-axa-bank-belgium-unissent-leurs-forces
- https://www.d-rating.com/results/digital-proposition-belgian-2019/
- 83 https://www.statista.com/outlook/dmo/fintech/neobanking/belgium#transaction-value
- 84 <u>https://www.rtbf.be/article/la-banque-en-ligne-aion-bank-a-deja-convaincu-plus-de-30-000-clients-10722022</u>
- 85 https://aion.eu/be-en/news/aion-bank-recognised-as-benelux-second-best-in-digital-value-creation

Finally, it is worth mentioning that Nickel made its debut in Belgium in 2022. The company, bought by BNP Paribas in 2017, aims to provide bank accounts to underbanked citizens by working with bookshops and tobacconists across the country. Initially launched in France, the company is expected to reach 4 additional European countries by 2024.⁸⁶

Banks	Group	Number of employees	Revenue (Million €)	Net Income (Million €)	LinkedIn
BNP Paribas Fortis	BNP Paribas	10.532	20.119,00	3.061,00	<u>Link</u>
KBC Bank	KBC Group	28.558	6.471,00	2.135,00	<u>Link</u>
Belfius Banque	Etat Belge	6.531	3.122,43	935,62	<u>Link</u>
ING Belgium	ING Group	7.491	3.020,51	708,58	<u>Link</u>
Argenta Spaarbank	Investar SA	859	655,86	181,04	<u>Link</u>
AXA Bank Belgium	AXA SA	n/a	341,26	92,67	<u>Link</u>
Crelan	Crelanco	2.270	308,68	660,35	<u>Link</u>
Beobank	Caisse Fédérale De Crédit Mutuel	974	243,26	24,32	<u>Link</u>
Deutsche Bank	Deutsche Bank	515	212,85	72,40	<u>Link</u>
Bpost Banque	Bpost Banque	297	156,24	6,28	<u>Link</u>
<u>Europabank</u>	Crelanco	351	98,20	28,40	<u>Link</u>
VDK Bank	VDK bank	272	74,76	20,65	<u>Link</u>
Banque CPH	Parent company	211	66,18	20,24	<u>Link</u>
<u>Triodos Bank</u>	Triodos Bank	149	52,50	30,46	<u>Link</u>
Medirect Bank	ANACAP Financial Partners II	53	20,25	-21,20	<u>Link</u>
<u>Aion</u>	Warburg Pincus	205	7,13	-48,59	<u>Link</u>

Source: Orbis | 2021 Financials

Electronic Money Institutions

There are five active electronic money institutions under Belgian law: Fimaser, Imagor, Paynovate, PPS EU and Worldline Financial Solutions.⁸⁷ All five companies issue cards.

ЕМІ	Group	Number of employees	Revenue (Million €)	Net Income (Million €)	LinkedIn
Worldline Financial Solutions	Worldline	68	41,91	2,64	Link
<u>Fimaser Plc</u>	Carrefour	69	24,66	3,44	Link
PPS EU	Edenred & MasterCard - JV	8	4,87	0,28	Link
lmagor	Sodexo Pass Belgium	8	4,36	1,53	Link
Paynovate	Independent company	16	1,53	-0,21	<u>Link</u>

https://www.lecho.be/entreprises/banques/nickel-le-compte-sans-banque-debarquera-en-belgique-en-2022/10275583.html

⁸⁷ https://www.nbb.be/fr/supervision-financiere/controle-prudentiel/domaines-de-controle/etablissements-de-paiement-et-9

Payment Institutions

There are currently 28 payment institutions registered and authorised in Belgium.⁸⁸ Some important payment institutions are highlighted below.

The French company Worldline handles nearly all payment transactions in Belgium.89

As mentioned in the Benelux section, Axepta BNP Paribas Benelux, a subsidiary of BNP Paribas, took over a part of Ingenico's in-store activities in Belgium, which made it the number two payment service provider in Belgium. This acquisition only concerns the acquiring activities (card payment acceptance) and terminals on the Luxembourgish and Belgian markets⁹⁰.

Isabel is one of the leading fintechs in Belgium. The group offers a wide range of payment solutions for companies. For instance, Isabel 6 brings together payments and account information from 27 partner banks in a single overview and, since 2022, it is now possible for users to log in using the ItsMe app.⁹¹ Ponto allows professionals to create a personalised banking experience using European PSD2 bank account information and payment initiation.⁹² Ibanity is its open banking enabler.⁹³

Payment Institutions	Group	Number of employees	Revenue (Million €)	Net Income (Million €)	LinkedIn
Worldline	Worldline	772	496,36	23,35	<u>Link</u>
<u>Isabel</u>	Parent company	139	62,16	10,24	<u>Link</u>
Alpha Card SCRL	American Express Company	132	43,23	1,83	<u>Link</u>
<u>Cofidis SA</u>	Caisse Fédérale De Crédit Mutuel	410	30,72	14,74	<u>Link</u>
Buy Way Personal Finance	Buy Way Consumer Finance	161	15,70	2,04	<u>Link</u>
Alpha Card Merchant Services	American Express Company	15	12,61	0,56	<u>Link</u>
Axepta BNP Paribas Benelux	BNP Paribas	26	10,53	-5,03	<u>Link</u>
Mastercard Transaction Services	Mastercard	38	8,48	-11,19	<u>Link</u>
<u>Unifiedpost Payments</u>	UnifiedPost Group SA/NV	n/a	3,04	-3,99	<u>Link</u>
Batopin NV	Belfius & KBC Bank	5	2,16	-3,57	<u>Link</u>
<u>eDebex</u>	Camasa	25	n/a	1,21	<u>Link</u>
Oonex	C and T Madden PTY Ltd	n/a	n/a	-0,27	<u>Link</u>
<u>Digiteal</u>	Parent company	6	n/a	-0,48	<u>Link</u>
Bonsai	Independent company	8	n/a	-2,38	<u>Link</u>

Source: Orbis | 2021 Financials

Many payment institutions registered in Belgium focus on international transactions. Belgium is home to a few cross-border payment and peer-to-peer services, including Wise, Worldremit, Moneygram and MoneyTrans. In 2020, MoneyTrans and Mastercard joined forces to facilitate the financial inclusion of migrant workers. The common product gives access to an IBAN account and a Mastercard debit card which is accepted worldwide, with the objective of including up to one million foreign workers by 2025.⁹⁴

Payment Institutions (P2P/Cross-border)	Group	Number of employees	Revenue (Million €)	Net Income (Million €)	LinkedIn
Moneygram International	MoneyGram International, Inc	26	223,81	0,90	<u>Link</u>
Worldremit Belgium	WorldRemit	3	22,30	0,01	<u>Link</u>
Ebury Partners Belgium	Santander Digital Business SL	22	15,85	-18,08	<u>Link</u>
Moneytrans Payment Services	FSA Holding	65	12,66	-0,64	<u>Link</u>
<u>iBanFirst</u>	Rocket Finance	23	12,13	-9,35	<u>Link</u>
Taptap Send Belgium	Taptap Send Inc	6	11,72	-1,35	<u>Link</u>
Wise Europe	Wise Payments Limited	5	n/a	0,12	<u>Link</u>
Money International	Money Management International	15	n/a	0,05	<u>Link</u>
Atlantic Money NV	Atlantic Money	n/a	n/a	n/a	Link

- 88 https://www.nbb.be/fr/supervision-financiere/controle-prudentiel/domaines-de-controle/etablissements-de-paiement-et-15
- 89 <u>https://www.statista.com/statistics/617466/merchant-transactions-card-acquirers-europe/</u>
- https://www.bnpparibasfortis.com/NEWSROOM/PRESS-RELEASE/AXEPTA-BNP-PARIBAS-ANNOUNCES-THE-CLOSING-OF-THE-ACQUISITION-OF-INGENICO%27S-IN-STORE-ACTIVITIES-IN-BELGIUM
- 91 https://www.isabelgroup.eu/en/isabel-6-is-always-on-the-move-and-is-now-picking-up-itsme-too/
- 92 https://www.isabelgroup.eu/en/businesses/
- 93 https://www.isabelgroup.eu/en/banks/
- 94 https://www.lesoir.be/284814/article/2020-03-05/mastercard-et-moneytrans-sallient-pour-une-meilleure-inclusion-des-travailleurs



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Banking-as-a-Service

Banking-as-a-Service is growing as a megatrend as financial institutions pursue their digital transition, and Belgian companies are no exception. In 2021, Aion had announced a strategic collaboration with banking software Temenos and Vodeno, a cloud-native BaaS provider. The aim of this collaboration was to further accelerate the integration of banking services into non-financial businesses on the European market, using Temenos Banking Cloud and Vodeno's card management and payment processing services. This year, Aion and Vodeno are again collaborating with Mastercard to integrate in-app payment methods into Tricount, a successful app used to split bills. The impossibility of paying in-app was the last stumbling block in the process. Additionally, Dutch neobank Bung announced its wish to acquire the company in 2022.

Open Banking Enablers

Belgian bank executives are amongst the most optimistic in Europe about Open Banking, with over 87% of those surveyed by Tink seeing it as a "positive development". Nonetheless, fintech companies still consider it as "mainly theoretical" as the access to banking data is still tricky. Non-financial companies need to be granted a licence by the National Bank of Belgium and some banks try to avoid the agreement by claiming a lack of security in third-party providers.

Ibanity is a financial services integration platform. It is part of Isabel Group, a leading Belgian fintech. Ibanity enables other companies to create banking experiences with their APIs. It offers its services to the leading Belgian banks (BNP Paribas Fortis, Belfius, ING and KBC).

⁹⁵ https://www.temenos.com/news/2021/09/23/temenos-vodeno-and-aion-bank-announce-strategic-collaboration-to-accelerate-the-adoption-of-banking-as-a-service-in-europe/

⁹⁶ https://aion.eu/be-en/news/tricount-aion-and-mastercard-join-efforts-to-transform-shared-expense-management

^{97 &}lt;a href="https://techcrunch.com/2022/05/03/bunq-to-acquire-group-expenses-app-tricount/">https://techcrunch.com/2022/05/03/bunq-to-acquire-group-expenses-app-tricount/

⁹⁸ https://www.taleo-consulting.com/future-of-open-banking-in-europe-belgium/

Local & Alternative Payment Methods

Bancontact Payconiq is the preferred payment method among Belgians. This method allows all types of payments to be made, from in-store transactions using a bank card to smartphone payments using contactless technology (NFC), as well as online transactions via the Bancontact application. Bancontact cards are often co-branded with Mastercard's debit card, Maestro. In 2022, the milestone of 2 billion payments using Bancontact was reached, representing an approximately 20% increase over the previous year. With the rising popularity of cashless payments amongst Belgians, the hegemony of Bancontact is expected to thrive. In October 2022, 81,5% of online payments by mobile were made using Bancontact or Payconiq, an increase of almost 50% compared to 2019 where the ratio was only 55%.

The popularity of Payconiq comes from its ability to meet the expectations of Belgian consumers; a fast, secure means of payment via a user-friendly app. According to RetailDetail, the Payconiq mobile application was downloaded 870.000 times during the coronavirus pandemic. The number of mobile payments using Payconiq increased by 62% between 2020 and 2021, reaching 204 million transactions, and 10,5 million payments were made using QR code at the cash register, 54% higher than in 2020.¹⁰¹

Local Payment Methods	Group	Number of employees	Revenue (Million €)	Net Income (Million €)	LinkedIn
Bancontact Payconiq Company	Belfius, BNP, KBC & AXA	34	28,40	3,80	<u>Link</u>

Source: Orbis | 2021 Financials

Besides Bancontact, Mastercard, Visa and American Express credit cards are also widely used. In 2020, 25% of online purchases were made with a credit card. PayPal comes third with a 17% share of online purchases.

Concerning the big American tech players, Apple Pay had about 150.000 users in Belgium at the beginning of 2019, and Google Pay had around 35.000 users. However, following the increase in the rate of contactless payments, it is very likely that the number of users has increased. Since 2021, it is now possible for ING customers to pay using ApplePay and in 2022, Belfius was the first bank to make Bancontact available on its app. 404

As mentioned in the Payment Institution section, Belgium is home to a few cross-border payment and peer-to-peer services, including Wise, Worldremit, Moneygram and MoneyTrans, and other European payment methods are also in use in Belgium such as Klarna's Buy Now Pay Later (BNPL). It is worth mentioning that the BNPL market continues to grow, along with an increasing ecommerce penetration. BNPL adoption is expected to grow with a CAGR of 38,3% between 2022 and 2028, while payments are expected to reach 2.554 million US\$ in 2022¹⁰⁵.

https://www.adyen.com/payment-methods-guides/europe/belgium

¹⁰⁰ https://assets-us-01.kc-usercontent.com/d07e2520-6dfa-00c4-d8b7-d0d10ceb2eee/252f6210-05ad-4493-8a61-33c4388120cc/PREN.pdf

https://www.payconiq.be/en/news/62-more-mobile-payments-in-2021

https://www.statista.com/statistics/1135469/contactless-payment-market-share-during-covid-19-in-belgium/

^{103 &}lt;a href="https://newsroom.ing.be/ing-belgium-brings-apple-pay-to-customers">https://newsroom.ing.be/ing-belgium-brings-apple-pay-to-customers

¹⁰⁴ https://www.brusselstimes.com/294935/belfius-to-make-bancontact-available-on-apple-pay

https://www.businesswire.com/news/home/20220208005843/en/Belgium-Buy-Now-Pay-Later-Market-Report-2022-BNPL-Payments-are-Expected-to-Grow-by-67.4-to-Reach-2554.0-Million-in-2022---Forecast-to-2028---ResearchAndMarkets.com



Roberto SAPORITO Founder & CEO



- **(Sample 1)** +32.497.59.22.76
- □ roberto@nextgenpayment.eu
- S robbysapy
- @Roberto_Saporito

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- Dedicated people at your service

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Others

The Society for Worldwide Interbank Financial Communication, better known under the acronym SWIFT, provides standardised inter-bank transfer messaging services and interfaces in more than 200 countries. The network carries over 8,4 billion messages per year and is used by more than 11.000 member institutions¹⁰⁶.

Two years ago, the four leading banks (BNP Paribas Fortis, KBC, Belfius and ING Belgium) together launched Batopin (Belgian ATM Optimisation Initiative), a new neutral network of cash points, intelligently distributed throughout the country. The aim of this initiative was to have a full network of ATMs by 2025. Similarly, the same year, four other major Belgian banks (Argenta, AXA Bank, Crelan and VDK Bank) together with BPost created JoFiCo (Joint Financial Company) to collectively manage their ATMs. In 2022, Test-Achats (TA) and Financité, two non-profit associations, criticised the joint-venture, asking the government to freeze the project. As the IWEPS warns in a recent study about the "banking desertification" of the South of the country, TA and Financité argue that Batopin might accentuate this deficiency even more by drastically diminishing the number of ATMs. Another fear is the possibility of incurring fees when withdrawing cash, as KBC does not consider these standardised ATMs as part of its network¹⁰⁷. The Minister of Economy Pierre-Yves Dermagne indicated that Batopin is under investigation by the Belgian competition authority, as the four companies must prove the positive impact of their project for the consumer¹⁰⁸.

Others	Group	Number of employees	Revenue (Million €)	Net Income (Million €)	LinkedIn
SWIFT	Parent company	3.300	905,40	35,82	<u>Link</u>
Openway Europe	Openway Holdings	43	26,64	4,29	<u>Link</u>
Batopin	Belfius & KBC	5	2,16	-3,57	<u>Link</u>
Finflag	Parent company	10	n/a	0,19	<u>Link</u>

¹⁰⁶ https://www.swift.com/about-us

⁷ https://www.lecho.be/entreprises/banques/batopin-doit-revoir-son-projet-de-distributeurs-automatiques-selon-test-achats/10431393.html

¹⁰⁸ https://www.7sur7.be/economie/l-autorite-de-la-concurrence-enquete-sur-batopin~aa5fe0f4/

The Netherlands

Introduction

The Dutch payment system is well known for its efficiency. Driven by a strong banked population, it is oriented towards electronic, contactless and even cardless technologies.¹⁰⁹

In 2021, 5,67 billion POS transactions were made in the Netherlands, where 79,1% were made by debit card and 20,5% by cash. The remaining 0,4% represents credit card transactions¹¹⁰. Credit cards were indeed quite unpopular in the Netherlands. While Maestro and Vpay debit cards, along with iDEAL and the Tikkie app - which are further developed later in this report - were the most widely used and accepted, Mastercard and American Express were hardly ever accepted, both online and at points of sale. In that sense, the Netherlands was becoming an exception in the EU, which is why the Dutch Payment Association in 2022 announced a project involving Mastercard, Visa and PSPs to make credit cards and Visa cards more widely accepted¹¹¹. In early 2023, as more and more businesses accept Mastercard and Visa, Mastercard announced that Maestro cards are to become obsolete by mid-2023 and customers should automatically receive a new card during the year.¹¹²

The trend observed in 2020 was still valid in 2021, although it had stabilised. Consumers made slightly fewer payments at points of sale than the year before, while cash payments dropped by another 10%. Contactless payments are becoming the norm as all payment terminals accept contactless payments virtually and every holder of a bank card can request a contactless card. By the end of 2021, the share of contactless payments with debit cards and credit cards increased to 87% (versus 85% in December 2020). Cardless payments continued with their breakthrough; almost 25% of all contactless payments were made with smartphones and wearables (with built-in NFC chips), which represents an increase of almost 54% in comparison with 2020. 113

Almost nine in ten Dutch bank customers use mobile devices (smartphones and tablets) or internet banking (on desktops and laptops) for banking services. There were 373 million e-commerce transactions in the Netherlands in 2021, valued at 30,64 billion €. Among these transactions, 55% were executed on computers, 29% on smartphones and 14% on tablets.¹¹⁴

Banks

Following massive consolidation after the financial crisis, the Dutch banking sector is dominated by very large banks. ING is the largest Dutch bank, followed by Rabobank and ABN Amro. Together with BNG Bank and NWB Bank, they represent 92% of the Dutch market. The Dutch banking sector is consequently one of the most concentrated in Europe¹¹⁵. The remaining 8% includes smaller banks such as the sustainable bank Triodos and de Volksbank.¹¹⁶

With a balance sheet of €951 billion in 2021 (39% of the market share)¹¹⁷, ING is by far the largest bank in the Netherlands. The bank issues mainly Maestro and Vpay debit cards, and also issues Mastercard credit cards. ING is an iDEAL issuer and acquirer.

Rabobank is in second place, with its total assets reaching 640 billion € (26% of the market share)¹¹⁸. The bank offers payment accounts and online banking services. It issues Maestro debit cards, Visa and Mastercard credit cards, and is an iDEAL issuer and acquirer. Since 1 August 2022, Rabobank's cardless payment system "Rabo Wallet" has been replaced by Google Pay. The other features will be managed by the Rabo App. 119

Finally, ABN Amro is in third place, with the bank having a balance sheet total of 399 billion € (17% of the market share) in 2021¹²⁰. The bank is an iDEAL issuer and acquirer. It issues Maestro debit and Mastercard credit cards. ABN Amro has developed the mobile application Tikkie that allows users to send an online payment request (a 'tikkie') via WhatsApp or email, for instance. The receivers of a "tikkie" can then pay via iDeal by clicking on the link provided. Due to the widespread use of the brand name, 'tikkie' is now also used in the Netherlands as a generic name for any form of online payment request.

Alongside these three major banks, there are some smaller local players such as the Volksbank, Aegon and the sustainable bank Triodos. Note that the Volksbank has different specialised subsidiaries, including SNS Bank, ASN Bank and Regio Bank.

The presence of foreign banks is relatively small in comparison to other European countries. In 2022, only 58% of banks in the Netherlands were foreign banks, compared to 81,5% in Belgium and 92% in Luxembourg. ¹²¹ Foreign banks include Deutsche Bank and Handelsbanken. The latter was an iDeal issuer until 1 October, when the bank decided to stop providing this service. ¹²²

- 109 https://www.globaldata.com/store/report/netherlands-cards-and-payments-market-analysis/
- 110 https://factsheet.betaalvereniging.nl/en/
- 111 https://www.betaalvereniging.nl/en/payment-products-services/point-of-sale-payments/project-dca/
- 112 https://dutchreview.com/news/mastercard-to-stop-issuing-maestro-debit-cards-in-2023/
- 113 https://www.betaalvereniging.nl/wp-content/uploads/Dutch-Payments-Association-Annual-Report-2021.pdf
- 114 https://factsheet.betaalvereniging.nl/en/
- https://www.statista.com/statistics/737276/leading-banks-with-domestic-origins-in-the-benelux-by-total-assets/
- 116 https://www.banken.nl/bankensector/marktaandeel
- 117 <u>https://www.banken.nl/bankensector/marktaandeel</u>
- 118 https://www.banken.nl/bankensector/marktaandeel
- 119 https://www.rabobank.nl/particulieren/betalen/contactloos/rabo-wallet
- 120 https://www.banken.nl/bankensector/marktaandeel
- 121 https://www.statista.com/statistics/706377/share-of-foreign-banks-in-the-benelux-by-country/
- 122 https://www.pay.nl/actueel/per-1-oktober-stopt-handelsbanken-met-het-aanbieden-van-ideal

In the Netherlands, both traditional banks and fintech companies actively promote the use of online banking features. In 2018, the apps of both ING and Rabobank ranked among the most popular smartphone apps in the country. In 2022, Tikkie is in the top 50 most popular apps on the Google Play Store. 123

In addition to the traditional banking players, some Dutch fintechs have emerged in the payments landscape, such as Bunq and Knab. Founded in 2012, Bunq is a Dutch mobile application with a banking licence in the Netherlands. It was the first European banking licence granted in over 35 years and, in 2021, Bunq announced that it had reached 1 billion € in user deposits, more than ten times the deposits it had in 2017.¹²⁴¹²⁵ The neobank has based its strategy on environmental protection and travel community building, and that strategy has proven to be successful. In 2021, the company, which up to then had been self-funded by its CEO and founder Ali Niknam, raised 228 million US\$, the largest Series A round for a European fintech company.¹²⁶ Knab is an online bank developed by Aegon Bank Group. It offers business and private payment accounts and online payment requests. Foreign neobanks such as Revolut and N26 are also widely used in the country.

Banks	Group	Number of employees	Revenue (Million €)	Net Income (Million €)	LinkedIn
ING Bank	ING Groep	57.660	18.516,00	4.898,00	<u>Link</u>
Cooperatieve Rabobank	Parent company	43.361	12.888,00	3.692,00	<u>Link</u>
ABN AMRO Bank	Parent company	19.957	7.737,00	1.234,00	<u>Link</u>
De Volksbank	the state of the Netherlands	3.178	827,00	162,00	<u>Link</u>
BNG Bank	Parent company	353	551,00	236,00	<u>Link</u>
NIBC Bank	Blackstone	637	504,00	190,00	<u>Link</u>
Nationale-Nederlanden Bank	NN Group	1.246	379,69	101,77	<u>Link</u>
Triodos Bank	Triodos Bank Holding	1.715	341,95	50,76	<u>Link</u>
AEGON Bank	Aegon	386	259,81	81,60	<u>Link</u>
BinckBank	Saxo Bank	395	190,60	55,29	<u>Link</u>
Achmea Bank	Vereniging Achmea	195	143,02	39,27	<u>Link</u>
GarantiBank International	Banco Bilbao Vizcaya Argentaria	224	72,97	18,01	<u>Link</u>

Source: Orbis | 2021 Financials

Electronic Money Institutions

There are 10 electronic money institutions registered and authorised by the Dutch National Bank to carry out the business of an Electronic Money Institution. 127

ЕМІ	Group	Number of employees	Revenue (Million €)	Net Income (Million €)	LinkedIn
<u>Uber Payments</u>	Uber Technologies Inc.	15	146,53	0,31	<u>Link</u>
<u>Franx</u>	ABN Amro Bank	39	2,02	-3,57	<u>Link</u>
Airwallex (Netherlands)	Airwallex (Caiman)	18	n/a	n/a	<u>Link</u>
Intersolve Payments	Intersolve Group	11	n/a	n/a	<u>Link</u>
WEX Europe Services	WEX	13	n/a	0,18	<u>Link</u>
World First Netherlands	Hangzhou Yun BO Investment Consulting	7	n/a	n/a	<u>Link</u>

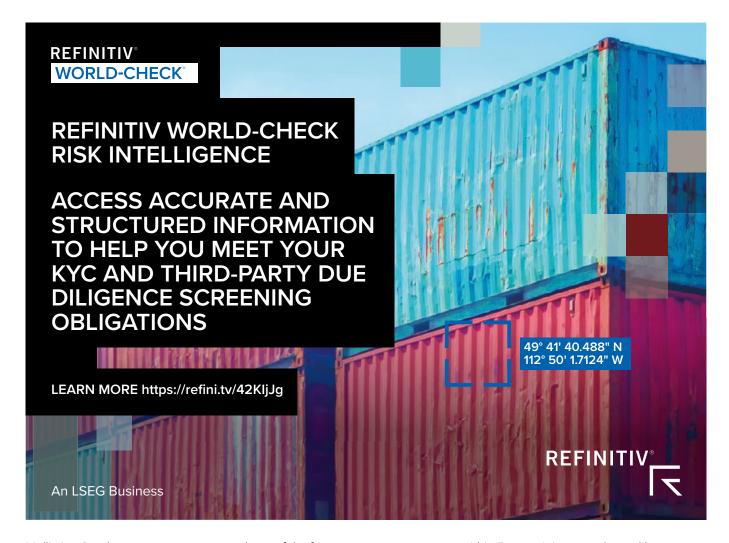
Source: Orbis | 2021 Financials

Payment Institutions

There are 66 active payment institutions registered and authorised by the Netherlands Bank¹²⁸.

Adyen, the 45-billion-dollar company¹²⁹, is a processor and acquirer. It provides payment solutions for Netflix, Facebook, Uber and Spotify, among others. In 2022, Adyen launched its own all-in-one Android POS terminal. The terminal comes with a customisable app management system, which allows merchants to upload and manage their favourite apps.¹³⁰

- 123 https://www.similarweb.com/apps/top/google/store-rank/nl/all/top-free/
- 124 https://tech.eu/2021/04/28/amsterdam-based-neobank-bung-reaches-e1-billion-in-user-deposits/
- https://www.statista.com/statistics/916120/deposits-from-customers-of-bung/
- https://techcrunch.com/2021/07/07/european-challenger-bank-bung-raises-228-million-at-1-9-billion-valuation/
- 127 https://euclid.eba.europa.eu/register/
- 128 https://euclid.eba.europa.eu/register/
- 129 https://finance.yahoo.com/quote/ADYEN.AS/
- 130 https://www.adyen.com/press-and-media/adyen-launches-android-pos-terminals



Mollie is a Dutch payment processor, and one of the fastest payment processors within Europe. It is currently used by over 130.000 businesses in Europe and it offers various payment methods such as PayPal, Sofort, iDEAL, Visa and Maestro cards, Apple Pay and Klarna. 131 As from May 2022, it is a Preferred Technology Partner of BigCommerce, an e-commerce software company. Customers can now easily add Mollie to their payment settings.

EquensWorldline, a subsidiary of Worldline, is a payment processor headquartered in Utrecht. With its launch in the Netherlands, it became the largest instant payment processor in the euro area in 2019. 132

European Merchant Service is a gateway operating at European level offering online and offline payment solutions. It is a joint venture of ABN Amro and Fiserv.

International Card Services (ICS), an independent subsidiary of ABN Amro Group, offers outsourcing services for issuing Visa and Mastercard credit cards.

PAY. is an independent company providing all-in-one payment solutions including online, in-store and omnichannel payments for businesses. Its solutions support all classic methods such as iDEAL, Visa and Mastercard as well as some more specific methods such as Alipay and WeChat.¹³³

CCV provides end-to-end payment solutions from fixed and mobile terminals to payment methods acceptance¹³⁴. The company serves online and brick-and-mortar shops mostly in Europe and counts 750.000 terminals for more than 120.000 clients.¹³⁵

CM.com is initially a mobile services company which also provides financial services. It is a reference in Conversational Commerce and offers a suite of products and solutions aimed at businesses to facilitate their everyday financial management: QR code creation, subscription fees collection, payment acceptance, etc.¹³⁶

Founded in 1999, Multisafepay is an independent company which offers tailor-made payment services to more than 18.000 small and medium businesses.¹³⁷

- 131 https://www.mollie.com/nl
- https://be.worldline.com/en/home/newsroom/general-press-releases/2019/pr-2019_06_19_01.html
- 133 https://www.pay.nl/en/solutions
- 134 https://www.ccv.eu/be-fr/solutions-de-paiement/
- 135 https://www.ccv.eu/be-fr/a-propos-de-ccv/
- 136 https://www.cm.com/payments/
- 137 https://www.multisafepay.com/company/what-we-do



PSP	Group	Number of employees	Revenue (Million €)	Net Income (Million €)	LinkedIn
Adyen N.V	Parent company	2.180	5.981,54	469,72	Link
equensWorldline SE	Worldline	4.355	742,88	60,36	Link
Global Collect Services BV	Worldline	572	532,64	12,55	Link
Worldpay B.V.	Fidelity National Information Services Inc.	44	283,71	-117,79	Link
Cm.Com NV	Parent company	755	237,05	-17,49	<u>Link</u>
Payvision B.V.	ING Groep NV	185	163,75	2,40	<u>Link</u>
CCV Group B.V.	Stichting Temper Holding	1.008	150,14	4,27	<u>Link</u>
International Card Services BV	ABN Amro Bank NV	555	132,86	-28,73	Link
Mollie Holding B.V.	Parent company	418	53,24	-70,85	Link
European Merchant Services B.V.	Fiserv Inc	103	n/a	0,39	<u>Link</u>
MultiSafepay B.V.	Parent company	55	n/a	4,13	<u>Link</u>

Open Banking Enablers

ING Group has invested in other scale-ups, such as Cobase, in partnership with Nordea and Crédit Agricole SA. Cobase is a trade name of Financial Transaction Services BV and operates as a multibank platform offering payment and treasury services for corporates.

Open Banking Enabler	Group	Number of employees	Revenue (Million €)	Net Income (Million €)	LinkedIn
Financial Transaction Services	Financial Transaction Services	18	n/a	n/a	<u>Link</u>

Local & Alternative Payment Methods

iDEAL is the number one online payment method in the Netherlands. It reached 99 billion € in transactions in 2021, which is 41% higher than the previous year.¹³⁸ iDEAL's market share in e-commerce increased from 60% in 2019 to 70% in 2021. The use of iDEAL makes the Dutch online payment market unique. In most European countries, Mastercard, Visa and PayPal are the most widely used payment methods. In the Netherlands, over 53% of customers prefer to use iDeal rather than other means of payment.¹³⁹

As mentioned above, the Tikkie app developed by ABN Amro is another very popular local means of payment. Used by over 7 million people in the country in 2021, its popularity is partly down to the wide use of WhatsApp, one of the country's most popular social media platforms. 140

Besides these payment methods, pay later methods such as Klarna, Tinka, Spraypay and AfterPay are also common. In May 2022, Klarna announced the launch of Virtual Shopping, a new technology bringing together the in-store experience and online flexibility by connecting customers directly to in-store experts while browsing online. AfterPay, a trade name developed by Arvato Finance BV, has managed to gain in popularity and reached 450 million € in transactions annually in 2018¹⁴². Tinka offers various deferred payment options to 2 million active clients. The company works with over 10.000 shops and processes more than 90 million transactions per year¹⁴³. The Tinka app is available both on AppStore and Google Play. Spraypay offers terms up to 36 months for products and services between 250€ and 5.000€ and is a partner of PAY. ApplePay is also gaining in popularity. The number of transactions via ApplePay had already increased from 116 million in 2019 to 516 million in 2020 and ApplePay's market share doubled from 0,2% to 0,4% between 2020 and 2021. ApplePay is also gain to 2020 and 2021.

The usage of digital "incassomachtigen" (mandates) increased by 13% in 2021, reaching 885.000 online mandates. This trend might be accentuated as paper Acceptgiro will no longer be processed from 1 June 2023 onwards, so alternatives such as IDEAL payment requests or digital incassomachtigen will have to be used.¹⁴⁶

Note that Payconiq, the mobile payment application widely used in Luxembourg and Belgium, stopped its app in the Netherlands as of 1 January 2022¹⁴⁷. In 2022, the company partnered with Currence (iDEAL), an online payment method that enables consumers to pay online through their own bank. Through this collaboration, consumers will be able to complete a purchase in one click and merchants will even be able to support subscription-based models securely with low friction¹⁴⁸.

Local Payment Method	Group	Number of employees	Revenue (Million €)	Net Income (Million €)	LinkedIn
arvato Finance B.V.	Bertelsmann Stiftung Gemeinnutzige Einrichtung	90	28,20	3,08	<u>Link</u>
Trustly Netherlands B.V.	Trustly AB	1	n.a.	n.a.	<u>Link</u>
TargetMedia B.V.	TargetMedia BV	9	n.a.	n.a.	<u>Link</u>
Rewire EU B.V.	Rewire	6	n/a	n/a	<u>Link</u>
Currence iDEAL B.V.	ABN Amro Bank NV	n/a	n/a	n/a	<u>Link</u>
Currence Incassomachtigen B.V.	ABN Amro Bank NV	n/a	n/a	n/a	<u>Link</u>
Acceptgiro B.V.	ABN Amro Bank NV	n/a	n/a	n/a	<u>Link</u>
Azimo Holding B.V.	Azimo LTD	n/a	n/a	n/a	Link
Klarna B.V.	Klarna Holding BV	n/a	n/a	n/a	Link
Ease2pay B.V.	Ease2pay NV	n/a	n/a	n/a	Link

¹³⁸ https://factsheet.betaalvereniging.nl/en/

https://finxp.com/insights/10-top-payments-methods-in-europe-for-2022/

¹⁴⁰ https://www.statista.com/statistics/917381/number-of-users-of-tikkie-in-the-netherlands/

^{141 &}lt;a href="https://www.mordorintelligence.com/industry-reports/netherland-payments-market">https://www.mordorintelligence.com/industry-reports/netherland-payments-market

¹⁴² https://factsheet.betaalvereniging.nl/en/

¹⁴³ https://www.tinka.nl/over-ons

https://www.spraypay.nl/over-spraypay/

¹⁴⁵ https://www.betaalvereniging.nl/wp-content/uploads/Dutch-Payments-Association-Annual-Report-2021.pdf

¹⁴⁶ https://www.currence.nl/nieuws/sterke-groei-ideal-idin-im-2021/

https://siliconcanals.com/news/startups/payconiq-discontinue-netherlands/

¹⁴⁸ https://www.payconiq.com/payconiq-and-currence-partnership-creating-a-seamless-payment-flow-together/

Luxembourg

Introduction

Located in the heart of Europe and hosting 123 banking institutions from all over the world¹⁴⁹, Luxembourg is a major player in the payment industry in the European Union and has become an international financial and banking hub, making the financial industry one of the key industries supporting the country's economy¹⁵⁰.

With the emergence of international PSPs, new digital services are offered to customers located in the European Union through the passporting model, such as mobile payments, e-money issuance, e-wallets or cryptocurrency exchange.

According to a study carried out by the LHoFT in collaboration with the Payments association¹⁵¹, in 2021 credit cards, wire transfers and cash were the top 3 preferred payment methods, with debit cards having lost ground in favour of credit cards over the past few years. Regarding contactless payments, there was a near-total adoption across all the different age groups, and the majority of respondents (61%) use at least 5 different payment methods.

Card payments were the most frequently used method at the POS also in 2022, accounting for 52% of the number of total transactions, and 63% in terms of value of transactions¹⁵².

Although cash use is declining, with a 7% decrease in cash withdrawals from ATMs in 2022, the population still considers the option to pay in cash important. The average amount of cash held in wallet and cash reserves was, on average, more than 110€. At the POS, cash accounted for 39% of the number of total transactions, and 26% in terms of value of transactions¹⁵³.

In 2022, the share of mobile payments in P2P transactions was about 25% and the share of mobile payments reached 34% in terms of value¹⁵⁴.

Despite the recent growth in mobile app payments, their percentage of total POS payments was still quite small. In Luxembourg, the proportion of mobile payments was just over 5% of the total transactions, while the percentage of residents who own cryptocurrency assets and utilise them for transactions and investments was 8%¹⁵⁵.

Banks

The Luxembourg banking industry continues to run a strong and dynamic banking ecosystem, characterised by sustained asset growth and developing business models that are heavily client-centric. The total number of authorised banks decreased slightly in 2022 (from 124 to 120), while total banking assets reached 998,7 billion € in September 2022, demonstrating a strong performance¹⁵⁶.

Most banks are subsidiaries of foreign banks. In terms of geographical representation, German banks lead the way, followed by French and Chinese banks. J.P. Morgan Bank Luxembourg, Banque et Caisse d'Epargne de l'Etat Luxembourg (BCEE), BGL BNP Paribas and Société Générale Luxembourg are among the most important banks.

The main retail banks are Spuerkeess, BGL, BIL, ING, Raiffeisen, as well as the telecommunication operation POST which markets current account offers to individuals.

BCEE is a state-owned bank and is the biggest retail bank in Luxembourg, with 53,76 billion € of total assets in 2021¹⁵⁷. Its web-banking solution, S-Net Mobile, has integrated the local payment method Payconiq as well as Apple Pay. Spuerkeess has designed specific offers for school students aged from 12 to 18 (Axxess Start), students aged from 18 to 30 (Axxess Study), as well as active young people up to 30 years of age (Axxess Job). It issues Visa debit and credit cards.

BGL BNP Paribas, part of the French group BNP Paribas, has also designed specific offers for the younger generations (high school students, students and young professionals), as well as a package for civil servants. Concerning payment cards, BGL issues both Mastercard and Visa credit cards. In 2020, it launched the Visa debit card, giving users the opportunity to easily purchase goods online and in stores around the world. Payments can be made via Apple, Payconiq, Garmin and Fitbit smart devices.

At Société Générale, a fingerprint bank card with an integrated fingerprint reader to simplify and secure all card payments, and compatible with all payment terminals that accept contactless technology, is currently under development¹⁵⁸. Société Générale Luxembourg is a multi-expert banking group based in Luxembourg with foreign subsidiaries in Switzerland and Monaco.

Banque Raiffeisen offers credit and debit cards, and commits to planting 1 tree for every 200 transactions made using any of the new, sustainable Visa credit cards¹⁵⁹. Other noteworthy banks include ING and Deutsche Bank. Similarly to Raffeisen, ING issues Visa debit (V Pay) and credit cards.

Finally, note that Elavon is the main acquirer in Luxembourg.

- 149 https://www.cssf.lu/
- 150 https://www.luxembourgforfinance.com/en/financial-centre/banking/
- 151 https://lhoft.com/en/the-payments-report/
- https://www.ecb.europa.eu/stats/ecb_surveys/space/html/ecb.spacereport202212~783ffdf46e.en.html
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- 156 https://www.cssf.lu/
- 157 https://www.spuerkeess.lu/fileadmin/mediatheque/documents/about_us/rapports_annuels/Rapports_et_bilan_2021.pdf
- 58 https://www.olkypay.com/EN/blog/24-the-biometric-bank-card.php
- 159 https://www.raiffeisen.lu/sites/default/files/documents/raiffeisen_rapport_annuel_2020_bd.pdf

Concerning the neobanking segment, its transaction value in Luxemburg is expected to grow at an annual growth rate of 16,27% (from 2023 to 2027) resulting in a projected total amount of 11,23 billion € by 2027. The user penetration rate is expected to reach 35,4% by that time¹⁶⁰.

Banks	Group	Number of employees	Revenue (Million €)	Net Income (Million €)	LinkedIn
BGL BNP Paribas	BNP Paribas	1.000	1.621,10	574,40	<u>Link</u>
Deutsche Bank	Deutsche Bank Group	750	791,41	147,59	Link
BIL	Legend Holdings Limited	1.955	669,09	135,45	Link
Societe Generale	Société Générale	1.000	608,93	262,89	Link
<u>BCEE</u>	Government of Luxembourg	1.860	606,09	n/a	Link
Advanzia Bank	Parent company	150	375,09	120,73	Link
ING Luxembourg	ING Group	750	305,91	91,00	<u>Link</u>
UniCredit International Bank	UniCredit	n/a	n/a	n/a	<u>Link</u>
J.P. Morgan	J.P. Morgan	n/a	n/a	n/a	<u>Link</u>
Banque de Luxembourg	CIC	n/a	n/a	n/a	<u>Link</u>
Banque BCP	ВСР	n/a	n/a	n/a	<u>Link</u>
Banque Raiffeisen	Parent company	n/a	n/a	n/a	<u>Link</u>
Elavon Financial Services	Elavon	n/a	n/a	n/a	<u>Link</u>

Source: Orbis | 2021 Financials

Electronic Money Institutions

Luxembourg is a leader in e-money transactions in the European Union. The total number of e-money transactions grew exponentially in the last decade. In 2021, there were approximately 5,05 billion e-money purchases compared to 4,45 billion in 2020, an increase of more than 14% over the span of a year¹⁶¹.

There are currently 11 electronic money institutions operating in Luxembourg which are licensed and authorised by the Commission de Surveillance du Secteur Financier (CSSF)¹⁶². These players are shown in the table below.

Amazon Payments (United States), Alipay (China), 3S Money (United Kingdom) and PingPong (China) have established their European headquarters in Luxembourg in order to reach the EU market. Having an e-money licence enables these companies to conduct their activities in any of the 31 EEA member states due to EEA passport rules.

J.P. Morgan Mobility Payments Solution is the result of the acquisition of Volkswagen Payments S.A. by J.P. Morgan in 2021. The platform covers initial purchase and lease payments, in-vehicle payments, refuelling and recharging of electric vehicles, parking and subscription-based services such as vehicle insurance. Its aim is to accelerate the change in mobility¹⁶³.

Local players include Dock Financial, Joompay, Mangopay and SnapSwap. Dock Financial is a Banking-as-a-Serving (BaaS) platform and will be further discussed below.

SnapSwap holds a Principal Mastercard membership which allows the company to issue debit and credit cards and process the transactions. The company offers three products: Everestcard (business accounts), Snaprove (onboarding and identity verification solutions) and a white-label card programme. In September 2022, Wallee Group AG closed the acquisition of SnapSwap International S.A. This acquisition will enable the companies to jointly reach an additional 50.000 clients, offer new functionalities and expand into new European markets¹⁶⁴.

Mangopay is a payment gateway for platforms. Some of its customers include Vinted, Chrono24 and Vestiaire Collective. In 2022, Mangopay announced the arrival of Advent International as their new majority shareholder. The private equity company pledged 75 million € to help Mangopay become a global leader in payments infrastructure for platforms and marketplaces. In November 2022, Mangopay acquired the fraud detection and prevention firm Nethone to offer anti-fraud solutions designed for platform businesses¹⁶⁵.

Finally, Satispay is a mobile payment solution allowing the users of the app to pay in physical and online stores and exchange money between friends. While the company's mother company is headquartered in Milan (Italy), it holds an e-money licence in Luxembourg. The company has 3,3 million customers and 240.000 merchants across Italy, Luxemburg, Germany and France.

- 160 https://www.statista.com/outlook/dmo/fintech/neobanking/luxembourg
- https://www.statista.com/statistics/443515/electronic-money-payment-in-luxembourg/
- 162 https://www.cssf.lu/
- https://www.businesswire.com/news/home/20210908005411/en/J.P.-Morgan-to-Take-Majority-Ownership-of-Volkswagen-Payments-Business
- 164 https://www.snapswap.eu/news/wallee-group-ag-announces-closing-of-snapswap-international-sa-acquisition
- https://blog.mangopay.com/news/mangopay-and-nethone-join-forces



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- ISO 27001 certification

BANK COMPLIANCE

PLATFORMS

(FPSD2 **(**FCEDRS)



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DiGiCASH

ЕМІ	Group	Number of employees	Revenue (Million €)	Net Income (Million €)	LinkedIn
3S Money	3S Money Club	n/a	n/a	n/a	Link
Alipay Europe	Hangzhou Yun Bo Investment	n/a	n/a	n/a	Link
Amazon Payments Europe	Amazon.com	n/a	n/a	n/a	Link
Dock Financial	Independent company	n/a	n/a	-4,52	Link
J.P. Morgan Mobility Payments Solutions	J.P. Morgan	19	3,30	-8,36	Link
Joompay.	Joom Holdings	n/a	n/a	n/a	<u>Link</u>
Mangopay	Advent International	66	64,49	-8,18	<u>Link</u>
PingPong Europe	PingPong Global Holdings	n/a	n/a	n/a	Link
Satispay Europe	Satispay	n/a	n/a	n/a	Link
SnapSwap International	Independent company	n/a	0,41	-1,11	<u>Link</u>

Source: Orbis | 2021 Financials

Payment Institutions

There are currently 17 active payment institutions authorised and regulated by the Commission de Surveillance du Secteur Financier (CSSF)¹⁶⁶. These payment institutions are shown in the table below.

The Airbnb and eBay platforms both have their own in-house payment solutions. Having a payment institution in Luxembourg enables these companies to accept and process payments in any of the 31 EEA member states due to EEA passport rules. Other foreign (non-EU) companies have set up in Luxembourg and hold a licence in Luxembourg to have access to the EU market. This is the case of Bitstamp, Monex, PPRO (Great Britain), XGD (China) and bitFlyer (Japan).

166 https://www.cssf.lu/en/

Worldline, the French leader, is one of the main processors in Luxembourg, the main acquirer being Elavon as mentioned above.

Local players include LuxHub, Payconiq, Sogexia and iBAN-X. LuxHub is an open banking enabler and will be further discussed below. Similarly, Payconiq is one of the most popular local payment methods in Luxembourg (and Belgium). Thus, the player will further be analysed in the following sub-section.

Sogexia provides payment accounts to consumers and businesses. It is a Mastercard Principal Member. One of Sogexia's innovative features is that it offers a dual IBAN, from both Luxembourg and France. Olkypay offers similar services, but the company only focuses on businesses.

iBAN-X, part of COMO Group, offers digital payments infrastructure to businesses, payment service providers, marketplaces and fintechs. It offers global payment transaction services on an API-driven Payment-as-Service platform.

Headquartered in Berlin, Unzer holds a payment institution licence in Luxembourg through its subsidiary Unzer Luxembourg S.A. The company provides online and in-store payments solutions to merchants.

Payments Institutions	Group	Number of employees	Revenue (Million €)	Net Income (Million €)	LinkedIn
<u>Worldline</u>	Worldline	n/a	294,48	15,71	<u>Link</u>
Bitstamp	Bitstamp Europe	n/a	66,01	17,59	Link
Payconiq International	Parent company	n/a	n/a	n/a	Link
Sogexia	Sogexia	n/a	7,57	0,95	Link
<u>Luxhub</u>	Independent company	n/a	7,47	-0,47	Link
bitFlyer	BitFlyer	n/a	5,42	0,55	Link
PPRO	PPro	13	3,04	-0,35	Link
<u>Olky</u>	Olky Payment Service Provider	18	1,88	0,83	<u>Link</u>
Airbnb Payments	Airbnb	6	n/a	1,42	<u>Link</u>
Monex	Monex Europe Holdings	n/a	n/a	n/a	<u>Link</u>
<u>Unzer</u>	Unzer	n/a	n/a	n/a	<u>Link</u>
XGD_	Nexgo Global	n/a	n/a	n/a	Link
<u>eBay</u>	еВау	n/a	n/a	n/a	Link
iBAN-X	COMO Group	n/a	n/a	n/a	Link

Source: Orbis | 2021 Financials

Banking-as-a-Service

Headquartered in Luxembourg. Banking Circle is an important Banking-as-Service (BaaS) company focusing on B2B global banking services. It is a fully licensed bank and offers services to payment and e-money businesses and banks of any size for them to seize opportunities in the payments industry. Banking Circle serves over 250 financial institutions, and in the first three quarters of 2022 the Luxembourg bank exceeded a total annual payment volume of 332 billion €. This indicates that it is processing more than 10% of Europe's B2C e-commerce flow, based on the number of inbound payments processed and new market size according to Worldpay's 2022 Global Payments Report.

In 2022, Banking Circle acquired SEPAexpress, which provides trusted and seamless white-label account-to-account payments for payment service providers, merchants and corporates in Europe.

The bank has also added stable coins in USDC for payment acceptance, processing and settlement. In this way, it is possible to cut the need for significant IT or financial investment for businesses that want to get into the web3 market.

Dock Financial has offices in Luxemburg, Munich and Vilnius. As mentioned in the EMI sub-section, Dock Financial holds an e-money licence and the company is also a principal member of Mastercard. It offers a cloud native Banking-as-a-Service platform. Crosscard, VIABUY and Fleetmoney are some of its customers.

Additionally, as mentioned above, iBAN-X, part of COMO Group, offers global payment transaction services on an API-driven Payment-as-Service platform.

Banking-as-a-Service	Group	Number of employees	Revenue (Million €)	Net Income (Million €)	LinkedIn
Banking Circle	Banking Circle	291	23,95	-19,59	<u>Link</u>
Dock Financial	Independent company	n/a	n/a	-4,52	Link
iBAN-X	COMO Group	n/a	n/a	n/a	<u>Link</u>



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Open Banking Enablers

Finologee and LuxHub are the two main open banking enablers based in Luxemburg.

Finologee offers compliant platforms and APIs for bank compliance (PSD2 for Banks and CEDRS), mobile payments and telecom routing (Digicash and Mpulse), KYC/AML (KYC Manager and Digital Onboarding) and professional payments (ENPAY). Finologee serves more than 100 financial institutions and handles more than 25 million transactions, messages and end-customer interactions per year.

LuxHub is a leading European open banking platform. It was founded in 2018 by 4 major Luxembourg banks: BCEE, BGL BNP Paribas, Bank Raiffeisen and POST Luxembourg. LuxHub connects fintechs and financial institutions through reliable and secure API connectivity, in compliance with PSD2 requirements. As mentioned above, LuxHub holds a payment institutions licence, which makes it the only 360-degree open banking enabler in Luxembourg.

LuxHub, together with Netherlands-based VERMEG, launched Custodix Hub to connect data from custodian banks and insurance companies. Through this collaboration, VERMEG's technology, which connects insurance firms and depository banks, is made accessible on LuxHub's central platform¹⁶⁷.

Open Banking Enabler	Group	Number of employees	Revenue (Million €)	Net Income (Million €)	LinkedIn
Luxhub	Government of Luxemburg	n/a	7,47	-0,47	<u>Link</u>
<u>Finologee</u>	NGFS PARTNERS	31	3,06	-0,19	<u>Link</u>

Source: Orbis | 2021 Financials

Local Payment Methods

Payconiq (Digicash) and Mpulse are the most popular local payment methods in Luxembourg.

Payconiq is the leading mobile payment solution in the country. Launched in 2012 as a start-up called Digicash, Payconiq managed to partner with BCEE, BGL BNP Paribas, BIL, POST, ING and Raiffeisen. These six partner banks issue the Payconiq supported apps to their customer base. The app is currently actively used by 50% of the population from 18 to 65 years old.

¹⁶⁷ https://thepaypers.com/online-mobile-banking/vermeg-and-luxhub-launch-custodix-hub-for-data-collection-and-processing



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Moreover, Payconiq and Worldline have boosted Luxembourg's digital payment scene by activating Payconiq on Worldline payment terminals. Since November 2021, a vast majority of payment terminals in Luxembourg became compatible with Payconiq payment applications from bank partners. When payments are made, the consumer automatically sees the QR displayed on the payment terminal.

Mpulse offers mobile payment (Premium SMS, WAP billing, direct debit) and SMS connectivity. It has been Luxembourg's prime telecoms messaging, routing and micro-payments gateway since 2006.

Satispay is another alternative payment method (holding an EMI licence). The mobile app allows its users to pay in physical and online stores and exchange money between friends. However, the company is better known and used in Italy rather than in Luxembourg.

Finally, international alternative payment methods have their European headquarters in Luxembourg. This is the case of PayPal, which holds a banking licence registered and authorised by the CSSF. In August 2022, PayPal added cryptocurrency features to its mobile app and, in December 2022, PayPal announced that it will expand its crypto service to Luxembourg. The company also announced its partnership with MetaMask in order to allow users to purchase cryptocurrencies via the MetaMask platform using their PayPal accounts. PayPal wants to make it simpler for people to get started with cryptocurrency through this cooperation¹⁶⁸.

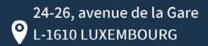
Local Payment Methods	Group	Number of employees	Revenue (Million €)	Net Income (Million €)	LinkedIn
Paypal (Europe)	PayPal	105	511,75	145,87	Link
Payconiq International	Parent company	n/a	n/a	n/a	<u>Link</u>
<u>Mpulse</u>	Independent company	1	5,95	0,34	Link
Satispay Europe	Satispay	n/a	n/a	n/a	Link

¹⁶⁸ https://thepaypers.com/cryptocurrencies/paypal-partners-metamask-to-make-it-easier-for-users-to-buy-crypto

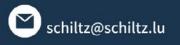


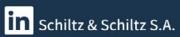


Contact us:









France

Introduction

France is a country with 67 million inhabitants where cashless payments are very well established and follow a steady evolution. In 2019, France's government set up its second National Retail Payments Strategy aimed at developing a secure, cashless society.

Cash has been the most popular payment method among the French population for decades, but this has been decreasing and shifting towards card payments, at an even faster rate since the COVID-19 pandemic. In 2021, debit and credit card payments together represented over 80% of payments in physical stores¹⁶⁹. Two years earlier, 59% of transactions were still made by cash compared to 35% by card¹⁷⁰.

COVID-19 disrupted the way people around the world behave, and France was no exception. According to a study conducted by Panorabanques (the bank comparator) in 2021, the French population does not use ATMs as frequently as before. As a result, French citizens only withdraw an average of 73€ per month through ATMs, whereas payments by card reach up to 543€¹⁷¹.

Innovation and technology have made card payments more efficient and easier, and an increasing number of merchants are accepting cards even for small amounts. In 2021, 79% of French citizens used seamless payments, representing 5,2 billion payments. This payment method was supported by the pandemic since the seamless ceiling was increased to 50€ in May 2020. Non-cash payments in France in 2020 represented 24.240 million transactions and 35,786 billion €. More precisely, bank transfers, seamless payments and instant payments increased between 2019 and 2020, whereas payments by cheque decreased. In 2020, card payments represented 57% of the total cashless payments, whereas cash withdrawals and bank transfers represented 18% and 19% respectively¹⁷².

In terms of preferences, the Carte Bancaire is the preferred local card scheme. Issued by all major banks, mostly as debit cards co-branded with Visa but also as credit cards co-branded with Mastercard¹⁷³, CB represents more than 65% of current transactions in France. In 2021, 14,2 billion transactions were made using CB which represents 648,8 billion € in value¹⁷⁴.

France is also home to several disruptive fintech start-ups and the sector has been very prolific over the last years. With the continuous shift to a cashless society, all actors of the payment industry are looking for innovative and practical digital solutions. In 2022, almost 80% of these solutions were tailored for businesses, whether oriented towards payment management (salaries, bookings, etc.) or distribution (payment acceptance). Similarly, some companies focus on individuals to provide them with innovative means of payment or everyday management tools. The major fundraising carried out in 2021 and 2022 further highlights the success of these companies. In January 2022, PayFit, a fintech company providing salary management solutions, raised 254 million €, becoming France's 23rd "unicorn"¹⁷⁵.

Banks

The French banking sector is the largest in the European Union in terms of assets. The consolidated banking assets in 2021 amounted to 8.803,60 billion €¹⁷⁶, of which 86% were represented by the 6 major banks in the country: BNP Paribas, BPCE Group, Crédit Agricole, Crédit Mutuel, Société Générale and HSBC Continental Europe¹⁷⁷. BNP Paribas and HSBC are among the 10 largest banks in the world¹⁷⁸.

BNP Paribas is present in 65 countries with around 190.000 employees, 145.000 of whom are in Europe. The group offers support to different types of customers (individuals, associations, SMEs and institutions)¹⁷⁹. In France, BNP Paribas issues the classic Visa cards (some being co-branded with CB) and offers its customers different payment methods such as Apple Pay, Paylib, Lyf Pay, Fitbit Pay and Garmin Pay.¹⁸⁰

Crédit Agricole is one of the leading banking groups in France, with more than 75.000 employees worldwide¹⁸¹ and 51 million users¹⁸², of which 7 million use the 'Ma Banque' banking mobile app¹⁸³. The bank allows Crédit Agricole e-transactions which allow merchants to accept and manage online payments such as the French CB cards (Visa and Mastercard), but also Paylib payments¹⁸⁴. In May 2020, the group acquired Linxo Group, which is a French fintech leader in payment initiation¹⁸⁵.

- 169 https://www.statista.com/statistics/1296684/preferred-payment-methods-france/
- 170 https://www.lafinancepourtous.com/2020/12/18/paiement-les-francais-utilisent-moins-les-especes/
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- 174 https://www.cartes-bancaires.com/cb/chiffres/
- 175 https://www.planet-fintech.com/Panorama-des-Fintech-du-Paiement-edition-Fevrier-2022-par-Le-Village-by-CA-Paris-et-Deloitte_a3070.html
- 176 https://thebanks.eu/countries/France/banking_sector
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- 84 https://www.roomcloud.net/en/roomcloud-e-transactions-credit-agricole/
- 185 https://www.credit-agricole.com/marques-et-metiers/toutes-nos-marques/credit-agricole-payment-services



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Société Générale Groupe is an international group present in 66 countries, with 117.000 employees around the world¹⁸⁶. The bank issues both Visa and Mastercard CB cards but also allows access to Apple Pay and Paylib¹⁸⁷. In 2022, Société Générale announced the acquisition of a major participation in PayXpert, a fintech company specialised in securitised payment services. The aim of this acquisition is to become a reference in the field of payment acceptance in Europe¹⁸⁸.

Groupe BPCE, Crédit Mutuel Alliance Fédérale and La Banque Postale are three other major banks. Innovation is one of the three key principles underlying the objectives of BPCE 2024, Groupe BPCE's new strategic plan, through which the group has strengthened its ambition to work with new innovative partners, particularly in the field of open banking and cyber security¹⁸⁹.

In France, the card issuing market is dominated by the top French banks listed above, namely Groupe BNP Paribas, Societe Generale, Groupe Crédit Agricole and BPCE. This can be explained by the fact that they all issue Carte Bancaire, which is a highly recognised and national interbank payment system in France¹⁹⁰.

When it comes to neobanks, they continue to thrive in the French payment landscape. There are around 7 million neobank users in France and, while this number is expected to double in the next 5 years, the transaction value is expected to show a CAGR of 26,33% between 2020 and 2027, reaching 610 billion US\$. This makes France the fourth largest neobanking market in the world¹⁹¹. Alongside large international actors such as Bunq, Revolut and N26, which are still the leaders in terms of customer experience, some French companies such as Ma French Bank and Orange Bank, a neobank resulting from the acquisition of Anytime in 2021, are making inroads. While these digital-only solutions still lack more complex products, they have already started to constitute a threat to more traditional banks and first-generation digital banks such as Boursorama and ING Direct, which lack digital efficiency¹⁹².

¹⁸⁶ https://www.societegenerale.com/fr/le-groupe-societe-generale/identite/presentation

^{187 &}lt;a href="https://particuliers.societegenerale.fr/services-en-ligne">https://particuliers.societegenerale.fr/services-en-ligne

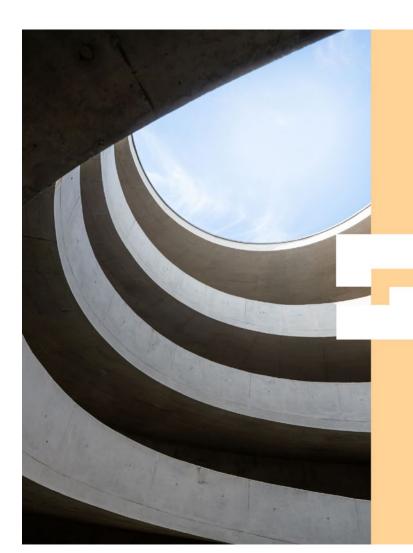
¹⁸⁸ https://www.societegenerale.com/fr/actualites/communiques-de-presse/societe-generale-annonce-le-projet-dacquisition-de-payxpert-pour-renforcer-loffre-de-paiement-en

¹⁸⁹ https://groupebpce.com/en/all-the-latest-news/news/2022/groupe-bpce-teams-up-with-the-first-fintech-100-ranking

¹⁹⁰ https://pay-lobby.com/en/country/france

^{191 &}lt;a href="https://www.statista.com/outlook/dmo/fintech/neobanking/france">https://www.statista.com/outlook/dmo/fintech/neobanking/france

¹⁹² https://www.ft.com/content/881bd0a6-96de-4776-818f-f81f2e0230f5





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Bank	Group	Number of employees	Revenue (Million €)	Net Income (Million €)	LinkedIn
BNP Paribas	Parent company	189.765	44.256,00	9 880,00	<u>Link</u>
Societe Generale	Parent company	131.293	25.804,00	6.338,00	<u>Link</u>
Credit Agricole	SAS Rue La Boetie	75.711	23.031,00	6.849,00	<u>Link</u>
BPCE	Parent company	n/a	11.870,00	1.455,00	<u>Link</u>
La Banque Postale	Government of France	32.503	8.119,00	1.123,00	<u>Link</u>
CIC	Caisse Federale de Credit Mutuel	19.401	6.060,00	2.116,00	<u>Link</u>
Caisse Federale De Credit Mutuel	Parent company	18.445	3.503,49	818,00	<u>Link</u>
HSBC Continental Europe	HSBC Holdings P	7.451	2.364,00	268,00	<u>Link</u>
Credit du Nord	Société Générale Groupe	7.277	1.822,10	502,10	<u>Link</u>
Caisse d'Epargne et de Prevoyance lle-de-France	BPCE	5.626	1.426,98	325,24	<u>Link</u>
Credit Cooperatif	Parent company	1.901	379,50	21,20	<u>Link</u>
Oney Bank	ВРСЕ	1.521	344,19	63,47	<u>Link</u>
AXA Bank	AXA	564	203,68	3,77	<u>Link</u>
<u>Arkea Direct Bank</u>	Credit Mutuel Arkea	622	193,87	22,96	<u>Link</u>
Boursorama	Societe Generale	852	188,99	-73,77	<u>Link</u>
Banque BCP	ВРСЕ	489	103,31	21,20	<u>Link</u>
Orange Bank	Orange	694	93,61	-156,33	<u>Link</u>
Banque EDEL	SOC Cooper Groupem Achat Centre Leclerc	177	56,51	18,84	<u>Link</u>
BFORBANK	Sacam Avenir & Crédit Agricole	303	28,83	-53,76	<u>Link</u>
Monabanq	Caisse Federale de Credit Mutuel	213	20,79	-12,74	<u>Link</u>
MA French Bank	Government of France	n/a	n/a	n/a	<u>Link</u>

Electronic Money Institutions

There are 17 EMIs in France which are licensed and authorised by the Prudential Supervisory and Resolution Authority, and which can conduct their activities in any of the 31 EEA member states due to EEA passport rules¹⁹³. These EMIs are shown in the table below.

Edenred is the issuer of "Ticket-Restaurant", one of the main meal vouchers in France with 1,8 million active cards on the market and 220.000 partner businesses¹⁹⁴. It also issues other solutions essentially aimed at professionals such as dry cleaning cards, mobility cards and gift cards.¹⁹⁵ It is worth mentioning that as from October 2022, the daily limit for meal vouchers was raised from $19 \\in to 25 \\in to a market and 220.000 partner businesses¹⁹⁴. It is worth mentioning that as from October 2022, the daily limit for meal vouchers was raised from <math>19 \\in to 25 \\in to a market and 220.000 partner businesses¹⁹⁵. The company holds an e-money licence through its subsidiary Edenred Paiement.$

The unicorn Swile offers employee benefits through an app and cards. Its solutions include meal vouchers, mobility, business travel and gift vouchers.

Market Pay and CentralPay act as payment gateways. Market Pay offers payment solutions online and in-store. Its products are "Pay by Bank" to accept payments by bank transfers in-store and online, "Pay On Site" to equip stores with vending terminals, "Pay online" to accept payments online and "PayWish" to transform Android devices into payment terminals. The company manages more than 160.000 terminals and 2,4 billion transactions. Its customers include Carrefour, Tabesto, Orange Bank and Crédit Agricole. CentralPay is an omnichannel payment solution.

Other companies holding an EMI license include UP, CNOVA Pay, W-HA, Lyf Pay, Easypay and Ouitrust. UP is an independent group and creator of payment methods and services for local and social purposes. CNOVA Pay offers payment services to the CNOVA group. W-HA, part of Orange Group, offers various payment solutions including e-money solutions. Lyf Pay enables people to pay via a QR code. Ezypay and Ouitrust focus on cross-border payments.

Okali, Treezor, Swan, eZyness and Xpollens are Banking-as-Service companies, and will further be explained in the corresponding sub-section below.

¹⁹³ EUCLID

¹⁹⁴ https://contact.edenred.fr/ticket-restaurant

¹⁹⁵ https://www.edenred.fr/solutions/guide

https://www.edenred.fr/magazine/votre-quotidien/ticket-restaurant/ticket-restaurant-le-plafond-quotidien-de-depenses-passera-25-euros-au-1er-octobre-2022-0

ЕМІ	Group	Number of employees	Revenue (Million €)	Net Income (Million €)	LinkedIn
UP	Cooperateurs Salaries	n/a	573,56	48,57	<u>Link</u>
Market PAY Tech	Market PAY	n/a	62,69	0,66	Link
w-HA SA	Orange	43	20,76	5,02	Link
Swile	Parent company	n/a	17,20	-41,00	<u>Link</u>
CNOVA Pay	Cnova France	9	7,23	0,29	n/a
Edenred Paiement	Edenred	n/a	1,85	0,35	<u>Link</u>
CentralPay	Independent company	14	1,53	0,02	<u>Link</u>
Checkout	Independent company	n/a	1,14	n/a	<u>Link</u>
LYE	Parent company	n/a	1,13	-25,90	<u>Link</u>
TMLC (Ezypay)	Independent company	n/a	n/a	n/a	Link
Harmoniie (Ouitrust)	Independent company	n/a	n/a	n/a	<u>Link</u>
Societe Financiere du Porte Monnaie Electronique Interbancaire (SFPMEI)	Parent company	n/a	n/a	n/a	n/a
Okali	Fcpr Blackfin Financial Services Fund	n/a	n/a	n/a	Link
Treezor	Société Générale Groupe	n/a	n/a	n/a	<u>Link</u>
Swan	Parent company	n/a	n/a	n/a	<u>Link</u>
Xpollens	BPCE	n/a	n/a	n/a	Link
eZyness	La Banque Postale	n/a	n/a	n/a	Link

Payment Institutions

There are 66 active payments institutions registered and authorised by the Prudential Supervisory and Resolution Authority. Each payment institution can conduct its activities in any of the 31 EEA member states due to EEA passport rules¹⁹⁷.

The principal regulated Payment Institutions in France are Lyra, HiPay and PayPlug.

Lyra is a major actor in the payment processing market. In 2022, the company made an agreement with NPCI International (the international branch of National Payments Corporation of India) in order to launch the UPI, a system merging several bank accounts onto one single app, and Rupay, an Indian card payment network. This makes France the first European country to accept this technology¹⁹⁸. The same year, the company introduced transfer initiation in Europe, a system allowing merchants to bypass the classic card networks and avoid interchange fees¹⁹⁹.

HiPay is a global payment platform. Beyond transactions, HiPay enables merchants to leverage their payment data, improve their conversion rate, increase their revenue and create new shopping paths. Its customers include Veepee, Promod, The Kooples, Auchan and Hachette Book Group.

Lemonway offers payment services for product and service marketplaces (B2B, B2C or C2C) and financial marketplaces (crowdlending, crowdequity, donations, invoice trading). SNCF Connect&Tech, Decathlon and Credit.fr are among Lemonway's loyal customers.

Created in 2012, PayPlug is an omnichannel payment solution designed for SMEs. More than 15.000 merchants have already opted for this solution from the BPCE group's subsidiary.

Fintecture is another major payment institution. Fintecture has developed the first French payment solution offering immediate account-to-account transfers, bypassing the traditional ceilings established by banking institutions.

Other major players in the country include Checkout.com, Adyen and MangoPay. While these players do not hold their licences in France, they are highly active in the country.

¹⁹⁷ EUCLID

¹⁹⁸ https://yourstory.com/2022/06/npci-international-upi-rupay-card-launch-france-lyra-network-ashwini-vaishnaw

¹⁹⁹ https://thepaypers.com/online-payments/frances-lyra-introduces-transfer-initiation-across-europe--1258334

PSP	Group	Number of employees	Revenue (Million €)	Net Income (Million €)	LinkedIn
Credit Agricole Payments Services	Crédit Agricole	660	387,83	17,99	<u>Link</u>
BPCE Payment Services	BPCE SA	597	371,26	72,02	<u>Link</u>
Monext	Credit Mutuel Arkea	410	93,75	14,85	<u>Link</u>
Hipay Group	Parent company	238	53,94	-4,35	<u>Link</u>
Lyra Network	Financiere Lyra	400	37,78	7,65	<u>Link</u>
Lemonway	Independent company	107	14,10	-9,60	<u>Link</u>
Score & Secure Payment	Clamae Group	41	14,10	-3,47	<u>Link</u>
Compagnie de l'Arc Atlantique (C2A)	Negometal participations	15	9,00	-0,77	<u>Link</u>
Budget Insight (Powens)	Credit Mutuel Arkea	93	7,46	-2,62	<u>Link</u>
SlimPay	Parent company	49	3,56	-4,54	<u>Link</u>
Olinda (Qonto)	Olinda	n/a	0,45	-2,09	<u>Link</u>
Brink's Payment Services	Brink's	n/a	n/a	n/a	<u>Link</u>
Spendesk Financial Services	Parent company	n/a	n/a	n/a	<u>Link</u>
Paytop	Independent company	n/a	n/a	n/a	<u>Link</u>
Noelse Pay	Independent company	n/a	n/a	n/a	<u>Link</u>
Nuapay	EML	n/a	n/a	n/a	<u>Link</u>
PayPlug	BPCE SA	n/a	n/a	n/a	<u>Link</u>
<u>Fintecture</u>	Société Générale, Samaipata Ventures, Target Germanium	n/a	n/a	n/a	<u>Link</u>

Banking-as-a-Service

France is home to five leading Banking-as-a-Service providers: Treezor, Xpollens, Okali, eZyness and Swan. Each of them holds an e-money licence as highlighted in the sub-section above.

Treezor is a subsidiary of the Société Générale Group. It is the first French EMI to provide access to the entirety of the payment chain and is a Principal Member of the Mastercard network.²⁰⁰ In 2022, the company continued its partnership with Mastercard with a view to extending its development across Europe. This collaboration gives Treezor access to Mastercard's whole infrastructure and new services such as Open Banking and credit services.²⁰¹

Xpollens is part of BPCE Group and is the result of a collaboration between Visa and Natixis Payments, continental Europe's largest Visa card issuer. The aim of Xpollens, as a white label solution, is to provide European companies with integrated "all-in-one" payment solutions, giving easier access to services such as card and instant payment acceptance or even card issuance.²⁰²

Swan, issued by the eFounders start-up studio, is an emerging BaaS platform that was launched in Paris in 2019. The French startup obtained its EMI licence in 2020 and has raised 21 million € in Series A funding since its inception. In 2022, the company has 50 partners including French retail group Carrefour, is processing 200 million € per month and is pursuing its international expansion by opening a new office in Berlin, Germany.²⁰³

Resulting from the Moneo activity launched in 1999, Okali serves customers such as Lydia, Unilend and Thunes (formerly Limonetik). In 2021, the BaaS activity was spun off and then sold in early 2022 to the Crédit Agricole Group and its start-up studio La Fabrique by CA. In October 2022, the company became Okali to better express its strong international ambitions.

²⁰⁰ https://www.treezor.com/company/

²⁰¹ https://thepaypers.com/online-mobile-banking/mastercard-treezor-extend-partnership

²⁰² https://www.pymnts.com/visa/2019/natixis-payments-service-xpollens/

²⁰³ https://thepaypers.com/mobile-payments/french-fintech-swan-expands-to-germany

Finally, eZyness is La Banque Postale's Banking-as-a-Service. It offers a collection solution for third-party accounts covering all functional requirements and issues payment cards to its customers.

Banking-as-a-Service	Group	Number of employees	Revenue (Million €)	Net Income (Million €)	LinkedIn
Treezor	Société Générale Groupe	n/a	n/a	n/a	<u>Link</u>
Swan	Parent company	n/a	n/a	n/a	<u>Link</u>
<u>Xpollens</u>	ВРСЕ	n/a	n/a	n/a	<u>Link</u>
Okali	Blackfin Financial Services Fund	n/a	n/a	n/a	<u>Link</u>
<u>eZyness</u>	La Banque Postale	n/a	n/a	n/a	<u>Link</u>

Source: Orbis | 2021 Financials

Open Banking Enabler

Open Banking and Open Finance are gaining in popularity more broadly in France. Powens, Bridge, Linxo and Greenly are four companies enabling open banking and open finance.

Open Banking Enabler	Group	Number of employees	Revenue (Million €)	Net Income (Million €)	LinkedIn
Budget Insight (Powens)	Credit Mutuel Arkea	93	37,78	7,65	<u>Link</u>
Linxo	Linxo Group	n/a	4,15	-3,41	<u>Link</u>
<u>Bridge</u>	Independent company	n/a	n/a	n/a	<u>Link</u>
Greenly	Independent company	n/a	n/a	n/a	<u>Link</u>

Source: Orbis | 2021 Financials

Local & Alternative Payment Methods

As stated above, the 'Carte Bancaire' group is the leading payment scheme in France and represents more than 65% of consumption transactions in France. Carte Bancaire issues the payment card called 'Carte Bleue' which can be both debit and credit. Carte Bancaire has created a payment network which has spread across the country, and all the banks operating in France have partnered up with the group. More than 95% of French cards are Carte Bancaire co-branded with Visa or Mastercard.²⁰⁴

E-wallets are the next most popular payment method. The e-wallet landscape is made up of a mix of local players such as PayLib, Lydia and Lyf, and global brands such as PayPal, Apple Pay, Google Pay and Amazon Pay.

In 2021, Lydia raised more than 100 million US\$ in funds and became France's 22nd unicorn. The app, the original aim of which was to ease reimbursements between friends, quickly gained in popularity and claims to have reached 5,5 million users in 2022 in France, Portugal and Spain after only 9 years on the market, attracting 150,000 new users every month. The company estimates that one in three French 18-35 year-olds uses Lydia. ²⁰⁵ It now includes a myriad of functionalities such as raising funds online, investing on the stock market or creating a current account. It also gives access, through subscription, to a Visa debit card compatible with Apple Pay, Google Pay and Samsung Pay. ²⁰⁶

Buy Now, Pay Later (BNPL) is another big winner in recent years. According to Oney, 19% of French people paid in instalments at least once a month in 2019. By 2021, 32% reported preferring to have the option of paying in instalments more often in the future. Significant players here include offerings from local banks such as Oney and Floa, local startups such as Alma and Pledg, and global players such as Klarna and Scalapay²⁰⁷.

Local Payment Method	Group	Number of employees	Revenue (Million €)	Net Income (Million €)	LinkedIn
LYE	Parent company	n/a	1,13	-25,90	<u>Link</u>
Lydia Solutions	Independent company	n/a	0,35	0,03	<u>Link</u>
<u>Paylib</u>	Parent company	n/a	n/a	n/a	<u>Link</u>
Alma	Independent company	n/a	n/a	n/a	<u>Link</u>
Pledg	Independent company	n/a	n/a	n/a	<u>Link</u>

²⁰⁴ https://www.cartes-bancaires.com/cb/

²⁰⁵ https://www.fintechfutures.com/2021/12/financial-services-app-lydia-hits-unicorn-status-with-latest-funding/

²⁰⁶ https://www.frandroid.com/services/banque-en-ligne/1160975_lydia-ce-nest-plus-uniquement-du-paiement-entre-amis-voici-les-nouvelles-fonctionnalites-de-cette-super-app

²⁰⁷ https://thepaypers.com/payment-methods/france/3



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Others

Worldline, headquartered in Bezons in France, is a leading payment service provider. Worldline is specialised in payment Issuing, Processing and Acquiring. It provides IT infrastructures to enable the operation of payments. The company does not hold any licence in France, but holds licences through its subsidiaries in other European countries such as Belgium, for instance.

Sopra Banking Software (SBS), Finastra and Skaleet are core banking providers. Founded in 2012, SBS provides technological solutions to 1.500 financial institutions worldwide. In 2022, the company was ranked 43rd in the IDC FinTech Rankings, a renowned ranking that rates the best international players in the sector of financial technology, setting it in the top 10 European actors²⁰⁸. Similarly, Skaleet provides a cloud-based SaaS core banking platform. Skaleet already has more than 40 clients all over the world.

Core Banking Services	Group	Number of employees	Revenue (Million €)	Net Income (Million €)	LinkedIn
<u>Worldline</u>	Parent company	20.711	4.898,00	-751,40	<u>Link</u>
Sopra Banking Software	Sopra Steria Group	47.437	4.699,10	187,00	<u>Link</u>
Skaleet	Lac Partners (MGMTCO), LP	24	4,61	0,20	<u>Link</u>
<u>Finastra France SAS</u>	Visat Equity Partners LLC	361	112,81	3,73	<u>Link</u>

Source: Orbis | 2021 Financials

208 https://www.soprabanking.com/news/sopra-banking-software-in-the-top-10-european-fintechs-in-the-2022-idc-fintech-rankings/

Germany

Introduction

Despite having the largest economic output in Europe, with a GDP of 3,6 trillion € in 2021, Germany's highly industrialised and diversified economy is characterised by one of the most fragmented markets when it comes to payments²⁰⁹.

According to a study conducted by Deutsche Bundesbank to analyse payment behaviour in Germany in 2021²¹⁰, cash is still the most popular form of payment, accounting for 58% of all daily transactions and representing 30% of turnover when seen as a whole. One of the biggest advantages of cash payments over card payments is the anonymity of the payment procedure, which preserves privacy and personal data, as mentioned by 55% of respondents. Additionally, 48% of respondents believe that using cash gives them a better understanding of their expenditure and 43% consider as a major benefit the fact that payments are made promptly and there is no need for receipt confirmation. Consequently, German consumers on average carry 100€ in their wallets and keep significantly larger sums at home as reserves. Only 4% of respondents do not hold any cash at all.

Nevertheless, since 1994 there has generally been a reduction of between 1 and 1,5 percentage points in cash payments and an increase in cashless transactions. This tendency surged in 2020 with cash payments losing 5,6 percentage points, but it had partly subsided in 2021. Among the reasons behind the decline in the use of cash is the rise of e-commerce and the use of contactless debit or credit cards, often prompted by retailers urging customers to choose contactless payment methods for hygienic reasons.

In this environment, the German banking population also increased. In fact, it is estimated that out of a total population of approximately 83,4 million individuals in 2021, 71,8 million had a bank account²¹¹, meaning 86% of the total population compared to 83,74% in 2020²¹².

The study also mentions that debit cards, particularly the Girocard, remain the second most popular method of payment. While their proportion of transactions has increased to 23% since 2017, their share of the turnover has slightly decreased to 30% during the same time. This is due to the fact that Girocards were not able to perform online payments. Debit cards have also been used more frequently and for lower sums. Two-thirds of all debit card payments are contactless, which is primarily responsible for this development.

Following the recent shift in consumer behaviour, which pushed online purchasing to keep expanding, e-payment methods were used to settle 5% of all transactions in the payments diary. Since 2017, their turnover share has doubled, reaching 8%. With 84% of transactions, PayPal leads the market, followed by Klarna with 8% and Giropay/Paydirekt with 4%.

Concerning online payment methods, Paydirekt, Giropay and Kwitt progressively merged their activities under the Giropay name in 2021 in order for German banks to standardise the online payment process²¹³. Following this, the German Federal Cartel Office allowed the further development and expansion of Giropay in May 2022, under the condition of abandoning the exclusivity obligation.

Regarding credit transfers, over 75% of people can make instant transfers and one-third can utilise this service without paying fees. 92% of respondents said they trust their home bank or savings institution to handle personal payment information properly. Only 15% and 13% of respondents express confidence in large tech corporations and start-ups/fintech organisations, respectively, when it comes to data protection.

Cryptocurrencies, on the other hand, raise a lot of curiosity, but only a small percentage of people (4%) have bought or plan to buy them. Moreover, just 8% of individuals who have bought cryptocurrency perceive it primarily as a means of payment, while 85% of those who have, have done so as an investment.

Banks

Germany has one of the most fragmented retail banking markets in Europe. The banking sector comprises three main groups, considering the ones in the payment business: commercial banks, savings banks and cooperative banks²¹⁴.

The largest German bank is Deutsche Bank (DB) with 1,324 billion € of total assets in 2021. The bank offers financial services globally. Through its private and business client division (PBC), DB is the only German bank which has developed a significant retail presence in the rest of Europe. Historically, it has been present in Italy, where it is a major player in credit cards and consumer finance, and in Spain, Belgium and Portugal. DB is multiplying partnerships and acquisitions to reinforce its offer in payments: it acquired Better Payments (September 2021), established a joint venture with Fiserv (June 2021), established a strategic partnership with Mastercard (Issuing & Acquiring) and is, of course, one of the historical players behind the German Girocard debit card network.

- 209 https://ecommercegermany.com/blog/j-p-morgan-global-payment-trends-payment-methods-and-insights-in-germany
- 210 https://www.bundesbank.de/resource/blob/894118/71470fbd2c8d075d1f8eaf36a882d16a/mL/zahlungsverhalten-in-deutschland-2021-data.pdf
- 211 https://www.statista.com/statistics/944142/banking-population-in-europe-by-country/
- 212 https://thepaypers.com/payments-general/europes-banking-population-hits-40946-million
- 213 https://thepaypers.com/mobile-payments/sparkasse-launches-new-online-payment-function-via-giropay
- 214 https://www.ebf.eu/germany/



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In 2022, DB continued its strategy of establishing itself as a comprehensive financial service provider for digital marketplaces. Together with the automotive company Smart, the bank is offering tailor-made payment options to customers that want to buy a smart car on the company's ecommerce platform²¹⁵. DB joined forces with Fiserv, a global leader in payments and financial services technology, to develop Vert, the newest German payment acceptance and processing company²¹⁶. The bank also partnered with Visa to prevent merchants from online retail fraud. In fact, merchants who accept e-commerce payments through DB can now use "Decision Manager," an automatic fraud detection system. The fraud system works similarly to a risk management system, calculating a risk value for each individual transaction based on artificial intelligence and predefined rules. The objective is to speed up good transactions and stop suspected fraudulent transactions, and involves small, medium and big businesses²¹⁷.

Another major bank in Germany is Commerzbank, with 473 billion € of total assets in 2021. Comdirect, its digital bank, has more than 2,8 million customers²¹⁸. In 2021, Commerzbank, Evonik and BASF conducted a joint project in which they successfully conducted the first blockchain technology and programmable money test to manage supply chain processes between companies. Payments between Evonik and BASF were reviewed, paid and booked in a completely automated, digital manner using a programmed payment process during the test. The initiative also included the creation of digital euros for payment purposes²¹⁹. In 2022, Commerzbank aimed to help shape emerging digital ecosystems with regard to custody and trading in non-physical assets. In fact, the bank has stated that it is requesting a licence from the Federal Financial Supervisory Authority (BaFin) to operate a crypto custody company²²⁰.

At the end of 2021, both Germany-based Commerzbank and Deutsche Bank announced that customers would be able to use the Giropay method for online shopping²²¹.

The commercial category also includes subsidiaries of foreign banks which are leading banks in Germany in terms of total assets. These include UniCredit (Italy), through its subsidiary HypoVereinsbank (UniCredit Bank AG), ING (the Netherlands) through ING DiBa and Crédit Mutuel (France) through TargoBank.

- 215 https://thepaypers.com/online-payments/deutsche-bank-and-smart-work-on-online-payment-for-the-new-smart-1
- 216 https://www.db.com/news/detail/20221012-deutsche-bank-and-fiserv-launch-vert-germany-s-newest-payments-company
- 217 https://www.db.com/news/detail/20220922-deutsche-bank-partners-with-visa-to-prevent-fraud-in-online-retail
- 218 https://www.comdirect.de/cms/ueberuns/en/unternehmen/index.html
- 219 https://www.commerzbank.com/en/hauptnavigation/presse/pressemitteilungen/archiv1/2021/2_quartal/presse_archiv_detail_21_02_97290.html
- 220 https://thepaypers.com/online-mobile-banking/commerzbank-applies-for-bafin-license-for-crypto-custody
- 221 https://thepaypers.com/online-mobile-banking/commerzbank-and-deutsche-bank-enables-giropay-for-online-shopping

Savings banks are represented by the Sparkassen-Finanzgruppe (DSGV). There are currently around 376 savings banks in Germany and 5 Landesbanken: Landesbank Saar (SaarLB), Landesbank Baden-Württemberg (LBBW), Bayerische Landesbank (BayernLB), Norddeutsche Landesbank Girozentrale (Nord/LB) and Landesbank Hessen-Thüringen Girozentrale (Helaba).

These banks are part of the German public banking system, where banks are controlled by state actors, though they are not fully publicly owned. Historically, they served as central banks for the savings banks in their respective regions, but their roles have gradually 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.

The savings banks issue Girocards, Mastercards and Visa cards. They have also developed a partnership with Apple Pay. Customers now also have the possibility to pay with the digital Girocard via Giropay, including existing services such as Paydirekt, Kwitt and the former Giropay.

In 2022, Sparkassen-Finanzgruppe greatly enhanced its "S-POS" application. Retailers and service providers are now able to accept Girocard payments of any amount by means of PIN entry on their smartphones, eliminating the need for additional acceptance devices. This allows Sparkassen-Finanzgruppe to take a significant step toward further opening the payment market up²²².

According to Börsen-Zeitung²²³, in July 2022 Sparkassen-Finanzgruppe confirmed that it would be continuing its commitment to the European Payment Initiative following the EPI's difficult start. Conversely, other major banks such as Commerzbank and DZ Bank opted out of the project as they could not foresee any European scope of the project for them.

Sparkasse will also be expanding its credit card offer in 2023 with the "FlexiGeld card", which will allow customers to make instalment payments instead of having to pay everything in one shot at the end of the month²²⁴.

The association of cooperative banks in Germany is called the "Bundesverband der Deutschen Volksbanken und Raiffeisenbanken". Its goal is to defend the interests of its more than 840 members and to develop a common strategy within the group. It also provides support on legal, commercial and financial matters. Volksbanken and the Raiffeisenbanken, the 11 Sparda banks and DZ Bank AG are all independent members of the association. DZ Bank AG is the largest cooperative bank and one of the largest banks in Germany, and it also acts as a central bank for the cooperative VR Banks. Finally, to underline the importance of savings and cooperative banks in the banking sector, both Sparkassen and VR-banks account for the majority of the debit cards issued in Germany. Sparkassen is responsible for almost half of the debit cards issued, while VR-banks for a quarter.

The total assets of local cooperative banks amount to 1,145 billion €. Together, they hold a customer base of 18,2 million people²²⁵. As of December 2022, the cooperatives are likely to rejoin the EPI initiative, but some doubts still need to be resolved, such as the design of the project²²⁶.

According to the CEO Andrea Orcel, UniCredit Bank is aiming to increase its market share through acquisitions in Germany as part of its plans to become a fully developed European bank²²⁷.

As of December 2022, Bitcoin Group SE has agreed to acquire 100% of the company from Dietrich von Boetticher, the owner of Germany-based Bankhaus von der Heydt. Bankhaus von der Heydt is a full-service bank in Germany that provides custody and tokenisation of digital assets²²⁸.

²²² https://uk.finance.yahoo.com/news/rubean-ag-german-sparkassen-pos-141106463.html

²²³ https://www.boersen-zeitung.de/die-sparkassen-halten-epi-die-treue-3fb4eee4-7632-11ed-8b29-0271f386d4c9

²²⁴ https://www.derwesten.de/panorama/vermischtes/sparkasse-kreditkarte-flexigeld-ratenzahlung-schulden-geld-id300346867.html

²²⁵ https://www.bvr.de/Press/Facts_and_figures

²²⁶ https://www.dertreasurer.de/news/cash-management-zahlungsverkehr/dz-bank-lenkt-ein-wendepunkt-bei-der-epi-2026361/

https://money.usnews.com/investing/news/articles/2022-09-20/unicredit-ceo-eyes-acquisitions-in-germany-handelsblatt

²²⁸ https://thepaypers.com/cryptocurrencies/bitcoin-group-signs-deal-to-acquire-bankhaus-von-der-heydt

Banks	Group	Number of employees	Revenue (Million €)	Net Income (Million €)	LinkedIn
Deutsche Bank	Parent company	82.969,00	25.596,00	2.510,00	<u>Link</u>
Commerzbank	Parent company	46.218,00	9.729,00	354,00	<u>Link</u>
DZ Bank	Parent company	32.271,00	7.342,00	2.176,00	<u>Link</u>
<u>UniCredit Bank</u>	UniCredit	11.406,00	4.622,00	245,00	<u>Link</u>
Landesbank Baden-Wuerttemberg	Parent company	9.893,00	3.402,00	418,00	<u>Link</u>
Bayerische Landesbank	Independent company	8.481,00	2.657,00	556,00	<u>Link</u>
ING-DiBa	ING Group	4.485,00	2.463,00	596,00	<u>Link</u>
Santander Consumer Bank	Banco Santander	2.868,00	1.445,98	532,75	<u>Link</u>
Hamburg Commercial Bank	Parent company	1.052,00	752,00	351,00	<u>Link</u>
Mercedes-Benz Bank	Mercedes-Benz Group	788,00	679,80	414,87	<u>Link</u>
Targobank	Caisse Federale de Credit Mutuel	n/a	513,00	513,00	<u>Link</u>
Frankfurter Sparkasse	Sparkassen-und Giroverband Hessen-Thuringen	1.519,00	359,23	18,00	<u>Link</u>
Postbank Finanzberatung	Deutsche Bank Group	206,00	290,20	n/a	<u>Link</u>
Hanseatic Bank GmbH & Co	Société Générale	343,00	252,28	70,56	<u>Link</u>
Sparda-Bank Baden-Wurttemberg	Parent company	659,00	215,24	12,53	<u>Link</u>
comdirect	Commerzbank	3,00	169,00	-477,00	<u>Link</u>
Sparda-Bank Hessen	Parent company	n.a.	132,16	4,52	<u>Link</u>
N26_	Parent company	726,00	62,98	-119,94	<u>Link</u>

Electronic Money Institutions

The value of e-money transactions decreased from 51,82 million € in 2007 to 23,86 million € in 2021²²⁹.

There are currently 10 electronic money institutions operating in Germany which are licensed and authorised by the Federal Financial Supervisory Authority (BaFin)²³⁰.

Zalando Payments, the payment arm of the famous online apparel retailer Zalando, can be considered as one of the leading German e-money institutions. The company holds 1,12 billion € in total assets (in 2021). It provides a full payment solution to the Zalando Group, ranging from risk assessment and fraud screening, offering payment methods at the checkout and processing, to the collection and reconciliation of funds. It is on the way to becoming the preferred payment solution for the fashion world²³¹.

Concardis (part of Nets Group) stands in second place with 708,39 million € of total assets and 22% of market share. It offers a wide range of payment services to financial institutions and acquirers. In 2022, Concardis partnered with Ixopay, a payment service provider that offers a full range of cashless and digital payment options. This will allow merchants to access the Concardis offering while providing them with support and access to more complex setups with Ixopay²³².

The third largest e-money institution is Payone, with 19,78% of market share and 636,87 million € of total assets²³³. The company offers POS and e-commerce payment gateways, among others. Worldline and DSV Group's joint venture Payone, and Berlin fintech Banxware, have partnered together to give Payone users in Germany rapid, easy, and convenient access to liquidity: on average, merchant financing is approved and paid within 15 minutes after submitting an online application through the Payone dealer portal. The pilot phase started in January 2022²³⁴.

Furthermore, the customer base of insolvent crypto bank Nuri will be taken over by Germany-based neobank Vivid Money. Nuri customers will now be directed to the Vivid app. Users can sign up for an account and immediately transfer their credit there. Vivid is a European provider of a mobile crypto and banking app via which Nuri customers will be able to manage their everyday finances and trade cryptocurrencies²³⁵.

- 229 https://www.statista.com/statistics/443496/electronic-money-payment-in-germany/
- 230 https://euclid.eba.europa.eu
- 231 https://thebanks.eu/emis/zalando-payments-354939
- 232 https://www.concardis.com/de-en/company/press-media/articles/ixopay-partners-with-concardis-nets
- 233 https://thebanks.eu/emis/zalando-payments-354939
- 234 https://www.payone.com/DE-de/ueber-uns/presse/payone-und-banxware-gehen-strategische-partnerschaft-ein
- 235 https://thepaypers.com/online-mobile-banking/vivid-money-takes-over-customer-base-from-nuri--1258852

ЕМІ	Group	Number of employees	Revenue (Million €)	Net Income (Million €)	LinkedIn
PAYONE GmbH	WORLDLINE	1.254,00	605,00	n/a	<u>Link</u>
Concardis	NEXI	431,00	364,00	n/a	<u>Link</u>
B2Mobility GmbH	ВР	2,00	320,09	n/a	<u>Link</u>
VR Payment GmbH	DZ BANK	341,00	128,00	n/a	<u>Link</u>
Reisebank AG	DZ BANK	525,00	79,12	6,92	<u>Link</u>
PayCenter GmbH	Independent company	55,00	7,46	n/a	<u>Link</u>

Payment Institutions

Computop, one of the original payment service providers, offers local and cutting-edge omnichannel solutions for processing payments and preventing fraud. The in-house created payment platform Computop Paygate makes integrated payment procedures possible for mobile devices, POS terminals and e-commerce so that they all have seamless integrated payment procedures. Retailers and service providers can customise their payment options for each country by selecting different payment options. Technologies such as self-learning algorithms and biometric authentication increase security and convenience for both customers and shops. Computop announced the launch of its new Cloud POS Interface that will make card payments easier. This solution allows retailers to operate card terminals from any web-based ERP, store or POS system through the Computop Paygate²³⁶.

AEVI, on the other hand, enables merchants to manage their operations more intelligently by giving them easy access to any payment technology and business solution for the best in-store customer experience. This platform is provided to businesses that deal with merchants. They may upgrade to more agile and data-driven offers with the help of AEVI's Platform for Smart Merchant Enablement, which promotes higher efficiency, more innovation and an enhanced consumer experience across all channels

EVO Payments is a payment institution licensed in Germany. As a payment institution and a principal member of Visa and Mastercard, EVO Payments is the exclusive provider of card acceptance solutions for Global Transaction Banking (GTB) for Deutsche Bank in Europe, a branch of DB Privat- und Firmenkundenbank AG. Note that in 2022, Computop and EVO Payments expanded their collaboration by creating a joint solution which allows businesses to use unified POS terminals and connect them to their e-commerce operations via a single payment platform²³⁷.

As mentioned earlier, Vert was created in 2022 through the collaboration between Deutsche Bank and Fiserv. Vert is a provider that offers full-service payment acceptance solutions for merchants via mobile devices and apps and at the checkout. The new provider also offers next-banking-day pay-outs, providing merchants with faster access to their funds²³⁸.

It is worth noting that Worldline and the DSV Group have prevailed in the Transgourmet Germany tender procedure for the acceptance and processing of the debit and credit card business as a payment service provider. Hence, as from 1 January 2022, Payone is totally responsible for all cashless payment services in Germany's 38 Selgros Cash & Carry markets²³⁹.

Stripe and Sides, a German provider of hospitality software, joined forces in September 2022. Sides' intentions are to expand the functionality of its software by integrating a safe payment platform. Cashless payment processing is provided by the all-inone catering software in eateries and online stores and on the app²⁴⁰.

Unzer, a company specialised in payment processing, has introduced POS Go, a mobile POS system that enables SMBs to accept contactless and cashless payments. Small and medium-sized businesses that want to take mobile payments are the target market for this system which, according to company spokespeople, aims to assist merchants in making the switch from cash to card payments²⁴¹.

²³⁶ https://computop.com/us/about-us/press/press-releases/computop-delivers-traditional-pos-alternative-with-cloud-pos-interface

²³⁷ https://computop.com/us/about-us/press/press-releases/computop-and-evo-certify-terminals-for-international-card-acceptance

²³⁸ https://www.db.com/news/detail/20221012-deutsche-bank-and-fiserv-launch-vert-germany-s-newest-payments-company

²³⁹ https://www.payone.com/DE-de/ueber-uns/presse/transgourmetausschreibung-fuer-payone-entschieden

²⁴⁰ https://thepaypers.com/mobile-payments/sides-and-stripe-launch-payment-solution-for-hospitality-industry

²⁴¹ https://thepaypers.com/payments-general/unzer-launches-mobile-pos-system-pos-go

PSP	Group	Number of employees	Revenue (Million €)	Net Income (Million €)	LinkedIn
PAYONE	Worldline	1.254,00	604,68	n/a	<u>Link</u>
ConCardis	Nexi SPA	431,00	364,11	n/a	<u>Link</u>
<u>VR Payment</u>	DZ Bank AG	341,00	128,22	n/a	<u>Link</u>
<u>Aifinyo</u>	Aifinyo AG	n/a	72,15	n/a	<u>Link</u>
PLUSCARD	Independent company	467,00	54,56	2,65	<u>Link</u>
AEVI	Diebold Nixdorf	14,00	25,56	-10,63	<u>Link</u>
Computop Paygate	Parent company	127,00	20,67	1,05	<u>Link</u>
<u>Unzer</u>	Unzer Group	64,00	15,48	n/a	<u>Link</u>

Banking-as-a-Service

The top five players in the German Banking-as-a-Service market are Deutsche Bank, Commerzbank, KFW Bankgruppe, DZ Bank and HypoVereinsbank. In addition, there are players such as Solaris and Raisin Bank²⁴².

Solaris is a technology company holding a banking licence. It has built an API-based white-label banking-as-a-service platform to power startups in the digital economy²⁴³. Following the acquisition of Contis in July 2021, Solaris has been working to integrate Contis' platform into its own embedded finance offering and to combine the teams of the previously separate businesses. Through the merger, Solaris gained an e-money licence in the UK to add to its EU licences in Germany and Lithuania²⁴⁴.

Raisin Bank is another Banking-as-a-Service company. In June 2022, Raisin Bank expanded its business by acquiring the Payment Services division from Bankhaus August Lenz & Co., which enables it to also cover cash solutions²⁴⁵.

BaaS	Group	Number of employees	Revenue (Million €)	Net Income (Million €)	LinkedIn
Solarisbank AG	Parent company	693	48,01	-41,63	<u>Link</u>
Raisin Bank AG	RAISIN GMBH	49	8,00	-2,93	<u>Link</u>
Circula GmbH	ZALANDO SE	37	1,06	n/a	<u>Link</u>

Source: Orbis | 2021 Financials

Open Banking Enablers

In Germany, the roll-out of open banking following PSD2 is still growing rapidly. The global pandemic intensified digitisation and, since 2020, usage of open banking has been rising steadily in the area. In fact, Germany now has 147 Third-Party Providers (TPPs), making it the country with the most TPPs in continental Europe²⁴⁶.

Recent open banking technologies target SMEs rather than major corporations. In fact, companies in this sector look for services that are specifically suited to their needs, whether it be embedded finance, payments or insurance, as they have less money to spend on unique integrations with banks²⁴⁷.

Sparkassen-Finanzgruppe is considered an example of open banking innovation. The German Savings Bank Finance Group created Wallis, a central API site that facilitates the collaborative creation of novel services and new business models for partners and fintechs discovered in the bank's ecosystem. The portal has also received a BaFin licence, which legalises its operations and maintains compliance with the law²⁴⁸.

Open banking platform C24 Bank has announced that it will provide its users with up to 8 virtual cards in addition to the physical Mastercard. After placing an order in the app, these are immediately operational online and can also be used in stores with Apple Pay or Google Pay 249 .

Numerous banks offer Open Banking in Germany, including Commerzbank, Volksbanken und Raiffeisenbanken and Deutsche Bank.

- 242 https://www.mordorintelligence.com/industry-reports/germany-banking-as-a-service-market
- 243 paymentcardyearbooks.com (germany statistical report)
- 244 https://www.pymnts.com/emea/2022/contis-brand-retires-following-embedded-finance-merger-with-solaris/
- 245 https://thepaypers.com/online-mobile-banking/raisin-bank-acquires-the-payments-division-of-bankhaus-august-lenz
- 246 https://www.yapily.com/blog/open-banking-in-germany
- 247 https://thepaypers.com/interviews/open-banking-in-germany-deutsches-perspective
- 248 https://nordigen.com/en/banks/open-banking/location/de/
- 249 https://thepaypers.com/online-payments/c24-bank-introduces-virtual-mastercard

Local & Alternative Payment Methods

Visa, Mastercard and Girocard are the main payment card brands issued in Germany. The Deutsche Kreditwirtschaft's Girocard is the domestic debit card system and most Girocards are co-badged Maestro, V Pay, Cirrus or Plus.

Girocard is the most widely used debit card in Germany. With the integration of the digital girocard into the payment procedure, the market has been enriched by a modern alternative German payment procedure. This also means a degree of national independence in the global competition for payment services.

In the first half of 2022, 3,17 billion transactions were reported, a 17% rise compared to the same period last year (2,71 billion). Sales were approximately 17,9% higher than in the first half of 2021, totalling more than 134 billion € (114 billion €). Retailers are also increasingly accepting Girocard payments; for the first time, there were more than 1 million acceptance points (up to about 1.023.000 active terminals per month), i.e. electronic cash registers where customers paid with Girocard. The number of active payment terminals in the first half of 2022 was approximately 11% higher than in the first half of 2021, demonstrating the system's widespread adoption²⁵⁰.

Online payments with Digital Girocard under the giropay brand debuted in the second half of 2022. The plan is to set Giropay up as a competitor to PayPal, Klarna and Apple Pay. Accordingly, previously isolated payment solutions such as Giropay and Kwitt have been merged under the Paydirekt brand²⁵¹.

Mobile payments are becoming increasingly common. The most used payment option at the POS is Apple Pay. For 38% of individuals who utilise mobile payment choices, it is their preferred method by far, followed by Google Pay (18%) and bank or savings bank payment apps (25%). However, the use of mobile payment technologies is still limited, amounting to only 3% of the total amount and volume of transactions in retail stores²⁵². In June 2022, Samsung debuted in the German market with Samsung wallet, which combines the capabilities of Samsung Pay and Samsung Pass. Samsung Wallet allows users to make payments with credit or debit cards and to manage access to membership cards, boarding passes and even cryptocurrency wallets²⁵³.

Furthermore, Mondu, a B2B payment fintech company, has introduced Split Payments, a Buy Now, Pay Later solution to its online B2B merchants and marketplaces. This solution helps merchants by increasing sales, cashflows and customer retention by offering risk-free instalments²⁵⁴.

Viva Wallet, a cloud-based neobank, partnered with Klarna to offer "Pay with Klarna" on Viva Wallet payment platforms. This will allow users to pay in 3 or 30 days, pay now or opt for financing to pay over 3-36 months. The service will be released in selected European markets, including Germany²⁵⁵.

Computop has partnered with Token, a platform for Open Banking payments, to offer account-to-account payments²⁵⁶.

Others

The German payment expert Airplus International made its company account available on Uber for Business in order to ease trip payments. Business travellers who want to use Uber for Business and pay using AirPlus can do so by requesting a ride through the Uber app; AirPlus handles payment and billing in the background. The same holds true for other Uber for Business features such as the ability to order meals or get other deliveries²⁵⁷.

The German flag carrier Lufthansa is developing a strong payment infrastructure that will provide its Group with all the required payment solutions, allowing all members to take advantage of the readily available and excellent services. The aviation company has chosen Worldline to be its partner and payment processor in order to achieve this²⁵⁸.

- 250 https://www.girocard.eu/presse-mediathek/pressemitteilungen/2022/girocard-halbjahreszahlen-2022/
- 251 https://thepaypers.com/online-payments/online-payments-via-digital-girocard-to-debut-in-second-half-of-2022
- 252 https://www.bundesbank.de/resource/blob/894118/71470fbd2c8d075d1f8eaf36a882d16a/mL/zahlungsverhalten-in-deutschland-2021-data.pdf
- 253 https://thepaypers.com/mobile-payments/samsung-to-launch-samsung-wallet-in-13-new-markets
- 254 https://thepaypers.com/online-payments/b2b-payments-provider-mondu-introduces-split-payments
- 255 https://thepaypers.com/online-payments/viva-wallet-partners-with-klarna
- 256 https://thepaypers.com/online-mobile-banking/token-and-computop-join-forces
- 157 https://thepaypers.com/mobile-payments/uber-for-business-integrates-airplus-payments
- 258 https://thepaypers.com/online-payments/lufthansa-chooses-worldline-as-global-payments-provider

Ireland

Introduction

Ireland is one of the most technologically mature markets in the euro area. With a population of almost 5 million inhabitants²⁵⁹, the country has a banked population of 95% and an internet penetration rate of 99%²⁶⁰.

In volume terms, card payments are the most popular payment instrument in Ireland, as they account for more than 60% of total payment transactions 261 . As such, the payment market is dominated by debit cards - with 1,14 cards per individual 262 - and credit cards - with a penetration rate of 56%, compared to 47% in western and central Europe 263 . Credit cards are generally used for larger purchases than debit cards, as the average transaction amount for credit cards is 68,40 against 41,11 each larger payments are also increasing. This payment method accounts for more than 10% of non-cash payment transactions in terms of volume 265 .

Spurred on by the pandemic, Ireland's payments landscape is more digital than ever. As in most countries, the pandemic changed people's habits, but also helped accelerate the digital transformation of businesses by making them conduct their transactions online. Digital wallets such as PayPal became the second most popular payment method after cards, with a usage of 24% for all online sales²⁶⁶. According to Revolut, Ireland has one of its highest penetration rates per capita in Europe and possibly the only country where the verb 'to Revolut' is used due to the pervasiveness of Revolut cards.

As Ireland is a technologically mature market, consumer behaviour has shifted towards more accessible, frictionless, convenient and faster digital payment methods. Irish consumers are enthusiastic adopters of new technologies when presented with the opportunity of new services. The country has some of the fastest consumer adoption rates of contactless and mobile payments, mobile banking and adoption of online commerce by SMEs²⁶⁷.

Moreover, following Brexit and the pressure it brought on companies to find an alternative regulatory home within the EU, Ireland has become the EU headquarters for many paytech companies due to, among other things, the availability and quality of talent and a similar 'Common Law' legal structure as the UK. The country is slowly becoming a global fintech hub as it has been extremely successful in attracting investment in this area. It is now home to many global players shaping the industry, including Mastercard, PayPal, Elavon, Stripe, Fiserv and Coinbase, to name but a few. Notable investments in recent years include Mastercard's plans to create 1.500 jobs and expand its new European technology centre in Dublin, and Stripe's creation of 1.000 new jobs in Ireland²⁶⁸ to grow its European user base and launch new global products²⁶⁹.

Banks

There are currently 44 banks operating in Ireland, of which 19 hold a credit institution licence in Ireland, 24 are branches of banks licensed in other EEA countries and 1 is the branch of a bank in a non-EEA country²⁷⁰. Many of these banks are international banks with operations in Ireland. One of the features of Financial Services in Ireland is that the largest part of the sector is made up of investment funds, money market funds and special purpose entities. Ireland has the third largest funds sector in the world.

The retail banking sector has an enormous impact on Ireland's economy, employing approximately 22.000 people and contributing 11,64 billion € to the economy each year, representing a GDP contribution of 3,3% compared to a Eurozone average of 2,6%²⁷¹. Irish retail banks are also responsible for the functioning of the payments system, representing its main actor. They process around 5 million transactions worth 3,7 billion € every day, consisting of consumer card payments, direct debits, cheques and credit transfers such as salary payments, social welfare payments and payments between businesses²⁷².

The Irish banking sector has different challenges to face, such as profitability, digitalisation and competition. In fact, the profitability of Irish retail banks is among the lowest in Europe, with a ROE of circa 2.6%, against the European average of circa 7,6% for Q1-21. To further shake the market, in 2021, two major players, KBC Bank and Ulster Bank, announced their intention to leave Ireland²⁷³, leaving one million customers behind²⁷⁴.

Regarding digitalisation, shifts in customer behaviour and COVID-19 have changed the way payments are conducted, with over-the-counter transactions in Irish retail bank branches down by over 45% in the past three years, against a 65% increase

- 259 https://ec.europa.eu/eurostat/web/main/home
- 260 https://datareportal.com/reports/digital-2022-ireland
- 261 https://www.centralbank.ie/statistics/data-and-analysis/payments-services-statistics
- 262 https://www.globaldata.com/store/report/ireland-cards-and-payments-market-analysis/
- 263 https://www.ppro.com/countries/ireland/
- https://www.centralbank.ie/statistics/data-and-analysis/payments-services-statistics
- https://www.centralbank.ie/statistics/data-and-analysis/payments-services-statistics
- 266 https://increasily.com/ecommerce-in-ireland/#r+15407+1+3
- ${\tt 267} \quad \underline{https://www.europeanpaymentscouncil.eu/news-insights/insight/irish-payment-landscape-digital-transformation}$
- 268 Note that Stripe, like many other tech companies, has announced layoffs across their markets, including Ireland.
- https://www.fintechfutures.com/2022/11/ireland-is-emerging-as-a-global-hub-for-payments/
- 270 https://euclid.eba.europa.eu/register/
- 271 https://bpfi.ie/wp-content/uploads/2021/09/BPFI-Future-of-Retail-Banking-in-Ireland-Report.pdf
- 272 https://bpfi.ie/publications/bpfi-ey-the-future-of-retail-banking-in-ireland-report/
- 273 https://www.centralbank.ie/consumer-hub/kbc-ulster-bank-withdrawal-from-ireland-consumer-faq
- 274 https://www.ft.com/content/c11421ff-5f85-48d4-b93d-1b6b0dc48185

in digital payments during the same period²⁷⁵. To answer this challenge, banks have collectively invested more than 3 billion € in the last five years in order to be able to provide new digital services and innovate their business. Ireland's government is pushing citizens towards card or online payment methods. In addition, the use of neobanks is increasing and hence contributing to banking and debit card adoption²⁷⁶.

The three major banks of Ireland are Bank of Ireland, Allied Irish Banks (AIB) and Permanent TSB (PTSB).

With total assets amounting to 155 billion € in 2021, Bank of Ireland is the largest bank in terms of total assets in Ireland. The bank provides both Visa credit cards and Maestro debit cards. Following their successful marketing partnership, Bank of Ireland Group and EVO Payments extended their alliance under the BOI Payment Acceptance (BOIPA) at the end of 2021 - increasing the adoption of contactless payments all over the country²⁷⁷.

Allied Irish Banks (AIB) has a total of 128 billion € in assets as of 2021. AIB offers different financial products and services to personal, business and corporate customers. Unlike Bank of Ireland, AIB works with Visa for both their credit and debit cards. In the last few years, AIB had around 2,9 million daily digital interactions compared with 35.000 customer branch visits. Furthermore, the bank registered a 36% decline in cash withdrawals from ATMs and a 50% fall in cheque usage over the past five years. Branch over-the-counter teller transactions declined by almost 50%, while mobile and online payments have increased by 85% over the same time span²⁷⁸.

Permanent TSB's assets amount to 22 billion €. As Ulster Bank expects to cease transactions with customers by the end of March 2023, Permanent TSB announced in November 2022 that it will invest 25 million € to open 25 former Ulster Bank branches, thus increasing its size by 30%, reaching a total of 98 branches.

It should be noted that the Irish government had a 71% stake in Allied Irish Banks, 75% in Permanent TSB and 14% in Bank of Ireland in 2020²⁷⁹. This situation changed in 2021, when the Finance Minister said that taxpayers' funds used to save the banks during the financial crisis between 2009 and 2011 would be recovered in order to use them for more productive purposes²⁸⁰. As a consequence, the Irish government started selling its stake in Bank of Ireland, with the last shares sold in September 2022²⁸¹. As of November 2022, the government also sold its stakes in AIB Group and Permanent TSB Group Holdings, now holding 57% and 62%, respectively²⁸².

Banks	Group	Number of employees	Revenue (Million €)	Net Income (Million €)	LinkedIn
Bank of Ireland Group PLC	Parent company	8.696,00	3.041,00	1.055,00	Link
Allied Irish Banks PLC	Government of Ireland	8.916,00	2.405,00	650,00	Link
Citibank Europe PLC	Citigroup Inc	11.249,00	2.182,15	893,47	<u>Link</u>
Bank of America Europe Designated Activity Company	Bank of America Corporation	2.349,00	1.758,79	539,47	<u>Link</u>
Barclays Bank Ireland PLC	Barclays PLC	1.708,00	1.196,00	235,00	<u>Link</u>
Bank of Cyprus Holdings PLC	Parent company	3.438,00	533,35	31,88	<u>Link</u>
Permanent TSB PLC	Government of Ireland	2.236,00	361,00	-20,00	<u>Link</u>
EBS Designated Activity Company	Government of Ireland	n/a	291,00	107,00	n/a
Wells Fargo Bank International	Wells Fargo & Company	447,00	281,83	53,09	<u>Link</u>
Revolut Limited	Revolut	2.158,00	222,00	-206,03	<u>Link</u>
JP Morgan Bank (Ireland) PLC	JPMorgan Chase & Co	565,00	159,54	8,08	<u>Link</u>
NBC Global Finance Limited	National Bank of Canada	51,00	136,84	25,28	<u>Link</u>
Scotiabank (Ireland) Limited	Bank of Nova Scotia - Scotiabank	64,00	126,28	98,47	<u>Link</u>
BNP Paribas Ireland Unlimited Company	BNP Paribas	n/a	106,99	99,19	<u>Link</u>
Avantcard Designated Activity Company	Bankinter SA	196,00	52,65	10,33	<u>Link</u>
Bank of Montreal Europe PLC	Bank of Montreal	63,00	30,66	3,14	<u>Link</u>
Intesa Sanpaolo Bank Ireland plc	Intesa Sanpaolo	32,00	30,39	22,84	<u>Link</u>
<u>Vivid Money Holdco Limited</u>	Parent Company	263,00	3,49	-37,00	n/a

^{275 &}lt;a href="https://bpfi.ie/wp-content/uploads/2021/09/BPFI-Future-of-Retail-Banking-in-Ireland-Report.pdf">https://bpfi.ie/wp-content/uploads/2021/09/BPFI-Future-of-Retail-Banking-in-Ireland-Report.pdf

²⁷⁶ https://www.globaldata.com/store/report/ireland-cards-and-payments-market-analysis/

²⁷⁷ https://www.thinkbusiness.ie/articles/changing-payments-landscape-ireland-cash-digital-boipa/

²⁷⁸ https://www.irishmirror.ie/news/irish-news/aib-abandons-plans-go-cashless-27550422

²⁷⁹ https://www.ebf.eu/ireland/

²⁸⁰ https://www.bloomberg.com/news/articles/2022-09-23/dublin-exits-bank-of-ireland-13-years-after-crisis-era-bailout

https://www.reuters.com/markets/deals/ireland-sell-8-its-majority-stake-aib-one-go-2022-11-07/

²⁸² https://www.reuters.com/markets/deals/ireland-sell-8-its-majority-stake-aib-one-go-2022-11-07/

Electronic Money Institutions

On account of the digital transformation and changing consumer habits, the value of e-money transactions increased by 289% from 2020 to 2021, reaching 28 billion \in (compared to 7.2 billion \in in 2020), while e-money payments transactions grew by 70%, with an average value of 91 \in (against 40 \in in the previous year). Hence, on average, e-money transactions are low-value transactions²⁸³.

There are currently 20 electronic money institutions operating in Ireland which are licensed and authorised by the Central Bank of Ireland (CBI)²⁸⁴. The companies that have obtained this type of licence are subsidiaries of corporations headquartered in the United States, United Kingdom and Australia. Obtaining a licence in Ireland enables them to enter the European market as these institutions can operate in any of 31 EEA member states due to EEA passport rules.

It is worth mentioning that some companies such as Stripe have obtained e-money institution licences, even though they do not act as EMIs but rather as PSPs. On the contrary, other companies might have a payment institution but act as e-money providers, as in the case of CUSOP. For the purpose of this paper, only companies acting as EMIs are listed in this subsection.

Some EMIs worth mentioning include Paysafe Group's subsidiary Paysafe Prepaid Services and EML Payments' subsidiary PFS Card Services. The companies Optal, Soldo, Payoneer and Moneycorp issue multi-currency IBAN accounts. The two big tech companies, Facebook Payments and Booking, have also obtained an e-money licence to process their payments on their websites.

ЕМІ	Group	Number of employees	Revenue (Million €)	Net Income (Million €)	LinkedIn
Paysafe Prepaid Services Limited	Paysafe Group	27	210,54	16,08	<u>Link</u>
Optal Financial Europe Limited	Wex Inc.	10	123,03	3,18	<u>Link</u>
Payoneer Europe Limited	Payoneer Global Limited	7	73,20	1,82	Link
Avantcard Designated Activity Company	Bankinter SA	213	54,54	13,77	<u>Link</u>
PFS Card Services (Ireland) Ltd	EML Payments Limited	166	30,39	1,92	n/a
Facebook Payments International Limited	Facebook International LLC	n/a	23,52	-0,01	<u>Link</u>
Moneycorp Technologies Limited	Regent Acquisitions (Holdings) Limited	53	16,34	6,34	Link
Soldo Financial Services Ireland Designated Activity Company	Soldo Software Limited	10	7,97	2,27	<u>Link</u>
Cusop (Payments) Designated Activity Company	Parent company	11	3,59	-0,07	<u>Link</u>
EML Money Designated Activity Company	EML Payments Limited	38	3,51	0,71	n/a
Fire Financial Services Limited	Burren Tech Holdings Limited	30	1,04	-1,42	<u>Link</u>
Gemini Payments Limited	Gemini Intergalactic LLC	n/a	n/a	n/a	Link
Booking Holdings Financial Services International Limited	Booking Holdings Limited	17	n/a	-18,99	Link

²⁸³ https://www.centralbank.ie/statistics/data-and-analysis/payments-services-statistics

²⁸⁴ https://euclid.eba.europa.eu/register/



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Payment Service Providers

Stripe Payments Europe is one of the most renowned payment service providers. It holds an e-money licence but acts as a PSP. Stripe focuses on payment solutions for e-commerce by offering payment acceptance, payment processing, payment acquiring and unified pay-outs to businesses²⁸⁵. Currently, more than 3,1 million websites use Stripe's solutions²⁸⁶.

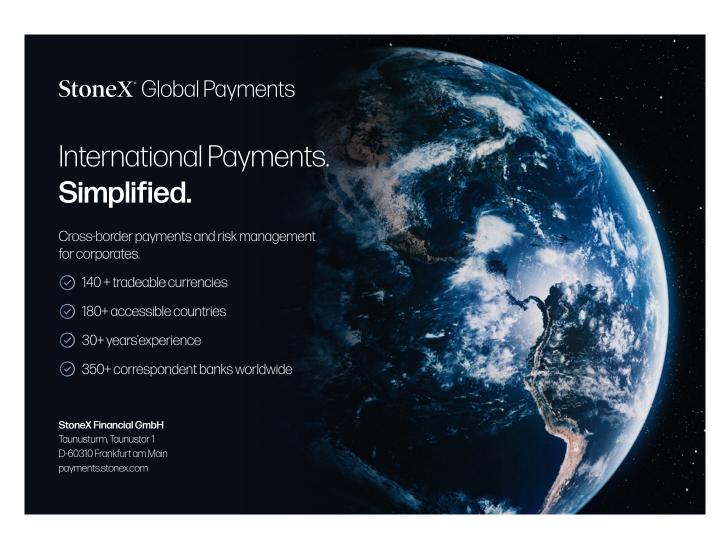
Elavon is a PSP Gateway/Processor which offers secure services for merchants, including a product called 'Converge', a gateway for processing payments in-person, online or on-the-go. Another big player is PayZone Ireland, which is a payment service provider for retailers and small businesses across fixed, mobile and virtual terminals.²⁸⁷

PSP	Group	Number of employees	Revenue (Million €)	Net Income (Million €)	LinkedIn
Stripe Payments Europe	Stripe INC	1.048	1.982,52	-23,43	<u>Link</u>
First Merchant Processing (Ireland) DAC	Fiserv Inc	108	640,31	39,12	Link
Elavon Financial Services Designated Activity Company	US Bancorp	2.160	264,86	-30,97	<u>Link</u>
Payzone Ireland Limited	Government of Ireland	n/a	184,66	4,43	<u>Link</u>
Chase Paymentech Europe Limited	JPMorgan Chase & Co	99	170,98	122,87	<u>Link</u>
Sumup Limited	Sumup Holdings	900	89,85	-56,95	Link
Squareup International Limited	Squareup Limited	98	34,45	-91,11	<u>Link</u>
J.P. Morgan Wholesale Payments Europe Limited	JPMorgan Chase & Co	n/a	28,73	1,46	<u>Link</u>
Pay and Shop Limited	Global Payments - Realex Payments Holdings Limited	122	25,39	7,06	<u>Link</u>
Global Payments - Realex Payments Holding Limited	Global Payments UK Holdings 2 Ltd	122	25,39	7,07	<u>Link</u>

²⁸⁵ https://thebanks.eu/emis/stripe-technology-europe-354889

²⁸⁶ https://backlinko.com/stripe-users

²⁸⁷ https://www.payzone.ie/



Local & Alternative Payment Methods

Local payment methods established in Ireland include major international players such as the PayPal e-wallet, Western Union Payments Services for cross-border payments, Google Payment and Skrill.

Bank of Ireland, AIB, PTSB and KBC, four leading banks in Ireland, are launching Synch Payments, a simple and open instant mobile payments service for Ireland. The new company aims to transform digital payments for consumers and businesses in Ireland through the introduction of a new mobile phone-based payments application²⁸⁸. This industry collaboration follows the success of many European and worldwide industry initiatives offering a similar instant mobile payment solution.

Local Payment Methods	Group	Number of employees	Revenue (Million €)	Net Income (Million €)	LinkedIn
Western Union Payment Services Ireland Limited	The Western Union CO	270,00	672,84	29,53	<u>Link</u>
Paypal Europe Services Limited	Paypal Payment Holdings PTE. LTD	2.744,00	276,99	52,43	<u>Link</u>
Paysafe Payment Solutions Limited (Skrill)	Paysafe Group	26,00	116,78	5,75	<u>Link</u>
Google Payment Ireland Limited	Alphabet Inc	n/a	35,62	1,97	<u>Link</u>
Remitly Europe Limited	Remitly Global Inc	49,00	21,62	0,54	<u>Link</u>
CurrencyFair Limited	Standard Chartered PLC	85,00	8,71	-4,23	<u>Link</u>
Lumon FX Europe Limited	Lumon Pay Limited	18,00	1,58	0,33	<u>Link</u>
OFX Payments Ireland Limited	OZForex Limited	6,00	0,44	0,06	<u>Link</u>

²⁸⁸ https://www.europeanpaymentscouncil.eu/news-insights/insight/irish-payment-landscape-digital-transformation

South-Western Europe

Introduction

South-Western Europe is composed of Italy, Spain and Portugal. The number of cash transactions in these countries is decreasing, following the trend of the last few years. The pandemic added further impetus to the move from cash to card payments, shaping new habits among consumers even after the black swan event.

Online payment methods have come to fruition with debit and credit cards. There is, however, some variation in online payment usage and preference across the countries. In particular, debit cards account for the highest total transaction value in these South-Western European countries, traditionally dominant as they are usually initially attached to a bank account, in contrast to other payment cards. Merchants had to turn to digital payments to offer e-commerce services, even though this region is still lagging behind in terms of digital payments, compared to many other geographic regions within the EU.

Additionally, there has been a rise in the use of alternative payment methods such as mobiles and e-wallets. These countries are distinguished by increased digitalisation, emphasising the distinction between traditional banks and pure digital banks. As a result, banks must reposition themselves by providing digital solutions to their customers. Because contactless payments have been so successful in these countries, banks have had to develop their own digital wallets.

Worthy of note is the trend of Open Banking, especially for Italy and Spain. By leveraging PSD2, the Italian and Portuguese banking ecosystems are gradually but steadily progressing toward an Open Banking reality centred on the customer's digital experience.

Banks



Santander has been a leader in the Spanish banking market for decades, with the launch of innovative products (such as the "Supercuenta Santander") and with successive acquisitions such as Banesto (1994), the merger with Banco Central Hispano (1999), and the integration of Banco Popular (2017). In Portugal, Santander began its activity in 1990 when it acquired a significant stake in Banco de Comércio e Indústria, but it was not fully consolidated until 1999, when it bought a significant stake of the Totta e Açores financial group and Crédito Predial Português. The merger of the Group's three commercial banks (Totta, Crédito Predial and Santander Portugal) gave rise to Banco Santander Totta. Subsequently, Banco Popular's business in Portugal was integrated in 2017. In the EU, Santander is also present in Poland.

The Spanish Caixabank is present in all three countries of the region. It is the third largest bank in Spain. In Portugal, the bank is present through its 100% owned subsidiary Banco BPI.

BBVA has a strong presence in Spain, Mexico, South America and Turkey. However, the bank is also present in Italy and Spain. In late 2021, BBVA entered the Italian market with a 100% online banking offer, with the goal of being the "zero commission everyday mobile bank" of reference²⁸⁹.

289 https://www.finextra.com/newsarticle/39073/bbva-launches-digital-retail-bank-in-italy



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Note that the two dominant Italian banks, UniCredit and Intesa Sanpaolo, do not have a strong presence in the region. Both are present in Spain, but do not have a strong footprint there. UniCredit's core markets include Italy, Germany and Central and Eastern Europe. Similarly, Intesa Sanpaolo has a strong presence in Central and Eastern Europe and the Mediterranean basin.

Bank	Group	Number of employees	Revenue (Million €)	Net Income (Million €)	LinkedIn
Banco Santander SA	Parent company	197.070	48.846,00	9.653,00	<u>Link</u>
Banco Bilbao Vizcaya Argentaria SA (BBVA)	Parent company	110.432	24.267,00	5.618,00	<u>Link</u>
Intesa Sanpaolo	Parent company	97.698	22.293,00	4.043,00	<u>Link</u>
<u>UniCredit SPA</u>	Parent company	78.571	17.239,00	1.570,00	<u>Link</u>
<u>Caixabank SA</u>	Parent company	49.762	11.601,00	5.229,00	<u>Link</u>
Novo Banco	Nani Holdings	4.193	1.128,06	192,19	<u>Link</u>

Source: Orbis | 2021 Financials

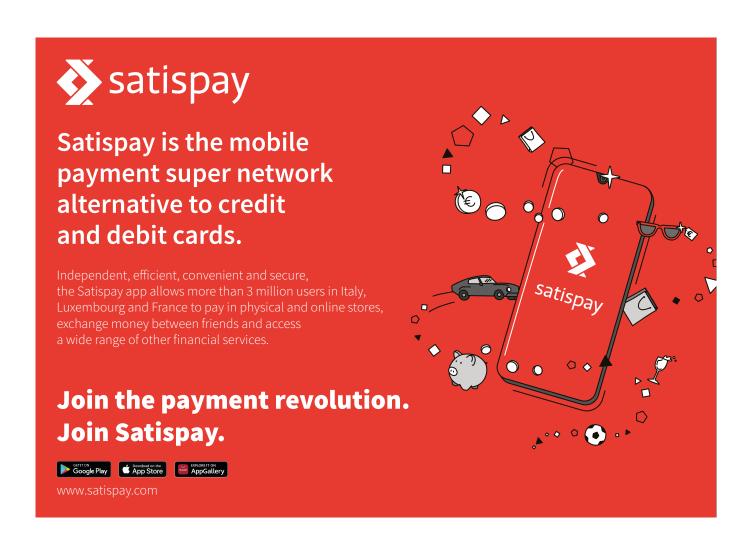
Payment Service Providers



Payment Service Providers are becoming more popular in South-Western Europe, owing to the increased use of digital and mobile payments, as well as the rise of e-commerce and online marketplaces.

The French leader Worldline is present in the three countries of the region. PagoNxt, a Santander company, is active in Spain and Portugal, serving Santander's customers. Axerve, a smaller Italian gateway and processor, is present in Italy and Spain. Finally, Nexi holds a strong presence in its home market Italy. Similarly, SIBS plays an important role in its home market, Portugal.

Payment Service Providers	Group	Number of employees	Revenue (Million €)	Net Income (Million €)	LinkedIn
<u>Worldline</u>	Parent company	20.711	4.898,00	-751,40	<u>Link</u>
Nexi Payments SPA (CartaSi)	Nexi SPA	1.415	1.550,59	185,52	Link
SIBS - SGPS SA	Parent company	1.371	275,28	44,26	<u>Link</u>
PagoNxt Merchant Solutions SL	Banco Santander SA	321	14,53	-51,38	<u>Link</u>
Axerve SPA	Fabrick SPA	57	0,24	2,76	Link



Local & Alternative Payment Methods



In terms of local and alternative payment methods, each country has its own preferred payment method: Satispay in Italy, Bizum in Spain and Multibanco in Portugal.

The mobile app Satispay is the most popular means of payment in Italy. The app allows users to pay in physical and online stores and exchange money between friends, and offers a range of other services such as phone top-ups, bill payments, pagoPA and vehicle tax stamps, donations, gift envelopes and savings.

In Spain, Bizum (launched by several Spanish banks) is the most popular local payment method. It allows users to conduct person-to-person payments through a smartphone. Bizum's goal is to make payments between people easy by linking their phone numbers and email addresses to their bank accounts.

Finally, Multibanco is Portugal's leading payment method. Developed by the payment company SIBS, it is a post-pay option where a reference is generated at the checkout and then paid via an ATM with a debit card or via online banking. In terms of mobile payments, MB WAY emerges as the leader on the market. It enables online and in-app purchases, immediate transfers, cardless cash withdrawals and even the generation of MB NET virtual cards, via a smartphone or tablet.

Additionally, BNPL companies have gained popularity in the region. Scalapay (Italy) and Sequra (Spain) are both present in the three countries of the region.

Local & Alternative Payment Methods	Group	Number of employees	Revenue (Million €)	Net Income (Million €)	LinkedIn
SIBS Pagamentos	SIBS - SGPS SA	n/a	37,77	15,39	<u>Link</u>
Segura Worldwide SA	Parent company	245	40,00	n/a	<u>Link</u>
Bizum SL	Owned by 15 Spanish banks	5	12,83	-0,01	<u>Link</u>
Satispay SPA	Parent company	105	8,64	-25,80	<u>Link</u>
Scalapay SRL	Scalapay Limited	48	7,00	-11,50	Link

Italy

Introduction

Italy is a European country where traditional services are still much more popular than digital ones. Cash and debit cards are the most used payment methods for the general public in Italy. Mobile apps are generally less used, the exception being Satispay, the independent mobile payment network, which is particularly popular among the younger generations for day-to-day purchases as it allows consumers to make peer-to-peer transfers as well as to pay in physical and online stores²⁹⁰.

Italy's payment preferences are slowly shifting away from cash towards credit cards. Indeed, the Italians' payment habits have changed radically in recent years and will continue evolving towards digital means of payment. This is attested by a study by Visa, according to which only three out of ten Italians interviewed today mainly use cash for their transactions. This is relevant progress considering past years, especially pre-pandemic. Digital payments were considered convenient by 62% of the Italians questioned. 70% of those questioned thought that payments would be mainly digital within the next 4 years, 40% credit cards, 21% prepaid cards, 27% mobiles, 7% bank transfer and 4% e-wallets²⁹¹.

In 2022, electronic payments were estimated to increase by 20% compared to the year before, accounting for 40% of transactions in Italy with a total estimated value of 400 billion € and with payments via mobile phones and wearables driving this growth. At the same time, cash payments were expected to fall below 50% of total transactions²⁹².

Over the last few months, the transition to digital payments has received a lot of attention from policymakers. The new Government led by Giorgia Meloni dropped its proposal to allow merchants to refuse card payments for purchases below $60 \le$ and is now planning to reduce the fees on digital payments for small businesses by introducing a "contribution" from banks. In addition, the government plans to raise the limit on cash payments from $1000 \le$ to $5000 \le$, with the new rules to take effect in 2023^{293} .

In terms of card payment schemes, Visa, Mastercard and the domestic debit brand PagoBancomat are the most popular ones, Visa being the country's preferred credit card scheme with a 56,2% share²⁹⁴.

The trends of digital and crypto currencies are moving fast in the country and the Italian association of banks (Associazione Bancaria Italiana – ABI) has introduced the Central Bank Digital Currency (CBDC), considered not only as a new innovative tool, but also as a way to foster the possibilities of blockchain technology in the payments sector.

Banks

There are 443 credit institutions registered in Italy, including 68 EEA branches and 9 non-EEA branches²⁹⁵. In terms of total assets, the two leading banks are Intesa Sanpaolo and UniCredit, holding 20% (628 billion €) and 15% (452 billion €) of total assets respectively²⁹⁶.

Offering its services to 13,6 million customers, Intesa SanPaolo is the leader in Italy²⁹⁷. In 2022, Intesa SanPaolo was named "best bank of the year in Italy" for the third consecutive year by The Banker²⁹⁸. The bank issues Mastercard and PagoBancomat cards. Forrester Research named the Sanpaolo Mobile app the "Global Mobile Banking Apps Leader" out of all the evaluated banking apps in the world. The app is the point of reference for more than 12 million multi-channel customers, with more than one and a half billion logins and 146 million transactions.²⁹⁹

Unicredit is the second largest bank in Italy. It is worth mentioning that Unicredit has launched its owned neobank called Buddybank. Its services are available online via a mobile application. Buddybank issues Mastercard debit and credit cards, and its services are available 24/7 which makes it much more convenient than a traditional bank³⁰⁰.

²⁹⁰ https://www.ecb.europa.eu/paym/digital_euro/investigation/profuse/shared/files/dedocs/ecb.dedocs220330_report.en.pdf

²⁹¹ https://www.milanofinanza.it/news/rivoluzione-fintech-tre-italiani-su-dieci-pagano-solo-in-contanti-202207051814386202

²⁹² Osservatorio Innovative Payments della School of Management del Politecnico di Milano

²⁹³ https://www.centralbanking.com/central-banks/payments/7953956/italy-to-allow-larger-cash-payments-despite-central-bank-objections

²⁹⁴ https://thepaypers.com/payment-methods/italy/9

https://euclid.eba.europa.eu/register/

²⁹⁶ https://thebanks.eu/banks/16008/market_share

²⁹⁷ https://group.intesasanpaolo.com/en/about-us

²⁹⁸ https://group.intesasanpaolo.com/en/sustainability/latest-news-and-insights/sustainability-latest-news/2022/intesa-sanpaolo-bank-of-the-year-in-italy

²⁹⁹ https://www.marketscreener.com/quote/stock/INTESA-SANPAOLO-S-P-A-68944/news/Intesa-Sanpaolo-S-p-A-Mobile-Global-Leader-among-banking-apps-42425587/?utm_medium=RSS&utm_content=20221129

³⁰⁰ https://www.buddybank.com



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Bank	Group	Number of employees	Revenue (Million €)	Net Income (Million €)	LinkedIn
Intesa Sanpaolo	Parent company	97.698	22.293,00	4.043,00	<u>Link</u>
UniCredit	Parent company	78.571	17.239,00	1.570,00	<u>Link</u>
ICCREA Banca	Parent company	22.084	5.020,62	460,57	<u>Link</u>
Poste Italiane	Republic of Italy	700	5.205,46	508,35	<u>Link</u>
Banco BPM	Parent company	19.435	4.586,25	568,78	<u>Link</u>
BPER Banca	Parent company	18.622	3.710,53	558,65	<u>Link</u>
Banca Monte dei Paschi di Siena	Republic of Italy	21.244	3.271,08	309,33	<u>Link</u>
Credit Agricole Italia	Credit Agricole	13.096	3.056,18	608,37	<u>Link</u>
Banca Nazionale del Lavoro	BNP Paribas	11.065	2.459,32	334,87	<u>Link</u>
FCA Bank	Parent company	2.446	2.168,65	493,60	<u>Link</u>
Banca Mediolanum	Parent company	3.318	1.638,83	713,06	<u>Link</u>
Credito Emiliano	Credito Emiliano Holding	6.608	1.573,40	352,59	<u>Link</u>
Banca Popolare DI Sondrio	Parent company	3.395	1.147,05	275,02	<u>Link</u>
FinecoBank Banca FinEco	Parent company	1.305	946,54	380,71	<u>Link</u>
Deutsche Bank	Deutsche Bank	3.232	968,45	36,28	<u>Link</u>

Electronic Money Institutions

There are currently 10 registered electronic money institutions³⁰¹, including PostePay, Lis Pay (now part of PostePay) and Mooney.

PostePay is one of the most relevant EMIs in the Italian market. It integrates the telecommunications services offered by PosteMobile with its electronic money and payment systems, becoming a digital service provider for consumers, businesses and the public administration. The payment company can count on a strong customer base with 4,08 million PosteMobile SIM cards, 26,2 million payment cards (including 19 million prepaid cards) and 2,2 million digital wallets³⁰².

In September 2022, Poste Italiane, through its subsidiary PostePay, received approval to acquire 100% of the share capital of LIS Pay. LIS is available through a network of 54.000 points of sale and offers services such as bill payments, prepaid payment cards, e-voucher top-ups and merchant solutions. This acquisition will strengthen PostePay's leading position in the payment industry³⁰³.

With 20 million customers per year and more than 45.000 points of sale, Mooney is the first company to offer proximity banking and payment solutions in Italy. The result of the merger of SisalPay and Bianca5, Mooney issues Visa prepaid cards. In December 2021, Enel agreed to take a 50% stake in Mooney and take joint control of the company with Intesa Sanpaolo, valuing Mooney at almost 1,4 billion €³⁰⁴.

Other e-money institutions worth mentioning include the French player Edenred, the challenger bank HYPE, Banca Mediolanum's app targeting younger generations such as Millennials and Generation Z, and Telepass, which focuses on mobility services.

ЕМІ	Group	Number of employees	Revenue (Million €)	Net Income (Million €)	LinkedIn
Postepay	Republic of Italy	310	1.078,11	184,56	<u>Link</u>
<u>Telepass</u>	Atlantia	401	273,50	57,55	<u>Link</u>
Mooney	Mooney Group	374	256,36	-1,37	Link
LIS PAY	B&D Holdings	83	231,33	12,26	Link
Epipoli SPA	Parent company	68	136,11	-12,54	Link
Edenred Italia	Edenred	7	1,11	0,01	Link
Нуре	Fabrick & Illimity Bank	46	0,86	-10,48	<u>Link</u>
<u>Flowe</u>	Banca Mediolanum	30	0,12	-33,10	Link
BCC Pay	ICCREA Banca	n/a	n/a	n/a	Link

Source: Orbis | 2021 Financials

Payment Service Providers

As the third largest economy in Europe with a cash penetration rate that is still high, Italy is a strategic and very attractive market for payment service providers, driven by the shift from cash to cards and the adoption of electronic payments. The market is also supported by a strong acceptance network and one of the highest point-of-sale densities per capita in Europe³⁰⁵. There are 47 active payments institutions licensed and authorised by the Bank of Italy³⁰⁶. However, not all the payment institutions act as PSPs. The major PSPs in Italy are Nexi, Worldline and Axerve.

Nexi is the leading PayTech company in Italy and the country's reference point for digital payments, as well as the 6th largest merchant acquirer worldwide, according to the Nilon report. The company processed more than 18 billion transactions in 2021. It operates in strong partnership with around 150 partner banks, serving around 900.000 merchants and managing more than 43 million payment cards.

In March 2022, a merger and integration took place between Nexi, Nets and Sia, leading to the strengthening of the Nexi group. The principal reasons behind the shareholders' agreement with Sia were growth in terms of scale and an international dimension. This deal marks a step towards digitalising payments, as Italy is more reliant on cash than any other European country. Moreover, Italy presents massive levels of tax evasion in Europe and digital payments could be a way to reduce this. Furthermore, Nexi was able to increase in size as online purchases intensified during the pandemic and consumers moved away from using physical cash. The new group will be the largest group in Europe by number of merchants served (2 million), number of cards (120 million) and number of transactions executed each year (21 billion)³⁰⁷.

The French PSP Worldline also holds a leading position in Italy. In January 2022, it completed the acquisition of 80% of Axepta Italy as part of its European consolidation strategy. Axepta Italy is one of the major bank acquirers in the country, with nearly 200 million transactions acquired per year (about 5% MSV market share) from an acceptance network of about 220.000

- 301 https://euclid.eba.europa.eu
- 302 https://www.ipc.be/news-portal/operations-logistics/2018/10/02/07/45/postepay-spa-launched-italys-digital-payments-leader
- 303 https://tgposte.poste.it/en/2022/09/15/poste-italiane-completes-lis-acquisition/
- 304 https://www.reuters.com/markets/deals/enel-teams-up-with-intesa-sanpaolo-italy-payments-firm-mooney-2021-12-23/
- 305 https://fr.worldline.com/fr/home/newsroom/press-releases-general/2022/pr-2022_01_04_01.html
- https://euclid.eba.europa.eu/register/
- 307 https://www.bscapitalmarkets.com/nexi-ndash-sia-a-crucial-merger-for-a-new-european-leader-in-the-paytech-industry.html

POS³⁰⁸. In November 2022, Worldline announced the acquisition of the merchant acquiring activities of Banco Desio. The deal is expected to close in the first quarter of 2023 and to bring extra revenue of 15 million € within the first year³⁰⁹.

Finally, Axerve offers a platform to accept all types of payments, from all channels through POS, e-commerce solutions, cash-in machines and omnichannel solutions. They have over 100.000 customers³¹⁰.

PSP	Group	Number of employees	Revenue (Million €)	Net Income (Million €)	LinkedIn
Nexi Payments	Nexi	1.282	1.137,80	143,95	<u>Link</u>
Axepta	BNP Paribas	108	109,89	4,01	<u>Link</u>
Ingenico Italia	Worldline	124	81,27	3,84	<u>Link</u>
Axerve	Fabrick	39	21,62	3,43	<u>Link</u>

Source: Orbis | 2021 Financials

Open Banking Enablers

Fabrick is a new open financial ecosystem which enables and fosters a fruitful exchange between players that discover, collaborate and create innovative solutions for end customers through an API platform. Fabrick presents the new way of doing banking: open, modular and data driven. For banks and financial institutions, Fabrick represents a vast ecosystem of quality services to access to grow their business. For fintechs, system integrators and developers, the network effect created by Fabrick provides an opportunity to collaborate with the best talents in the financial sector and beyond, and to build new products and services.

In Italy, FlowPay is the first PSD2 (AISP & PISP) authorised startup. Account information and aggregation, payments and e-invoice services are all part of the OpenBanking solution. On account of the electronic invoicing obligation, Flowpay has established a strong position in the Italian market and is moving toward Europe, benefiting from the continent's regulatory unification and from collaborations with the most prestigious national fintech players.³¹¹

Additionally, Nexi, as a technological partner, developed the CBI Open Banking System, to which the main Italian banks have already adhered³¹².

Open Banking Enabler	Group	Number of employees	Revenue (Million €)	Net Income (Million €)	LinkedIn
<u>Fabrick</u>	Banca Sella	99	0,24	-3,44	<u>Link</u>
Flowpay	Independent company	4	0,36	-0,10	<u>Link</u>

Source: Orbis | 2021 Financials

Local & Alternative Payment Methods

The most popular alternative payment method among Italians is the mobile app Satispay. The company possesses an e-money licence issued by Luxemburg, and has 3,3 million customers and 240.000 merchants across Italy, Luxemburg, Germany and France. The Satispay app allows users to pay in physical and online stores and exchange money between friends, and offers a range of other services such as phone top-ups, bill payments, pagoPA and vehicle tax stamps, donations, gift envelopes and savings. In 2022, Satispay announced a 320 million € Series D investment round, led by Addition, taking its valuation to more than 1 billion € and becoming a unicorn³¹³.

Moreover, even if the Italian BNPL industry is still in its early stages of development, it is expected to grow in the long term. Domestic BNPL firms are looking to strengthen their position, as demonstrated by the huge investments made by Scalapay in May 2022³¹⁴. Italian's first unicorn³¹⁵ and Klarna's rival, Scalapay is an innovative payment method that allows users to buy now and pay later in three convenient, interest-free instalments of the same amount. In May 2022, the BNPL company teamed up with the Web3 payments provider Twig to promote more sustainable behaviour among shoppers. The partnership allows customers to resell apparel and electronics purchased via Scalapay and receive immediate payment from Twig³¹⁶.

- 308 https://fr.worldline.com/fr/home/newsroom/press-releases-general/2022/pr-2022_01_04_01.html
- 309 https://www.reuters.com/markets/deals/frances-worldline-buy-merchant-acquiring-activities-italys-banco-desio-2022-11-07/
- 310 https://www.axerve.com/en/learn/insights/what-is-axerve
- ${\tt 311} \quad \underline{https://www.polihub.it/it/news/flowpay-prima-startup-ad-ottenere-da-banca-ditalia-labilitazione-come-istituto-di-pagamento-aisp-e-pisp/lineari$
- 312 https://www.linkedin.com/company/nexipayments/
- 313 https://www.eu-startups.com/2022/09/milan-based-payment-network-satispay-exceed-e1-billion-valuation-and-becomes-an-italian-unicorn/
- 314 https://www.globenewswire.com/en/news-release/2022/10/17/2535351/28124/en/Outlook-on-the-Buy-Now-Pay-Later-Market-in-Italy-to-2028-Domestic-BNPL-Firms-are-Raising-Funding-Rounds-to-Invest-in-Product-Development-and-Branding.html
- 315 https://www.crowdfundinsider.com/2022/05/191607-bnpl-fintech-scalapay-teams-up-with-twig-to-provide-consumers-with-frictionless-shopping-experience/
- 316 https://www.altfi.com/article/9301_scalapay-and-twig-team-up-to-help-shoppers-profit-from-second-hand-clothes

Finally, the e-payment solution called MyBank is also popular in the country³¹⁷. MyBank enables users to make and receive payments through immediate bank transfers via its online banking portal.

Local Payment Method	Group	Number of employees	Revenue (Million €)	Net Income (Million €)	LinkedIn
Satispay	Parent company	105	8,64	-25,80	<u>Link</u>
Scalapay	Scalapay	48	7,00	-11,50	<u>Link</u>
Presta (MyBank)	Independent company	n/a	n/a	n/a	<u>Link</u>

Source: Orbis | 2021 Financials

Others

PagoPA is a specialised public company whose mission is to spread digital public services through the development of innovative projects and the management of technological infrastructure to accompany the modernisation of public administration and the country. Among other things, the company enables citizens and companies to electronically pay the public administration in an easy and intuitive way³¹⁸.

Other	Group	Number of employees	Revenue (Million €)	Net Income (Million €)	LinkedIn
PagoPA	Republic of Italy	45	13,31	0,04	<u>Link</u>

^{317 &}lt;a href="https://www.ppro.com/payment-methods/mybank/">https://www.ppro.com/payment-methods/mybank/

³¹⁸ https://developers.italia.it/it/pagopa/

Spain

Introduction

Spain is a unique case within the European Union, as multiple forms of payment coexist with no plans to phase out any of them in the near future. After the pandemic subsided, the Spanish population resumed their use of cash, making it the European country with the highest number of banked individuals who reported using cash in the past month (85%), particularly for small purchases, public transportation and at restaurants³¹⁹.

Meanwhile, cards remain a popular method of payment, accounting for 47% of online payments, with Visa (57%) and Mastercard (39%) being the dominant payment schemes. However, this percentage is expected to decline by nearly 30% over the coming years as digital wallets and other payment methods gain in popularity. In the realm of cards, contactless payments have experienced significant growth, making Spain a leader in this field in Europe (chosen by 9 out of 10 consumers in the country)³²⁰.

There are still many Spaniards who have yet to make their first online purchase, with 47% of the population falling into this category. E-commerce currently accounts for only 6,7% of total retail sales in the country, but this is expected to change as domestic retailers, including retail giant Inditex, move towards online sales³²¹. To date, online spending has been dominated by seller's marketplaces and classified ad sites³²².

The use of smartphones for e-commerce purchases is still increasing in Spain (where 60% of people report using them), although the adoption rate remains lower than in other European Union countries. Additionally, the frequency of online purchases has risen, with 56% of Spaniards making at least one purchase per month, but this is still well below the UK's 69%³²³.

Among the local payment methods employed, the instant mobile payment system Bizum has grown in popularity for day-to-day spending. It allows customers to send money conveniently from one bank to another merely by having the recipient's mobile phone number. Bizum is the gateway service to people adopting other digital payment methods³²⁴. People also use digital wallets, Paypal being the most popular in Spain, although the adoption rate is much lower than in other countries. Note that, following the global trends, BNPL is also gaining traction in Spain.

Banks

The four main banks in Spain in terms of total assets are Santander (1,67 trillion €), Caixabank (689 billion €), BBVA (675 billion €) and Sabadell (253 billion €). These four banks are followed by Bankinter (110 billion €) and other smaller players such as Albanca, Unicaja, Kutxabank and Ibercaja, to name a few³²⁵. However, this classification takes global assets into account. Following the merger between Caixabank and Bankia, Caixabank is now the leading bank in terms of local assets, with a combination of more than 665 billion € in combined assets, making it Spain's largest bank³²⁶.

With 19 million customers in Spain out of a total of 21 million customers, Caixabank has an industry-leading market share. It has a 43% market penetration in retail banking and is the main bank of 32% of Spanish citizens. It also has a 44% penetration rate among micro-enterprises and self-employed workers. Thanks to the bank's ability to gain and retain customers, Caixabank received Euromoney's award for excellence in 2022³²⁷. It has also been ranked as the neobank with the best quality service in Spain by AQMatrix³²⁸. CaixaBank has been nominated to build a prototype for the digital euro, more specifically for online peer-to-peer payments³²⁹.

CaixaBank has launched Imagin, Spain's leading mobile-only bank for young people. Two years ago, the bank relaunched as a digital platform for younger users - offering both financial and non-financial services. Unlike other banks, Imagin does not require users to register as banking customers. Its aim is to encourage growth and loyalty among younger customers³³⁰. Today, Imagin has already reached 4 million users and had a market share of 12.9% of the neobank segment in Spain³³¹.

Imagin is not the only neobank gaining interest among customers. Following consumer preferences, the neobanking segment is increasing in the country. Neobanks in Spain include the UK-based Revolut and German N26, as well as local players such as EVO Banco and Open Bank³³².

- 319 XI Edition of the Means of Payment Trends 2022 Report, https://www.minsaitpayments.com/informe-2022
- 320 XI Edition of the Means of Payment Trends 2022 Report, https://www.minsaitpayments.com/informe-2022
- 321 https://www.jpmorgan.com/merchant-services/insights/reports/spain-2020
- 322 XI Edition of the Means of Payment Trends 2022 Report, https://www.minsaitpayments.com/informe-2022
- 323 XI Edition of the Means of Payment Trends 2022 Report, https://www.minsaitpayments.com/informe-2022
- 324 https://www.ecb.europa.eu/paym/digital_euro/investigation/profuse/shared/files/dedocs/ecb.dedocs220330_report.en.pdf
- 325 https://www.helpmycash.com/banco/ranking-bancos-espanoles/

Figures are as of the first trimester of 2022

- 326 https://www.statista.com/statistics/693883/leading-banks-assets-spain/
- 327 https://www.euromoney.com/article/2acjtoawc4ekb7m12nugx/awards/awards-for-excellence/awards-for-excellence-2022-best-bank-in-spain-caixabank
- https://www.caixabank.com/comunicacion/noticia/imagin-ranked-as-the-neobank-with-the-best-user-experience_en.html
- 329 https://thepaypers.com/online-payments/eu-to-propose-digital-euro-legislation-in-2023--1258637#
- 330 https://www.caixabank.com/comunicacion/noticia/caixabank-relaunches-imagin-as-a-digital-services-and-lifestyle-platform-for-2-6-million-young-people_en.html
- https://en.neobanking.info/news/europe/imagin-neobank-spain
- 332 https://blog.unguess.io/en/the-state-of-spanish-banks-digitalisation

Bank	Group	Number of employees	Revenue (Million €)	Net Income (Million €)	LinkedIn
Banco Santander	Parent company	197.070	48.846,00	9.653,00	<u>Link</u>
BBVA	Parent company	110.432	24.267,00	5.618,00	<u>Link</u>
Caixabank	Parent company	49.762	11.601,00	5.229,00	<u>Link</u>
Banco de Sabadell	Parent company	20.070	5.493,49	538,71	<u>Link</u>
<u>Bankinter</u>	Parent company	6.138	2.035,57	1.333,11	<u>Link</u>
Abanca	Parent company	6.222	1.177,78	320,57	<u>Link</u>
Unicaja Banco	Parent company	9.264	1.280,86	1.113,20	<u>Link</u>
<u>Kutxabank</u>	Bilbao Bizkaia Kutxa (BBK)	5.519	1.256,86	218,37	<u>Link</u>
Ibercaja Banco	Fundación Bancaria Ibercaja	4.880	1.029,73	150,99	<u>Link</u>
Arquia Bank	Parent company	239	54,85	10,40	<u>Link</u>
Cajasur Banco	Bilbao Bizkaia Kutxa (BBK)	1.750	243,89	16,43	<u>Link</u>
Open Bank	Banco Santander SA	170	148,33	10,13	<u>Link</u>
EVO Banco	Bankinter SA	200	32,17	-23,72	<u>Link</u>

Source: Orbis | 2021 Financials

Electronic Money Institutions

There are currently 10 e-money institutions licensed and authorised by the Bank of Spain³³³. These companies can conduct their activities in any of the 31 EEA member states due to EEA passport rules. They include the companies Sefide, Moneytopay (a CaixaBank company), Pecunia Pay (branded under the name Pecunpay), Up Aganea, Finpay, BIP & Drive, and Currencies Direct. Pagonxt (a Santander company) is also registered as an e-money institution, but acts as a payment service provider. Similarly, Unnax acts as an Open Banking Enabler.

Bnext offers alternative banking solutions. The startup has reached more than 500.000 customers in Spain and is currently the leading payment fintech in Spain with B2C services³³⁴. In September 2022, Bnext launched its utility token (B3X token). With over 10,5 million €, it takes second place in Spain's ICO ranking³³⁵.

Pecunia Cards, branded under the name Pecunpay, was created with the aim of improving and adding value to the payment systems in Spain and to optimise the customer experience in electronic money processes³³⁶. In September 2022, Pecunpay became the first Mastercard partner in Spain to accept payments via the Mastercard Send service. The fintech provides near real-time money transfers to Mastercard cards all over the world³³⁷.

Bip & Drive is the most complete digital platform of payment services for drivers in Spain. The app provides users with all mobility services in one place, from electronic tolling to ITV test reservations and payment, as well as refuelling at petrol stations. With over 1,1 million users and over 29.000 affiliated businesses, it currently has 100% coverage of tolls in Spain, France and Portugal³³⁸.

ЕМІ	Group	Number of employees	Revenue (Million €)	Net Income (Million €)	LinkedIn
BIP & Drive	Abertis & others	23	222,84	2,36	<u>Link</u>
Pecunia Cards	Normax	23	21,94	0,41	<u>Link</u>
Global Payments Moneytopay	Caixabank	3	10,66	2,41	<u>Link</u>
Bnext Electronic Issuer	Marcandita	74	n/a	-0,49	<u>Link</u>

³³³ https://euclid.eba.europa.eu/register/

³³⁴ https://bnext.es/uploads/landing/Whitepaper-Bnext ENG.pdf

³³⁵ https://beincrypto.com/bnext-launches-its-utility-token-on-gate-io/

³³⁶ https://www.linkedin.com/company/pecunpay/

³³⁷ https://paymentexpert.com/2022/09/08/pecunpay-turns-to-mastercard-send-for-faster-payments/

³³⁸ https://www.linkedin.com/company/bipdrive/?originalsubdomain=es

Payment Service Providers

There are currently 58 active payment institutions licensed and authorised by the Bank of Spain³³⁹. These companies can conduct their activities in any of the 31 EEA member states due to EEA passport rules.

In Spain, many Payment Service Providers offer acquiring solutions such as point-of-sale payments and e-commerce. The most popular solutions are those offered by commercial banks.

In late 2020, Santander Group launched PagoNxt as a global payments platform that brings together all its payment solutions under one umbrella. This platform builds on the already established Getnet franchise and aims to innovate the payment industry (Getnet was previously a Santander Brasil company).

It is worth noting the significance of Redsys in the Spanish market. As a company owned by the major banks and savings banks in Spain, Redsys acts as a supportive company for them, offering processing services, regulatory sandbox (PSD2) and other solutions.

In contrast, Minsait Payments continues to be the preferred specialised issuing processor for the expansion of the services of Spanish banks in Latin America, where a significant portion of their business volume comes from.

Monei is one of the fastest growing omnichannel platforms in Southern Europe³⁴⁰, as it helps merchants to accept a wide range of local payment methods, including Bizum.

PSP	Group	Number of employees	Revenue (Million €)	Net Income (Million €)	LinkedIn
Caixabank Payments & Consumer	Caixabank	521	782,48	218,70	<u>Link</u>
Comercia Global Payments	Caixabank	100	161,30	29,82	<u>Link</u>
Getnet Europe	Banco Santander	156	152,14	6,57	<u>Link</u>
Redsys Servicios de Procesamiento	Parent company	632	142,43	2,10	<u>Link</u>
Minsait Payment	Indra Sistemas	738	53,89	-5,22	<u>Link</u>
Universalpay	EVO Payments	115	42,19	-12,45	<u>Link</u>
Worldline MS Iberia	Worldline	102	24,22	-2,38	<u>Link</u>
PAY Retailers	Parent company	19	10,38	6,05	<u>Link</u>
Worldwide Payment Systems	HIG Capital Partners	94	5,72	-1,12	<u>Link</u>
Sipay Plus	Nevado Vinaras	46	5,12	1,52	<u>Link</u>
Paymatico_	Paymatico Group	8	2,38	0,15	Link
Paycomet	Banco de Sabadell	26	2,01	-0,21	Link
Monei Digital Payments	Lion King Investments	n/a	0,47	0,07	Link
Pagonxt Onetrade Espana	Banco Santander	n/a	n/a	n/a	<u>Link</u>

Source: Orbis | 2021 Financials

Open Banking Enablers

Three open banking enablers are established in Spain: Unnax, Tink (Eurobits was acquired by the open banking leader Tink in 2020³⁴¹) and Arcopay. The English company Yapily also entered Spain in 2021 and already covers almost every bank account in the country³⁴².

Open Banking Enabler	Group	Number of employees	Revenue (Million €)	Net Income (Million €)	LinkedIn
Eurobits (Tink)	Tink	43	3,35	-0,89	<u>Link</u>
<u>Unnax</u>	Blumeran Technology	40	1,77	-1,42	<u>Link</u>
Minsait Payments (Arcopay)	Indra Systemas	12	0,95	0,02	<u>Link</u>

³³⁹ https://euclid.eba.europa.eu/register/

³⁴⁰ https://www.usabusiness.co.in/best-ecommerce-payment-gateway-spain/

³⁴¹ https://tink.com/blog/news/tink-completes-eurobits-acquisition/

³⁴² https://www.openbankingexpo.com/news/yapily-launches-in-spain/

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minsaitpayments.com







Acquiring



Open Business

minsoit payments

An Indra company

Trusted partner of Financial Institutions and Fintech

Issue cards integrated with your trusted channels

Improve your conversion and experience with our acquiring and open business solutions

Gain control, flexibility, and transaction speed with our cloud processing service



Local & Alternative Payment Methods

Launched in 2016, Bizum is the most popular local payment method. The company was launched by a number of Spanish banks, including the four leading banks (CaixaBank, Banco Santander, BBVA and Sabadell, which together hold almost 75% of the company) and other banks including Unicaja, Kutxabank, Ibercaja and Bankinter³⁴³. It allows users to conduct personto-person payments through a smartphone. Bizum's goal is to make payments between people easy by linking their phone numbers and email addresses to their bank accounts.

Twyp was a popular local payment method whose app, among other things, offered instant transfers, cash withdrawals in stores and a prepaid virtual card. However, after 7 years of service, ING decided to close its Twyp application in August 2022. The Twyp application was a pioneer in the introduction of instant transfers between individuals and cashback. ING announced that it would transfer its cash withdrawal platform in stores to Topii with the aim of making the service available to everyone³⁴⁴.

³⁴³ https://everly.eu/2022/10/02/n26-incorporates-bizum-for-its-customers-in-spain/

³⁴⁴ https://www.elespanol.com/invertia/empresas/banca/20220608/ing-cerrara-agosto-aplicacion-twyp-ofreciendo-servicios/678432247_0. html

As mentioned in the introduction, BNPL services are becoming increasingly popular - especially among the younger generations. Local companies SeQura and Aplazame (owned by WiZink, the bank specialising in simple credit and savings solutions) offer such services. Foreign companies such as Clearpay and Klarna are also present in Spain.

Local Payment Method	Group	Number of employees	Revenue (Million €)	Net Income (Million €)	LinkedIn
Sequra Worldwide	Parent company	245	40,00	n/a	<u>Link</u>
<u>Bizum</u>	Owned by 15 Spanish banks	5	12,83	-0,01	<u>Link</u>
Clearpay	Block	17	1,73	-4,82	<u>Link</u>
Klarna Spain	Klarna Holding	3	1,08	0,06	<u>Link</u>

Source: Orbis | 2021 Financials

Spain is also home to many cross-border payment companies:

Local Payment Method (cross-border)	Group	Number of employees	Revenue (Million €)	Net Income (Million €)	LinkedIn
RIA	Euronet Worldwide	487	311,35	6,72	<u>Link</u>
Small World Financial Services	LCC Trans-sending	311	47,14	-1,55	<u>Link</u>
Monty Global Payments	Monty & Cogroup	64	16,53	0,69	<u>Link</u>
I-Transfer Global Payments	Tempo Financial Cooperatief	38	11,59	-0,26	n/a
Maccorp Exact Change	Independent company	157	9,83	-2,51	<u>Link</u>
<u>Titanes Telecomunicaciones</u>	Independent company	34	8,47	0,55	<u>Link</u>
Transferzero Money Transfer	Aza Finance	7	4,62	0,03	Link
Trans Fast Financial Services	Independent company	14	2,47	0,00	n/a
Money Exchange	Independent company	79	1,65	-0,42	Link

Portugal

Introduction

Following a deep recession caused by the pandemic in 2020, Portugal's economy grew in 2021. However, the crisis is likely to exacerbate poverty and inequality. Electronic payments, including card payments, bank transfers and direct debit, account for 83% of total consumer payment value, with cash falling to 16% in 2021 from 19% the previous year.

Portugal, with nearly three payment cards per adult in 2021, is one of the largest issuers of payment cards in the European Union. With 215 cards per 100 adults and nearly 97 percent of total billed volume in 2021, debit cards maintained their dominance³⁴⁵.

In 2021, online card purchase volume was a third of the total value of card purchase transactions, up from a quarter five years earlier³⁴⁶. The Bank of Portugal presented its activity report on payment systems in spring 2022. The document, which covers the fiscal year 2021, highlights the country's strong growth in retail payments, with 3,1 billion € in transactions, an all-time high for Portugal. Furthermore, the Portuguese actor SIBS reports a significant increase in the use of the MB Way wallet this year, indicating the growth of electronic payments in the country in the post-COVID-19 context. Since the post-pandemic crisis, the Portuguese payments ecosystem appears to have entered a new chapter. Thus, according to the Bank of Portugal, payments made through the interbank clearing system increased in volume and value by 13,7% and 12,5% respectively, compared to 2020. Payment cards, direct debits and credit transfer transactions (including instant payment) increased by 13,9% in volume and 14,4% in value, accounting for 99,5% of total payments in 2021. These figures represent a significant advancement for a country that has been working for many years to digitally transform its society.

Banks

The Portuguese banking system consists of 160 credit institutions, 35 of them being foreign branches³⁴⁷. The five main banks in Portugal in terms of total assets are Caixa Geral de Depósitos (CGD), Banco Comercial Português branded under the name Millennium BCP, Banco Santander Totta, NOVO Banco and Banco Português de Investimento (BPI)³⁴⁸. These five banks accounted for 77% of the market at the end of 2021³⁴⁹.

With approximately 100 billion € in assets, Caixa Geral de Depósitos (CGD) is the largest Portuguese bank. The 100% state-owned banking corporation operates in 20 countries across four continents. The bank issues Visa, Mastercard and MB cards (credit, debit and prepaid). CGD offers an app called MB WAY which enables online and in-app purchases, immediate transfers, cardless cash withdrawals and even the generation of MB NET virtual cards, via a smartphone or tablet.

Banco Comercial Português (BCP) is the largest privately held bank in Portugal. It holds a total of 91 billion € in assets. With over 900 branches nationwide, the bank has the largest banking distribution network in the country. The bank has been branded under the name Millennium BCP since 2004. Millennium mainly issues Visa cards but also cards under the Mastercard and UnionPay schemes. It also has offers adapted for younger and older customers.

The third position is taken by Banco Santander Totta, a subsidiary of the Spanish Santander Group. The bank owns 46 billion € in total assets. Note that by loan volume, it is the largest privately owned bank in the country, with 3,1 million customers and 397 branches and corporate centres nationwide.

Novo Banco holds the fourth position with 45 billion € in total assets. Following the bankruptcy of Banco Espirito Santo, Novo Banco was founded in 2014. The bank serves over 1,4 million customers. The digital platform Banco Best is part of the Novo Banco Group.

Finally, Banco Português de Investimento (BPI) - or Portuguese Investment Bank in English - comes in fifth position with 37 billion € in total assets. Serving over 1,8 million customers, BPI is the subsidiary of the Spanish CaixaBank.

Other foreign players are also relevant in the market. They include the French BNP Paribas, the Dutch ING and the Spanish Bankinter. Other local players include ActivoBank and Banco Finantia.

It is important to note that, generally speaking, digital transformation is a priority for Portuguese banks and strong progress has been achieved on this front. Internet banking users have increased from 38% in 2010 to 64% in 2021³⁵⁰.

³⁴⁵ https://www.argusadvisoryresearch.com/reports/country-reports/europe/portugal.html

³⁴⁶ https://www.argusadvisoryresearch.com/reports/country-reports/europe/portugal.html

³⁴⁷ https://euclid.eba.europa.eu/register/

³⁴⁸ https://payspacemagazine.com/banks/top-10-banks-in-portugal/

https://www.ebf.eu/wp-content/uploads/2022/12/ff-pt-22.pdf

³⁵⁰ https://www.ebf.eu/wp-content/uploads/2022/12/ff-pt-22.pdf

Bank	Group	Number of employees	Revenue (Million €)	Net Income (Million €)	LinkedIn
Banco Comercial Portugues SA	Parent company	15.868	2.571,14	24,99	<u>Link</u>
Caixa Geral de Depositos	Government of Portugal	11.471	1.921,17	633,70	<u>Link</u>
Banco Santander Totta	Banco Santander	3.272	1.327,47	270,49	<u>Link</u>
Novo Banco	Nani Holdings	4.193	1.128,06	192,19	<u>Link</u>
Banco BPI	Caixabank	4.478	952,08	306,82	<u>Link</u>
Credito Agricola Financial Group	Parent company	n/a	588,37	158,94	<u>Link</u>
Sistema Integrado do Credito Agricola Mutuo	Independent company	n/a	555,74	143,30	Link
<u>EuroBic</u>	Parent company	1.465	142,00	7,48	<u>Link</u>
Banco Credibom	Credit Agricole	463	133,20	39,15	<u>Link</u>
Banco CTT	CTT Correios de Portugal	444	103,80	16,15	<u>Link</u>

Source: Orbis | 2021 Financials

Electronic Money Institutions

There is only one operating e-money institution licensed and authorised by the Bank of Portugal: *SFS - Financial Services IME SA*³⁵¹, branded under the name Universo. This company provides payment services for Sonae Group. In particular, it offers a payment card that supports all the credit advantages of Sonae stores as well as multiple payment options such as credit, debit and instalments³⁵².

ЕМІ	Group	Number of employees	Revenue (Million €)	Net Income (Million €)	LinkedIn
<u>Universo, Ime</u>	Sonae SGPS	n/a	n/a	n/a	<u>Link</u>

Source: Orbis | 2021 Financials

Payment Service Providers

There are 13 payment institutions licensed and authorised by the Bank of Portugal³⁵³. These include the local payment gateways Eupage, Easypay, Raize and Lusopay. Two major payment gateways in Portugal are UNICRE's Reduniq and Payshop.

UNICRE is also a local payment company. The company holds a banking licence and is divided in two parts: UniBanco, which specialises in the credit market, and Reduniq which specialises in the payments market. More specifically, Reduniq acts as a payment gateway.

Payshop, a subsidiary of Banco CTT, is another important gateway in the country. In November 2022, PayShop partnered with Checkout.com to maximise its acceptance rate outside the Portuguese market following its growth within the domestic market³⁵⁴. Additionally, the company received the "Editor's Choice Award" at the PayTech Awards 2022, along with BHMI³⁵⁵.

Finally, Paybyrd is another local payment gateway worth mentioning.

Important payment processors in Portugal include the French leader Worldline and SIBS (which is described in more detail in the following sub-section).

³⁵¹ https://euclid.eba.europa.eu/register/

^{352 &}lt;a href="https://www.sonae.pt/en/innovation/projects/universo-loyalty-credit-card/">https://www.sonae.pt/en/innovation/projects/universo-loyalty-credit-card/

³⁵³ https://euclid.eba.europa.eu/register/

^{354 &}lt;a href="https://ecommercenews.pt/payshop-faz-parceria-com-a-checkout-com/">https://ecommercenews.pt/payshop-faz-parceria-com-a-checkout-com/

³⁵⁵ https://ffnews.com/newsarticle/bhmi-and-payshop-win-editors-choice-award-at-paytech-awards-2022/

PSP	Group	Number of employees	Revenue (Million €)	Net Income (Million €)	LinkedIn
UNICRE	Parent company	224	76,49	19,51	<u>Link</u>
SIBS Pagamentos	SIBS - SGPS	n/a	37,77	15,39	<u>Link</u>
Payshop	Banco CTT	54	10,21	1,92	<u>Link</u>
Ingenico	Worldline	11	7,35	-0,47	<u>Link</u>
Saltpay (Portugal)	Disashop & Centaudream	44	7,32	-0,89	<u>Link</u>
Eupago	Independent company	14	4,96	0,20	<u>Link</u>
Easypay	Parent company	20	3,50	0,52	<u>Link</u>
Worldline	Worldline	2	1,70	-0,07	<u>Link</u>
Raize	Parent company	n/a	1,10	0,06	<u>Link</u>
Lusopay	Independent company	2	0,68	0,12	<u>Link</u>

Source: Orbis | 2021 Financials

Local & Alternative Payment Methods

SIBS³⁵⁶ was founded in 1983 as an interbank payment provider, ATM/POS unified network provider and Automated Clearing House (ACH), but it originated and grew up as a fintech, innovating and taking technology as its driver along this path. It is the company responsible for the management of the ATM Express and Multibanco Network, the largest Portuguese ATM network. In parallel, SIBS manages multiple digital payment channels, from Automatic Payment Terminals to online channels and mobile phones³⁵⁷.

Multibanco is the most popular payment method in Portugal. It is a post-pay payment option, meaning that a reference is generated at the checkout, and the customer then either goes to an ATM and pays physically with their debit card (within a certain number of days), or pays online via the Multibanco online banking environment.

Among other things, SIBS created MB WAY, Portugal's leading payment app, which enables online and in-app purchases, immediate transfers, cardless cash withdrawals and even the generation of MB NET virtual cards, via a smartphone or tablet. The app had already reached 4 million users by spring 2021, in its own app or in one of the 8 banking apps. In April 2022, MB WAY carried out more than 28 million transactions, 42% of which were purchases in physical and online stores. This national mobile wallet solution has over 6,6 million registered debit, credit and meal cards and is currently available at approximately 400 thousand payment terminals via MB Way QR code or NFC technology. According to SIBS, "this is another significant milestone in the company's history that reflects the relevance of the service in the daily lives of the Portuguese and is proof that [SIBS] is contributing in the best way to an increasingly digitalised and cashless society." 358

Local Payment Method	Group	Number of employees	Revenue (Million €)	Net Income (Million €)	LinkedIn
SIBS Pagamentos	SIBS	n/a	37,77	15,39	<u>Link</u>

³⁵⁶ https://www.sibs.com/en/company/

https://www.sibs.com/en/produtos/acceptance-of-payments/

³⁵⁸ https://thepaypers.com/expert-opinion/towards-a-new-chapter-in-the-use-of-electronic-payments-in-portugal--1257723

South-Eastern Europe

Introduction

South-Eastern Europe – Cyprus, Greece and Malta – is characterised by a heterogeneous landscape. Generally speaking, the region's banked population varies significantly from one country to another, with Malta being the first, with 97% of the population having a bank account, while Greece is last, with 87%.

Cash is still the most preferred means across all countries, with Malta being the first in terms of both the number of payments observed (77%), and in terms of value of payments (65%) in cash at the POS. Nevertheless, cash use declined most in southern European countries: Greece and Cyprus recorded respectively -18% and -23% with respect to the 2019-2022 period, while Malta decreased by 12%359. Acceptance of different cashless means of payment seems to have increased in most countries except for Malta and Cyprus.

In terms of entrepreneurship, Cyprus and Malta have become central hubs for fintechs to thrive on account of their attractive tax regimes. More precisely, Malta was one of the first EU member countries to allow standalone e-money institutions. Malta is highly attractive due to certain amendments to the domestic regulatory framework. In 2011, Malta modified its domestic EMI regulatory framework by significantly lowering the initial capital requirement from 1 million € to 350.000 €. This provided more opportunities for smaller newcomers to access the market.

Banks



The region is distinguished by a diverse landscape of local and foreign-controlled banks that provide a wide variety of solutions. Among them, Eurobank, Alpha Bank and National Bank of Greece operate in both Cyprus and Greece.

Eurobank offers products and services in retail, private, business and corporate banking and wealth management to individuals, SMEs and business entities. The bank also offers Visa and Mastercard cards³⁶⁰. Retail and private banking, SMEs and business banking, corporate and investment banking, asset management, brokerage services and real estate management are among the many banking and financial products and services offered by Alpha bank.³⁶¹

Other banks worth mentioning are Bank of Cyprus, Bank of Valetta, and Piraeus Bank, which are some of the biggest banks in their respective countries.

³⁵⁹ https://www.ecb.europa.eu/stats/ecb_surveys/space/shared/pdf/ecb.spacereport202212~783ffdf46e.en.pdf

³⁶⁰ https://thebanks.eu/banks/14655

³⁶¹ https://thebanks.eu/banks/14651





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With EVC, every issuer can now offer a universal, inclusive, frictionless, easy to use, and secure payment method for all users across your business, your community, and the global payment ecosystem.

Ask your card supplier to learn more about EVC.



Bank	Group	Number of employees	Revenue (Million €)	Net Income (Million €)	LinkedIn
Piraeus Financial Holdings	Piraeus Group	10.425	2.400,00	-3.014,00	<u>Link</u>
National Bank of Greece	NBG Group	10.117	2.123,00	869,00	<u>Link</u>
Eurobank Ergasias Services and Holdings	EuroBank Group	11.495	1.934,00	327,00	<u>Link</u>
Bank of Cyprus Public Company	Bank of Cyprus Group	3.438	554,99	29,67	n/a
Alpha Services and Holdings	Alpha Bank Group	8.939	-333,03	-2.906,07	<u>Link</u>

Source: Orbis | 2021 Financials

Payment Service Providers

Worldline clearly dominates the payment processing market throughout the European Union thanks to partnerships and acquisitions of local players in different regions. The Italian leader Nexi as well as Nuvei are also highly present in the region. Even though it is Austrian, the Printec Group is a leading PSP in South-Eastern and Eastern Europe, operating processing and gateway activities in Greece and Cyprus through its subsidiaries.

Greece

Introduction

There are 10,8 million inhabitants in Greece, of which 73% have access to the internet and 87% hold a bank account³⁶².

Greece used to have a cash-based economy, but the introduction of capital controls in 2015 (removed in 2019) caused an increase in card-based payments. As a cap on cash withdrawals was established, as well as a requirement to use cards for any purchases over 1500 €, consumers had little choice but to use cards as a payment method³⁶³.

Today, card-based payments represent 49% of total transactions. Cash is the second most popular payment method as it accounts for 24% of transactions. E-wallets are also gaining in popularity, especially among younger people and tech enthusiasts. They currently account for 16% of all payments. Finally, bank transfers come in fourth place with a share of 9% of total payments.

In terms of payment schemes, Mastercard and Visa are the most popular, with a more or less equivalent market share ³⁶⁴.

Banks

The Greek banking sector is made up of 38 credit institutions, including 23 foreign branches³⁶⁵. As of 2021, the country's consolidated banking assets amounted to 327 billion €. Due to the financial crisis, the Greek banking sector shrank significantly, both in terms of number of banks and consolidated assets³⁶⁶. The sector is currently based on four domestic systemic banks. There are also a number of regional cooperative banks and foreign-owned banks as shown by the high number of foreign branches.

Major banks include the National Bank of Greece, Piraeus Bank, Alpha Bank and Eurobank.

The National Bank of Greece (NBG) is the leading bank in Greece. NBG issues Mastercard and Visa credit cards, Visa prepaid cards and Mastercard debit cards. It offers mobile and internet banking services called i-Bank, as well as an e-wallet called i-Bank Pay which allows users to perform instant payments easily and to transfer money to any of their phone contacts or Facebook friends. NBG also offers a service called Go4More that enables customers to earn points on each payment in one of the 7500 businesses they have partnered with.

Piraeus Bank has a strong influence in the Balkans, Greece included. It issues Mastercard and Visa cards which are compatible with Google Pay, Apple Pay and Garmin Pay. The bank also has an e-wallet solution called Winbank Pay.

The third major bank is Alpha Bank, which issues Visa, Mastercard and Diners cards. It offers access to wallets such as Apple Pay, Google Pay and Garmin Pay, as well as its own wallet called myAlpha Wallet. In July 2022, Alpha Bank and Nexi confirmed that they have joined forces (following Nexi's acquisition of a 51% stake in Alpha Bank) to pave the way for a new era of digital payments in Greece. This transaction has made the Italian processor one of the top 3 acquirers in the Greek market³⁶⁷.

Finally, Eurobank is present in Greece, Cyprus, Luxembourg, Serbia, Bulgaria and UK (London). The Eurobank Group has 83,4 billion € in total assets and a network of 615 branches in Greece and abroad. It issues MasterCard and Visa credit, debit and physical or virtual Prepaid cards. It offers mobile and internet banking services, enabling users to perform a wide range of transactions, including instant payments and P2P transfers. It also offers a cashback loyalty programme called "Epistrofi" ("Return"), which allows cardholders to receive cashback on their card transactions.

In March 2022, HSBC Continental Europe sold its Greek bank operations to the local bank Pancreta. This transaction, which is taking place in the context of the merger of Pancreta with the Bank of Chania³⁶⁸ (approved in May 2022) makes the new bank a new strong pillar of the sector, with 5 billion € of assets³⁶⁹.

- 362 https://www.ppro.com/countries/greece/
- 363 https://www.adyen.com/payment-methods-guides/europe/greece
- 364 https://www.ppro.com/countries/greece/
- 365 https://euclid.eba.europa.eu/register/
- 366 https://thebanks.eu/countries/Greece/major_banks
- 367 https://www.alpha.gr/-/media/alphagr/files/group/press-releases/2022/20220704_deltio_typou_enb.pdf
- 368 https://www.deltafinance.gr/en/mou-for-the-merger-of-pancreta-bank-with-bank-of-chania/
- https://www.thenationalherald.com/pancreta-bank-to-buy-hsbcs-operations-in-greece/

Bank	Group	Number of employees	Revenue (Million €)	Net Income (Million €)	LinkedIn
<u>Piraeus Bank</u>	Piraeus Financial Holdings	9.120	2.287,00	382,00	<u>Link</u>
National Bank of Greece	Parent company	10.117	2.123,00	869,00	<u>Link</u>
Pancreta Bank	Parent company	490	58,74	3,56	<u>Link</u>
Optima Bank	Ireon Investments	393	54,15	10,05	<u>Link</u>
Cooperative Bank of Chania	Parent company	280	37,19	0,92	<u>Link</u>
Aegean Baltic Bank	Costanus	102	23,39	6,87	<u>Link</u>
Eurobank	Eurobank Ergasias	11.390	1,92	0,40	<u>Link</u>
<u>Viva Bank SA</u>	Viva Wallet Holdings	23	0,56	-4,04	<u>Link</u>
Attica Bank SA	Hellenic Republic-Ministry of Finance	8.939	-333,03	-2.906,07	<u>Link</u>
Alpha Bank SA	Alpha Services and Holdings	8.923	n/a	-94,39	<u>Link</u>

Source: Orbis | 2021 Financials

Electronic Money Institutions

Greece currently has three operating e-money institutions that are licensed and authorised by the Bank of Greece. These EMIs are Viva Payments, Tora Wallet and Cosmote Payments³⁷⁰.

Viva Wallet is Europe's first entirely cloud-based neobank, using Microsoft Azure. The company holds its license in Greece but operates in 24 countries in Europe. The company is a principal member of Visa and Mastercard for acquiring and issuing services³⁷¹. In February 2022, JP Morgan announced the acquisition of 48% of the company for 800 million dollars, making it the first Greek unicorn³⁷². Note that Viva Wallet Holdings also holds a credit institution licence via its subsidiary VivaBank.

In more detail, JP Morgan received all approvals from Greek and EU regulators in September 2022, but the transaction had to be concluded by 31/12/22, otherwise it would have been cancelled. Consequently, as of 20 December 2022, the transaction can be considered as a "done deal" done deal".

Cosmote Payments, owned by OTE, started developing acquiring card services, which are currently offered to OTE's companies for online and retail stores. Cosmote Payments is currently building a digital e-money offering in order to fulfil their vision to become "the digital provider of everyday life use cases".

Tora Wallet focuses on providing e-wallets for Tora Direct. Tora's services are available through a vast retail network in Greece, which includes OPAP stores as well as other retail locations (kiosks, convenience stores, supermarkets, petrol stations, and so on), totalling over 10.000 retail locations³⁷⁴.

ЕМІ	Group	Number of employees	Revenue (Million €)	Net Income (Million €)	LinkedIn
Tora Direct Single Member	OPAP Investment	18	80,78	0,31	<u>Link</u>
<u>Viva Payment Services</u>	Viva Wallet	316	39,65	-6,17	<u>Link</u>
Cosmote Payments	OTE	30	3,67	-1,26	<u>Link</u>

Source: Orbis | 2021 Financials

Payment Service Providers

There are 15 payment institutions licensed and authorised by the Bank of Greece³⁷⁵ such as the local players NBG Pay and EveryPay. NBG Pay is a strategic alliance between the National Bank of Greece (NBG) and the leading global payment processor EVO Payments International. EveryPay is a payment gateway. In November 2022, EveryPay partnered with Fintro to improve in-store payment acceptance. More specifically, customers benefit from other payment methods and merchants benefit from simplified and streamlined POS terminal management³⁷⁶.

Other PSPs include leading companies such as Worldline and Euronet Merchant Services (offered in Greece under the name ePay), as well as the Italian giant Nexi. As mentioned above, Nexi acquired a 51% stake in Alpha Bank, making the Italian processor one of the top 3 acquirers in the Greek market³⁷⁷.

- 370 https://euclid.eba.europa.eu/register/
- 371 https://www.vivawallet.com/gb_en/about
- 372 https://greekreporter.com/2022/02/01/jp-morgan-viva-wallet-greece/
- 373 https://www.vivawallet.com/gr_en/press-article-viva-wallet-announces-closing-jp-morgan-deal-gr
- 374 https://www.linkedin.com/company/tora-wallet-s.a./
- 375 https://euclid.eba.europa.eu/register/
- 376 https://thepaypers.com/payments-general/finaro-partners-everypay-to-improve-in-store-payment-acceptance--1258955
- 377 https://www.alpha.gr/-/media/alphagr/files/group/press-releases/2022/20220704_deltio_typou_enb.pdf

It is also important to mention Worldline's subsidiary, Cardlink, whose acquisition was completed in September 2021. Cardlink is the top Greek Network Services Provider, with over 240.000 Points of Sale (46% of POS transactions) and a yearly transaction volume of about 500 million (53% market share of Merchant Sales Volumes). Through its Cardlink check-out solution, the firm delivers excellent value-added services to over 10.000 online retailers and benefits from long-term ties with Greece's top banks³⁷⁸.

Following the announcement made by Eurobank Ergasias Services and Holdings S.A., Worldline also acquired 80% of Eurobank's merchant acquiring business ("PayCo") and signed a long-term agreement for PayCo products to be distributed exclusively in Greece through Eurobank's sales network³⁷⁹.

EDPS is also worth mentioning as it has been shaping the landscape of electronic payments in Greece through the introduction of new technologies and the provision of premium processing and transaction support services. It continues to be a leader in transaction speed (maximum 1") and transaction volume per terminal (averaging more than 120 per day). EDPS accepts all card transactions of VISA, Mastercard, Amex, Diners, ChinaUnionPay, Co-branded and Loyalty cards (EuroReturn, Bonus, Go4More, Yellows)³⁸⁰.

PSP	Group	Number of employees	Revenue (Million €)	Net Income (Million €)	LinkedIn
Nexi Greece Processing Services	Nexi	n/a	69,29	-8,92	<u>Link</u>
Cardlink	Worldline	110	34,73	2,56	<u>Link</u>
<u>Printec</u>	Printec Group	208	30,50	1,91	<u>Link</u>
<u>Edps</u>	Independent company	19	4,44	1,22	<u>Link</u>
Everypay	Independent company	9	1,03	0,07	<u>Link</u>
NBG PAY	NBG & EVO Payments	n/a	n/a	n/a	<u>Link</u>
Worldline Merchant Acquiring	Worldline	n/a	n/a	n/a	<u>Link</u>
Euronet Merchant Services (ePay)	Euronet Worldwide	n/a	n/a	n/a	Link

Source: Orbis | 2021 Financials

Local & Alternative Payment Methods

Cross-border payments and money transfers are made through local payment methods such as SmartPay, Intel Express and Worldbridge (branded as PayLink), which was acquired by Western Union. Tora Wallet is also an important e-wallet in Greece.

In 2022, Payzy by COSMOTE was launched during an event at the OTE Group's Headquarters in Athens. It is a product of COSMOTE Payments, a subsidiary of OTE Group, which has been licensed by the Bank of Greece as an e-money institution. Payzy allows users to cover everyday purchases and bill payment needs, while also carrying out transactions with their friends and family, quickly, easily and safely via their mobile phones. The new app is a holistic digital solution that is designed for all those who want flexibility and simplicity in their daily lives³⁸¹.

Local Payment Method	Group	Number of employees	Revenue (Million €)	Net Income (Million €)	LinkedIn
Worldbridge (PayLink)	Western Union	71	14,22	1,83	<u>Link</u>
Tora Wallet	OPAP Investment	16	4,69	0,33	<u>Link</u>
Intel Express	Independent company	32	3,74	0,10	<u>Link</u>
Smart PAY	Independent company	9	0,80	0,07	<u>Link</u>
Dog Payment Institution	Independent company	n/a	n/a	n/a	<u>Link</u>

https://investors.worldline.com/en/home/news-events/financial-press-releases/2021/pr-2021_09_30_01.html

https://www.eurobank.gr/en/group/grafeio-tupou/etairiki-anakoinosi-07-12-21

³⁸⁰ https://edps.gr/en/company/

^{381 &}lt;a href="https://www.cosmote.gr/cs/otegroup/en/payzy.html">https://www.cosmote.gr/cs/otegroup/en/payzy.html

Cyprus

Introduction

Although electronic payments are becoming more popular in Cyprus, cash remains king. Nonetheless, there are strong indications that the Cypriot payments landscape is entering a new digitalised era. The COVID-19 pandemic has hastened the global shift to electronic payments, and Cyprus is no exception.

According to a recent KPMG Cyprus study, 81% of Cypriots chose digital payment instruments for the majority of their payment transactions over the past year. Nonetheless, the same study found that Cypriots are still hesitant to exchange their personal data for a better product or service, demonstrating that there is still some work to be done before a holistic digital payments culture can be adopted³⁸².

Almost two-thirds of adults in Cyprus use online banking, which is higher than the EU average. A bank account is held by more than 90% of the population. Between 2022 and 2027, the market for digital payments is expected to grow at an annual rate of 16%³⁸³.

Banks

In 2012 and 2013, Cyprus underwent a financial crisis mainly due to its large exposure to Greek Government Bonds and the major domestic real estate bubble. Fortunately, by 2016, the country had benefited from government aid and was eventually able to stabilise its financial sector.

Today, Cyprus is considered an important financial centre and a hub in the banking landscape due to offshore banking. Indeed, the country's favourable taxation, sophisticated legal framework and strategic location make it an appealing investment and living destination for both individual and corporate international clients. Cyprus is seen as a vital business gateway connecting Europe, the Middle East, Africa and Asia, as reflected in the Cypriot banking landscape.

There are currently 6 authorised local credit institutions, 4 subsidiaries of foreign credit institutions and 9 branches of foreign institutions³⁸⁴. While some banks focus solely on the domestic market, others offer their products and services to international customers; these services are known as international banking or international business banking³⁸⁵.

The three major banks in Cyprus are Bank of Cyprus (25 billion € in total assets), Hellenic Bank (19 billion €), and Eurobank Cyprus (8 billion €)³⁸⁶. The three banks issue Mastercard and Visa credit and debit cards, and each has their own internet and mobile banking services. Other noteworthy banks include Astrobank - which acquired Byblos Cyprus in January 2022³⁸⁷ -, Alpha Bank and Societe Generale Bank.

Although RCB Bank was considered an important Cypriot bank, it has decided to wind down its operations³⁸⁸. In December 2022, the European Central Bank approved the withdrawal of RCB's banking licence³⁸⁹. Its performing loan portfolio (tranches A and B) has been sold to Hellenic Bank³⁹⁰. RCB has been granted an EMI licence and a Credit Acquisition Company licence on the condition that it changes its name before commencing business. It has been renamed Finstella Ltd.

Bank	Group	Number of employees	Revenue (Million €)	Net Income (Million €)	LinkedIn
Bank of Cyprus	Bank of Cyprus Holdings	3.438	554,99	29,67	<u>Link</u>
Hellenic Bank	Parent company	2.760	365,35	-11,68	<u>Link</u>
<u>Eurobank</u>	Eurobank	433	112,01	52,28	<u>Link</u>
<u>AstroBank</u>	Parent company	452	74,95	3,27	<u>Link</u>
Alpha Bank	Alpha Services & Holdings	487	65,98	-44,66	<u>Link</u>
National Bank of Greece	National Bank of Greece	138	15,11	-40,50	<u>Link</u>
The Cyprus Development Bank	Parent company	148	12,38	-1,31	<u>Link</u>
Ancoria Bank	Ancoria Investments	101	8,90	1,00	<u>Link</u>

- 382 https://www.europeanpaymentscouncil.eu/news-insights/insight/digital-payments-cyprus
- 383 https://www.ppro.com/countries/cyprus/
- 384 https://www.centralbank.cy/en/licensing-supervision/banks/register-of-credit-institutions-operating-in-cyprus
- 385 https://thebanks.eu/articles/offshore-banking-in-cyprus
- 386 https://thebanks.eu/countries/Cyprus/major_banks
- 387 https://libnanews.com/en/astrobank-sempare-de-byblos-cyprus/
- 388 https://www.bankingsupervision.europa.eu/press/pr/date/2022/html/ssm.pr220324~3e29618447.en.html
- https://rcbcy.com/en/news/ecb-decision-exiting-banking
- 390 https://rcbcy.com/en/news/successful-completion-tranche-b-loan-portfolio-sale-hellenic



Electronic Money Institutions

There are 18 operating e-money institutions authorised by the Central Bank of Cyprus³⁹¹.

JCC Payments Systems is a payment processor and gateway. The company is the leader in Cyprus in processing technologies, offering all card acceptance solutions. JCCSoftPos allows merchants to accept contactless payments directly on their Android smartphones. It offers issuing banks a mobile card payment solution which is connected to tokenisation platforms and OEM wallets such as Apple Pay, Samsung Pay, Google Pay, Garmin Pay, etc. Its partner payment schemes are Visa, Mastercard, American Express, UnionPay and JCB.

Unlimint (ex-CardPay) which is based and headquartered in the United Kingdom, focuses on the acceptance and processing of online payments. It processes payments with Visa, Mastercard and UnionPay.

The Montreal-based payments technology company Nuvei entered the Cypriot market with the acquisition of SafeCharge International Group in August 2019³⁹². This strategic acquisition enabled Nuvei to step across European, Asian and Latin-American territories, while the company originally operated in the US and Canada.

Ecommbx specialises in providing a secure payment platform. Ecommbx Limited provides corporate customers with a fully-compliant money transfer network, virtual accounts with IBAN, e-accounts, SWIFT transfers, SEPA transfers, FPS transfers, multi-currency conversions and a personal account manager.

ISX Financial offers e-money solutions such as business IBAN accounts and consumer e-wallets. It goes beyond e-money, as it also offers payment processing services with iSXPay and an identity platform Payldentity to comply with AML/CFT regulatory requirements. Moneygate offers similar services and is focused on card issuance to individuals and businesses.

Sibilla Solutions primarily serves people in the European Economic Area. Sibilla Solutions provides digital accounts with virtual and physical cards, as well as instant and secure money transfers. Sibilla Solutions also provides businesses with custom-made solutions to meet their specific requirements.

³⁹¹ https://www.centralbank.cy/

³⁹² https://www.prnewswire.com/il/news-releases/nuvei-completes-acquisition-of-safecharge-for-us-889-million-strengthening-its-global-payment-technology-and-reach-879250713.html

Oro Pay is focused on international money transfers. Oro Pay offers e-wallets, merchant accounts, debit cards, virtual cards and international money transfers to online merchants and natural persons.

Electronic Money Institutions	Group	Number of employees	Revenue (Million €)	Net Income (Million €)	LinkedIn
<u>Nuvei</u>	Nuvei Corporation	43	130,63	44,09	<u>Link</u>
Unlimint	Unlimint Holding EU	500	n/a	n/a	<u>Link</u>
Sibilla Solutions (Profee)	Independent company	n/a	n/a	n/a	Link
ISX Financial EU	ISX Financial	24	16,01	5,06	Link
Sepaga EMI	Independent company	n/a	n/a	n/a	<u>Link</u>
<u>Ecommbx</u>	Independent company	n/a	n/a	n/a	<u>Link</u>
Oro Pay	Independent company	n/a	n/a	n/a	<u>Link</u>
<u>NETinfoPAY</u>	Net Info PLC	n/a	n/a	-0,47	<u>Link</u>
Sureswipe E.M.I.	Eurivex, Meerkat, others	n/a	n/a	n/a	<u>Link</u>
IPS Solutions	IPS Solutions	n/a	n/a	n/a	<u>Link</u>
<u>Koronapay</u>	P & BS Holdings	n/a	n/a	n/a	<u>Link</u>
<u>EPMAP</u>	Independent company	n/a	n/a	n/a	<u>Link</u>
MGL Wallet	MGL MY.COM	n/a	n/a	n/a	<u>Link</u>
Moneygate Solutions	Moneygate Solutions	n/a	n/a	n/a	<u>Link</u>
<u>Bnkpro</u>	Bnkpro	n/a	n/a	n/a	<u>Link</u>
JCC Payment Systems	Bank of Cyprus Holdings	n/a	n/a	n/a	<u>Link</u>

Source: Orbis | 2021 Financials

Payment Service Providers

There are 11 operating payment institutions registered and authorised by the Central Bank of Cyprus³⁹³. Among them, Payabl. and BigWallet Payments are worth highlighting.

Payabl. is an EU-regulated PSP which processes online payments but also issues prepaid cards. The company processes Visa and Mastercard but also other payment methods such as PayPal, Apple Pay, Google Pay and Klarna³⁹⁴.

BigWallet Payments is a payment processor and gateway for European merchants. It helps merchants to process online payments with its integrated process and trailblazing technology.

Payments Institutions	Group	Number of employees	Revenue (Million €)	Net Income (Million €)	LinkedIn
G.S. Cash Line	Parent company	n/a	n/a	n/a	n/a
G.A.P. Vassilopoulos	Vassilopoulos	n/a	n/a	n/a	<u>Link</u>
SPSPI Smart Pay Services	Independent company	n/a	n/a	n/a	n/a
Mediterranean Finance	Independent company	n/a	n/a	n/a	n/a
Payabl.	Roteral Limited	n/a	n/a	n/a	<u>Link</u>
TFI Markets	Independent company	n/a	n/a	n/a	<u>Link</u>
Masari Payment	Independent company	n/a	n/a	n/a	<u>Link</u>
Wise Wolves	Wise Wolves Group LTD	n/a	n/a	n/a	<u>Link</u>
BigWallet Payments	Axios Capital Limited	n/a	n/a	n/a	<u>Link</u>
Paycomcy (Pay.com)	Pay.com	n/a	n/a	n/a	<u>Link</u>
<u>Intraclear</u>	FS Technologies LTD	n/a	n/a	n/a	<u>Link</u>

^{393 &}lt;a href="https://www.centralbank.cy/">https://www.centralbank.cy/

³⁹⁴ https://payabl.com/news/article/welcome-payabl-powered-powercash21

Local & Altenative Payment Methods

As stated before, Silibia Solutions and Sureswipe provide e-wallets, whereas KoronaPay and OroPay offer cross-border money transfer services and P2P. SPSI and G.S. Cashline Limited offer money transfers, money exchange and remittance services.

Others

Decentralized Vision is the blockchain-based fintech company behind the PumaPay PullPayment Protocol. It powers the world of decentralised finance with automated crypto billing.

Other	Group	Number of employees	Revenue (Million €)	Net Income (Million €)	LinkedIn
Decentralized Vision (PumaPay)	Independent Company	n/a	n/a	n/a	<u>Link</u>

Malta

Introduction

There are 500.000 inhabitants in Malta, of which 400.000 are part of the so-called 'online population'. The local currency is the euro. The banked population is one of the highest in Europe, at 97%, and credit card penetration is 52%³⁹⁵.

Cash, credit and debit cards are widely used for everyday purchases in Malta. Cash is widely accepted everywhere and is frequently used for smaller sums. Cards, including digital wallets, are widely used, but the minimum card spend can range from $5 \in \text{to } 10 \in \text{S}^{396}$. However, there is a new trend of merchants accepting Revolut directly so as to avoid credit card restrictions.

The use of e-money cards such as Revolut in Malta has reached an all-time high, with the total number of such cards issued exceeding the number of traditional credit and debit cards issued by banks. 2,13 million payment cards were issued in Malta last year, of which 1,2 million have an e-money function - prepaid cards that can be reloaded from an e-money account or non-reloadable such as gift cards. Data reported between 2017 and 2021 show that online payment transactions are increasing, with a 152,6% increase (from 9,5 million in 2017 to 23,9 million in 2021). Similarly, despite being weaker, the value of such transactions increased significantly³⁹⁷.

Innovative fintechs, PSPs and EMIs establish their headquarters in Malta because of the highly attractive tax regime and proximity to the iGaming industry. Since online casinos are deemed high-risk merchants, they are always in need of payment and banking solutions to conduct their business. Malta is also highly attractive due to certain amendments to the domestic regulatory framework. In 2011, Malta modified its domestic EMI regulatory framework by significantly lowering the initial capital requirement from 1 million € to 350.000 €. This offered more opportunities for smaller newcomers to access the market³⁹⁸.

Banks

Malta is continuously establishing itself as an international banking centre and financial hub in the Mediterranean. Malta's banking sector has evolved from a diversified landscape of domestic and foreign-controlled banks offering a range of solutions from traditional retail banking products to sophisticated customised private banking, wealth management and corporate banking products.

There are currently 24 operating credit institutions in the country³⁹⁹. The Central Bank of Malta classifies APS Bank, Bank of Valletta (BOV), BNF Bank, HSBC, Lombard Bank and MeDirect Bank as Malta's "core domestic banks"⁴⁰⁰.

The two major banks in Malta are Bank of Valletta (BOV) and the global bank HSBC. BOV, previously known as National Bank of Malta, is the oldest and largest Maltese financial service provider, with total assets exceeding 14 billion €. The global leading bank HSBC comes in second place in terms of total assets with a total of 7,2 billion € in assets⁴⁰¹. BOV and HSBC each operate around 40 branches in the country and together control more than 65% of the Maltese banking market⁴⁰². Both issue credit and debit cards mainly with the Visa payment scheme. They also both offer digital banking services.

The next leading banks are APS Bank (2,8 billion €), Lombard Bank (1 billion € - when excluding the group's investment in MaltaPost), BNF Bank, also known as Banif Bank (1 billion €)⁴⁰³, and the online bank MeDirect⁴⁰⁴. Other noteworthy banks include Ferratum Bank, FIMBank (First International Merchant Bank), Sparkasse Bank, IIG Bank, FMC Bank and AgriBank, among others.

- 395 https://www.ppro.com/countries/malta/
- 396 https://www.adyen.com/payment-methods-guides/europe/malta
- 397 http://weekly.uhm.org.mt/en/article/e-money-cards-jikbru-fil-popolarita/
- 398 https://zeta-financial.com/publications/zeta-electronic-money-institutions-e-money-emi-malta/
- 399 https://euclid.eba.europa.eu/register/
- 400 https://timesofmalta.com/articles/view/maltas-retail-banks-in-focus.959134
- https://timesofmalta.com/articles/view/maltas-retail-banks-in-focus.959134
- 402 https://www.privacyshield.gov/article?id=Malta-Banking-Systems; https://thebanks.eu/countries/Malta/major_banks
- https://timesofmalta.com/articles/view/maltas-retail-banks-in-focus.959134
- 404 https://www.privacyshield.gov/article?id=Malta-Banking-Systems



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Bank	Group	Number of employees	Revenue (Million €)	Net Income (Million €)	LinkedIn
Bank of Valletta	Parent company	1.922	257,41	56,19	<u>Link</u>
HSBC Bank Malta	HSBC Holdings	970	131,31	17,76	<u>Link</u>
<u>Ferratum Bank</u>	Multitude SE	168	125,71	10,52	<u>Link</u>
APS Bank	The Archdiocese of Malta	508	63,16	15,10	<u>Link</u>
Lombard Bank Malta	Parent company	1.008	62,66	7,88	<u>Link</u>
<u>Credorax Bank</u>	CredoRax Inc	130	59,01	4,41	<u>Link</u>
MeDirect Bank (Malta)	MDB Group Limited	329	56,10	-15,33	<u>Link</u>
FIMbank	Kuwait projects company Holding KSC	324	36,34	-3,19	<u>Link</u>
ECCM Bank	Banasido Investments	n/a	30,59	19,75	<u>Link</u>
BNF Bank	JUD Investment Group	226	27,24	6,30	<u>Link</u>
Credit Europe Bank	Credit Europe Bank NV	n/a	26,72	10,02	<u>Link</u>
Novum Bank Limited	Novum Participations BV	n/a	19,40	57,17	<u>Link</u>
Sparkasse Bank Malta	Sparkasse (Holdings) Malta	96	13,20	2,11	<u>Link</u>
Izola Bank	IBL T Limited	54	6,75	0,45	<u>Link</u>
IIG Bank (Malta)	IIG Trade Opportunities Fund	34	4,88	0,36	<u>Link</u>
Merkanti Bank	Merkanti Holdings	n/a	2,79	0,14	<u>Link</u>
AgriBank plc	AgriHoldings	n/a	1,65	-0,64	<u>Link</u>
FCM Bank	SAB Europe Holdings AS	n/a	0,00	0,60	<u>Link</u>

Source: Orbis | 2021 Financials

Electronic Money Institutions

Malta has become one of the most vibrant environments for operating electronic gambling businesses and, as a result, the number of Electronic Money Institutions (EMIs) that provide the infrastructure for handling transactions in this sector has increased⁴⁰⁵. Some of the prominent players in the space are AstroPay, EPG Financial Services, Em@ney PLC, Mifinity and Xcoins Payments.

There are currently 24 EMIs licensed and authorised by the Malta Financial Services Authority which can conduct their activities in any of the 31 EEA member states due to EEA passport rules⁴⁰⁶.

Regarding the latest trends, it is worth mentioning that the local MGA authority has made a more favourable regulation for accepting cryptocurrencies as a form of payment. Regulated local casinos are looking into this closely.

Xcoins Payments is a crypto platform that enables merchants to accept crypto as payment with no risk to price exposure. In 2022, it announced that users will be able to use a new instant cashout function that allows them to immediately cash out their coins to their debit or credit card within a few minutes at absolutely no additional cost⁴⁰⁷.

FinXP Limited is a rising EMI star in the country. It specialises in banking and payment solutions for B2B and B2B2C transactions. Individuals, businesses and merchants can benefit from FinXP Limited's business IBAN accounts, debit card issuing, closed-loop B2B2C payments, omni-channel payment gateway, international payments and payment infrastructure.

EMP Systems, branded under the name Plix, is an electronic money institution that specialises in e-wallets. Individuals, businesses and merchants can all benefit from EMP Systems' IBAN accounts and payment acceptance.

Em@ney is involved in issuing electronic money, payment services, payment circuits and innovative Internet banking solutions. It offers personal accounts, business accounts, prepaid cards, Em@ney prepaid cards, electronic cheques, payment gateways and mass payments to individuals and businesses. Its point of strength lies in the capacity to make a payment without knowing the payee's banking credentials and the power to simplify big payments in just a few clicks⁴⁰⁸.

MilFINITY, on the other hand, provides international money transfers, e-wallet accounts and payment gateways to individuals and businesses. In 2022, MiFINITY made Virtual International Bank Account Number (IBAN) technology available to its users, providing greater control over their accounts and how they transfer money⁴⁰⁹. It also announced a new partnership with online casino operator PressEnter Group (formally Betpoint Group), which will provide PressEnter Group customers with an exceptional user experience when using the MiFinity e-wallet payment service⁴¹⁰. In November, they also passed 500 merchant branding integrations.

- 405 https://money-gate.com/electronic-money-institutions-malta/
- 406 https://euclid.eba.europa.eu/register/pir/search
- 407 https://beincrypto.com/xcoins-com-launches-instant-cashout-to-credit-debit-cards-in-eu-and-uk/
- 408 https://www.gamblinginsider.com/magazine/191/in-focus-emoney
- 409 https://www.gamblinginsider.com/news/14573/mifinity-launches-virtual-iban-to-improve-payments-platform
- 410 https://igamingbusiness.com/company-news/pressenter-group-broadens-its-payment-reach-with-mifinity/

Both MiFINITY and Em@ney are very well-established players with great reputations.

Moneybase is a platform for all things finance, providing the sending and receiving of SEPA payments, instant payments, and physical and virtual cards. It owns most of the market share within its niche (financial investments, forex, commodities, etc.). Moneybase cardholders are able to make payments using Google Pay since December 2022.

EPG Financial Services is an electronic money institution that offers a wide range of payment processing services, international merchant accounts and IPSP accounts.

Papaya is an electronic money institution focused on e-wallets and payment cards, offering e-wallet accounts, prepaid cards to private clients, businesses and merchants.

ЕМІ	Group	Number of employees	Revenue (Million €)	Net Income (Million €)	LinkedIn
<u>FinXP</u>	FinXP Holdings	n/a	4,13	0,63	<u>Link</u>
Finance Incorporated (Paymix)	Doxxon Finance	n/a	3,78	0,46	<u>Link</u>
Em@ney	Absolute Holdings	36	3,28	0,51	<u>Link</u>
EMP Systems (Plix)	EMP Systems Holding	n/a	0,67	-0,04	<u>Link</u>
<u>Moneybase</u>	CC Finance Group	n/a	0,00	-0,16	<u>Link</u>
Nobel Financial	Nobel Financial Holding	n/a	0,00	0,00	<u>Link</u>
handi.cash_	Kavalier Holdings	n.a.	0,00	-0,34	<u>Link</u>
Transact Payments Malta	Neptune International	n.a.	0,00	-0,13	<u>Link</u>
EPG Financial Services	Euro Payment Group	n/a	0,00	-1,50	<u>Link</u>
Andaria Financial Services	Andaria Capital	n/a	n/a	n/a	<u>Link</u>
Alpha FX Europe	Alpha Fx Group	n/a	n/a	n/a	<u>Link</u>
MiFINITY Malta	MiFINITY Payments	n/a	n/a	n/a	<u>Link</u>
Papaya	Papayafin	n/a	n/a	n/a	<u>Link</u>
Insignia Cards	Insignia International	n/a	n/a	n/a	<u>Link</u>
C2D Payment Solutions	Tackle Holdings Jersey	n/a	n/a	n/a	<u>Link</u>

Source: Orbis | 2021 Financials

Payment Service Providers

The number of Payment Service Providers licensed in Malta has been increasing in recent years and the island has become the preferred location for the establishment of Payment Server Providers, in addition to the thriving iGaming and e-Commerce industries⁴¹¹.

ETG Payments is a PSP Gateway which helps merchants accept payments and issue pay-outs.

EPG Financial Services Limited offers a wide range of payment processing services for international merchant accounts. It provides both online and mobile payment solutions.

Another player in the payments environment is AstroPay, which is a rising star in the country. Founded in 2009, it allows people to make online payments by offering different cards. At the beginning it offered a virtual prepaid card and has now extended its offer.

In April 2022, it launched a new in-app feature, Transfer, which enables users to transfer money even to those contacts that do not have an existing AstroPay account, as long as they are in the same country. This new functionality allows users to transfer money between digital wallets easily and without commission.

In June 2022, it launched a VISA virtual debit card, signalling the strategic partnership with Europe's most widely recognised payment network. It also offers a cryptocurrency wallet and investing platform⁴¹².

Global Payments is another PSP which offers a complete worldwide commerce ecosystem. It processes more than 50 billion transactions every year and serves merchants in over 100 countries. It enables merchants to accept online payment simply and to accept credit and debit cards through its POS systems through its innovative software.

MaxPay is an international PSP gateway with more than 30 bank partners. It offers a platform which helps online business owners accelerate growth⁴¹³.

Truevo, Finance Incorporated Limited (which holds an EMI licence) and Syspay (which also holds an EMI licence) are other PSP gateways in Malta.

⁴¹¹ https://gsl.org/en/offers/payment-services-provider-license-psp-in-malta/

^{412 &}lt;a href="https://www.astropay.com/press/?lang=en">https://www.astropay.com/press/?lang=en

⁴¹³ https://www.linkedin.com/company/maxpay/

Dlocal holds an EMI licence but operates as a PSP accepting local cards, money instalments, bank transfers, e-wallets, direct debit and cash payments in emerging markets⁴¹⁴.

PSP	Group	Number of employees	Revenue (Million €)	Net Income (Million €)	LinkedIn
Dlocal	Dlocal	n/a	38,07	11,18	<u>Link</u>
Truevo Payments	DalaMear Investments	n/a	25,59	-0,55	<u>Link</u>
Maxpay	Maxpay Holding	n.a.	8,02	2,42	<u>Link</u>
Global Payments	Global Payments	n.a.	4,64	0,86	<u>Link</u>
Finance Incorporated (Paymix)	Doxxon Finance	n/a	3,78	0,46	<u>Link</u>
Mistral PAY	MPHOL International	n/a	1,50	-0,14	<u>Link</u>
Syspay	SYScommerce Group	n/a	1,35	-0,51	<u>Link</u>
<u>Finductive</u>	Fintastic	n/a	0,90	-0,08	<u>Link</u>
Paybypago	Paybypago	n/a	0,01	-0,11	Link
<u>Payscout</u>	Payscout	n/a	0,00	-0,14	<u>Link</u>
Trust Payments	Trust Payments	n/a	0,00	3,91	<u>Link</u>

⁴¹⁴ https://dlocal.com/

Eastern Europe

This region consists of nine different countries: Austria, Bulgaria, Croatia, Czech Republic, Hungary, Poland, Romania, Slovakia and Slovenia. Eastern Europe is a particular region in the European Union as most countries have different currencies.

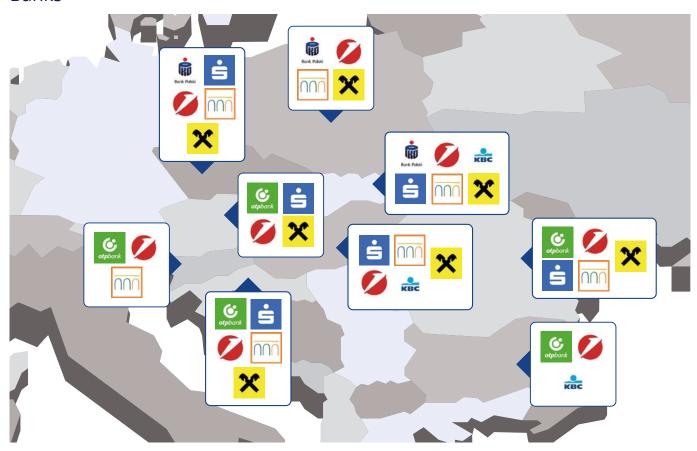
The Czech Republic and Hungary were among the nations in Eastern Europe that preferred card payments for online purchases. According to a survey, the acceptance of digital and mobile wallet payments in addition to credit and debit card payments had a positive effect on online businesses in Bulgaria.

Other Eastern European nations such as Poland have a stronger preference for digital payment methods. Direct bank payments were the preferred method of payment for online shoppers in Poland. Another study found that the majority of Polish online buyers used mobile payments and immediate transfer via payment services.

According to the yStats.com report, more than one-third of Internet users in the Czech Republic also stated that they made their payments using online bank transfers, even though more than half of them used card payments via gateway to complete their online purchases. Additionally, domestic and international E-Commerce purchases were frequently made using electronic payments and the majority of Croatian online buyers preferred to use digital wallets⁴¹⁵.

Concerning the entrepreneurial scene, 2022 was yet another productive year for unicorn development. In the larger CEE region, eight new unicorns emerged, bringing the total to 44. Among them, the startups valued at \$1 billion or more include Payhawk, a fintech company in Bulgaria, Elrond and UiPath in Romania and Eligma in Slovenia. The recent unicorns are increasing awareness of central and eastern Europe as a startup hub on a global scale. Romania has produced the second-highest total startup value in Eastern Europe since 2000, but most of that value is attributable to just one business: UiPath, which went public in the US earlier this year with a \$35 billion valuation⁴¹⁶.

Banks



The typical banking sector of Eastern European countries is relatively small, has a small number of banks with wide business focus, is highly concentrated and has a significant amount of foreign capital.

PKO Bank (Poland), OTP Bank (Hungary), Erste Group (Austria) and Raiffeisen Bank (Austria) are the four native banks with major footholds in the region.

PKO Bank is a leader on the Polish market. It has branches in the Czech Republic, Slovakia and Germany. PKO placed first in the Finnoscore ranking, and is listed in the Top 10 of the most technologically advanced banks in Europe.

⁴¹⁵ https://www.researchandmarkets.com/reports/5633089/eastern-europe-online-payment-methods-2022

⁴¹⁶ https://sifted.eu/articles/cee-vc-booming-report/

OTP Group is the biggest financial supplier in Hungary and was named best consumer digital bank 2021 in the country by Global Finance. As a result of an international expansion strategy, OTP Group is a determining player on the banking market within the CEE region, with over 18,5 million customers. OTP Group currently operates in Albania, Bulgaria, Croatia, Romania, Serbia, Ukraine, Russia, Moldova, Montenegro and Slovenia (SKB) via its subsidiaries.

Erste Group Bank is the largest bank in Austria, as well as one of the largest financial service providers in Central and Eastern Europe, having more than 16 million customers across 7 countries: Austria, Croatia, Czech Republic, Hungary, Romania, Slovakia and Serbia.

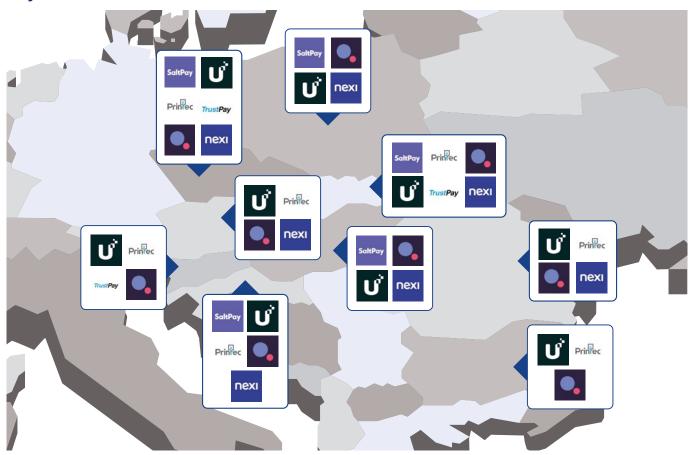
Raiffeisen is present in 24 countries. In the CEE region, the bank is present in 12 countries, including 7 countries that are part of the EU: Romania, Slovakia, Hungary, Poland, Austria, Czech Republic and Croatia.

As mentioned in the South-Western Europe section, the two major Italian banks have a strong presence in Central and Eastern Europe. UniCredit is present in Bulgaria, Croatia, Czech Republic, Austria, Hungary, Romania, Slovakia and Slovenia. Intesa Sanpaolo also has a strong presence in the region. Moreover, the Belgian bank KBC is present in Bulgaria (United Bulgarian Banks), Slovakia (CSOB) and Hungary (K&H).

Bank	Group	Number of employees	Revenue (Million €)	Net Income (Million €)	LinkedIn
Intesa Sanpaolo	Parent company	97.698	22.293,00	4.043,00	<u>Link</u>
UniCredit SPA	Parent company	78.571	17.239,00	1.570,00	<u>Link</u>
KBC Group	Parent company	n/a	7.571,00	2.614,00	<u>Link</u>
Raiffeisen Bank International	Parent company	46.185	5.931,00	1.508,00	<u>Link</u>
OTP Bank	pParent company	37.866	3.857,68	1.237,27	<u>Link</u>
PKO Bank Polski	Parent company	25.657	3.337,93	1.059,73	<u>Link</u>
Erste Group Bank	Parent company	45.000	n/a	n/a	<u>Link</u>

Source: Orbis | 2021 Financials

Payment Service Providers



There are many different payment service providers in the region. PayU, Printec, Paysafe, Nexi, Trustpay and SaltPay are the most relevant and dominant ones in Eastern Europe.

PSP	Group	Number of employees	Revenue (Million €)	Net Income (Million €)	LinkedIn
Nexi	Parent company	9.929	1.544,51	51,73	<u>Link</u>
PrinTec Austria Holding	Parent company	n/a	103,28	7,07	<u>Link</u>
Trust Pay	Parent company	n/a	22,75	7,15	<u>Link</u>
PayU Global	Naspers Limited	n/a	n/a	n/a	<u>Link</u>
Paysafe Group	Foley Trasimene Acquisition II Corp	n/a	n/a	n/a	<u>Link</u>

Local & Alternative Payment Methods

Digital payments such as PayPal, Apple Pay and Google Pay are gradually increasing in the region. Each country has its own preferred payment method and mobile payment apps. For instance, Pago is the leading mobile app for payments in Romania. The Slovenian app Flik is widely used for peer-to-peer transactions in the country. In Slovakia, Viamo is a local payment method which enables peer-to-peer money transfers and payments to merchants. In Hungary, people use Simple by OTP Mobil, while Aircash is preferred in Croatia. Each of these means of payments will be further developed in their respective country.

Romania

Introduction

Despite being a member of the European Union since 2007, Romania is not yet a member of the euro area. The country's currency is the Romanian Leu (RON), which is not part of the Exchange Rate Mechanism II⁴¹⁷. The target year for Romania to adopt the euro is 2024, in accordance with the national plan, after the necessary conditions have been satisfied⁴¹⁸.

The nation has 19,1 million inhabitants, of which 14,38 million are the so-called "online" population who have internet access⁴¹⁹. The internet penetration rate reaches 75%, slightly below the average in Europe.

Cash dominates the Romanian payments landscape in terms of transaction volume. As a result of the preference for cash payments, Romania has one of the lowest bank card penetration rates in the European Union, at about one card per person⁴²⁰. At the end of June 2021, there were 19,2 million cards in use nationwide, of which 16,2 million were debit cards and 2,9 million were credit cards⁴²¹.

However, the country is gradually moving toward electronic payments as a result of government and central bank initiatives to encourage these types of payments, rising consumer awareness and a gradual increase in the acceptance of credit and debit cards⁴²². According to a study conducted by the local organisation DreptulLaBanking, the quantity and value of card payment transactions in Romania increased by 60% in June 2021 compared to June 2019, reflecting the accelerated digitisation process in the banking system during the pandemic. Additionally, the use of digital wallets is spreading rapidly. Nevertheless, despite this shift toward electronic payments, many Romanians still prefer to pay in cash or online with cash on delivery.

Romania's fintech industry has seen significant advancements over the past few years, and is advancing the development of a cashless society. The pandemic compelled the industry to comply with government restrictions and benefit from the rapid expansion of online commerce. With more and more products being developed and more foreign and domestic capital being invested, Romania's fintech industry is upending the status quo. In January 2020, a national association was established to assist startups in overcoming the obstacles the sector faces both domestically and internationally. A specific acceleration programme called NEXT Fintech is open to association members. The Impact of COVID-19 on Romanian Tech Startups study by ROTSA found that fintech startups account for 35,2% of all employment in Romania⁴²³.

Banks

There are currently 39 credit institutions operating in Romania⁴²⁴, with Banca Transilvania being the largest. In comparison to other CEE nations, Romania's banking sector is distinguished by its relatively small size, small number of banks, high degree of concentration and moderate share of foreign capital; in fact, it is mainly dominated by foreign-controlled banks, owned by groups from Austria, France and the Netherlands⁴²⁵. Around 20% of the banking industry is made up of banks under Romanian capital control, compared to 80% under foreign capital⁴²⁶.

At the beginning of 2022, the favourable environment for the Romanian banking sector consolidated as the country demonstrated resilience in the face of overlapping shocks such as the onset of the Ukrainian crisis. The persistence of the post-pandemic economic cycle, the low level of real financing costs and the monetary cycle put in place by the central bank were some of the factors that contributed to its resilience.

The banking sector's overall assets and net aggregate financial result increased at average YoY rates of 12,81%⁴²⁷.

Banca Transilvania (BT) dominates the Romanian banking sector in terms of total assets. The bank has developed a mobile application called BT Pay⁴²⁸ that serves as a mobile wallet. BT Pay is used by 2 million people⁴²⁹. It has also partnered with fintechs such as the mobile app Pago. Following the leading bank are Banca Comerciala Romana (BCR) and BRD (a Société Générale group). Other banks worthy of mention include CEC, OTP, Raffeisen, UniCredit, Alpha Bank and Garanti Bank, which was named best consumer digital bank 2021 in Romania by Global Finance⁴³⁰.

- 417 https://economy-finance.ec.europa.eu/euro/eu-countries-and-euro/romania-and-euro_en
- 418 https://www.bnr.ro/Preparing-the-changeover-to-the-euro-11694.aspx
- 419 https://www.statista.com/statistics/252753/number-of-internet-users-eu-countries/
- 420 https://www.romania-insider.com/card-payments-ro-pandemic-nov-2021
- 421 https://www.romania-insider.com/card-payments-ro-pandemic-nov-2021
- 422 https://www.globaldata.com/store/report/romania-cards-and-payments-market-analysis/
- 423 https://thepaypers.com/expert-opinion/fintech-startups-and-ecosystem-trends-in-romania--1250735
- https://euclid.eba.europa.eu/ (checked on November 25, 2022)
- https://thebanks.eu/articles/banks-in-romania
- 426 Banca Transilvania, Presentation: The Banking Market Leader, March 2022 https://www.bancatransilvania.ro/files/app/media/relatii-investitori/ir-presentations-roadshows/General%20Presentations/BT-the-banking-market-leader-in-Romania.pdf
- 427 Banca Transilvania, Presentation: The Banking Market Leader, March 2022 https://www.bancatransilvania.ro/files/app/media/relatii-investitori/ir-presentations-roadshows/General%20Presentations/BT-the-banking-market-leader-in-Romania.pdf
- 428 https://en.bancatransilvania.ro/wallet-bt-pay/
- 429 Banca Transilvania, Presentation: The Banking Market Leader, March 2022 https://www.bancatransilvania.ro/files/app/media/relatii-investitori/ir-presentations-roadshows/General%20Presentations/BT-the-banking-market-leader-in-Romania.pdf
- 430 https://d2tyltutevw8th.cloudfront.net/media/document/press-release-digital-bank-awards-2021-consumer-1629396207.pdf

Bank	Group	Number of employees	Revenue (Million €)	Net Income (Million €)	LinkedIn
Transilvania Bank	Parent company	10.800	1.016,00	409,00	<u>Link</u>
Banca Comerciala Romana	Erste Group Bank	5.342	808,00	285,00	<u>Link</u>
BRD	Société Générale	6.408	631,00	266,00	<u>Link</u>
Raiffeisen Bank	Raiffeisen Bank International	4.798	555,00	165,00	<u>Link</u>
<u>UniCredit Bank</u>	UniCredit	3.358	431,00	163,00	<u>Link</u>
CEC Bank	Government of Romania	5.414	299,00	74,00	<u>Link</u>
OTP Bank	OTP Bank	1.791	127,00	-2,00	<u>Link</u>
Alpha Bank	Alpha International Holdings	2.088	133,00	21,00	<u>Link</u>
Banca Romaneasca	Government of Romania	1.028	49,00	2,00	<u>Link</u>
Garanti Bank	Banco Bilbao Vizcaya Argentaria	960	89,00	28,00	<u>Link</u>
<u>Libra Internet Bank</u>	Broadhurst Investments]	1.027	79,00	37,00	<u>Link</u>
<u>First Bank</u>	JC Flowers & Co	1.039	78,00	12,00	<u>Link</u>
<u>Idea Bank</u>	Transilvania Bank	383	35,70	3,79	<u>Link</u>
<u>Vista Bank</u>	Barniveld Enterprises	312	23,48	45,91	<u>Link</u>
Patria Bank	EEAF Financial Services	710	20,00	-10,00	<u>Link</u>

Electronic Money Institutions

There are 2 electronic money institutions (EMIs) registered and authorised by the National Bank of Romania⁴³¹. These EMIs can operate in any of the other 31 EEA members.

The first e-money licence owner is Capital Financial Services (operating under the Twispay brand). The company was acquired by the European blockchain unicorn Elrond in March 2022⁴³². Note that even if the company holds an EMI licence, Twispay acts as a payment service provider as it provides payment processing services for online transactions through Visa, Mastercard and other alternative payment methods. Twispay being a principal member of Visa (for issuing Visa cards) and of Mastercard (for issuing and acquiring Mastercard cards), the acquisition is an important move for Elrond, as it will be able to issue e-money across EEA countries. Indeed, Elrond plans to issue MultiversX cards in the first quarter of 2023⁴³³.

The second e-money institution is Orange Money IFN, a subsidiary of the French telecommunication company Orange. Orange Money IFN focuses on providing m-wallets and payment cards.

ЕМІ	Group	Number of employees	Revenue (Million €)	Net Income (Million €)	LinkedIn
Capital Financial Services (Twispay)	Elrond Network	13	1,52	-0,72	<u>Link</u>
Orange Money IFN	Orange	n/a	n/a	n/a	<u>Link</u>

Source: Orbis | 2021 Financials

Payment Service Providers

There are 10 payment institutions registered and authorised by the National Bank of Romania⁴³⁴. Some domestic payment service providers include Netopia Payments, Printec, Danibus and Mellon.

However, the Dutch company PayU is the leading payment service provider in Romania. PayU participates in the online payment processing market by offering both a cutting-edge payment gateway and an acquiring service. The total amount of online transactions carried out via the PayU platform in November 2021 totalled RON 357 million, with a corresponding rise of 22% in volume to 658.000 transactions.

PayU announced in February 2022 that a brand-new, cutting-edge credit payment solution it had created was now accessible to Romanian consumers. For all product categories, whether in its own offer or for goods sold by sellers active on the eMAG Marketplace, the online retailer eMAG was the first partner to give its customers the option to either delay a payment or pay in four instalments. Romanian customers can choose between two different ways to use PayU's credit solution: Buy Now, Pay Later (BNPL), which allows customers to postpone payments for 30 days without incurring any additional fees, and payment in four monthly instalments (SLICE IT), where the first instalment is paid on the day of the transaction and the remaining three are spread out over three calendar months⁴³⁵.

^{431 &}lt;a href="https://euclid.eba.europa.eu/register/">https://euclid.eba.europa.eu/register/ (checked on November 25)

^{432 &}lt;a href="https://elrond.com/blog/romanian-central-bank-approves-twispay-acquisition/">https://elrond.com/blog/romanian-central-bank-approves-twispay-acquisition/

⁴³³ https://medium.com/@BSuccessful/x-card-will-be-launched-in-q1-2023-multivers-x-is-here-efb42354e2f0

^{434 &}lt;a href="https://euclid.eba.europa.eu/register/">https://euclid.eba.europa.eu/register/ (checked on November 25)

⁴³⁵ https://romania.payu.com/en/news/payu-new-finance-option/

PSP	Group	Number of employees	Revenue (Million €)	Net Income (Million €)	LinkedIn
Printec Group Romania	Printec Holdings	162	22,00	2,00	<u>Link</u>
Netopia Payments	Independent company	21	14,00	1,00	<u>Link</u>
<u>Danubius Exim</u>	Independent company	37	6,00	1,00	<u>Link</u>
Westaco	Craciun Tarara	36	4,67	0,36	<u>Link</u>
Mellon Romania	Mellon Technologies	103	3,00	0,00	<u>Link</u>
PayU Romania Services	PayU Fintech Holdings	37	3,00	0,00	<u>Link</u>
Capital Financial Services (Twispay)	Elrond Network	13	1,52	-0,72	<u>Link</u>

Open Banking Enablers

In 2021, Smart Fintech became the first open banking third party provider in Romania. The firm is leading innovation in Open Banking, helping fintechs and ASPSPs quickly integrate and deliver new products and services. FINQware also enables open banking. The firm develops technologies and products in order to implement "open banking at work", giving people the tools to be wiser with their money.

Open Banking Enabler	Group	Number of employees	Revenue (Million €)	Net Income (Million €)	LinkedIn
Finqware	Independent company	7	0,12	-0,47	<u>Link</u>
Smart Fintech	Independent company	3	0,00	0,00	<u>Link</u>

Source: Orbis | 2021 Financials

Local & Alternative Payment Methods

Alternative payment methods are heavily dominated by international players such as Bitpay, PayPal, PayU, Skrill, Apple Pay, UnionPay SecurePay, Trustly, Mobiamo and Google Pay⁴³⁶.

The domestic competitors include Beez, which provides a "buy now, pay later" business model with no interest, no late fees and no commission. In addition to financing their purchases, advantages for users also include cashback, sweet deals and other rewards⁴³⁷.

Another relevant domestic player is Netopia, which offers the mobilPay Wallet, the most recognised and honoured payment method in Romania and the first Romanian tech product to receive such recognition from Silicon Valley. This is the first digital wallet in Romania that enables users to send payments instantly from an app⁴³⁸.

Timesafe, operating under the name Pago, is the leading mobile payment application in Romania. Pago is an app for managing and paying all utility bills from one account: users get their bills updated in real time, organised by due date on one screen, and pay them in a few seconds. Mozaik Investments acquired from Banca Transilvania the 51,12% stake it held in Pago⁴³⁹. The company launched real-time money transfers between cards in February 2022, enabling Pago users to transfer money to any cards issued by banks in Romania and any Revolut cards⁴⁴⁰.

Local Payment Method	Group	Number of employees	Revenue (Million €)	Net Income (Million €)	LinkedIn
Netopia Payments	Independent company	21	14,00	1,00	Link
PayU Romania Services	PayU Fintech Holdings	37	3,00	0,00	<u>Link</u>
Timesafe (Pago)	Mozaik Investments	5	2,64	0,01	<u>Link</u>
Beez Software	Independent company	5	0,00	0,00	<u>Link</u>

⁴³⁶ https://www.ppro.com/countries/romania/

^{437 &}lt;a href="https://use-beez.com/welcome?returnUrl=%2Fhome%2Fhome-page">https://use-beez.com/welcome?returnUrl=%2Fhome%2Fhome-page

⁴³⁸ https://www.linkedin.com/company/netopia-system/?original_referer=https%3A%2F%2Fnetopia-payments.com%2F

https://www.romania-insider.com/mozaik-investments-pago-bt-feb-2022

⁴⁴⁰ https://business-review.eu/money/pago-launches-real-time-money-transfer-between-cards-227689

Others

Other important players include the infrastructure providers MultiversX (Elrond), Fintech OS, Symphopay, Selfpay and Salarium.

MultiversX, formerly known as Elrond, is a highly scalable, secure, decentralised blockchain network developed to support radically new applications for individuals, organisations, the general public and the nascent metaverse⁴⁴¹. Aside from Ethereum 2.0, Elrond claims to have 3.200 validators distributed across the globe, making it the second-largest Proof of Stake blockchain in the world. The protocol is also the first carbon-zero blockchain in Europe, with more CO2 offset than needed to run its cutting-edge Proof of Stake network⁴⁴². After UiPath, Elrond Blockchain became the second unicorn in Romania in 2021⁴⁴³.

The global leader in high productivity fintech infrastructure (HPFI), FintechOS enables businesses from any industry to quickly launch and manage the newest financial goods and services⁴⁴⁴.

Salarium is an app giving employees instant access to the money they have already earned before their regular pay days, whenever they want. Currently being used by staff members of 50 Romanian companies, the Salarium platform was introduced in 2021. Active users used the platform 3,7 times in September and transferred, on average, 1120 lei, up 50% from the same month last year⁴⁴⁵.

Symphopay offers retailers a way to integrate each of their partner banks into a single payment terminal. The startup, which was founded in Bucharest in 2015, has already received 1,4 million € in funding. It is currently expanding to Greece, Bulgaria and Poland⁴⁴⁶.

SelfPay provides self-service payment terminals. The company currently runs more than 3000 self-service kiosks, completes more than 700.000 transactions each month, and has contracts with a number of service providers, including the major utility providers, telcos and public authorities. As a result, the SelfPay platform and the APIs of these third parties were directly integrated, enabling users to access and pay their preferred Service providers from a SelfPay payment station⁴⁴⁷.

Other	Group	Number of employees	Revenue (Million €)	Net Income (Million €)	LinkedIn
Elrond Network (MultiversX)	Parent company	39	25,00	10,00	<u>Link</u>
Fintech OS	FintechOS Holdings	107	8,47	-2,71	<u>Link</u>
Salarium Fintech	Independent company	2	0,00	0,00	<u>Link</u>
Symphopay	Independent company	2	0,00	-1,00	Link
Selfpay Finance	Zebrapay	n/a	n/a	n/a	<u>Link</u>

^{441 &}lt;a href="https://multiversx.com/">https://multiversx.com/

https://www.romania-insider.com/elrond-available-revolut-2022

⁴⁴³ https://www.romaniaiournal.ro/business/new-romanian-unicorn-elrond-startup-says-its-worth-usd-1-bln/

^{444 &}lt;a href="https://www.linkedin.com/company/fintechos/?originalSubdomain=uk">https://www.linkedin.com/company/fintechos/?originalSubdomain=uk

⁴⁴⁵ https://business-review.eu/business/human-resources/romanian-software-launches-partnership-with-fintech-platform-salarium-237903

⁴⁴⁶ https://thepaypers.com/expert-opinion/fintech-startups-and-ecosystem-trends-in-romania--1250735

⁴⁴⁷ https://thepaypers.com/expert-opinion/fintech-startups-and-ecosystem-trends-in-romania--1250735

Bulgaria

Introduction

Bulgaria formally joined the EU in 2007 and has been a member of the ERM-II since July 2020. Bulgaria is not currently part of the eurozone. However, the country is expected to join the eurozone in 2024, unless the uncertainty about inflation in the next two years delays accession beyond 2025⁴⁴⁸.

With a population of 6,8 million inhabitants, Bulgaria is highly dependent on cash. According to statistics from Global Findex, 63% of transactions are still made with cash. Moroever, 28% of the population does not hold a bank account⁴⁴⁹.

However, with the onset of the pandemic in 2020, Bulgarians have changed their payment habits. According to a research commissioned by Paysafe, there is a persistent trend whereby an increasing number of Bulgarians prefer cashless payments which offer better options of control of spending. The research conducted by Sapio Research in April 2022 showed that, compared to a year earlier, Bulgarians (45%) use their debit cards considerably more often than respondents in Britain (39%), Germany (29%), Italy (21%) and Austria (21%). Payments via digital wallets increased their share among Bulgarian customers (24%)⁴⁵⁰.

Although the pandemic tangibly changed consumer attitudes towards a preference for cashless payments, 62% of Bulgarians would be concerned if they could not pay for services or goods in cash. For 54% of them, payment by cash is still the most reliable method of payment⁴⁵¹.

Concerning non-cash payments, their distribution as of 2021 was as follows: credit transfers led the way (48%), followed by card payments (28%)⁴⁵².

As of 2021, Bulgaria is considered the fastest growing fintech hub in South-Eastern Europe, the most developed fintech segment being digital payments⁴⁵³. In 2021, there were 156 fintech companies in Bulgaria, of which 92% are SMEs, mostly located in Sofia, Varna and Plovdiv. Despite the lower number of fintech companies founded in 2021, fintechs' total revenue achieved a historic 25% increase with a historic peak of total revenue (1,8 billion BGN). The Digital Payments segment continues to be the largest contributor to the performance of the sector, with 54% of total revenue⁴⁵⁴.

Banks

Bulgaria's banking sector is typical of Eastern Europe, in that it is relatively small, has a small number of banks with wide business focus, is highly concentrated and has a significant amount of foreign capital.

There are 30 credit institutions operating in Bulgaria, including 10 EEA branches and 2 non-EEA branches⁴⁵⁵. The top 7 banks in terms of market share (total assets) are UniCredit Bulbank (18%), DSK Bank (18%), United Bulgarian Bank (11%), Eurobank (11%), First Investment Bank (8%), KBC Bank Bulgaria (8%) and Central Cooperative Bank (5%). Together they account for about 80% of the consolidated banking assets⁴⁵⁶. Out of these 7 banks, only First Investment Bank and Central Cooperative Bank are owned and operated by Bulgarians. The other five banks are foreign-controlled institutions with roots in Italy, Hungary, Belgium, Greece and Austria⁴⁵⁷.

Named best consumer digital bank 2021 by Global Finance⁴⁵⁸, UniCredit Bulbank is leading the Bulgarian banking market in terms of total assets. The bank is a subsidiary of the Italian UniCredit bank. It offers online services as well as mobile services. It issues Visa and Mastercard debit cards which can be integrated in Apple Pay and Bulbank Mobile's Digital Wallet. It has also launched its "Bulbank Pay" service for utilities and periodic payments such as electricity and phone bills⁴⁵⁹.

DSK Bank is the second largest bank in Bulgaria. It issues Mastercard debit cards and Visa credit cards. The bank offers online banking services with DSK Direct and mobile services with DSK Smart. Interestingly, it also offers a service to confirm transfers and documents completed through e- and m-banking via its mobile application DSK mToken⁴⁶⁰.

The Belgian financial group KBC acquired Raiffeisenbank and its subsidiaries in Bulgaria. Thus, the KBC group in Bulgaria has 14 banking, insurance, leasing, insurance brokerage, asset management, pension insurance and factoring companies. Serving over 2,5 million customers, the KBC group is the largest integrated financial group in Bulgaria, according to BNB data as of March 2022, based on the total value of the companies' assets following the acquisition⁴⁶¹.

- 448 https://sofiaglobe.com/2022/11/19/euro-zone-prospect-keeps-bulgarias-rating-at-bbb-with-positive-outlook-fitch/
- 449 https://www.atmia.com/cash-repository/articles/63-of-transactions-in-bulgaria-are-made-in-cash/17666/
- 450 https://www.bta.bg/en/news/economy/290208-growing-number-of-bulgarians-prefer-cashless-payment-methods-survey-shows
- 451 https://www.bta.bg/en/news/economy/290208-growing-number-of-bulgarians-prefer-cashless-payment-methods-survey-shows
- 452 https://www.europeanpaymentscouncil.eu/news-insights/insight/instant-payments-bulgaria
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- 456 https://thebanks.eu/articles/banks-in-Bulgaria
- 457 https://thebanks.eu/articles/banks-in-Bulgaria
- 458 https://d2tyltutevw8th.cloudfront.net/media/document/press-release-digital-bank-awards-2021-consumer-1629396207.pdf
- 459 https://www.unicreditbulbank.bg/en/individual-clients/everyday-banking/payments/
- 460 https://dskbank.bg/en/individual-clients/banking
- 461 https://www.kbcbank.bg/en/about-us/we-are-becoming-kbc-bank/

Note that although Bulgaria lacks pure direct banks, many banks make their products available online. However, only 15% of Bulgarian consumers use online banking⁴⁶².

Bank	Group	Number of employees	Revenue (Million €)	Net Income (Million €)	LinkedIn
DSK Bank	OTP Bank	6.052	520,92	212,97	<u>Link</u>
<u>UniCredit Bulbank</u>	UniCredit	4.108	463,03	189,19	<u>Link</u>
Eurobank Bulgaria	Eurobank Ergasias Holdings	3.289	253,49	86,52	Link
First Investment Bank	Parent company	2.867	243,32	56,96	Link
United Bulgarian Bank (UBB)	KBC Group	2.618	205,98	87,91	Link
KBC Bank Bulgaria	Raiffeisen Bank International	2.563	188,52	66,70	Link
TBI Bank	Tirona	1.765	124,49	27,49	Link
Central Cooperative Bank	ICA Invest Capital	1.875	93,63	13,78	Link
Investbank	Independent company	598	64,80	7,13	Link
International Asset Bank	Parent company	637	23,89	10,83	Link
D Commerce Bank	Independent company	n/a	23,07	7,58	<u>Link</u>
Municipal Bank	Novito Opportunities Fund	549	10,55	-4,58	Link
Texim Bank	Parent company	268	9,02	0,17	Link
<u>Tokuda Bank</u>	Tokushokay	211	7,27	-0,25	<u>Link</u>

Source: Orbis | 2021 Financials

Electronic Money Institutions

The Bulgarian National Bank (BNB) has granted 9 electronic money institution (EMI) licences: Econt Financial Services (branded as ecoints), PayMan Group (which acts as a PSP), Tenen Payments, MyFin, Paynetics (acting as a BaaS), Transact Europe, Easy Payment Services, EasyPay and iCard⁴⁶³. Thanks to EEA passport regulations, EMIs are permitted to carry out their operations in any of the 31 EEA member states.

Paynetics offers services such as payment-as-a-service and card-as-a-service. As such, Paynetics is the company that issues cards for Phyre, the unicorn Payhawk and many others⁴⁶⁴.

iCard offers personal and business IBAN accounts, payment cards, virtual cards and gift cards to natural persons and business entities.

Founded in 2006, EasyPay offers products and services such as the payment of utility bills, payment of taxes and fees, bank transfers in Bulgaria and money transfers. It is the largest non-bank payment company in the country. Note that the company works with a franchise model. Hence, representatives can collect payments and offer the company's products and services. EasyPay currently has more than 2600 offices and works with more than 500.000 households in Bulgaria monthly⁴⁶⁵. It is a partner of the online payment system Epay, meaning that the Bulgarian electronic system Epay is a registered representative of EasyPay for providing payment services related to conducting payment operations with bank cards, credit payments and depositing and withdrawing money from accounts serviced by Easypay AD⁴⁶⁶.

Econt Financial Services EOOD is an electronic money institution focused on payment acceptance and processing, which was authorised by the Bulgarian National Bank in June 2021. Econt Financial Services EOOD provides mobile wallets for both individuals and businesses. 467

https://www.statista.com/statistics/222286/online-banking-penetration-in-leading-european-countries/

⁴⁶³ https://euclid.eba.europa.eu/register/

⁴⁶⁴ https://www.paynetics.digital/empowered-clients/

⁴⁶⁵ https://www.easypay.bg/site/en/?p=partner

^{466 &}lt;a href="https://www.epay.bg/v3main/front?p=about">https://www.epay.bg/v3main/front?p=about

^{467 &}lt;a href="https://thebanks.eu/emis/econt-financial-services-355237">https://thebanks.eu/emis/econt-financial-services-355237

ЕМІ	Group	Number of employees	Revenue (Million €)	Net Income (Million €)	LinkedIn
Easypay	Independent company	944	29,34	1,55	<u>Link</u>
<u>Paynetics</u>	Intera Financial Services	53	1,27	-0,21	<u>Link</u>
Easy Payment Services	Management Financial Group JSCO	7	1,05	-0,71	<u>Link</u>
Icard	Intercapital Holding	239	0,93	2,23	<u>Link</u>
Transcard Financial Services	Pomorie Turninvest	93	0,30	0,36	<u>Link</u>
Transact Europe	Ransact Europe Holdings	64	0,01	1,08	<u>Link</u>
Myfin_	First Investment Bank	1	0,01	-0,11	<u>Link</u>
Econt Financial Services	Econt	3	0,00	-0,14	<u>Link</u>
Tenen Payments	Independent company	n/a	0,00	-0,02	<u>Link</u>

Payment Service Providers

The Bank of Bulgaria has issued 5 payment institution licences: Transcard Financial Services (acting as an EMI), Datecs Payment Technology, Iris Solutions (acting as an Open Banking Enabler), Borica and Diners Club Bulgaria⁴⁶⁸.

As a Payment Institution, Borica is able to accept payments with payment and prepaid cards for primary and secondary spending units. Revenues from card payments in favour of budget spending units are centralised by direct certification of their BNB accounts. 469

MyPOS is the first and only fintech in Europe to provide merchants with instant fund settlement at no additional cost. The company increased the number of terminals used by merchants in Bulgaria by about 40%, bringing the total to 7000 in the first quarter of 2022⁴⁷⁰. The company has received numerous honours for its contributions to the payments sector, including the B2B Innovation Award from Fintech Breakthrough in 2021⁴⁷¹.

As mentioned above, EPay is a PSP registered representative of EasyPay, and provides payment services for bank card payments at ATMs (B-pay), as well as a system for automatic utility bill payments and SMS notifications for bank card transactions.⁴⁷²

Paysafe is a payment platform that connects and facilitates transactions between businesses and consumers through its industry-leading capabilities in payment processing, digital wallets and online cash services. Paysafe is a large company with over 3.000 employees spread over than 12 different countries. 473

PSP	Group	Number of employees	Revenue (Million €)	Net Income (Million €)	LinkedIn
Paysafe Bulgaria	Foley Trasimene Acquisition II Corp	1.357	91,08	5,34	<u>Link</u>
MyPos Technologies	Novapay Technologies	253	38,46	6,18	Link
<u>Borica</u>	JV of 20 Bulgarian banks	388	25,06	4,10	Link
<u>Epay</u>	Datamax System Holding	56	9,93	0,70	Link
Nuvei Bulgaria	Nuvei Corporation	175	9,62	0,43	Link
Datecs Payment Technology	Datecs	8	0,84	-0,09	<u>Link</u>

Source: Orbis | 2021 Financials

Open Banking Enablers

Iris Payments is the leader in Open Banking in the Balkan peninsula (currently present in Bulgaria, Romania and Greece), and has already partnered with more than 40 banks.

Open Banking Enabler	Group	Number of employees	Revenue (Million €)	Net Income (Million €)	LinkedIn
<u>Iris Solutions</u>	Parent company	3	0,02	-0,04	<u>Link</u>

⁴⁶⁸ https://euclid.eba.europa.eu/register/

⁴⁶⁹ https://www.borica.bg/en/products-and-services/plashtaniya-kam-byudietni-razporediteli

⁴⁷⁰ https://seenews.com/news/bulgarian-fintech-mypos-expands-local-ops-launches-bucharest-store-789932

^{471 &}lt;a href="https://www.linkedin.com/company/mypos-official/about/">https://www.linkedin.com/company/mypos-official/about/

^{472 &}lt;a href="https://www.epay.bg/v3main/front?p=about&lang=en">https://www.epay.bg/v3main/front?p=about&lang=en

⁴⁷³ https://www.jobs.bg/en/company/675; https://www.paysafe.com/eu-en/about/our-story/



Local & Alternative Payment Methods

Local payment methods are highly dominated by foreign players. The biggest foreign players are Revolut, PayPal, Curve and Wise, as well as Skrill and Neteller, mostly for betting and gambling.

Note that the majority of Bulgarian banks have developed their own wallets: Bulbank Mobile, DSK Smart, RaiPay, MyFin, B@CB Pay (developed in collaboration with Paynetics and Phyre), One Wallet by Postbank, CCB Mobile and UBB Mobile.

Others

Payhawk, Bulgaria's first unicorn⁴⁷⁴, is a leading spend management solution. It is one of the 5 most dynamic fintechs in Bulgaria, with 267% operating revenue growth⁴⁷⁵. Payhawk cards are issued through the Bulgarian company Paynetics which holds an e-money licence (and through PayrNet Limited in the UK). Payhawk was initially created to manage business funds. After only 9 months of operations, it released its first card and financial software package⁴⁷⁶. The company's business payment solution gathers, extracts and reconciles expenses while saving employees' time through tools such as spending caps, cash withdrawal restrictions, card sharing and more. Including Germany, the UK, Spain, Belgium and the Netherlands, Payhawk has clients in 30 different nations in Europe⁴⁷⁷. Their clients include fast-growing and established multinational companies such as LuxAir and Flink.

Other	Group	Number of employees	Revenue (Million €)	Net Income (Million €)	LinkedIn
Payhawk	Payhawk Limited	23	0,23	-1,03	<u>Link</u>

⁴⁷⁴ https://payhawk.com/blog/payhawk-becomes-first-ever-bulgarian-unicorn-after-raising-100m-in-a-lightspeed-led-series-b-extension

⁴⁷⁵ Fintech Bulgaria, Annual Fintech Report 2022

⁴⁷⁶ https://www.unleash.ai/hr-technology/payhawk-is-bulgarias-first-unicorn/

^{477 &}lt;a href="https://www.eu-startups.com/directory/payhawk/">https://www.eu-startups.com/directory/payhawk/

Slovenia

Introduction

Slovenia has been a member of the European Union since 2004. In 2007, Slovenia became the first of the new EU members to adopt the euro⁴78. The country has a developed, service-oriented economy and has set the goal of being one of the top five digitally advanced nations in the EU by 2030. In order to achieve this goal, Slovenia aimed to focus on the following DESIndex components in 2021: human capital, connectivity, digital technology integration and digital public services. More than 21% of funding, or just over 532 million €, is designated for digital transition under the Recovery and Resilience Plan⁴79.

In Slovenia, up to 63% of transactions use prepaid cards as a form of payment. Mobile devices take second place with a significantly lower score, accounting for 17% of the payment market, followed by credit cards (10%) and e-wallets (9%).⁴⁸⁰

The total number of card transactions made in Slovenia from 2011 to 2021 saw a steady increase over time, with the number almost doubling and reaching a total of over 250 million card payments in 2021⁴⁸¹.

Looking at the fintech market, the market's largest segment was digital payments, with a total transaction value of 8 billion € in 2022. The total fintech transaction value in Slovenia is forecast to grow by 167% from 2021 to 2025. As for the neobanking segment, it is expected to show a revenue growth of 41% in 2023⁴⁸².

There are three local schemes in Slovenia: Activa (co-branded with Maestro, Mastercard, Visa or Electron), BA (co-branded with Maestro) and Karanta (co-branded with Mastercard)⁴⁸³.

Banks

The Slovenian banking sector is relatively small, having a small number of banks⁴⁸⁴ with wide business focus, a high degree of concentration and a moderate share of foreign capital. Most of the banks operating in Slovenia are universal banks providing products and services in retail and business banking⁴⁸⁵.

With a market share of 22%, Nova Ljubljanska Banka (NLB) remains the leader in the Slovenian banking market. Its leading position is due to its very well-established branch and ATM network, the 24/7 Contact centre and continuous digitalisation improvements. NLB issues Mastercard, Visa and Karanta cards⁴⁸⁶.

In March 2022, the EU unit of Sberbank went into insolvency due to EU sanctions in reaction to the 2022 Russian invasion of Ukraine. As a result, NLB acquired the local unit of the Russian bank⁴⁸⁷.

Bank	Group	Number of employees	Revenue (Million €)	Net Income (Million €)	LinkedIn
Nova Ljubljanska Banka	Parent company	8.185	718,30	247,87	<u>Link</u>
Nova Kreditna Banka Maribor	Biser Holdings	1.801	268,62	112,59	<u>Link</u>
SKB Banka	OTP Bank	908	122,05	46,01	<u>Link</u>
UniCredit Banka	UniCredit	565	74,24	6,32	<u>Link</u>
Gorenjska Banka	Agroindustrijsko Komercijalna Banka	479	73,68	28,35	<u>Link</u>
Intesa Sanpaolo Bank	Intesa Sanpaolo Group	n/a	71,00	18,00	<u>Link</u>
Addiko Bank	Addiko Bank	321	54,50	25,28	<u>Link</u>
N Banka	Nova Ljubljanska Banka	379	43,43	10,26	<u>Link</u>
Delavska hranilnica	Parent company	344	39,23	7,55	<u>Link</u>
Banka Sparkasse	Karntner Sparkasse	309	38,36	15,91	<u>Link</u>
Dezelna Banka	Parent company	345	28,16	4,70	<u>Link</u>
Hranilnica LON	Independent company	94	8,28	-0,36	<u>Link</u>
Primorska Hranilnica Vipava	Independent company	48	3,86	0,38	<u>Link</u>

⁴⁷⁸ https://economy-finance.ec.europa.eu/euro/eu-countries-and-euro/slovenia-and-euro_en

⁴⁷⁹ https://commission.europa.eu/document/download/60bc37f7-4178-47ab-92b9-21c424c8564f_en?filename=nrp_2022_slovenia_en.pdf

⁴⁸⁰ https://www.paymentwall.com/it/payment-methods/slovenia

⁴⁸¹ https://www.statista.com/statistics/746301/purchases-with-payment-cards-slovenia/

⁴⁸² https://www.statista.com/outlook/dmo/fintech/romania?currency=EUR

⁴⁸³ https://www.adyen.com/payment-methods-guides/europe/slovenia

^{484 15} credit institutions are registered in Slovenia according to EUCLID https://euclid.eba.europa.eu/

⁴⁸⁵ https://thebanks.eu/articles/banks-in-Slovenia

⁴⁸⁶ https://nlb.si/cards

⁴⁸⁷ https://seenews.com/news/slovenias-nlb-acquires-sberbank-slovenia-775417

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Electronic Money Institutions

There are presently 3 electronic money institutions licensed and authorised by the Bank of Slovenia: mBills, Paywiser and Telekom Slovenije⁴⁸⁸. Due to EEA passport regulations, they are able to carry out their business in any of the 31 EEA member nations. For EMIs, Slovenia offers a welcoming operating environment⁴⁸⁹.

The e-money provider mBills focuses on offering payment cards and mobile wallets. The company is known especially for its mobile app that enables users' smartphones to become a mobile wallet. It also enables connection with loyalty cards offered by various stores. The "network" of service and product providers that support mBills payment is continuously growing, satisfying customers' primary wish to always be able to make payments using their phone⁴⁹⁰.

Paywiser, a company at the forefront of the global payments technology sector, offers B2B issuing and acquiring services. It makes it easier to make payments in multiple currencies and transfer money in a safe setting.

Erste Card, called Diners Club Slovenia, issues personal and business cards with deferred payment (on average 30 days interest-free deferred payment, bill paid by postage). While the company holds a payment institution licence, it acts as an e-money institution.

ЕМІ	Group	Number of employees	Revenue (Million €)	Net Income (Million €)	LinkedIn
mBills	Petrol Slovenska Energetska Druzva	18	2,70	-1,15	<u>Link</u>
Paywiser	Paywiser	2	0,00	0,00	<u>Link</u>
Erste Card (Diners Club)	Karntner Sparkasse	60	9,24	0,96	<u>Link</u>

⁴⁸⁸ https://euclid.eba.europa.eu/register/

⁸⁹ https://thebanks.eu/list-of-emis/Slovenia

⁴⁹⁰ https://med.over.net/mbills-mobilna-denarnica-za-vsakogar/

Payment Service Providers

Payment service providers in Slovenia are key players when it comes to the country's transition to an instant payment environment, as all PSPs agreed in 2018 to establish Flik, a domestic payment scheme for instant transfers. In 2019, Bankart, the national processor, implemented the Bankart Instant Payments System (BIPS), including the domestic payment scheme Flik⁴⁹¹.

Bankart maintains and regulates the network of POS terminals, offers domestic and foreign card products, as well as online and SEPA processing services to different banks and financial institutions in six countries across South-Eastern Europe. The company processes more than 4 million payment cards and more than 30 million card transactions per month. Bankart also offers an e-invoice system enabling the electronic exchange of invoices between invoice senders and recipients. The Public Payments Administration of the Republic of Slovenia (UJP) and bank customers can conveniently exchange electronic documents through the universal system⁴⁹².

Another important PSP is Eligma, also known as GoCrypto. It provides a selection of POS solutions for businesses so they can accept cryptocurrency in-person or online. The solution also enables business owners to get payments in the currency of their choice. The firm has also unveiled a brand new cryptocurrency-based payment app, Elipay, that enables users to use their mobile devices to make cryptocurrency payments in store and online⁴⁹³. Note that Eligma submitted the necessary paperwork for an EMI licence to the Bank of Slovenia in 2020, and approval is still pending.

PSP	Group	Number of employees	Revenue (Million €)	Net Income (Million €)	LinkedIn
Bankart	Independent company	217	35,14	2,65	Link
Eligma Labs (GoCrypto)	Independent company	2	0,36	0,02	<u>Link</u>

Source: Orbis | 2021 Financials

Local & Alternative Payment Methods

When it comes to payment options, international players such as PayPal, BitPay, Paysera and SEPA are the most common payment methods.

As mentioned previously, mBills is considered a local payment method, transforming users' smartphones into wallets. Leanpay is another local company, which offers BNPL solutions and has recently raised 2,5 million € to expand its European presence⁴⁹⁴.

In early 2020, Slovenia launched Flik, a peer-to-peer money transfer system. The system has been developed by all 15 Slovenian commercial and savings banks in cooperation with the national payment processor Bankart⁴⁹⁵. The Flik Pay application is available on Google Play and Apple Store, and allows easy, fast and secure payments between users of different banks⁴⁹⁶. The only requirement is that the sender and the recipient of the transfer must both be Flik users and must use a mobile application from a Slovenian bank that is a participant in the Flik national payment scheme⁴⁹⁷.

Local Payment Method	Group	Number of employees	Revenue (Million €)	Net Income (Million €)	LinkedIn
Leanpay	Independent company	8	0,43	0,17	<u>Link</u>
<u>mBills</u>	Petrol Slovenska Energetska Druzva	18	2,70	-1,15	<u>Link</u>

Source: Orbis | 2021 Financials

Other

Halcom is an electronic payment solution provider for financial institutions.

Other	Group	Number of employees	Revenue (Million €)	Net Income (Million €)	LinkedIn
Halcom d.d.	Parent company	97	8,50	1,77	<u>Link</u>

Source: Orbis | 2021 Financials

491

492 https://www.bankart.si/en/company/

493 https://www.inventiva.co.in/trends/top-10-best-unicorns-in-slovenia/

494 https://www.eu-startups.com/2021/11/slovenian-fintech-startup-leanpay-raises-e2-5-million-to-expand-european-presence/

495 https://paymentexpert.com/2019/09/04/slovenia-to-flik-the-switch-for-instant-payments-system/

96 https://www.bankart.si/en/flik-pay/

497 https://www.intesasanpaolobank.si/en/prebivalstvo/mobilna-placila/flik.html

Slovakia

Introduction

Slovakia has a total population of 5,47 million, of which 91% have access to the internet⁴⁹⁸. The proportion of suburban households with internet access rose by 4% from 2020 to 2021⁴⁹⁹. Moreover, 84% of the population holds a bank account⁵⁰⁰.

Although Slovakia still uses cash extensively, the use of cash in payment transactions has decreased significantly among consumers in Slovakia since the introduction of the euro in 2009. In fact, 64% of POS transactions were made in cash in 2021 (versus 95% in 2005)⁵⁰¹. In parallel, the total number of card transactions is increasing on a yearly basis. In 2021, around 650 million card payments were made overall⁵⁰². Note that credit card penetration is 31%, which is lower than the Eastern Europe average of 46%⁵⁰³.

The COVID-19 pandemic had a big impact on Slovaks' payment habits. Non-cash payments at point-of-sale (POS) terminals have grown in volume by a double-digit percentage over the past year. Mobile cashless payments are also being used more and more frequently. For the first time, in 2021, more mobile payments than ATM withdrawals were made (a rise of more than 100%)⁵⁰⁴.

Banks

The banking industry in Slovakia is one of the most innovative in all of Europe, and it has long offered its customers cutting-edge products to make life easier. Banks in Slovakia are aware of the current trend of digitisation and the trends that go along with it, and they want to enable their customers to pay easily and quickly. The rise in contactless payments made by card, phone or smartwatch supports this. Due to its simplicity of use and the expanding network of businesses that accept it, this method of payment is replacing cash as the preferred method⁵⁰⁵.

In Slovakia, banks actively participate in financial education. Numerous initiatives are funded by banks, the central bank or the banking association, such as the Economics Olympiad for high school students⁵⁰⁶.

There are 25 credit institutions operating in Slovakia⁵⁰⁷. The majority of Slovakian banks are under the control of foreign organisations, primarily banking groups from Austria, Italy and Belgium. The three major banks are Slovenska Sporitelna, Všeobecná Úverová Banka (VÚB) and Tatra Banka. Together, they dominate the Slovakian banking market as they hold 60% of the banking sector's assets.

With roughly 2,1 million customers, Slovenská Sporitea is now Slovakia's leading bank. In comparison to a year ago, Slovenská Sporitea's total assets increased by nearly 12%, reaching more than 2,4 billion €⁵⁰⁸. The bank issues Visa debit and credit cards that can be integrated in wallets such as Apple Pay and Google Pay. Slovenská Sporitea has launched its mobile app George, enabling new customers to create a SPACE account in 10 minutes without visiting a branch. It offers different accounts according to the customer's age: kids, students, young adults and over 62s.

The second largest bank in Slovakia is VÚB. The bank is devoted to serving small and medium-sized businesses⁵⁰⁹. VÚB issues Visa and Maestro debit cards as well as Mastercard credit cards. Similar to Slovenská Sporitea, it offers junior, student and senior accounts. Other services include VÚB Viamo, its mobile application that enables customers to send money to anyone simply with a phone number, ePayments enabling customers to shop online via online banking and Payme to share payments with friends.

Named best consumer digital bank in Slovakia for 2021⁵¹⁰, Tatra Banka is Slovakia's third largest bank and a subsidiary of the Raiffeisen Banking Group. It provides both corporate and individual customers with sophisticated banking services and money management options⁵¹¹. Similarly, the bank issues Mastercard and Visa cards, with specific offers for children and students. Interestingly, Tatra shows its users the carbon footprint of each purchase made with their card. Moreover, it rewards users who make responsible purchases from sustainable merchants by offering discounts of up to 15% when buying organic fashion, farm food and many other products. Other services include its mobile app Tatra Banka, Viamo, to send money fast and securely, and Tatra Banka POS to turn Android phones into terminals.

- 498 https://www.statista.com/statistics/378007/total-population-of-slovakia/
- 499 https://www.statista.com/statistics/1236224/internet-access-town-suburban-households-slovakia/
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- 501 https://www.statista.com/statistics/1095503/cash-use-in-slovakia/
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- https://www.statista.com/statistics/675371/ownership-of-credit-cards-globally-by-country/
- 504 https://www.europeanpaymentscouncil.eu/news-insights/insight/instant-payments-slovakia
- 505 https://www.europeanpaymentscouncil.eu/news-insights/insight/instant-payments-slovakia
- 506 https://www.ebf.eu/slovakia/
- 507 https://euclid.eba.europa.eu/register/
- https://cdn0.erstegroup.com/content/dam/sk/slsp/www_slsp_sk/en/annual-reports/annual-report-slovenska-sporitelna-2021.pdf
- 509 https://www.vub.sk/en/ludia/profil-banky.html
- 510 https://d2tyltutevw8th.cloudfront.net/media/document/press-release-digital-bank-awards-2021-consumer-1629396207.pdf
- 511 https://www.emis.com/php/company-profile/SK/Tatra_Banka_as_en_1546674.html

Elevator Lab powered by Tatra Banka, has been named one of the top financial innovation labs in the world for the second year in a row on account of its innovative approach. Tatra Banka is the leader in financial innovation, according to Global Finance⁵¹².

Bank	Group	Number of employees	Revenue (Million €)	Net Income (Million €)	LinkedIn
Slovenska sporiteľna	Erste Group Bank	3.644	630,76	228,05	<u>Link</u>
<u>Tatra Banka</u>	Raiffeisen Bank International	3.327	485,52	162,05	<u>Link</u>
Vseobecna Uverova Banka	Intesa Sanpaolo	3.417	471,31	113,34	<u>Link</u>
365.bank	J&T Finance Group	1.517	241,00	57,00	<u>Link</u>
Prima banka	Penta Investments Group	786	75,33	18,00	<u>Link</u>
Slovenska Zarucna a rozvojova banka	Slovakian Republic	202	23,90	4,17	<u>Link</u>
<u>Privatbanka</u>	Penta Investments Group	187	22,12	6,13	<u>Link</u>
CSOB Bank	KBC Group	114	5,60	1,23	<u>Link</u>

Source: Orbis | 2021 Financials

Electronic Money Institutions

There is only one electronic money institution licensed and authorised by the Bank of Slovakia: SKPay⁵¹³. With a strong reputation on the Slovak market, SKPay issues contactless prepaid cards. SKPay cards are available without the need for a bank account and allow users to make payments in-person and online, and to withdraw money in the same way as regular cards⁵¹⁴.

ЕМІ	Group	Number of employees	Revenue (Million €)	Net Income (Million €)	LinkedIn
SKPAY	Slovakian Republic	14	11,76	1,06	<u>Link</u>

Source: Orbis | 2021 Financials

Payment Service Providers

There are 10 payments institutions registered and authorised by the Bank of Slovakia⁵¹⁵, including TrustPay, 24-pay, Payout and Besteron.

Providing secure e-commerce payments, TrustPay is a leader in card payment acceptance. The company positions itself as one of the most innovative PSPs in the market by adding new payment methods such as WeChat Pay, CB acquirer, iDEAL, etc. The company's portfolio includes worldwide online card payment processing, accounts for online businesses, a portfolio of local payment methods, reconciliation tools, etc.⁵¹⁶. TrustPay was selected as a member of Fintech Power 50 in 2022, a prestigious list of fintech influencers, out of more than 1200 companies nominated and 18.000 votes cast⁵¹⁷.

RPC belongs to the Raiffeisen Bank of Austria. Through RPC, businesses in Slovakia can now accept payments using their smartphones by downloading the Tatra Banka POS app. Raiffeisen Bank International's shared service centre and card competence centre, RPC is one of the largest processing companies in the region, processing 1 billion transactions annually, distributing more than 6 million cards and having more than 90.000 POS terminals⁵¹⁸.

DanubePay is a processing centre with the ability to handle all kinds of payment and non-payment transactions. The PSP provides services for acquirers and issuers of payment tools⁵¹⁹. Its key competitive advantage is its flexibility together with its extensive knowledge in the field of card processing. DanubePay uses its own proprietary technology (StarCARD) for the authorisation and processing of transactions. DanubePay provides a broad range of services and goods for the authorisation and processing of transactions. Any client system may be connected to the system because it is modular. It is simple to create a communication interface that satisfies all technical and security criteria⁵²⁰.

 $^{{\}color{blue} {\tt b12}} \quad \underline{\tt https://www.tatrabanka.sk/en/about-bank/press-releases/tatra-banka-group-reached-highest-profit-ever/about-bank/press-releases/tatra-banka-group-reached-highest-profit-ever/about-bank/press-releases/tatra-banka-group-reached-highest-profit-ever/about-bank/press-releases/tatra-banka-group-reached-highest-profit-ever/about-bank/press-releases/tatra-banka-group-reached-highest-profit-ever/about-bank/press-releases/tatra-banka-group-reached-highest-profit-ever/about-bank/press-releases/tatra-banka-group-reached-highest-profit-ever/about-bank/press-releases/tatra-banka-group-reached-highest-profit-ever/about-bank/press-releases/tatra-banka-group-reached-highest-profit-ever/about-banka-group-banka-group-banka-group-banka-group-banka-group-banka-group-banka-group-banka-group-banka-group-banka-group-banka-group-banka-group-banka-group-banka-group-banka-group-banka-group-banka-group-banka-group-banka-group-banka$

^{513 &}lt;a href="https://euclid.eba.europa.eu/register/">https://euclid.eba.europa.eu/register/

⁵¹⁴ https://skpay.sk/o-nas

⁵¹⁵ https://euclid.eba.europa.eu/register/

⁵¹⁶ https://www.trustpay.eu/

⁵¹⁷ https://www.trustpay.eu/news/

⁵¹⁸ https://ri-rpc.sk/about-us/, https://ri-rpc.sk/wp-content/uploads/2022/04/RPC_EN_2021-Annual-Report.pdf

⁵¹⁹ https://danubepay.com/

⁵²⁰ https://www.linkedin.com/company/danubepay/about/



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PSP	Group	Number of employees	Revenue (Million €)	Net Income (Million €)	LinkedIn
Regional Card Processing Centre	Raiffeisen Bank International	200	27,30	1,50	<u>Link</u>
Trust Pay	Parent company	100	22,75	7,15	<u>Link</u>
DanubePay	J&T Finance Group SE	51	6,22	0,13	<u>Link</u>
24-Pay	Parent company	11	1,70	0,59	<u>Link</u>
Payout	Independent company	11	0,32	-0,43	<u>Link</u>
Pay Solutions (Besteron)	Parent company	5	0,09	-0,17	<u>Link</u>

Source: Orbis | 2021 Financials

Local & Alternative Payment Methods

Since 2013, the Slovakia-based company Viamo has provided peer-to-peer (P2P) payment services to the entire nation. The company offers commercial payment services supported by QR codes and payment links. As mentioned in the 'Banks' section, the local payment method is available through Tatra Banka and VUB Banka.

Note that through Viamo PayGate, the business has also provided payment gateway services. It has forged partnerships with two banking groups, namely Tatra Banka and VÚB. Slovak customers, however, can access banking services through the Viamo Plus mobile app⁵²¹.

Local Payment Method	Group	Number of employees	Revenue (Million €)	Net Income (Million €)	LinkedIn
VIAMO,	mTrust	n/a	0,35	-0,10	<u>Link</u>

⁵²¹ https://www.electronicpaymentsinternational.com/news/blik-mobile-payment-viamo/

Hungary

Introduction

There are 9,7 million people in Hungary, of which 8 million have internet access. The local currency is the Forint (HUF).

The global pandemic accelerated changes in payment habits and, as in many other nations. The Hungarian government moved quickly to boost non-cash payments and reduce physical contact at the point of sale, by rising the maximum amount that can be paid without a PIN code rose from HUF 5.000 to HUF 1.000 in 2020.

The number of POS terminals at merchant acceptance points increased along with consumer use of contactless, with a 7% increase in the final quarter of 2020. This in part reflects the way that businesses have responded to the changes in consumer payment habits. It also demonstrates the impact of subsequent legislative changes which, as from January 2021, required businesses using online cash registers to provide their customers with any type of cashless payment option. By the end of 2020, many retailers were getting ready for the rise of digital payments due to the requirement to provide a POS terminal and other related technologies such as wired bank transfers and QR codes⁵²².

Hungary has seen a steady increase in the use of contactless payments over the past few years, as evidenced by the share of contactless payment cards issued there increasing year over year. In 2021, more than 90% of credit and debit cards were able to make contactless payments, compared to only 6% in 2012. In addition, a survey conducted in 2022 revealed that more than half of Hungary's adult population used smart devices to make contactless payments, with nearly 20% of them doing so repeatedly each day⁵²³.

The most common payment methods are card-based (36%) and wallet-based (30%), while cash only accounts for 6% of all payments⁵²⁴. In Hungary, only 13% of households have credit cards, compared to 46% in Eastern Europe; debit cards are more commonly used than credit cards. In terms of payment scheme, Mastercard dominates the credit card schemes with an 80% market share, while Visa only has 20%⁵²⁵.

The majority of Hungarians prefer to communicate with their banks online; 84% of respondents use internet banking and 78% use mobile banking at least twice or three times per month. They view banking services as a tool for handling their finances. Hungarians manage and budget their spending based on the simple idea of avoiding impulsive spending⁵²⁶.

Banks

OTP Bank and the Hungarian Bankholding are the most important banks in the country.

In terms of total assets, OTP Bank Nyrt is the largest bank in Hungary. Currently, OTP Bank serves both private individuals and corporate clients by offering a full range of retail, private and corporate banking products and services. OTP Bank offers the possibility to apply for online-only, globally accepted Mastercard and Visa international cards or for offline versions of these cards. OTP customers' online activity significantly increased during the pandemic, aided by online campaigns, in-branch customer education and ongoing development of its digital services.

In 2021, OTP Bank was named best consumer digital bank in Hungary by Global Finance⁵²⁷. New end-to-end procedures were introduced in 2021 in new internet and mobile banking applications, including online personal loan requests, credit card instalment payments, purchases of government securities, prepaid mobile phone top-ups and QR payments for postal cheques (including cheques that were not fully filled out). The digitisation of Apple Pay cards, the open banking feature for viewing balances of foreign bank accounts, the donation option for money transfers, the profile picture setting and maintenance of notification options are just a few of the cutting-edge features that cater for customer needs⁵²⁸.

A merger of 3 Hungarian banks (namely, Budapest Bank, MKB Bank and TakarékBank) will be completed in 2023 and, as a result, the Hungarian Bankholding will be the second largest bank in Hungary. The aim of this merger is to create the most modern bank in Hungary and embrace the digital transformation of payments by introducing fast and flexible banking solutions, and to create Hungary's second largest banking group after OTP Bank. The state will hold a 30% stake in it. The first step of the merger timetable was achieved in the second quarter of 2022: Budapest Bank and MKB merged under the name MKB Bank. Takarek Group will join the merged bank by the end of the second quarter of 2023⁵²⁹.

Following OTP Bank and the Hungarian Bankholding, there are many foreign banks in Hungary, such as K&H Bank⁵³⁰ (KBC), UniCredit Bank⁵³¹ (UniCredit Group), CIB Bank (Intesa Sanpaolo Group), Raiffeisen Bank (Raiffeisen Group) and Erste Bank (Erste Group). These banks belong to Belgian, Italian or Austrian banking groups. The Hungarian payment ecosystem is dominated by traditional banks, both on the issuing and the acquiring side.

- 522 https://ingenico.com/en/newsroom/blogs/contactless-2021-hungarys-journey-cashless-payments
- 523 https://www.statista.com/topics/10312/digital-payments-in-hungary/#dossierKevfigures
- 524 https://www.ppro.com/countries/hungary/
- 525 https://www.ppro.com/countries/hungary/
- 526 https://bbj.hu/business/tech/innovation/more-than-half-of-hungarians-prefer-digital-payment-methods
- 527 https://d2tyltutevw8th.cloudfront.net/media/document/press-release-digital-bank-awards-2021-consumer-1629396207.pdf
- 528 https://www.otpgroup.info/static/sw/file/221109 OTP 20223Q e final.pdf
- 529 https://www.mkb.hu/az-mkb-bankrol/kozlemenyek/sajtokozlemenyek/2021-12-15-eng
- 530 Second largest bank in Hungary in terms of total assets in 2021 (5.248 billion HUF). Note that K&H Bank has replaced Visa and Maestro cards with Mastercards from 2021.
- Third largest bank in Hungary in terms of total assets in 2021 (4.581 billion HUF)



Payment solutions for Corporates and Fintech

- funds disbursment
- corporate purchases
- employee benefits
- travel purchasing solutions
- payment services for banks and PIs
- gift cards
- cashless events
- open banking
- loyalty solutions



DiPocket is leading European BaaS (Banking as a Service) provider. Licenced as an e-money institution in Lithuania and the UK, DiPocket operates a tier one ecosystem providing the highest level of resilience and security. Our offer complements that of traditional banks with a broad range of customized products.

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Bank	Group	Number of employees	Revenue (Million €)	Net Income (Million €)	LinkedIn
OTP Bank	Parent company	37.866	3.857,68	1.237,27	<u>Link</u>
Raiffeisen Bank	Raiffeisen Bank International	2.889	356,53	99,58	<u>Link</u>
K&H Bank	KBC Group	3.251	556,52	204,41	<u>Link</u>
Erste Bank Hungary ZRT	Erste Group	3.238	507,09	160,58	Link
MKB Bank Zrt	Hungarian Bankolding	2.092	395,55	162,60	<u>Link</u>
UniCredit Bank Hungary	UniCredit	1.770	372,19	125,61	Link
Budapest Bank	Hungarian Bankolding	2.908	298,87	n/a	Link
<u>CIB Bank</u>	Intesa Sanpaolo	2.177	219,78	42,94	Link
Takarekbank	Hungarian Bankolding	4.231	n/a	n/a	Link
Hungarian Bankholding Ltd.	Parent company	n/a	n/a	n/a	<u>Link</u>

Electronic Money Institutions

Currently, there are three e-money institutions in Hungary which are licensed and authorised by the Central Bank of Hungary (MNB) and can conduct their activities in any of the 31 EEA member states due to EEA passport rules. These companies include Barion Payment, BinX Business Integrated NetworX and Viva Payment⁵³². Barion Payment acts as a PSP, providing data-driven payment solutions for e-shops,⁵³³ and serves as an electronic wallet.

Viva Payment Service, the Hungarian subsidiary of the first European cloud-based neobank Viva Wallet, was granted an EMI licence in August 2020. Viva Wallet is a Principal Member of Visa and Mastercard for acquiring and issuing services, and provides card acceptance services to businesses of all sizes. It also provides business IBAN accounts and cards.

Lastly, Binx is a recent EMI that received authorisation in June 2022.

ЕМІ	Group	Number of employees	Revenue (Million €)	Net Income (Million €)	LinkedIn
Viva Payment Services Hungary	Viva Wallet	n/a	n/a	n/a	<u>Link</u>

Source: Orbis | 2021 Financials

Payment Service Providers

The largest PSP in Hungary is SimplePay, which is developed by OTP Mobil. Founded in 2013 by OTP Bank, OTP Mobil promotes cashless payment and device-based shopping solutions. OTP Mobil offers three services: the Simple by OTP application (further developed in the LPM sub-section), the SimplePay online payment solution and the SimpleBusiness application for the SME sector. In particular, SimplePay offers webshop operators and service providers instant payment solutions and online bank card acceptance. Since 2015, it has provided online credit card payments for more than 17.000 online stores.

B-payment Group is another important PSP. It helps companies accept cards with online payment solutions as well as POS terminals. Its online payment solutions include installing payment pages for merchants' webshops. It serves merchants that accept Mastercard, Maestro, Visa, Visa Electron, Union Pay, JCB, Diners Club, Discover and American Express cards or local cards.

Barion Payment, which holds an EMI licence, is a payment gateway that offers a range of payment options to businesses while specialising in data-driven payment solutions for online shops. With the aid of cutting-edge paytech solutions, its objective is to establish a cashless society⁵³⁴. The company currently serves over 13.000 merchants.

It is also important to highlight that the Hungarian postal service, Magyar Posta, holds a payment institution licence as well.

⁵³² https://euclid.eba.europa.eu/register/pir/search

⁵³³ https://www.barion.com/en/about-us/

⁵³⁴ https://www.barion.com/en/about-us/

PSP	Group	Number of employees	Revenue (Million €)	Net Income (Million €)	LinkedIn
Magyar Posta	Government of Hungary	27.536	676,19	40,13	<u>Link</u>
OTP Mobil Szolgaltato	OTP Bank	96	42,21	2,48	<u>Link</u>
O.F.SZ. Országos Fizetési Szolgáltató	Independent company	79	7,48	0,85	<u>Link</u>
B-Payment Group	SaltPay Europe	41	2,99	-0,84	<u>Link</u>
Barion Payment	Independent company	33	2,36	-0,53	<u>Link</u>
Billingo Technologies CPLC	Independent company	25	1,23	-0,44	Link
PSC CEE	Independent company	11	0,34	-0,35	Link
ONEY Payment Services	ONEY	n/a	0,34	0,00	<u>Link</u>

Local & Alternative Payment Methods

Simple - the mobile wallet developed by OTP Mobil - remains the market-wide solution for any locally issued card. The app's users can pay online and in physical stores accepting Masterpass and Simple, and pay for on-street parking, road tolls and bills, and transfer money.

Foreign wallets such as Apple Pay and Google Pay (launched in 2019 and 2020 respectively) are also used in Hungary as alternative payment methods. More options such as Xiaomi Pay or Samsung Pay are expected to enter the local market as well⁵³⁵.

Local Payment Method	Group	Number of employees	Revenue (Million €)	Net Income (Million €)	LinkedIn
OTP Mobil	OTP Bank	96	42,21	2,48	<u>Link</u>

⁵³⁵ https://www.mastercard.hu/content/dam/public/mastercardcom/eu/hu/pdfs/MC_DPI_Presentation_Hungary_2021.pdf

Poland

Introduction

With 38 million inhabitants, Poland has the largest economy in Eastern Europe and the sixth largest in Europe. It is also the largest IT hub in Central and Eastern Europe and one of the most important IT centres in Europe.

The Polish payments landscape is characterised by both traditional practices such as cash, which remains one of the main means of payment, and by innovation and digital payments⁵³⁶. As a matter of fact, Poland continues to be the third-most cash-dependent nation in Europe, despite a decline in this payment method in favour of digital payment methods. The proportion of cash payments to non-cash payments is steadily declining, as a result of the pandemic and the expansion of e-commerce⁵³⁷. In 2021, card payments accounted for 64% of all payments made by Poles, while 22% of payments were made in cash. Over 21 million Poles made digital payments in 2021⁵³⁸.

Payment cards and quick transfers are the most common non-cash transaction methods. Payment cards are the most popular form of payment in physical stores, but they are also frequently used for online purchases. When shopping online, Poles are more likely to use quick transfers through payment services such as Przelewy24 or PayU through BLIK, a real time account-to-account payment system⁵³⁹.

Mobile banking apps are actively used by an increasing number of Poles. Over 16,5 million active users were present in the fourth quarter of 2021, an increase of almost 17% in just one year. In this regard, Blik is one of the fastest growing mobile payment services in Poland. Launched in 2015, Blik enables its users to transfer money to a phone number, withdraw cash from an ATM without using a card and make quick payments using payment terminals. As of the end of 2021, Blik had more than 10 million active users⁵⁴⁰.

Instant payments are also becoming more popular in Poland, which is also a result of the significant growth in their usage in mobile channels. Poland's domestic instant payments system, operated by Krajowa Izba Rozliczeniowa (KIR), is doubling its transactions each year and reached 19,5 million transactions in June 2022⁵⁴¹.

Furthermore, contactless transactions accounted for over 96% of all cashless transactions during the second quarter of 2021⁵⁴². Poles typically use payment cards, wearable technology and their phones for contactless payments. Mobile NFC transactions (via ApplePay and Google Pay) reached 300 million in Q3 2022.

When it comes to accepting non-cash payments, Poland is one of the most technologically advanced nations in Europe. The nation is a highly competitive market for acquiring. Companies in the acquiring market have low margins and comparable offerings. The most important value-added products are DCC, cashback, top ups, bill payments and PUDO package collections.

Concerning card payment schemes, Mastercard and Visa lead the way with an even split between both schemes⁵⁴³. American Express and Diners Club constitute less than 0,5% of transaction value⁵⁴⁴.

Banks

The banking sector in Poland plays a significant role in the country's financial system. With a modest percentage of domestic commercial banks, foreign-controlled banks dominate the Polish banking sector. Nevertheless, the state of Poland has acquired and taken control of an increasing number of banks over the last few years, including PKO Bank Polski, Pekao, Alior, Bank Pocztowy, Bos and Velo Bank (transfer of assets from Getin in liquidation). Poland's share of commercial banks has hence increased over the last decade.

In 2021, the five major banks in Poland in terms of total assets were PKO Bank Polski (418 billion PLN), Santander Bank Polska (244 billion PLN), Pekao Bank Hipoteczny (241 billion PLN) ING Bank Śląski (201 billion PLN) and mBank (199 billion PLN).

PKO Bank Polski (PKO BP) was established in 1919 and is currently the largest bank in Poland. PKO BP is at the forefront of innovation and technology. It won first place in the Finnoscore ranking and is listed in the Top 10 of the most technologically advanced banks in Europe. In 2020, the bank launched a mobile solution called IKO, which is the most popular app in Poland. The IKO mobile app reached over 1,15 billion logins when it was launched 545. PKO BP issues both Mastercard and Visa cards.

The second largest local bank in Poland is Bank Pekao, which used to be part of UniCredit Group but was acquired by Powszechny Zakład Ubezpieczeń (PZU) - the largest Polish state-owned insurer -, and the Polish Development Fund in 2017. Bank Pekao is working hard to develop quick and convenient digital channels. The PeoPay application, the Bank's primary mobile banking tool, provides a number of innovative solutions. It ensures that customers have full access to services, a wider selection of orders, automated recurring payments and instant transaction authorisation. It had nearly 2,4 million active mobile banking customers by 2021. Bank Pekao was the first financial institution in Poland to offer customers the option of opening a selfie account with an e-ID card⁵⁴⁶.

- https://www.europeanpaymentscouncil.eu/news-insights/insight/polish-payment-landscape-modern-payments-approach
- 537 https://www.statista.com/topics/9396/digital-payments-in-poland/
- https://www.statista.com/topics/9396/digital-payments-in-poland/
- https://www.statista.com/topics/9396/digital-payments-in-poland/
- 540 https://www.statista.com/topics/9396/digital-payments-in-poland/
- 541 https://www.europeanpaymentscouncil.eu/news-insights/insight/polish-payment-landscape-modern-payments-approach
- 542 https://www.statista.com/topics/7416/banking-in-poland/#dossierKeyfigures
- 543 https://www.ppro.com/countries/poland/
- 544 Fintech Poland, How to do Fintech in Poland? Report 2020
- https://en.media.pkobp.pl/127989-pko-bank-polski-as-the-digital-transformation-leader
- 546 https://www.pekao.com.pl/dam/jcr:8c2085b6-aaca-477b-b57f-bda20a9d3914/Report_on_the_activities_of_the_Group_%20RR_2021.pdf

Santander Bank Polska and ING Bank Slaski are examples of two banks in Poland owned by foreign-controlled banking groups. Santander Bank Polska developed a mobile app which allows users to perform contactless payments through BLIK or with a phone or watch by adding the card to a digital wallet such as Google Pay, Apple Pay, Garmin Pay or Fitbit Pay⁵⁴⁷. ING Bank Slaski offers different payment methods such as contactless Visa payments through the Moje ING app, BLIK, Apple Pay, Google Pay or Garmin Pay⁵⁴⁸.

mBank is the first fully online bank in Poland. In 2021 they served 5,5 million retail customers and 31.300 corporate clients. They operate in Poland, Czech Republic and Slovakia. Since 2020, the bank has been developing Paynow, an online payment system for e-commerce, making mBank the only provider in Poland to offer a solution which integrates a payment management panel with a banking transaction service⁵⁴⁹.

Bank Millennium is also worth mentioning, as it was named best consumer digital bank 2021 in Poland by Global Finance⁵⁵⁰. In 2021, the number of active digital customers exceeded 2,3 million and the number of mobile customers reached 1,9 million.

Finally, VeloBank was established in October 2022 as a result of the forced restructuring of Getin Noble Bank. The bank historically had two commercial brands: Getin Bank and Noble Bank. In November 2022, the bank unveiled a strategy to build a universal bank and a new visual identity. The Getin Bank and Noble Bank commercial brands were eliminated and replaced by the VeloBank brand.

Note that in the last decade, Polish banks have made a huge effort to increase the importance of digital channel usage by focusing on customer centricity. Deloitte's worldwide 2021 benchmarking analysis placed Polish banks in the top ten percent best-in-class for digital banking. The whole banking sector in Poland is also focused on a cashless and paperless approach. This is noticeable in its daily banking activities. There are 21 million digital banking active users and 16 million mobile app users⁵⁵¹.

Bank	Group	Number of employees	Revenue (Million €)	Net Income (Million €)	LinkedIn
PKO Bank	Government of Poland	25.657	3.337,93	1.059,73	<u>Link</u>
Santander Bank Polska	Banco Santander	11.323	2.018,91	272,36	<u>Link</u>
Bank Pekao	PZU, Government of Poland	14.702	1.877,38	473,33	<u>Link</u>
Mbank	Commerzbank	9.464	1.379,12	-256,36	<u>Link</u>
ING Bank Slaski	ING Groep	8.694	1.502,01	501,98	<u>Link</u>
BGZ BNP Paribas	BNP Paribas	8.667	1.099,33	38,34	<u>Link</u>
Bank Millennium	Banco Comercial Portugues	7.000	829,72	-289,64	<u>Link</u>
Alior Bank Spolka Akcyjna	Government of Poland	7.441	827,57	104,80	Link
Bank Handlowy W Warszawie	Citigroup	2.903	531,44	156,03	<u>Link</u>
Getin Noble Bank (restructured into VeloBank)	Parent company	3.227	248,02	-232,43	<u>Link</u>
Bank Ochrony Srodowiska - BOS	Government of Poland	n/a	142,14	10,32	Link
Bank Polskiej Spoldzielczosci	Cooperative bank	1.545	114,91	9,11	<u>Link</u>

Source: Orbis | 2021 Financials

Electronic Money Institutions

Billon Solutions is the only e-money institution licensed and authorised in Poland by the Polish Financial Supervision Authority (KNF)⁵⁵². Billon Solutions focuses on blockchain technology solutions and does not have any significant e-money business in Poland itself.

ЕМІ	Group	Number of employees	Revenue (Million €)	Net Income (Million €)	LinkedIn
Billon Solutions	Billon Group Limited	5	0,10	-0,25	<u>Link</u>

Source: Orbis | 2021 Financials

Payment Service Providers

Poland is a highly competitive market for acquiring in both e-commerce and POS. Companies in the acquiring market have low margins and comparable offerings. The most important value-added products are DCC, cashback, top ups, bill payments and PUDO package collections.

- 547 https://www.santander.pl/klient-indywidualny/bankowosc-internetowa/santander-mobile
- 548 https://www.ing.pl/indywidualni/karty/platnosci-telefonem
- 549 https://www.mbank.pl/pdf/CSR/mbank_raportzintegrowany_2021_eng.pdf
- 550 https://d2tyltutevw8th.cloudfront.net/media/document/press-release-digital-bank-awards-2021-consumer-1629396207.pdf
- 551 https://www.europeanpaymentscouncil.eu/news-insights/insight/polish-payment-landscape-modern-payments-approach
- 552 EUCLID

There are currently 41 (active) payment institutions registered and authorised by the Polish Financial Supervision Authority (KNF)⁵⁵³. The most important ones in terms of revenue and market share are presented in the table below.

Polskie ePatnoci (Polish ePayments - PeP) is a leading merchant acquirer that provides a comprehensive range of in-store and online payment solutions and value-added services. It offers a wide range of payment solutions for SME businesses through an installed base of more than 230.000 POS terminals. PeP has recently acquired a majority stake in Team4U, the owner of Simapka, an app that provides solutions to enhance distribution and sales processes for retail outlets. With the aim of dominating the cashless payment market in Poland, PeP has undertaken a number of acquisitions over the previous five years, including NeoTu, PayUp, TopCard, Billbird and PayLane⁵⁵⁴.

Fiserv Polska is the owner of the Polcard brand, which first brought non-cash payments to Poland in early 1990. It also offers POS terminals and PolCard Go, a softpos product which allows merchants to transform electronic devices into mobile terminals. It processes Visa, Mastercard, American Express, Diners Club, Discover, JBC, UnionPay and BLIK payments.

eService is one of the largest acquirers in Europe, offering services such as BLIK terminals, cashless payments with mobile devices and PIN Pads for cash registers. It offers safe payments through SafeLink for Visa, Mastercard, BLIK, Google Pay and PayPal.

ITCARD processed more than 670 million transactions worth PLN 225 billion in 2021. Its Planet Cash ATM network and Planet Pay POS terminal network are part of the ITCARD Group.

BlueMedia offers automation of bill payments and online payments. It also offers merchants tools to perform omnichannel online payments and processes card payments such as Visa, Mastercard, Maestro and BLIK.

PayU allows merchants to accept online payments through alternative payment methods but also domestic payment methods. It helps e-commerce merchants perform cross-border payments. Its payments solutions include payment links and mobile POS payments.

Kar-tel offers innovative solutions for secure and reliable payment transactions, though it mainly focuses on prepaid GSM topups and bill payment functionality. It helps merchants with card payments acceptance solutions such as mobile POS.

Przelewy24 is an online payment operator in Poland, offering innovative solutions for the e-commerce market. The service allows transactions to be conducted on all devices using various payment methods - fast transfers, BLIK, payment cards, mobile payments (Apple Pay, Google Pay), electronic wallets and instalments. The Przelewy24 service belongs to PayPro SA, which joined forces with Dotpay and eCard in 2020.

PSP	Group	Number of employees	Revenue (Million €)	Net Income (Million €)	LinkedIn
Polskie ePlatnosci	Nets	383	209,00	3,00	<u>Link</u>
Blue Media	Parent company	n/a	207,32	4,04	<u>Link</u>
<u>e-service</u>	EVO Holdings	506	117,23	28,80	<u>Link</u>
PayU	Naspers Limited	265	104,47	2,71	<u>Link</u>
<u>Fiserv Polska</u>	Fiserv Inc	537	82,21	8,88	<u>Link</u>
IT Card	Parent company	n/a	78,65	5,87	<u>Link</u>
<u>Kar-tel</u>	Parent company	97	49,05	1,72	<u>Link</u>
Krajowa Izba Rozliczeniowa (KIR)	Independent company	373	43,41	7,79	<u>Link</u>
Przelewy24	Nexi	149	39,40	16,25	<u>Link</u>
PKO BP FINAT	PKO Bank	n/a	28,66	7,19	n/a
Paytel	SIBS - SGPS	177	26,59	-0,36	<u>Link</u>
Mobiltek S.A.	Independent company	14	13,87	0,01	<u>Link</u>
Krajowy Integrator Platnosci (TPay)	Independent company	55	11,53	1,80	<u>Link</u>
<u>Fenige</u>	Independent company	18	7,52	-0,25	<u>Link</u>
Cashbill	Independent company	9	5,91	0,12	<u>Link</u>
mPay	Grupa Lew	16	3,74	0,03	<u>Link</u>
<u>mElements</u>	mBank	15	2,21	0,05	<u>Link</u>
SkyCash	Parent company	32	1,61	-0,86	<u>Link</u>
Global Payments Provider (Tap2Pay)	Independent company	n/a	n/a	n/a	<u>Link</u>

⁵⁵³ EUCLID

⁵⁵⁴ https://www.nets.eu/Media-and-press/news/Pages/PeP-acquires-Simapka-owner-Team4U.aspx

Banking-as-a-Service

Vodeno offers a Banking-as-a-Service (BaaS) cloud-native platform entirely based on Google Cloud. The company has been recognised with the Polish Innovation Award 2022. In late 2022, UK-based NatWest entered a strategic partnership with Vodeno to create a BaaS business in the UK, offering BaaS to NatWest's business customers⁵⁵⁵.

Banking-as-a-Service	Group	Number of employees	Revenue (Million €)	Net Income (Million €)	LinkedIn
<u>Vodeno</u>	Warburg Pincus	89	7,81	-25,91	<u>Link</u>

Source: Orbis | 2021 Financials

Open Banking Enablers

Kontomatik started as a personal finance management platform. In 2021, the company decided to focus solely on B2B services based on open banking and financial data analysis. Kontomatik was the first company to become an authorised AISP in the CEE region. Its primary service is customer bank account access (AIS), which allows a company to receive data from a customer's bank account with their consent.

Open Banking Enabler	Group	Number of employees	Revenue (Million €)	Net Income (Million €)	LinkedIn
Kontomatik	Runa Capital Fund	n/a	1,68	-0,23	<u>Link</u>

Source: Orbis | 2021 Financials

Local & Alternative Payment Methods

With 95% of the market, Blik is the most widely used mobile payment method in Poland. Its shareholders include six major Polish banks - Alior Bank, Bank Millennium, ING Bank Śląski, mBank, PKO BP and Santander Bank Polska - as well as the global payment scheme Mastercard. Launched in 2015, Blik is developed by the company Polski Standard Platnosti. Blik allows users to make online and in-store purchases and to transfer money in real time between bank accounts and ATMs without the need of a payment card. Transactions are identified by a 6-digit one-time code, valid for 2 minutes, which the user generates and authenticates in their mobile app. The company's latest improvement, Blik Contactless, allows users to pay at POS utilising NFC based on Mastercard virtual cards.

As mentioned in the introduction, instant payments are on the rise in Poland. Poland's domestic instant payments system, operated by Krajowa Izba Rozliczeniowa (KIR), is doubling its transactions each year and reached 19,5 million transactions in June 2022⁵⁵⁶.

Local payment Method	Group	Number of employees	Revenue (Million €)	Net Income (Million €)	LinkedIn
Polski Standard Platnosci (Blik)	Independent company	50	24,53	6,89	<u>Link</u>
Krajowa Izba Rozliczeniowa (KIR)	Independent company	373	43,41	7,79	<u>Link</u>

Source: Orbis | 2021 Financials

SkyCash and mPay offer mobility payment services. SkyCash specialises in mobile payments for parking and transport tickets, as well as various supplementary services. The application supports transfers to a phone number (P2P) and other payment methods such as parking fees, cinema tickets, ATM cash withdrawals and public transport tickets. With a market share of over 80% for smartphone parking payments and over 50% for purchasing city tickets, the company is currently the leader in its sector. 557 SkyCash's main competitor is mPay.

Local payment Method	Group	Number of employees	Revenue (Million €)	Net Income (Million €)	LinkedIn
SkyCash	Parent company	32	1,61	-0,86	<u>Link</u>
mPay	Grupa Lew	16	3,74	0,03	<u>Link</u>

Source: Orbis | 2021 Financials

Concerning BNPL, there are a few players in the country, including PayPo and Twisto. PayPo is the local BNPL. Launched in 2013 in the Czech Republic, Twisto has been operating in Poland since 2018. Mokka, Klarna and PayPro are also present in Poland.

BNPL	Group	Number of employees	Revenue (Million €)	Net Income (Million €)	LinkedIn
<u>PayPo</u>	NRW	62	11,85	1,87	<u>Link</u>
Twisto Polska	Twisto Payments	17	0,83	-4,37	<u>Link</u>

⁵⁵⁵ https://www.natwestgroup.com/news/2022/10/natwest-and-vodeno-create-strategic-partnership.html

⁵⁵⁶ https://www.europeanpaymentscouncil.eu/news-insights/insight/polish-payment-landscape-modern-payments-approach

⁵⁵⁷ https://www.skycash.com/o-nas/

Austria

Introduction

Austria is a prosperous, democratic country located in Central Europe with a well-developed market economy, skilled labour force, and high standard of living.

Austria, which was until recently largely dependent on cash, has seen a remarkable change in the acceptance of digital payments, including the use of contactless. The country's adoption rate was 40% as of June 2019. Today, contactless accounts for more than three-quarters of all cashless transactions⁵⁵⁸.

The innovative use of unattended payment terminals has been one of the major outcomes of this shift. With over 10.000 vending machines in Austria accepting debit, credit and mobile phone payments, contactless payment acceptance is on the rise on account of opportunities in the workplace, community buildings, shops and restaurants. Indeed, there is a rising demand for "intelligent" vending machines that improve user experience⁵⁵⁹.

With 1,14 debit cards per capita compared to 0,41 credit cards per capita in 2020⁵⁶⁰, debit cards are more widely used than credit cards. However, attitudes toward using credit appear to be shifting. The use of debit methods suggests aversion to incurring debt.

Digital wallets are the fastest-growing payment method. Bank account penetration in Austria is high, at 98,2%, and bank transfers account for 14% of online transactions. Electronic Payment Standard is a popular domestic online bank transfer payment service, accepted by 80% of Austrian merchants⁵⁶¹.

Consumer transactions drive the digital payments market segment, which includes online purchases of goods and services, mobile point-of-sale (POS) payments made through smartphone apps and online cross-border money transfers. In the digital payments segment, the total transaction value is anticipated to reach 31,30 billion € in 2023⁵⁶². By 2027, it is anticipated that the total transaction value will increase by 14,69% per year, totalling 54,12 billion €. Digital commerce is expected to have a total transaction value of 20,50 billion € in 2023, making it the market's largest segment⁵⁶³.

The Austrian payment culture is dominated by local payment methods. According to data from 2019, credit cards were only used to make 32% of all online purchases, consumers used bank transfers in 14% of all online transactions and 20% of all purchases were made using e-wallets. Although the majority of Austrians prefer cashless methods for making online purchases, 6% of consumers still pay with cash, which is more typical in developing markets. Austrian consumers use open invoice in 26% of digital payments and employ a variety of other payment methods in 3% of digital payments. However, the use of open invoice and cash is expected to decline by 5% by 2023 in favour of digital wallets⁵⁶⁴.

Banks

The economy of Austria is heavily dependent on Austrian banks. As a result, Austria has a very advanced banking industry. There are currently 520 credit institutions registered and authorised in Austria⁵⁶⁵.

Most banks in the nation promote self-service to their customers. Online banking and banking apps are therefore widely used across the nation even though, according to the latest ECB study on consumer payment attitudes in the euro area, Austrians prefer using cash to cards⁵⁶⁶.

The Austrian banking system is a universal banking system with many opportunities for synergies and risk mitigation. The banking system is stable, due to its lower exposure to the higher-risk Central and Eastern European countries.

One of the most noteworthy aspects of Austria's banking system is its structures. Banks in Austria are organised into different industry associations depending on the sector. The sectoral structure is generally respected, although there may be some differences in the business models of the different banks. There is the one-tier structure, which includes joint-stock banks, housing banks and specialised credit institutions, as well as mortgage banks. The two-tier structure includes savings banks and the Volksbanken (cooperative banks). Then there is the three-tier structure, which includes the Raiffeisen banks⁵⁶⁷.

As of the third quarter of 2021, most banking sector assets in Austria consisted of loans and advances to individuals and businesses. Cash balances accounted for the second largest share of banking sector assets in Austrian banks (19,6%)⁵⁶⁸.

According to Statista, the largest Austrian banks in terms of total assets in 2021 are Erste Group Bank (307 billion €), Raiffeisen Bank International (192 billion €), UniCredit Bank Austria (118 billion €), BAWAG Group (56 billion €) and Raiffeisenlandesbank Oberösterreich (47 billion €)⁵⁶⁹. Other important banks include Raiffeisenlandesbank Niederösterreich-Wien, Oberbank, Steiermärkische Bank und Sparkassen, Raiffeisenlandesbanken Steiermark and Hypo Noe Landesbank.

- 558 https://www.nets.eu/Media-and-press/news/Pages/DACH-region-reaches-tipping-point-for-contactless-payments.aspx
- 559 https://ingenico.com/en/newsroom/blogs/innovative-use-cases-unattended-payment-austria#footnoteref2_bli63jg
- 560 https://www.ipmorgan.com/merchant-services/insights/reports/austria-2020
- https://www.paymentwall.com/it/payment-methods/austria
- 562 Statista, October 2022
- 563 https://www.statista.com/outlook/dmo/fintech/digital-payments/austria?currency=EUR
- 564 https://www.jpmorgan.com/merchant-services/insights/reports/austria-2020
- 565 https://www.advantageaustria.org/fr/zentral/branchen/banken-und-versicherungen/zahlen-und-fakten/zahlen-und-fakten.fr.html
- 566 https://www.ecb.europa.eu/stats/ecb_surveys/space/html/ecb.spacereport202212~783ffdf46e.en.html
- 567 https://www.bmf.gv.at/en/topics/financial-sector/structure-of-the-austrian-financial-sector.html
- https://www.statista.com/statistics/1071361/asset-composition-of-the-austrian-banking-sector/
- 569 https://www.statista.com/statistics/693476/leading-banks-assets-austria/

Established in 1819, Erste Group Bank is the largest bank in Austria, as well as one of the largest financial service providers in Central and Eastern Europe, having more than 16 million customers across 7 countries. The bank holds approximately 307,43 billion € in total assets, which is over 100 billion € more than the second largest bank, Raiffeisen. However, despite being Austria's largest bank, Erste Group Bank has assets valued at less than one tenth the size of the largest European bank. In Austria, the bank has 3,9 million customers and owns 23% of the market share of retail deposits. It issues both Mastercard and Visa cards. Erste Bank also offers access to George, its modern internet banking platform, which can be used at no charge by all customers with a current account at Erste Bank or Sparkasse.

Raiffeisen Bank International, however, comes in first place in terms of corporate and investment banking. Note that Raiffeisen Bank International acquired Raiffeisen Zentralbank in 2017⁵⁷⁰. Interestingly, Raiffeisen has developed its own mobile app called My ELBA. Its services include money transfers (transaction approval via pushTAN using signature code or Touch ID/ Face ID), finance overview (account balance and turnover allocation per category) and debit card management, among others. Raiffeisen also issues Mastercard and Visa cards.

With 118 billion € in total assets, the Italian UniCredit Bank is the third largest bank in Austria. The universal bank offers services similar to Erste Group and Raiffeisen.

Bank	Group	Number of employees	Revenue (Million €)	Net Income (Million €)	LinkedIn
Erste Group Bank	Parent company	45.000	n/a	n/a	<u>Link</u>
Raiffeisen Bank International	Parent company	46.185	5.931,00	1.508,00	<u>Link</u>
UniCredit Bank Austria	UniCredit	4.994	1.925,00	105,00	<u>Link</u>
Bawag Group	Parent company	3.716	1.424,50	480,00	<u>Link</u>
<u>OberBank</u>	Parent company	2.158	687,55	234,65	<u>Link</u>
Raiffeisenlandesbank Oberoesterreich	Raiffeisenbankengruppe OÖ Verbund eGen	1.685	514,28	n/a	<u>Link</u>
Raiffeisenlandesbank Niederoesterreich-Wien	Raiffeisen-Holding Niederösterreich-Wien	1.012	370,30	n/a	<u>Link</u>
Steiermaerkische Bank und Sparkassen	Steiermärkische Verwaltungssparkasse	1.257	240,66	n/a	<u>Link</u>
Raiffeisenlandesbank Steiermark	Raiffeisenlandesbank Steiermark Holding eGen	772	n/a	n/a	<u>Link</u>
HYPO NOE Landesbank fuer Niederoesterreich und Wien	Land Niederosterreich	718	n/a	n/a	Link

Source: Orbis | 2021 Financials

Electronic Money Institutions

Austria has one licensed e-money institution⁵⁷¹. Bitpanda Payments has been authorised as an EMI to conduct payment activities in Austria by the Austrian Financial Market Authority (FMA). Bitpanda Payments is a Payment Service Provider (PSP) since receiving a licence in June 2019. As a licenced EMI (since March 2022), Bitpanda Payments can now issue e-money, expanding on what other traditional PSPs offer⁵⁷².

ЕМІ	Group	Number of employees	Revenue (Million €)	Net Income (Million €)	LinkedIn
Bitpanda	Independent Company	180	8.015,00	37,00	<u>Link</u>

Source: Orbis | 2021 Financials

Payment Service Providers

Founded in 2000 and headquartered in Vienna, Paysafecard is one of the main payment service providers in Austria. The company is part of the international Paysafe Group and offers prepaid and online cash solutions under the brands Paysafecard, Paysafecard account, Paysafecard Mastercard and Paysafecash.

Other important local players include DIMOCO Payments and Hobex. DIMOCO Payments was also founded in 2000 and enables merchants to accept more than 100 payment methods, whereas Hobex is a payment gateway offering a full range of services for payment processes.

Other regional payment service providers are also present in Austria, including Unzer (which took over mPAY24 and Payolution in Austria), Concardis (a Nets company), Netcetera and Qenta. The global leader Worldline is also present in the country for processing payments.

⁵⁷⁰ https://www.marketscreener.com/quote/stock/RAIFFEISEN-BANK-INTERNATI-6497717/news/Raiffeisen-Bank-International-AG-completed-the-acquisition-of-Raiffeisen-Zentralbank-Osterreich-AG-35161555/

https://euclid.eba.europa.eu/register/pir/search

⁵⁷² https://blog.bitpanda.com/en/bitpanda-becomes-austrias-first-electronic-money-institution

PSP	Group	Number of employees	Revenue (Million €)	Net Income (Million €)	LinkedIn
paysafecard.com Wertkarten	Foley Trasimene Acquisition II Corp	227	100,08	94,22	<u>Link</u>
DIMOCO Payments	Parent company	132	91,72	4,40	<u>Link</u>
PSA Payment Services Austria	Parent company	94	33,65	6,82	<u>Link</u>
Hobex	Parent company	108	32,44	n/a	<u>Link</u>
Worldline Austria	Worldline	54	12,79	1,98	<u>Link</u>
Concardis Austria	Nexi SPA	n/a	2,54	0,10	<u>Link</u>
Netcetera	Netcetera Group	57	n/a	n/a	<u>Link</u>
DaoPay	Dao Holdings	25	n/a	n/a	<u>Link</u>
Qenta Payment CEE	Qenta Technologies Group	24	n/a	n/a	<u>Link</u>
<u>Unzer Austria</u>	Unzer Group	10	n/a	n/a	<u>Link</u>
Orderbird	Orderbird	n/a	n/a	n/a	<u>Link</u>

Banking-as-a-Service

When it comes to the Banking-as-a-Service sector, Austria has one local player. Credi2 is an Austrian-based fintech startup that designs, builds and operates "buy now pay later" (BNPL) solutions for banks, payment institutions, consumers and merchants.

New Frontier Innova, which is part of the New Frontier Group, has developed a Banking-as-a-Service platform called Fintense, turning traditional banks into digital leaders. Their clients include Raiffeisen Bank, OTP Bank, APS Bank and many more.

Furthermore, Qenta Payments, an Austrian local player mentioned as a PSP in the previous section, is now offering its own banking-as-a-service platform.

Banking-as-a-Service	Group	Number of employees	Revenue (Million €)	Net Income (Million €)	LinkedIn
credi2_	Parent company	n/a	n/a	n/a	<u>Link</u>
New Frontier Innovation	New Frontier Group	n/a	n/a	n/a	<u>Link</u>

Source: Orbis | 2021 Financials

Local & Alternative Payment Methods

The market has traditionally been less attractive for alternative payment methods than in other European countries, due to the large market share of card payments in Austria and the population's preference for cash payments. The picture is changing somewhat due to the growth rate of the contactless payment market. According to a study carried out by JP Morgan in 2020, PayPal is the most used wallet in Austria, but their prominent digital wallets include Skrill, WebMoney, SEQR and Masterpass. Samsung Pay and Apple Pay are also gaining market share, with the former currently leading due to the late arrival of Apple Stores in the country in 2018.

The Raiffeisen Group's payment solution, the ELBA-pay app, is also a popular alternative local payment method, as is EPS bank transfer, which is an e-commerce payment method for the e-commerce market created in conjunction with Austrian banks and the government.

Paysafecard is a market leader in eCash payment solutions. Headquartered in Vienna, the company is part of the international Paysafe Group. Paysafecard offers prepaid and online cash solutions under the brands Paysafecard, Paysafecard Account, Paysafecard Mastercard and Paysafecash.

Credi2 is a local BNPL solution for banks, payment institutions, consumers and merchants.

Local Payment Method	Group	Number of employees	Revenue (Million €)	Net Income (Million €)	LinkedIn
paysafecard.com Wertkarten	Foley Trasimene Acquisition II	227	100,08	94,22	<u>Link</u>
credi2_	Parent company	n/a	n/a	n/a	<u>Link</u>

Since 2017, Smart 4 Invest is increasingly growing and trusted in the Belgian payment sector.

Similarly, our specific position in the market allows us to develop a close and strong relationship with major stakeholders in the sector.

2023 is a milestone for S4I as we will launch our mobile app "Clever" thanks to BAAS and Banking partners, allowing us to provide payment services (Sotfpos, Fx, Instant & Swift) & MCA for businesses.

Also during this year, our own NEXO payment solution will be available in the European market this year (Q3 2023) allowing S4I to move from Payment solution broker to Paytech thanks to startegic partnerships.

Interested to know more about S4l's roadmap? Contact us at jorge.libert@smart4invest.com



Others

Payment Services Austria (PSA) is a transaction service provider and has been the competence centre for cashless payment in Austria for many years. PSA enables banks in the DACH region to offer customers card, account and identity products and ensures fast, convenient and secure transactions. On behalf of the banks, the company manages the ATM system with more than 7.500 ATMs and around 10 million debit cards, processes 2,3 billion transactions for the banks and provides connections to international account payment transactions. PSA has developed the mobile debit card and the P2P payment service ZOIN, which allows users to send and receive money via smartphone without entering the IBAN or account number; the other party's telephone number is sufficient to complete the transaction.

Another Austrian company that fits into this category is Coinfinity GmbH, which is an Austrian Bitcoin broker headquartered in Graz.

Other	Group	Number of employees	Revenue (Million €)	Net Income (Million €)	LinkedIn
PSA Payment Services Austria	Parent company	94	33,65	6,82	<u>Link</u>
Coinfinity GmbH	Parent company	n/a	n/a	n/a	<u>Link</u>

Czech Republic

Introduction

The Czech Republic differs from other European e-commerce markets due to its consumers' inclination for cash payments. Due to the popularity of click-and-collect, 36% of online payments are made in cash, and in-store purchases are picked up and paid for in the store. Following this, credit card payments, online banking and cash on delivery are popular⁵⁷³.

Nevertheless, the Czech payment system has made great progress toward digitisation over the past few years and the financial sector has shown substantial digital growth. This increase is the result of more Czechs shopping online and the quick growth of e-commerce. Cash use has decreased by more than 20 percentage points in nine years, as consumers use less cash in their payments. In 2021, the estimated share of cash at points of sale (POS) was 50,7%⁵⁷⁴. The value and volume of users of digital payments are expected to increase over the coming years.

Debit card use is increasing, which is another factor that favours this tendency. Contactless payments have also significantly increased in terms of the volume of money spent over the past three decades. Additionally, both the total number of card payments and the transaction volume have been gradually increasing in recent years. The digital payment market in the Czech Republic is anticipated to keep expanding, propelled by the digital commerce and mobile point of sale segments, according to Statista's Digital Market Outlook.

Moreover, the Czech Republic has recently seen an increase in requests for account-to-account payments, SoftPOS solutions and instant payments. A distinctive segment is the area of automation, i.e. unattended payment solutions (car washes, car parks, etc.). This segment is seeing exponential growth in the country.

Regarding card schemes, Mastercard is used slightly more (56%) than Visa (44%)⁵⁷⁵.

Banks

The Czech banking industry is distinguished by its small size and great concentration. As of January 2023, there are 51 credit institutions operating in the Czech Republic⁵⁷⁶. Banks with foreign capital (mainly from Austria, Italy, France and Belgium) dominate the banking industry. In the Czech Republic, the majority of banks are universal banks that offer services and products in the field of both retail and investment banking.

Československá Obchodní Sanka (ČSOB), Česká spořitelna and Komerční Banka dominate the banking industry. These three major banks are foreign-owned.

ČSOB was created by the government in 1964 to handle convertible currency transactions and provide finance for international trade. Since 1999, ČSOB has been part of KBC Group. It is a universal bank that offers individuals, SMEs, corporations and institutional clients a wide range of retail, corporate and investment banking products and services. ČSOB is the largest bank in the Czech Republic in terms of total assets. In 2021, its total assets were 1.805,48 billion CZK and its net income was 16.160 million CZK⁵⁷⁷. The bank issues Mastercard and Visa cards that are compatible with wallets such as Apple Pay, Google Pay, Garmin Pay and Xiaomi Pay⁵⁷⁸.

Česká Spořitelna is a universal bank that specialises in offering retail and business banking products and services to individuals, small and medium-sized businesses, municipalities and towns. The bank also provides financing and financial market solutions to large enterprises. Česká Spořitelna has been part of Erste Group since 2000. In terms of total assets, it is the second largest bank in the Czech Republic (1.641,74 billion CZK).⁵⁷⁹ Currently, the Bank provides services to 4,5 million clients⁵⁸⁰ and has 2 million active clients for internet banking and BUSINESS 24 (an application for corporate clients that allows them to manage their finances)⁵⁸¹. Czechia is Erste Group's first market⁵⁸², where the brand goes under the name Česká spořitelna.

Komerční Banka is the third largest bank in the Czech Republic and has been part of Société Générale Group since 2001. A universal commercial bank, Komerční Banka offers a variety of retail, private, corporate and investment banking products and services to individuals, SMEs and other business entities. S83 With the launch of a new version of its digital Open Banking platform, Komerční Banka offers its partners' and its own products under a Banking-as-a-Service model. Komerční Banka won first place in the Corporate Bank of the Year and Sustainable Bank of the Year categories for the 2021 Mastercard Bank of the Year Awards S84.

- 573 https://www.adyen.com/payment-methods-guides/europe/czech-republic
- 574 https://www.statista.com/statistics/1094801/cash-use-in-czechia/
- 575 https://www.ppro.com/countries/czech-republic/
- 576 EUCLID
- 577 https://thebanks.eu/countries/Czech-Republic/major_banks
- 578 https://www.csob.cz/portal/people/accounts/payment-cards
- 579 https://thebanks.eu/countries/Czech-Republic/major-banks
- 580 https://www.csas.cz/static_internet/en/Redakce/Ostatni/Ostatni_IE/Prilohy/vz-2021.pdf
- 581 https://www.csas.cz/en/about-us/who-we-are
- 582 https://www.statista.com/statistics/693476/leading-banks-assets-austria/
- https://thebanks.eu/countries/Czech-Republic/major_banks
- 584 https://www.kb.cz/getmedia/93754fae-76a3-4e9a-b9d5-9a1a760dfbef/KB-2021-Annual-Report.pdf.aspx

Bank	Group	Number of employees	Revenue (Million €)	Net Income (Million €)	LinkedIn
CSOB	KBC Group	8.087	1.490,40	650,00	<u>Link</u>
Ceska Sporitelna	Parent company	9.741	1.693,85	571,48	<u>Link</u>
Komercni Banka	Société Générale	7.763	1.279,52	522,57	Link
Unicredit Bank	UniCredit	3.242	817,88	280,79	Link
Raiffeisenbank	Raiffeisen Bank International	2.787	609,09	191,86	<u>Link</u>
Moneta Money Bank	Parent company	3.003	449,20	160,25	<u>Link</u>
J&T Banka	J&T Finance Group	875	273,67	112,78	<u>Link</u>
<u>Air Bank</u>	Parent company	956	175,37	74,89	Link
<u>Fio Banka</u>	Parent company	98	157,68	94,04	Link
PPF banka	Parent company	240	141,38	77,71	Link

Electronic Money Institutions

Eurowag is a major e-money institution authorised and registered in the Czech Republic. The company is a leading pan-European integrated payments & mobility platform focused on the commercial road transportation industry. Eurowag issues professional fuel cards, an ideal way to control the costs associated with fuelling.

ЕМІ	Group	Number of employees	Revenue (Million €)	Net Income (Million €)	LinkedIn
W.A.G. (Eurowag)	W.A.G Payment Solutions	406	3.143,73	35,02	<u>Link</u>
Edenred	Edenred	n/a	25,94	4,22	<u>Link</u>

Source: Orbis | 2021 Financials

Payment Service Providers

Major payment service providers in Czechia include Global Payments, ComGate and GoPay. Global Payments occupies about 80% of the banking market; the other players concentrate on large merchants. GoPay has become a member of the Worldline group. SaltPay is a very strong player for the Czech Republic as well.

PSP	Group	Number of employees	Revenue (Million €)	Net Income (Million €)	LinkedIn
Global Payments Europe	Parent company	289	323,14	7,78	<u>Link</u>
ComGate Payments	Comgate	29	17,02	0,33	<u>Link</u>
EVO Payments International	EVO Payments	17	8,90	0,35	<u>Link</u>
PayU Czech Republic	Naspers	7	2,00	n/a	<u>Link</u>
GOPAY	Worldline	48	n/a	n/a	<u>Link</u>
ThePay	Parent company	7	n/a	n/a	<u>Link</u>
Saltpay	Saltpay	n/a	n/a	n/a	<u>Link</u>

Source: Orbis | 2021 Financials

Local & Alternative Payment Methods

Concerning the local payments landscape, the most used methods are PayU, Skrill, Apple Pay, PayPal, Google Pay and PaySera⁵⁸⁵. Akcenza and SAB Finance are two companies focused on foreign exchange and cross-border payments. Twisto is a BNPL company.

Local Payment Method	Group	Number of employees	Revenue (Million €)	Net Income (Million €)	LinkedIn
AKCENTA CZ	Raiffeisen Bank International	101	13,45	2,94	<u>Link</u>
SAB Finance	Parent company	60	3,37	6,50	<u>Link</u>
Twisto	Parent company	n/a	n/a	n/a	Link

⁵⁸⁵ https://www.ppro.com/countries/czech-republic/

Croatia

Introduction

Croatia has a recently active fintech scene with innovative payment solutions that are fast growing beyond Croatia. With Croatia introducing the EUR as its official currency in January 2023, this trend will accelerate further.

Croatia has one of the highest credit card penetration rates in Central and Eastern Europe, with 2,01 credit cards per capita⁵⁸⁶. Despite this, payment card usage in Croatia is one of the lowest among its peer countries⁵⁸⁷. This reflects the historically cash-dominated nature of the Croatian economy as well as the very competitive banking environment.

Croatia's market for online payments is expected to grow by a rate of nearly 17% per year (2022-2027)⁵⁸⁸. Almost two thirds of online purchases are made with wallets and online-banking, with the majority of online shoppers in Croatia preferring to pay by e-wallet⁵⁸⁹. This is especially since local wallet solutions such as Aircash and KEKS Pay (by Erste Bank) offer not just the ability to pay at online- and offline merchants but also to develop into a "super-app", offering in-app payments for parking or public transport, an easy way to pay for insurance or concert tickets and peer-to-peer payment solutions.

Banks

Croatia's banking sector is typical of Eastern European countries, with a relatively small number of banks, a high degree of concentration and a high share of foreign capital.

There are 22 registered credit institutions in the country⁵⁹⁰. The major banks are mostly foreign-controlled. Leading banks in terms of total assets include are Zagrebacka Banka, Privredna Banka Zagreb (PBZ), Erste & Steiermärkische Bank, OTP Banka and Raiffeisen⁵⁹¹.

Zagrebacka Banka is a subsidiary of the Italian bank UniCredit that offers banking and related financial solutions. The bank holds 26% of the market share in Croatia⁵⁹². It issues Visa debit cards and Mastercard credit cards. The company's online banking service is called e-Zaba and its mobile app is called m-Zaba. Users are able to use IziPay on their mobile app to transfer money.

Privredna Banka Zagreb (PBZ) comes in second place with a market share of $21\%^{593}$. PBZ is owned by another major Italian bank, Intesa Sanpaolo. It offers current accounts, giro accounts and student accounts. The bank issues cards branded with both Visa and Mastercard, which can then be stored in e-wallets such as Apple Pay and Google Pay. The withPAY feature enables card holders to transfer money quickly using a mobile phone number.

With a 17% market share, Erste & Steiermarkische is a subsidiary of the Austrian Erste Group. It serves 600.000 customers, including individuals and small and medium-sized businesses. The bank offers similar services to its peers. OTP Banka, a subsidiary of the Hungarian bank, owns 10% of the market, and the Austrian Raiffeisen 8%⁵⁹⁴.

Neobanks such as Revolut do not as yet play a relevant role in the market. With Croatia entering the Eurozone, their relevance is likely to increase.

Bank	Group	Number of employees	Revenue (Million €)	Net Income (Million €)	LinkedIn
Zagrebacka Banka	UniCredit	4.900	641,90	199,22	<u>Link</u>
Privredna Banka Zagreb	Intesa Sanpaolo	4.879	579,57	186,46	<u>Link</u>
Erste & Steiermarkische Bank	Erste Group Bank	3.221	440,43	142,07	<u>Link</u>
Raiffeisenbank Austria	Raiffeisen Bank International	1.869	276,96	66,85	<u>Link</u>
OTP Banka	OTP Bank	2.549	257,96	89,44	<u>Link</u>
Hrvatska Postanska Bank	Parent company	1.315	110,37	26,93	<u>Link</u>
Addiko Bank d.d. Zagreb	Addiko Bank	846	87,69	10,62	<u>Link</u>
Nova hrvatska banka	Hrvatska Postanska Bank	478	48,16	4,45	<u>Link</u>

- 586 https://www.adyen.com/payment-methods-guides/europe/croatia
- 587 https://www.electronicpaymentsinternational.com/country-surveys/croatia-payment-card-market/
- 588 https://www.statista.com/outlook/dmo/fintech/digital-payments/croatia
- https://finance.yahoo.com/news/eastern-europe-online-payment-methods-081300048.html
- 590 https://euclid.eba.europa.eu/register/
- 591 https://thebanks.eu/articles/banks-in-Croatia
- 592 https://thebanks.eu/articles/banks-in-Croatia
- 593 https://thebanks.eu/articles/banks-in-Croatia
- 594 https://thebanks.eu/articles/banks-in-Croatia

Electronic Money Institutions

There are five e-money institutions currently registered and operating in Croatia: Primex Payments, Aircash, Hrvatski Telekom, PBZ Card and Erste Card Club.⁵⁹⁵ These institutions are licensed and authorised by the Croatian National Bank and can conduct their operations in any of the 31 EEA member states due to EEA passport rules.

Aircash was the first Croatian fintech and is the only bank-independent player truly acting as an EMI, while PBZ Card and Erste Card Club are primarily card-issuing subsidiaries of local banks, Primex Payments acts as a PSP and Hrvatski Telekom is a Croatian telecom operator.

Aircash is the market-leading mobile wallet in Croatia, with more than 500.000 users, offering the largest variety of loading options allowing payment both at POS and online. The wallet has grown into a super-app that includes a marketplace, with a one-stop payment solution for parking, transport, entertainment, utilities and telecoms, as well as the opportunity to sign up for a prepaid card.

ЕМІ	Group	Number of employees	Revenue (Million €)	Net Income (Million €)	LinkedIn
PBZ Card	Intesa Sanpaolo	248	101,66	16,09	<u>Link</u>
Erste Card Club	Erste Group Bank	260	96,63	16,48	<u>Link</u>
<u>Aircash</u>	Independent company	21	12,12	3,90	<u>Link</u>

Source: Orbis | 2021 Financials

Payment Service Providers

There are only three payment institutions licensed and authorised by the Croatian National Bank⁵⁹⁶: Elektronicki Racuni (branded as Moj-eRacun), NHT Mobile and Corvus Pay.

Corvus Pay, Monri Payments (part of the Payten Group), Primex Payments and Prolaz Pos are the most prominent gateways. International PSPs do not play a significant role in Croatia as yet.

PSP	Group	Number of employees	Revenue (Million €)	Net Income (Million €)	LinkedIn
Monri Payments	Payten	14	3,52	0,42	<u>Link</u>
CORVUS PAY	Independent company	8	0,96	0,24	<u>Link</u>
Primex Payments	Global Primex Europe Spolka	10	0,72	-0,05	<u>Link</u>
Prolaz POS	Independent company	1	0,12	-0,32	<u>Link</u>

Source: Orbis | 2021 Financials

Local & Alternative Payment Methods

International payment methods such as PayPal, Google Pay and Apple Pay are present but not as relevant as in many other European markets. Besides paying via online-banking – with many local banks having very innovative and easy-to-use banking-apps – mobile wallets are the predominant and fastest growing local payment solution.

There are two predominant players that have both expanded their wallet solution beyond simple payments:

KEKS Pay is a solution provided by leading regional bank Erste Bank. This wallet historically serviced their own bank-client base but is meanwhile opened to users not holding a bank account at Erste Bank. It is a classic wallet for payment at POS and online, but offers additional benefits such as easy payments for parking, public transport, etc.

Aircash is the market-leading, bank-independent wallet solution. Similar to KEKS Pay, it also offers a marketplace within the app, allowing users to one-click pay for parking, public transport and more. A virtual and physical Visa card can also be added. One of the main USPs of Aircash is the network of 50.000 stores (petrol stations, tobacconists, etc.) where people can purchase an A-Bon to load the wallet. This opens the solution for the historically large number of people that still prefer to load their wallet at a physical store rather than by bank transfer or card. After its success in Croatia, Aircash is moreover expanding its reach into other EU-markets including Slovenia, Romania, Austria and Germany.

Local Payment Methods	Group	Number of employees	Revenue (Million €)	Net Income (Million €)	LinkedIn
<u>Aircash</u>	Independent company	21	12,12	3,90	<u>Link</u>

⁵⁹⁵ https://euclid.eba.europa.eu/register/

⁵⁹⁶ https://euclid.eba.europa.eu/register/

Baltic Countries

Introduction

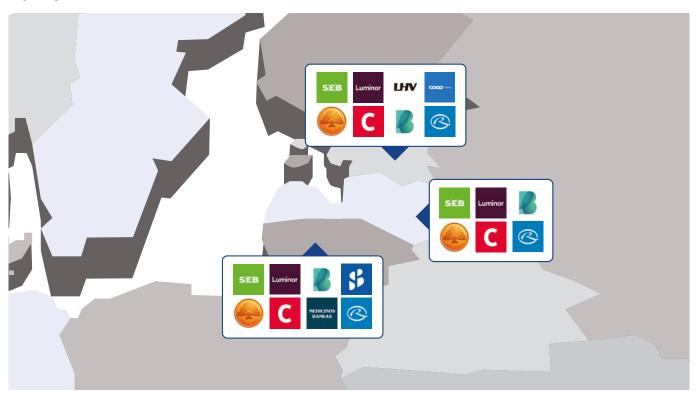
With 6 million inhabitants, the Baltic states - Lithuania, Latvia and Estonia - are home to an astonishing number of startups⁵⁹⁷ and an impressive count of 12 unicorns⁵⁹⁸. Recent years have witnessed a growing community of startups in the region⁵⁹⁹, including ventures in the payments industry. This growth has been attributed to various drivers, including the ease of working in the region, the cost of living and the emphasis placed on innovation.

Moreover, many foreign institutions have set up their European headquarters in one of the three countries, as the region is considered the best gateway to the EU market - especially Lithuania. In this regard, Brexit has been a catalyst for growth as it encouraged UK-based companies such as Revolut to set foot in the Baltics.

On the other hand, the Baltic States can be considered a fully consolidated market with a strong predominance of Nordic institutions in the banking and payments sector⁶⁰⁰.

Concerning preferred payment methods, these vary slightly across the three countries, with cards, bank transfers and e-wallets being the most widely used means of payment⁶⁰¹. Payment by bank transfer, in particular, is the preferred option. As a result, solutions such as Neo Pay and Bankling are gaining traction in the region.

Banks



The main characteristic of the banking sector in the three Baltic states is that it is dominated by the operations of Nordic banks. Swedbank has the largest share of assets. After Swedbank, Sweden's Skandinaviska Enskilda Banken (SEB) is the largest player in the region⁶⁰². According to their own statistics and other estimates, Swedbank and SEB, through their subsidiaries and local branches, dominate the markets in the Baltics and cover 50% of the Estonian market, 85% of the Lithuanian market and 60% of the Latvian market⁶⁰³.

Estonia's Luminor Bank (the result of the merger of Nordea Bank and DNB⁶⁰⁴) comes third in terms of market share in the region. Other local banks such as Citadele have managed to develop outside their domestic markets as well.

Amongst the dozen local banks and credit institutions in the region, Siauliu Bankas and Medicinos Bankas (Lithuania), Bigbank and Coop Pank (Estonia) and Rietumu Banka (Latvia) are the most relevant.

- 597 Around 5000 startups
- 598 https://sifted.eu/articles/baltics-estonia-latvia-lithuania-startups-ecosystem/
- 599 https://civitta.com/articles/the-baltic-startup-scene-today-s-realities-tomorrow-s-possibilities
- 600 http://www.baltic-course.com/eng/analytics/?doc=141880
- 601 https://www.adyen.com/payment-methods-guides/europe/baltics
- 602 https://www.scoperatings.com/ScopeRatingsApi/api/downloadstudy?id=aab452eb-7a93-4fc3-bf9f-0fafb8c572dc
- 603 https://www.luxembourgforfinance.com/wp-content/uploads/2020/06/The-European-Union-Payments-landscape-in-perspective.pdf
- 604 https://www.strategeast.org/biggest-baltic-bank-starts-operations-in-estonia-latvia-and-lithuania/

Lithuania is also home to several neobanks that are licensed to operate in the region. Revolut is for sure the most relevant in terms of local customers, while other neobanks such as Swedish Plexian or ZEN.com have a local presence in the region. With regard to business banks, LHV Pank, SME Bank and European Merchant Bank have their home in the Baltics and are growing their local relevance into the EEA region.

Bank	Group	Number of employees	Revenue (Million €)	Net Income (Million €)	LinkedIn
Skandinaviska Enskilda Banken AB	Parent company	15.500	5.335,19	2.483,55	<u>Link</u>
Swedbank AB	Parent company	17.700	4.580,64	2.038,97	<u>Link</u>
<u>Luminor Bank AS</u>	Luminor Holdings AS	2.262	342,00	74,70	<u>Link</u>
AS Citadele Banka	Parent company	1.335	159,48	55,05	<u>Link</u>
<u>Siauliu Bankas</u>	Parent company	882	115,79	55,22	<u>Link</u>
Bigbank AS	Parent company	464	89,00	35,90	<u>Link</u>
Rietumu Bank Group	Parent company	558	81,98	28,88	<u>Link</u>
Coop Pank	Parent company	300	41,52	13,46	<u>Link</u>
UAB Medicinos Bankas	Independent company	307	20,47	4,39	<u>Link</u>

Source: Orbis | 2021 Financials

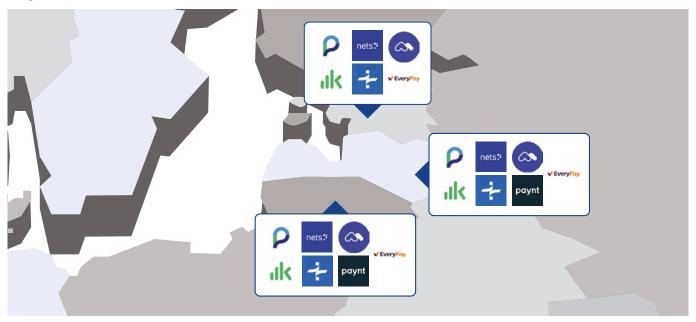
Electronic Money Institutions

There are 91 EMIs currently operating in the Baltic region, of which 95% operate in Lithuania⁶⁰⁵. This is because many startups have moved to the region, more specifically to Lithuania, to gain access to the European market. Transact Pro is the biggest non-banking Mastercard issuer in the Baltics⁶⁰⁶.

ЕМІ	Group	Number of employees	Revenue (Million €)	Net Income (Million €)	LinkedIn
<u>Wallte</u> r	Wallter Payments	20	14,60	1,23	<u>Link</u>
<u>VIA Payments</u> (Vialet)	Via SMS	18	6,54	0,38	<u>Link</u>
Connectpay	Independent company	72	6,53	-1,87	<u>Link</u>
Transact PRO	Independent company	34	2,79	-0,70	<u>Link</u>

Source: Orbis | 2021 Financials

Payment Service Providers



⁶⁰⁵ https://euclid.eba.europa.eu/register/

⁶⁰⁶ https://www.mastercard.com/news/europe/en/newsroom/press-releases/en/2022/september-2022/mastercard-transact-pro-and-the-municipality-of-jelgava-bring-city-key-cards-to-latvia-for-the-first-time/

The Baltics, and especially Lithuania, are home to dozens of PSPs but not all of them are relevant for the regional market. International PSPs such as Stripe play a relevant role in the Baltics, especially when it comes to internationally selling merchants. Nets, part of Nexi group, is an important PSP in the region.

Unlike most European markets, most local merchants do not use a PSP but use their local bank for card acquiring and access to local bank payments.

The most relevant Baltic PSP is Paysera, followed by Transact PRO and Paynt. EveryPay, Maksekeskus and Ashburn are also important. Ashburn differs from EveryPay and Maksekeskus in that it also offers physical POS terminal equipment. Montonio, which recently raised 11 million € Series A funding led by Index Ventures⁶⁰⁷, is one of the fastest growing new players in the market.

PSP	Group	Number of employees	Revenue (Million €)	Net Income (Million €)	LinkedIn
Paysera LT	Independent company	124	14,46	1,65	<u>Link</u>
Boku Network Services	Boku Network Services Holdings	200	8,45	0,43	<u>Link</u>
<u>Maksekeskus</u>	Luminor Bank	20	6,09	1,60	<u>Link</u>
Ashburn International	Parent company	35	3,46	0,03	<u>Link</u>
Transact PRO	Independent company	34	2,79	-0,70	<u>Link</u>
Paynt	Independent company	26	2,12	0,57	<u>Link</u>
EveryPay	AS LHV Group	23	1,47	-0,48	<u>Link</u>
Montonio Finance	Parent company	64	1,20	n/a	Link

Source: Orbis | 2021 Financials

Banking-as-a-Service

Tuum, Railsr and Contis are significant Banking-as-a-Service solutions.

The strong financial performance of the newly founded Tuum (2019), previously known as Modularbank, is worthy of note, with a three-fold increase in revenue in 2021 compared to previous years. It provides major actors such as Nets Estonia, which will be described in the section on Estonia, by rolling out enablers of new financial products or services⁶⁰⁸.

BaaS	Group	Number of employees	Revenue (Million €)	Net Income (Million €)	LinkedIn
Finansines Paslaugos Contis	Solaris	3	29,42	9,76	<u>Link</u>
Railsbank Technology (Railsr)	Parent company	52	4,46	0,32	<u>Link</u>
Modular Technologies (Tuum)	Parent company	n/a	2,43	-2,36	<u>Link</u>

Source: Orbis | 2021 Financials

Open Banking Enablers

Across the 11 open banking enablers present in the Baltics⁶⁰⁹, the relevant ones include Nordigen and Kevin. Nordigen plays a major role as it was the first to provide free open banking across 300 banks in 29 European countries in 2020⁶¹⁰, while Kevin provides access to its account-to-account payment system in 35% of European PoS and seeks to achieve 85% in 2023.⁶¹¹

As in other European countries, they are regulated by European Union (EU) directive PSD2 which "seeks to encourage the development and use of innovative online and mobile payment methods" 612.

Open Banking Enabler	Group	Number of employees	Revenue (Million €)	Net Income (Million €)	LinkedIn
Nordigen Solutions	GoCardless	39	1,06	-0,71	<u>Link</u>
Kevin	Independent company	98	0,05	-4,71	<u>Link</u>

⁶⁰⁷ https://thepaypers.com/payments-general/montonio-raises-eur-11-mln

⁶⁰⁸ https://fintechbaltic.com/5978/baltic/fintech-funding-momentum-continues-this-year-in-baltic-states/

https://fintechbaltic.com/3533/baltic/baltics-banks-open-banking/

⁶¹⁰ https://fintechbaltic.com/3533/baltic/baltics-banks-open-banking/

https://fintechbaltic.com/5978/baltic/fintech-funding-momentum-continues-this-year-in-baltic-states/

⁶¹² https://fintechbaltic.com/3533/baltic/baltics-banks-open-banking/

Local & Alternative Payment Methods

Cards, bank transfers and e-wallets are the most widely used payment methods⁶¹³.

Payment by bank transfer is the preferred option. As a result, Banklinq (a solution developed by Nikulipe) and Neopay (a solution developed by Neo Finance) are gaining traction in the region. Banklinq is a payment method launched by Nikulipe for the Baltic region. This local payment method covers all the relevant banks in the region. Connected banks include SEB, Swedbank, Luminor, Revolut, Citadele, Šiaulių Bankas, Medicinos Bankas, LKU, LHV Pank and Coop Pank. It is an easy, fast, secure process based on Open Banking legislation. The idea is for users to pay for their online shopping simply by using their bank accounts. No registration or credit card is needed⁶¹⁴. Similarly, Neopay, a solution launched by NEO Finance, enables businesses to accept payments directly from banks, taking full advantage of open banking APIs⁶¹⁵.

E-wallets are also a much-appreciated means of payments in the region. In particular, the local wallet Paysera has been widely adopted in the Baltics.

Local Payment Method	Group	Number of employees	Revenue (Million €)	Net Income (Million €)	LinkedIn
Paysera LT UAB	Independent company	124	14,46	1,65	<u>Link</u>
NEO Finance AB	UAB Era Capital	35	3,44	0,12	<u>Link</u>
Nikulipe UAB	Bergwand GMBH	15	n/a	n/a	<u>Link</u>

Source: Orbis | 2021 Financials

A seamless payments experience is an API call away...





⁶¹³ https://www.adyen.com/payment-methods-guides/europe/baltics

⁶¹⁴ https://www.bankling.eu

⁶¹⁵ https://neopay.online

Estonia

Introduction

Estonia is a uniquely entrepreneurial and tech-savvy environment. With a population of only 1,3 million inhabitants, this small country is leading Europe in terms of startups. Ten unicorns have their origin in the smallest Baltic country - including the leading paytechs Wise and Veriff. On a per-capita basis that represents the highest concentration of unicorns in any country in Europe, although not all are headquartered domestically⁶¹⁶. Indeed, policymakers are determined to establish Estonia not only as an important innovation powerhouse but also as an attractive destination for foreign founders and tech staff - the Startup Visa Scheme⁶¹⁷ and e-residency⁶¹⁸ being key measures in this regard.

Named the most advanced digital society in the world, Estonia - also called e-Estonia⁶¹⁹ - has built an efficient, secure and transparent ecosystem where 99% of government services are online⁶²⁰. This digital-first approach also applies to the payments world. As a matter of fact, Estonians rank highly for their use of cards and non-cash payments because of their literacy in digital payments and the broad acceptance and use of cards without minimum thresholds. Contactless cards and digital options dominate the payments market.

Cards accounted for 67% of payments in 2020⁶²¹. Debit cards are much more popular than credit cards. Consumers' preference for debt-free payments and prudent spending has led to the dominance of debit cards in terms of both transaction volume and value. They account for approximately 85% of total card usage⁶²². In the credit cards market, Mastercard accounts for 95% of the total market.

Since the beginning of the development of the card payment system, Estonia has been among the frontrunners in digitising its nation. It was an early member of the SEPA Instant Credit Transfer (SCT Inst) scheme⁶²³ and bank transfer payments are relevant especially for e-commerce payments. Almost two-thirds of all e-shopping payments are made by bank transfers and wallets⁶²⁴.

Additionally, due to its favourable legislation and the Cryptocurrency Exchange Licence, Estonia plays a significant role for Crypto Exchange and Payment Startups⁶²⁵.

Banks

The current banking sector consists of 9 licensed credit institutions and five banks operating as foreign credit institutions (EEA branches).⁶²⁶ Total assets amount to 30 billion € which is equivalent to 110% of the Estonian GDP⁶²⁷.

The market is divided between the Swedish banks Swedbank (32,41%) and SEB Bank (16,19%), and local banks Luminor Bank (28,07%) and LHV Pank (14,17%).⁶²⁸ It is interesting to note that almost 50% of the Estonian banking market is controlled by two Swedish banks. As mentioned above, the Estonian banking sector is largely dominated by foreign institutions: up to 85% of the Estonian banking sector's assets is held by foreign capital holding - mainly Scandinavian institutions⁶²⁹.

Swedbank, the country's leading bank in terms of total assets (32%), aims to promote financial literacy and entrepreneurship and contribute to social participation through the development of the whole society. In terms of payments, the bank offers Mastercard debit and credit cards to both individuals and businesses. It is compatible with numerous digital wallets: Google Pay, Apple Pay, mobile contactless payments (Android), Fitbit Pay, Garmin Pay, Xiaomi Pay, Fidesmo and Manage-Mii.

Estonia-based bank Luminor Bank comes in second place in terms of total assets (28%). Luminor provides banking products and services to all customer groups, with a special focus on small and medium-sized enterprises, as well as high-net-worth private customers. The bank offers Visa payment cards that are compatible with Google Pay, Apple Pay, Garmin Pay and Fitbit Pay. Luminor has launched a secure free card for children aged from 6 to 21 years old. It enables parents to have full control and overview of their children's internet banking and to change the limits for purchases and transfers, among others.

Besides the leading banks, there are also many regional players that share the rest of the market. These include Coop Bank, Citadele Banka and Bigbank. International operating neobank brands such as Revolut, or the Lithuania-based business bank European Merchant Bank, are also becoming increasingly popular in Estonia.

- 616 https://investinestonia.com/estonia-leads-europe-in-startups-unicorns-and-investments-per-capita
- The Startup Visa Scheme has attracted more than 4000 people which is more than the comparable UK scheme
- 618 https://www.forbes.com/sites/trevorclawson/2022/09/22/starting--from-zero-what-can-estonia-teach-us-about-building-a-startup-ecosystem/
- 619 https://www.computerweekly.com/news/252505564/Inside-Estonias-tech-startup-scene
- 620 https://investinestonia.com/estonia-leads-europe-in-startups-unicorns-and-investments-per-capita/
- ${\tt 621} \quad \underline{\tt https://www.europeanpaymentscouncil.eu/news-insights/insight/country-profile-digital-and-instant-payments-are-norm-estonia$
- 622 https://haldus.eestipank.ee/sites/default/files/files/Maksesysteemid/et/ep_mky_2018_est_0.pdf (pp 48-49)
- 623 https://www.europeanpaymentscouncil.eu/news-insights/insight/country-profile-digital-and-instant-payments-are-norm-estonia
- 624 https://www.ppro.com/countries/estonia/; https://nikulipe.com/countries/estonia/
- 625 https://finlaw.io/estonia-cryptocurrency-license/
- 626 https://euclid.eba.europa.eu/register/
- 627 https://www.ebf.eu/estonia/
- 628 https://thebanks.eu/countries/Estonia/major_banks / Note that the percentages are given in terms of total assets.
- 629 https://www.ebf.eu/estonia/

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Bank	Group	Number of employees	Revenue (Million €)	Net Income (Million €)	LinkedIn
<u>Swedbank</u>	Swedbank	1.931	394,50	188,60	<u>Link</u>
<u>Luminor Bank</u>	Braavos Bidco	2.262	342,00	74,70	<u>Link</u>
SEB Pank	Skandinaviska Enskilda Banken	1.026	174,80	99,40	<u>Link</u>
<u>LHV Pank</u>	LHV Group	611	127,90	64,05	<u>Link</u>
Bigbank AS	Parent company	464	89,00	35,90	<u>Link</u>
Coop Pank	Parent company	300	41,52	13,46	<u>Link</u>
<u>InBank</u>	Parent company	293	57,21	10,96	<u>Link</u>
TBB Pank	Parent company	74	3,07	-1,24	<u>Link</u>
<u>Holm Bank</u>	Parent company	n/a	0,48	1,16	<u>Link</u>
TF Bank Eesti filiaal	TF Bank	n/a	n/a	n/a	<u>Link</u>
Op corporate Bank Eesti filiaal	Op corporate Bank	n/a	n/a	n/a	<u>Link</u>
<u>Citadele Banka Eesti filiaal</u>	Citadele Banka	n/a	n/a	n/a	<u>Link</u>
Nordea Bank Eesti filiaal	Nordea Bank	n/a	n/a	n/a	<u>Link</u>

Electronic Money Institutions

There are currently only two electronic money institutions registered in Estonia and authorised by the Estonian Financial Supervision Authority (EFSA)⁶³⁰: inHouse Pay, which accepts and processes payments, and IPF Digital, which offers credit solutions. The two EMIs can conduct their activities in any of the 31 EEA member states due to EEA passport rules. Even though these two companies hold e-money licences, they do not truly act as EMIs. However, Wallester and Pocopay - payment institution licence holders - do act as e-money institutions. Wellester is a licensed white-label Visa card issuer, while Pocopay is a licensed Mastercard card issuer. Note that Pocopay has currently stopped onboarding new customers in order to enhance its product offer.

ЕМІ	Group	Number of employees	Revenue (Million €)	Net Income (Million €)	LinkedIn
Pocopay	Independent company	n/a	2,13	0,27	<u>Link</u>
Wallester	Placet Group	15	0,79	-0,96	<u>Link</u>

Source: Orbis | 2021 Financials

Payment Service Providers

Nets Estonia and Swedbank process card payments in Estonia. The card payment system in Estonia is managed mostly by Nets Estonia which acts as the settlement agent between parties in the four-party card scheme⁶³¹.

Most Estonian merchants use their banks (or specialised subsidiaries of banks such as Maksekeskus) as their card acquirer and to get access to local bank transfers. International PSPs do not play a significant role in Estonia, with the exception of Stripe, which attracts small local merchants in particular, and the Lithuania-based PSP Paysera.

20 payment service providers are currently operating and authorised by the Estonian Financial Supervision Authority (EFSA),⁶³² including major players EveryPay, Maksekeskus and Montonio.

EveryPay helps merchants accept and process Visa and Mastercard payments, as well as bank payments from major Estonian banks and alternative payments such as Paypal. It also offers acquiring services used by Swedbank, SEB Bank and LHV.

Maksekeskus - owned by leading bank Luminor - is a gateway operating in the Baltic region that accepts bank payments, card payments, mobile payments and other online payment solutions for e-commerce. Maksekeskus was acquired by Luminor Bank in July 2022⁶³³.

Montonio is an e-commerce checkout solution created by a small startup based in Tallinn, Estonia. The startup currently supports all major banks in the Baltics and a few major banks in Finland. In April 2022, the company raised an 11 million € Series A funding round led by Index Ventures to expand further in Europe, starting in Poland. As customers often initiate payments from their bank accounts directly in Estonia, Montonio has built out open banking connections in order to initiate payments at a lower cost⁶³⁴.

Concerning local Estonian players, Paytailor is the only startup operating specifically in Estonia. It provides a payment solutions platform that accepts online payments for merchants and businesses.

PSP	Group	Number of employees	Revenue (Million €)	Net Income (Million €)	LinkedIn
<u>Maksekeskus</u>	Luminor Bank	20	6,09	1,60	<u>Link</u>
Nets Estonia	Nexi SPA	47	5,24	0,53	<u>Link</u>
<u>Esto</u>	Parent company	n/a	2,13	0,27	<u>Link</u>
EveryPay	Independent company	23	1,47	-0,48	<u>Link</u>
Montonio Finance	Parent company	64	1,20	n/a	<u>Link</u>
Wallester	Placet Group	15	0,79	-0,96	<u>Link</u>
Paysera EE	Independent company	6	0,26	0,02	<u>Link</u>
Coop Finants	Coop Pank	n/a	n/a	7,89	Link
inHouse Pay	Unit Invest	2	n/a	-0,22	Link
PayEx Sverige Eesti Filiaal	Swedbank	n/a	n/a	n/a	Link

⁶³⁰ https://euclid.eba.europa.eu/register/

^{631 &}lt;a href="https://www.eestipank.ee/en/card-payment-system">https://www.eestipank.ee/en/card-payment-system

⁶³² https://euclid.eba.europa.eu/register/

⁶³³ https://www.luminor.lv/en/news/luminor-completes-acquisition-maksekeskus

⁶³⁴ https://techcrunch.com/2022/04/12/montonio-is-building-the-payment-and-checkout-solution-to-rule-them-all/

Banking-as-a-Service

Several BaaS companies are based in Estonia on account of the particular role the country plays in fintech, though most are at an early stage. Tuum and AdvaPay are both worth mentioning.

Tuum, previously known as Modularbank⁶³⁵, is a core banking technology provider that has developed a cloud-agnostic and modular platform for banks, fintechs and traditionally non-financial companies to quickly and easily roll out new financial products and services. It serves players such as Nets Estonia and Veriff, among others. While Tuum is based in Estonia, it does not really act "locally", but is rather based in the country to gain access to the EU after Brexit.

Advapay is a technology and consulting provider for banks and fintechs that offers integrated banking and payment services. It defines itself as an end-to-end digital core banking solution: an engine, APIs, back and front office, SaaS, BaaS, software licence and software codes. Advapay operates mainly in Estonia.

BaaS	Group	Number of employees	Revenue (Million €)	Net Income (Million €)	LinkedIn
Modular Technologies (Tuum)	Parent company	n/a	2,43	-2,36	<u>Link</u>
Advapay	Independent company	5	0,59	0,10	<u>Link</u>

Source: Orbis | 2021 Financials

Local & Alternative Payment Methods

As mentioned above, Estonia is a technologically mature market when it comes to payment methods, with contactless cards and digital options dominating the market. Estonians are looking for convenient, fast and secure payment methods. Options that allow Estonians to use a single service for different purposes are popular: a debit card that is also a customer card, a student card or a transport card⁶³⁶. Payment via online and mobile banking is quite common in Estonia. It is used for approximately 65% of all online payments - much more than in other European countries. As a result, bank transfer solutions (50% of payments) and e-wallets (10% of payments) are Estonia's favourite payment methods⁶³⁷.

Relevant local e-wallets include Paysera and mTasku. Based in Lithuania, Paysera enables customers to pay and transfer money in a few clicks. The local digital wallet mTasku - developed by Talio but now owned by Moneery - is used by nearly 100.000 people in Estonia. The company offers virtual loyalty cards of several popular companies such as Kaubamaja Group's Partnerkaart, Alexela's loyal customer card and Estravel's loyal customer card⁶³⁸.

The Lithuanian fintech Nikulipe enables instant bank transfers via its Banklinq service. Built on open banking, the Baltic payment method Bankling offers a payment option that addresses regional complexities and covers all relevant banks in the Baltics.

Additionally, some companies are also working on cryptocurrency as a payment method. This is the case of Wert and Swapin, which are developing payment tools for the crypto industry.

Boku offers mobile carrier billing. It acquired Fortumo in July 2020. Fortumo primarily focused on providing mobile payment solutions to SMEs but it also served larger merchants such as Google, Amazon and Tencent⁶³⁹.

Local Payment Method	Group	Number of employees	Revenue (Million €)	Net Income (Million €)	LinkedIn
Boku Network Services	Boku Network Services Holdings	200	8,45	0,43	<u>Link</u>
Paysera EE	Independent company	6	0,26	0,02	<u>Link</u>
TavexWise	Independent company	2	0,38	0,20	<u>Link</u>
Ungaro (Swapin)	Payster Group	n/a	0,17	0,02	<u>Link</u>
SHA2 Solutions (Wert)	Independent company	7	0,02	-0,45	<u>Link</u>
<u>Paywerk</u>	Independent company	4	0,00	-0,21	<u>Link</u>
<u>Mobiamo</u>	Independent company	n/a	n/a	n/a	<u>Link</u>
Modena Payments	Modena	n/a	n/a	n/a	<u>Link</u>
Moneery	Independent company	n/a	n/a	n/a	<u>Link</u>

⁶³⁵ https://www.retailbankerinternational.com/news/core-banking-platform-modularbank-rebrands-as-tuum/

Kantar Public, Study on New Digital Payment Methods, May 2022 https://www.ecb.europa.eu/paym/digital_euro/investigation/profuse/shared/files/dedocs/ecb.dedocs220330_report.en.pdf

⁶³⁷ https://www.ppro.com/countries/estonia/

https://www.euronics.ee/en/news/the-digital-wallet-mtasku-changes-owners

⁶³⁹ https://www.finextra.com/pressarticle/82951/mobile-payments-outfit-boku-to-buy-fortumo

Others

Other important companies in the payments ecosystem include Veriff, the industry leader in online identity verification - an increasingly important topic. Veriffs intelligent decision engine analyses thousands of technological and behavioural variables in seconds, matching people to more than 10.200 government-issued IDs from over 190 countries.

Other	Group	Number of employees	Revenue (Million €)	Net Income (Million €)	LinkedIn
<u>Veriff OU</u>	Veriff Inc	373	14,30	-12,72	<u>Link</u>

Latvia

Introduction

As of August 2022, 29% of total transactions were made in cash, while the remaining 71% were non-cash payment transactions⁶⁴⁰. As in many other countries, the COVID-19 outbreak led to a substantial shift in consumer preference for cashless payments, as only 64% of transactions were non-cash payments in February 2020. The growing adoption of contactless payments has positively supported the growth of card-based payments in the country. Alternative payments solutions such as e-wallets are increasingly gaining traction as well⁶⁴¹. Additionally, the number of contactless POS devices increased by 13,9% following COVID-19⁶⁴².

These efforts towards cashless payments started with Latvijas Banka which, in 2017, was the first bank⁶⁴³ to set up a compliant SEPA SCT instant payment system ("EKS system") that "ensures the processing of customer retail payments across the SEPA"⁶⁴⁴. Additionally, TARGET2-Latvija provides an infrastructure for payment processing in Latvia. Finally, at international level, Latvia has ensured instant payments with the RT1 pan-European instant payment infrastructure since 2017.⁶⁴⁵

To comply with the new level of European anti-fraud regulations, Latvia also focused on fighting money laundering with new regulations in 2019⁶⁴⁶.

Within this payment structure, debit cards are the most common type of cards, with 86% of the market⁶⁴⁷. Alternative payment solutions are progressively gaining importance in Latvia. Google Pay and Apple Pay were launched in Latvia between 2019 and 2020, enabling users to make in-store and online payments⁶⁴⁸.

Banks

As in most Baltic countries, Latvia is no exception to the rule as its banking market is heavily dependent on Scandinavianowned banking players, especially Swedish banks⁶⁴⁹. Indeed, Swedbank and SEB Banka hold nearly 60% of the market share. They were the first and third biggest banks respectively in terms of total assets in 2021. A slight decrease of 2% in Swedbank's market share between 2020 and 2021 contrasted with the large increase of 10% made by the second largest bank: the Latvian Citadele Banka. Citadele Banka aims to become the first bank of choice for individuals and small businesses in the Baltics.

Also worthy of mention is AS Rietumu Banka, another Latvian bank which was ranked the fourth largest bank in Latvia in terms of total assets, with a market share of 7,5%, and finally the newly named BlueOr Bank which was in fifth position in this ranking, with 4,3% of the market share⁶⁵⁰. The company changed its name in March 2022 from BlueOrange Bank following global trends towards simplicity and conciseness in the digital environment⁶⁵¹.

Other smaller Latvian banks operate on the market such as Regionala Investiciju Bank, Industra Bank, LPB Bank, etc., but they represent only a minor part of the Latvian banking market.

International neobank brands such as Revolut, Lithuania-based ZEN.com and the business bank European Merchant Bank are also becoming increasingly popular in Latvia.

- 640 https://www.bank.lv/en/tasks/payment-systems/payment-radar
- 641 https://www.globaldata.com/store/report/latvia-cards-and-payments-market-analysis/
- 642 https://www.openpr.com/news/2471033/latvia-cards-and-payments-market-report-statistical-analysis
- 643 https://www.ebf.eu/latvia/
- 644 https://www.marketresearch.com/globaldata-v3648/payments-landscape-latvia-opportunities-risks-11823361/
- 645 https://www.marketresearch.com/globaldata-v3648/payments-landscape-latvia-opportunities-risks-11823361/
- 646 https://www.luxembourgforfinance.com/wp-content/uploads/2020/06/The-European-Union-Payments-landscape-in-perspective.pdf
- 647 https://www.statista.com/statistics/1096824/credit-card-and-debit-card-number-in-latvia/
- 648 https://www.businesswire.com/news/home/20200225005904/en/Latvia-Cards-Payments-Market-to-2023-Emergence-of-Contactless-Technology-has-Supported-the-Growth-of-Card-Based-Payments---ResearchAndMarkets.com
- 649 PA EU, The European Payments Landscape in Perspective, Report 2020 https://www.luxembourgforfinance.com/wp-content/uploads/2020/06/The-European-Union-Payments-landscape-in-perspective.pdf
- 650 https://thebanks.eu/
- 651 https://www.financelatvia.eu/en/news/bluor-bank-our-new-brand-and-name/

150

Bank	Group	Number of employees	Revenue (Million €)	Net Income (Million €)	LinkedIn
Swedbank	Swedbank	1.409	189,33	73,52	<u>Link</u>
<u>Citadele Banka</u>	Parent company	1.335	159,48	55,05	<u>Link</u>
SEB banka	Skandinaviska Enskilda Banken	882	113,20	66,30	<u>Link</u>
Rietumu Bank Group	Parent company	558	81,98	28,88	<u>Link</u>
BluOr Bank	BBG	203	27,45	9,43	<u>Link</u>
Regionala investiciju banka	Parent company	134	20,92	12,92	<u>Link</u>
<u>LPB Bank</u>	MONO	228	16,90	5,51	<u>Link</u>
Baltic International Bank	Independent company	n.a.	13,86	-5,32	<u>Link</u>
Industra Bank	Independent company	166	9,72	1,52	<u>Link</u>
Signet Bank	SB Resolution	68	3,01	-2,11	<u>Link</u>

Electronic Money Institutions

There are currently four electronic money institutions licensed and authorised by the Latvian Financial Capital Market Commission (FCMC). The EMIs can conduct their activities in any of the 31 EEA member states due to EEA passport rules.

Here are a few companies that act as e-money institutions:

ЕМІ	Group	Number of employees	Revenue (Million €)	Net Income (Million €)	LinkedIn
Royal PAY Europe	iIndependent company	19	73,43	10,37	<u>Link</u>
Bilderlings Pay,	Bilderlings Holdings	92	2,81	0,02	<u>Link</u>
Transact PRO	iIndependent company	34	2,79 €	-0,70 €	<u>Link</u>
Weststein	Parent company	5	0,69	0,13	<u>Link</u>
Latcard	First Latcard	4	0,09	-0,28	<u>Link</u>
<u>Vialet Finance</u>	Via SMS Group	2	0,07	-0,17	<u>Link</u>

Source: Orbis | 2021 Financials

Transact PRO is the largest non-banking Mastercard issuer in the Baltics. Interestingly, the company partnered with Mastercard and the municipality of Jelgava in September 2022 to bring City Key cards to Latvia. The card will serve as an identity tool for residents and a way to receive services, benefits and allowances - boosting the effectiveness of the administration, accounting and management of benefits for its citizens⁶⁵².

Payment Service Providers

Like the other Baltic countries, the majority of Latvian merchants use their bank as a card acquirer and to get access to local bank transfers. The most relevant merchant PSP in Latvia is Lithuanian native Paysera. Other locally relevant PSPs are Paynt (formerly Paydoo) and Transact Pro, while international merchants play a less important role, with Stripe being the most relevant global PSP present in Latvia.

PSP	Group	Number of employees	Revenue (Million €)	Net Income (Million €)	LinkedIn
Worldline Latvia	Worldline	130	14,74	1,92	<u>Link</u>
Transact PRO	independent company	34	2,79	-0,70	<u>Link</u>
<u>Paynt</u>	independent company	26	2,12	0,57	<u>Link</u>
Paysera Latvia	Parent company	10	0,38	0,12	<u>Link</u>

https://www.mastercard.com/news/europe/en/newsroom/press-releases/en/2022/september-2022/mastercard-transact-pro-and-the-municipality-of-jelgava-bring-city-key-cards-to-latvia-for-the-first-time/

Open Banking Enablers

Nordigen, a GoCardless company, is the first free open banking data provider in Europe to provide regulated connections to more than 2300 European banks.

Open Banking Enabler	Group	Number of employees	Revenue (Million €)	Net Income (Million €)	LinkedIn
Nordigen Solutions	GoCardless	39	1,06	-0,71	<u>Link</u>

Source: Orbis | 2021 Financials

Local & Alternative Payment Methods

Since COVID-19, the number of cash payments has decreased significantly. In early 2022, the National Bank of Latvia was reporting that non-cash transactions had increased by 27% compared to the first six months of 2021. Debit cards are much more popular than credit cards. In the credit cards market, Mastercard accounts for 75% of the total market as against Visa at 25%.

With more people using cards, mobile payment solutions are gaining in popularity. Latvia-based Mobilly, among others, offers mobile payments for public transport tickets and other public services.

For online payments, cards are responsible for approximately 50% of all payments. Local payment methods – such as Online Banking payments and wallets – are increasingly important for e-shoppers.

Besides global wallet giant Paypal, the Baltic's largest wallet Paysera is popular in Latvia, as is Banklinq, a local banking payment option offered by Lithuania-based fintech Nikulipe. Banklinq allows customers of all relevant banks in Latvia to easily pay by instant bank transfer.

Local Payment Method	Group	Number of employees	Revenue (Million €)	Net Income (Million €)	LinkedIn
<u>Mobilly</u>	Parent company	30	1,44	0,03	<u>Link</u>
Paysera Latvia	Parent company	10	0,38	0,12	<u>Link</u>

Source: Orbis | 2021 Financials

Others

Other important companies in the payments ecosystem include D8 Corporation, X Infotech and Sollo.

Other	Group	Number of employees	Revenue (Million €)	Net Income (Million €)	LinkedIn
X Infotech SIA	Peng Ooi GOH	57	6,61	1,74	<u>Link</u>
D8 Corporation SIA	parent company	59	3,78	0,43	<u>Link</u>
Sollo LV SIA	Sollo UAB	3	1,11	0,09	<u>Link</u>

Lithuania

Introduction

Over the last decade, Lithuania has become the leader in continental Europe for the number of licensed payment and e-money institutions. Almost 150 fintechs have a licence in this Baltic country, many of them being international companies such as Revolut, Curve and Airwallex. Brexit accelerated this trend, as many fintechs with UK-FCA licences chose Lithuania as their EU hub and for their EU-wide licence. Lithuania's Fintech ecosystem attracts both existing players and startups in various fields including analytics and big data, cybersecurity, digital banking, e-money, blockchain, cryptocurrencies and financial software⁶⁵³.

By continuously focusing on improving its business and regulatory environment, Lithuania has strengthened its position as one of the best ecosystems in the world for the development and rapid scaling of innovative fintech solutions. Lithuania offers a business-friendly regulatory environment with efficient licensing processes and a rich talent pool in software development, anti-money laundering and compliance, customer support and operations⁶⁵⁴. As an illustration, the central bank of Lithuania has recently revoked UAB Epayblock's licence due to *systemic violations in the area of anti-money laundering*⁶⁵⁵.

Lithuania's payments system is dominated by bank transfers, accounting for 57% of all payments. Compared to the other Baltic countries, card-based payments are the lowest in the mix with 17% of the share, while cash-based payments are the highest, representing a significant 13% of the share⁶⁵⁶.

Banks

There are currently 85 credit institutions operating in Lithuania, including six Lithuanian banks, seven branches of foreign banks and 71 credit unions⁶⁵⁷.

Not to be outdone by the other Baltic countries, Lithuania is overwhelmingly dominated by two Swedish banks. Indeed, more than 85% of the Lithuanian banking market is controlled by two Swedish banks, Swedbank and SEB Bankas (with notably half of the market taken by Swedbank)⁶⁵⁸.

In addition, other regional banks operating in the Baltic region are present in the Lithuanian market, including Citadele Bank of Latvia and Luminor Bank of Estonia.

As for Lithuanian banks, the remaining part of the market is shared by three traditional national banks that only operate locally. These are Siauliu Bank, Medicinos Bank and Lietuvos Centrinė Kredito Unija⁶⁵⁹.

Other banks have also emerged in recent years, offering only online banking services. These include domestic players such as European Merchant Bank and Mano Bank, and foreign online banks such as Revolut, which has established a licensed banking entity in Lithuania to maintain access to the European market.⁶⁶⁰

Bank	Group	Number of employees	Revenue (Million €)	Net Income (Million €)	LinkedIn
Swedbank	Swedbank	1.818	245,77	87,21	Link
SEB Bankas	Skandinaviska Enskilda Banken	1.339	215,80	113,86	Link
<u>Siauliu Bankas</u>	Parent company	882	115,79	55,22	Link
Medicinos Bankas	Independent company	307	20,47	4,39	Link
Revolut Bank	Revolut	52	3,54	-6,88	Link
Mano Bankas	Parent Company	64	1,96	1,20	<u>Link</u>
SME Bank	AKM Finance & Magnus Inv.	25	1,49	-0,22	<u>Link</u>
Bigbank Filialas	Bigbank	88	n/a	n/a	<u>Link</u>
European Merchant Bank	Three Commas	54	n/a	n/a	Link

⁶⁵³ https://thebanks.eu/articles/e-money-institutions-in-the-fintech-ecosystem-of-lithuania

⁶⁵⁴ https://investlithuania.com/tech/fintech

⁶⁵⁵ https://www.lb.lt/lt/naujienos/uz-siurkscius-pinigu-plovimo-prevencijos-reikalavimu-pazeidimus-panaikinta-uab-epayblock-licencija

⁶⁵⁶ https://www.ppro.com/countries/lithuania/

^{657 &}lt;a href="https://thebanks.eu/countries/Lithuania/banking_sector">https://thebanks.eu/countries/Lithuania/banking_sector

⁶⁵⁸ https://thebanks.eu/countries/Lithuania/major_banks

https://thebanks.eu/countries/Lithuania/banking_sector

⁶⁶⁰ https://thebanks.eu/countries/Lithuania/banking_sector

Electronic Money Institutions

Lithuania is a leader in continental Europe in terms of EMI licences. 83 EMIs currently operate in Lithuania and are licensed and authorised by Bank of Lithuania (BoL)⁶⁶¹. The EMIs can conduct their activities in any of the 31 EEA member states due to EEA passport rules. Furthermore, EMIs operating in Lithuania are mainly focused on providing alternative banking solutions to natural persons and companies and enabling international money transfers, payment processing infrastructure and solutions.

Over the past few years, Lithuania has seen a major shift in the finance and payments industry. During 2016-2020, the number of EMIs increased 6-fold. As mentioned above, many fintechs have moved from the UK to Lithuania due to Brexit to gain secure access to the European market. This access translates into banking, e-money and payment institution licences. It was the e-money institution licence in particular that UK fintechs applied for in Lithuania. In 2021, the total value of customer funds safeguarded was 5 billion, in comparison with just 400 million in 2019, which proves this trend⁶⁶². So, against the backdrop of Brexit, Lithuania is gradually turning into a hub for new financial technologies, where a growing number of players from the UK are trying to continue operating in the European Union.

But besides big international fintech brands such as Revolut, Curve, SumUp, Flywire and Nium that use Lithuania as their hub for a continental European licence, Lithuania is home to many highly innovative local fintechs. In fact the majority of Lithuanian licensed EMIs were founded locally and are often successful far beyond the local borders. Some of the largest local fintechs are Connectpay, Wallter, Maneuver (trading as Genome), Via Payments, local payment methods specialist Nikulipe and Kevin, the A2A Infrastructure fintech which was awarded CEE Fintech company of the year in 2021.

ЕМІ	Group	Number of employees	Revenue (Million €)	Net Income (Million €)	LinkedIn
Walletto	Securita	18	19,06	4,00	<u>Link</u>
Phoenix Payments	Independent company	12	17,95	-9,55	<u>Link</u>
Wallter, UAB	Wallter Payments LTD	20	14,60	1,23	<u>Link</u>
Perlas Finance	UAB Lotena	19	10,20	3,80	<u>Link</u>
Zen.Com	Zen.Com	11	8,74	-3,32	<u>Link</u>
VIA Payments	Via SMS group AS	18	6,54	0,38	<u>Link</u>
Connectpay	Independent company	72	6,53	-1,87	<u>Link</u>
Transactive Systems	Parent company	15	5,52	1,99	<u>Link</u>
Payswix	Parent company	26	5,05	0,42	<u>Link</u>
Pervesk	Obolis Ltd	63	2,35	0,35	<u>Link</u>
Maneuver LT (Genome)	FSNS Solutions Holding Ltd.	22	2,30	0,23	<u>Link</u>
SumUp EU Payments	SumUp Holdings	10	2,27	0,08	<u>Link</u>
Paytend Europe	Independent company	6	2,20	0,44	<u>Link</u>
Satchelpay	Independent company	19	1,54	-0,15	<u>Link</u>
Guru Pay	Parent company	14	1,38	0,08	<u>Link</u>
<u>Valyuz</u>	Independent company	27	1,18	-0,83	<u>Link</u>
IBS Lithuania	International Business Settlement	18	1,06	0,35	<u>Link</u>
<u>DiPocket</u>	DiPocket Group	9	0,29	-0,35	<u>Link</u>

Source: Orbis | 2021 Financials

Payment Service Providers

There are currently 37 active payment institutions registered and authorised by the Bank of Lithuania 663. That notwithstanding, not all of them are relevant for the local market but use Lithuania as a gateway to do business in the EU.

Like the other Baltic countries, the majority of Lithuanian merchants use their local bank as a card acquirer and to get access to local bank transfers. The most relevant international PSPs are Stripe and Estonia-based Montonio, both of which are significant, especially with smaller local merchants.

The most relevant local PSP is Paysera. Paysera was the first EMI holder in Lithuania (2004). However, today the company provides payment services (and hence acts as a PSP) and is also creating an industry-leading super-app. Paysera enables customers to accept online payments in e-shops, sell tickets to events, trade gold and manage their funds via the Paysera mobile app (which has had more than 1 million downloads).

⁶⁶¹ https://euclid.eba.europa.eu/register/pir/search

⁶⁶² https://thebanks.eu/articles/e-money-institutions-in-the-fintech-ecosystem-of-Lithuania

⁶⁶³ https://euclid.eba.europa.eu/register/

PSP	Group	Number of employees	Revenue (Million €)	Net Income (Million €)	LinkedIn
Paysera LT	Parent company	124	14,46	1,65	<u>Link</u>
Nayax Europe	Nayax	2	14,14	0,21	<u>Link</u>
Shift4 Payments Lithuania	Shift4 Payments	232	10,46	0,80	<u>Link</u>
Flywire Europe	Flywire	1	5,37	0,09	Link
Alternative Payments	Alternative Payments	2	4,97	0,16	<u>Link</u>
Paynt,	Choice Europe	7	4,47	-0,04	<u>Link</u>
Paystrax	European Payments	23	4,19	n/a	<u>Link</u>
Ashburn International	Parent company	35	3,46	0,03	Link
Click2sell (cardinity)	Independent company	16	2,57	0,01	<u>Link</u>
Bankera	Parent company	65	1,89	0,06	<u>Link</u>
Opay Solutions	Opay	10	1,04	0,18	<u>Link</u>

Banking-as-a-Service

As Lithuania became a fintech hub, many BaaS providers have a presence in this Baltic country while there are almost no local BaaS providers originating in Lithuania, with local BaaS-company Verified Payments being one of the few successful exceptions.

The large international BaaS players present in Lithuania include UK native Contis (acquired by Solaris in 2021), Embedded Finance SaaS provider Railsr (formerly Railsbank) and German based BaaS-Unicorn Mambu.

BaaS	Group	Number of employees	Revenue (Million €)	Net Income (Million €)	LinkedIn
Finansines Paslaugos Contis	Solaris	3	29,42	9,76	<u>Link</u>
Mambu	Mambu BV	89	5,45	0,16	<u>Link</u>
Railsbank Technology (Railsr)	Parent company	52	4,46	0,32	<u>Link</u>

Source: Orbis | 2021 Financials

Open Banking Enablers

Many companies based in Lithuania are creating Open Banking solutions. According to Tadas Češkevičius, Lithuania country manager at Yapily: "Lithuania is well-positioned to play a leading role in the evolution and the success of Open Banking across the EU - not just from a licensing perspective, but also from a cultural one." As a result, the British BaaS company Yapily has established its main office in Vilnius.

Open Banking Enabler	Group	Number of employees	Revenue (Million €)	Net Income (Million €)	LinkedIn
NEO Finance	UAB Era Capital	35	3,44	0,12	<u>Link</u>
Kevin EU	Independent company	98	0,05	-4,71	<u>Link</u>
Yapily Connect	Yapily Connect Ltd	12	0,02	0,00	<u>Link</u>

Local & Alternative Payment Methods

Less than one third of the Lithuanian population use cards as a preferred payment option when shopping online. Payment by bank transfer is the preferred option for more than 50% of Lithuanian online shoppers. While the individual bank link solutions offered by each bank are still dominant with local merchants, international e-commerce platforms prefer a single solution covering multiple banks such as Banklinq, a Baltic online-banking payment option offered by Lithuania-based fintech Nikulipe. Wallets such as PayPal or local wallet-market leader Paysera also have a relevant market share⁶⁶⁴.

Local Payment Method	Group	Number of employees	Revenue (Million €)	Net Income (Million €)	LinkedIn
Paysera LT	Parent company	124	14,46	1,65	<u>Link</u>
Nikulipe	Bergwand GMBH	15	0,03	n/a	<u>Link</u>
NEO Finance	UAB Era Capital	35	3,44	0,12	<u>Link</u>

Source: Orbis | 2021 Financials

Others

Other relevant players include the infrastructure provider NexPay.

Other	Group	Number of employees	Revenue (Million €)	Net Income (Million €)	LinkedIn
NexPay	Independent company	29	2,29	0,14	<u>Link</u>

Source: Orbis | 2021 Financials

664 https://www.ppro.com/countries/lithuania/; https://nikulipe.com/countries/lithuania/

Nordic countries

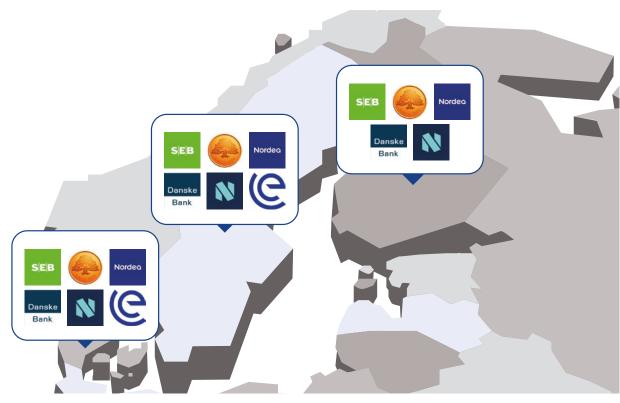
Introduction

The Nordic region comprises Denmark, Finland and Sweden. It is the most advanced region in terms of payments. It is characterised by a high penetration rate and really low cash usage.

"We trust our governments more than many countries do, and we're willing to share information. This combination of trust and collaboration created a strong foundation for today's industry." stated Claus Bukenborg, head of Customer Solutions for Danske Bank⁶⁶⁵. This collaborative environment explains how Nordic countries lead fintech solutions, especially in the digital payments field.

Moreover, this region is characterised by almost no cash payments, with notably one of the most cashless societies: Sweden⁶⁶⁶. Therefore, while Denmark and Sweden have developed their own mobile payment solution to face this new trend, Finland and Norway's populations have switched to card-based payments⁶⁶⁷. The global trend of the Nordic region aims at account-to-account payments, which is supported once again by trust and an innovative environment⁶⁶⁸.

Banks



As with the Baltic states, the Nordic countries can be seen as a larger consolidated Nordic market. Most Nordic banks operate on a regional level; the major regional banks being Nordea Bank, Danske Bank, Skandinaviska Enskilda Banken (SEB) and Swedbank.

Nordea bank is the leading universal bank in the Nordics. This major bank operates in Denmark, Finland, Norway and Sweden 669 . It is worth mentioning that the company entered the EURO STOXX 50^{670} Index in September 2022^{671} .

Danske Bank is the largest bank in Denmark, the third largest bank in Finland and the fifth largest bank in Sweden⁶⁷². Interestingly, Danske Bank offers Nordic accounts for people that have fixed expenses in Denmark, Sweden and Norway. This kind of account is convenient for people that either have a summer house in one of those countries or that live abroad. It enables users to avoid currency exchange fees and inconvenience when paying bills, withdrawing cash and paying for goods in shops⁶⁷³.

- 665 https://www.mckinsey.com/industries/financial-services/our-insights/nordic-payments-where-collaboration-and-competition-lead-to-innovation
- 666 https://www.europeanpaymentscouncil.eu/news-insights/insight/sweden-cashless-society-and-digital-transformation
- 667 https://www.argusadvisoryresearch.com/reports/country-reports/europe/nordics-payments-research-reports.html
- 668 https://www.luxembourgforfinance.com/wp-content/uploads/2020/06/The-European-Union-Payments-landscape-in-perspective.pdf
- 669 https://www.nordea.com/en/about-us/who-are-we/our-markets
- Supersector leader index which comprises the the 50 largest listed companies in the Eurozone
- 671 https://www.nordea.com/en/press/2022-09-02/nordea-joins-the-flagship-euro-stoxx-50-index
- 672 https://danskebank.com/about-us
- 673 https://danskebank.dk/en/personal/products/accounts/konto-i-norden

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Skandinaviska Enskilda Banken (SEB) is the leading corporate bank in the Nordics and one of the leading universal banks in the Nordics and the Baltics⁶⁷⁴.

While Swedbank's home markets are Sweden, Estonia, Latvia and Lithuania - where the bank offers services such as loans and mortgages, savings and investments, payment services, pension and insurance, and private banking -, the bank also has international branches, including in Denmark and Finland⁶⁷⁵.

In November 2022, the merger of Nordax Bank and Bank Norwegian was registered with the Swedish Companies Registration Office and is thus complete⁶⁷⁶. Nordax Group has thus become a leading company in the Nordic market by combining the capabilities of Nordax and Bank Norwegian.

Handelsbanken previously operated in the three Nordic countries, but announced in October 2021 that it would be leaving Denmark and Finland, as the group saw little opportunity to scale up its offerings without significant investment⁶⁷⁷. In November 2022, Handelsbanken finalised the sale of its operations in Denmark to Jyske Bank⁶⁷⁸.

Entercard is present in Denmark, Sweden and Norway. The company is one of the leading credit institutions in Scandinavia, with over 1,7 million customers over their three markets. Entercard is a joint venture between Swedbank and Barclays Principal Investments Limited.

The Nordic challenger bank Lunarbank raised 77 million US\$ at a 2 billion US\$ valuation in March 2022⁶⁷⁹. The bank currently operates in Denmark and Sweden, and has announced its plan to acquire Instabank which has customers in Norway, Finland and Germany. This would open up the Finnish market⁶⁸⁰.

⁶⁷⁴ https://sebgroup.com/about-us/our-business/our-locations

⁶⁷⁵ https://swedbank.com/about-swedbank/organisation/our-markets.html

https://www.globenewswire.com/en/news-release/2022/11/30/2564979/0/en/The-merger-between-Nordax-Bank-AB-publ-and-Bank-Norwegian-ASA-has-been-completed.html

⁶⁷⁷ https://www.helsinkitimes.fi/business/20215-handelsbanken-announces-decision-to-depart-from-finland-denmark.html

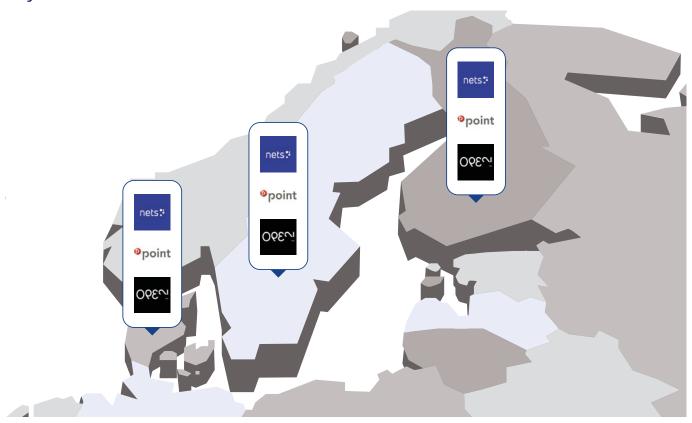
⁶⁷⁸ https://vp292.alertir.com/afw/files/press/handelsbanken/202211302477-1.pdf

⁶⁷⁹ https://techcrunch.com/2022/03/10/lunar-the-nordic-neo-bank-raises-77m-at-a-2b-valuation-and-launches-crypto-trading-platform-and-b2b-payments/

⁶⁸⁰ https://www.lunar.app/en/personal/blog/corporate-news/lunar-instabank-acquistion-updates

Bank	Group	Number of employees	Revenue (Million €)	Net Income (Million €)	LinkedIn
Nordea Bank	Parent company	29.239	9.669,00	3.831,00	<u>Link</u>
<u>Danske Bank</u>	Parent company	21.754	6.396,40	1.738,61	<u>Link</u>
Skandinaviska Enskilda Banken	Parent company	15.500	5.335,19	2.483,55	<u>Link</u>
Swedbank	Parent company	17.700	4.580,64	2.038,97	<u>Link</u>
Jyske Bank	Parent company	3.257	1.238,29	427,39	<u>Link</u>
IKANO Bank	ICAF Antillen	352	216,96	54,51	<u>Link</u>
SVEA Ekonomi	Parent company	1.069	585,03	-9,89	<u>Link</u>
Entercard Group	Parent company	2.113	387,54	84,69	<u>Link</u>
Resurs Bank	Resurs Holding	452	321,29	82,62	<u>Link</u>
Nordax Group	Nordax Holdings	630	300,89	92,54	<u>Link</u>
Komplett Bank	Independent company	145	88,00	-21,00	<u>Link</u>
Lea Bank	Parent company	41	49,00	13,00	Link
<u>Lunar Bank</u>	Lunar Group	19	n/a	-23,67	Link

Payment Service Providers



Nets, part of the Italian Nexi group, 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 and acquiring and processing services in the Nordic market for specific industries.

Point Transaction System was acquired by Verifone in 2012. It is a Nordic payment gateway and the leading supplier of ATMs to Nordic banks.

It is also important to note that the international PSP Worldline has acquired Handelsbanken's card acquiring activities in the Nordics. This acquisition is part of Worldline's strategy to expand its presence across Europe through partnerships with leading local financial institutions⁶⁸¹. Moreover, in May 2022, Worldline renewed its strategic partnership with Tietoevry Banking for card acquiring processing services for the next five years. The agreement includes Worldline's authorisation processing services in the Nordic market⁶⁸².

PSP	Group	Number of employees	Revenue (Million €)	Net Income (Million €)	LinkedIn
<u>Nets</u>	Nexi	2.983	733,70	1.665,70	<u>Link</u>
Open Pos Nordic Group	Opensolution Nordic Group	129	18,04	-7,85	<u>Link</u>
<u>Verifone</u> / Point	Francisco Partners Feeder	62	n/a	8,84	<u>Link</u>

Source: Orbis | 2021 Financials

Open Banking Enablers

Neonomics is an open banking company unifying access to more than 2.500 banks and 150 million bank customers across Europe via its platform⁶⁸³. The company won the Fintech Finance 2022 Award in the Open Banking category for the second time in a row⁶⁸⁴ and has been listed in the 10 Nordic fintechs to watch in 2022 by the Nordic Fintech Magazine⁶⁸⁵. In November 2022, the French payment leader Worldline partnered with the Nordic open banking provider Neonomics to strengthen its services across Europe, and to expand its account-to-account payments and data aggregation coverage to Nordic countries Norway, Sweden, Denmark and Finland⁶⁸⁶.

Open Banking Enabler	Group	Number of employees	Revenue (Million €)	Net Income (Million €)	LinkedIn
Neonomics AS	Fintech Innovation, Chicos Holding, Berger Associates & others	76	0,46	-4,54	<u>Link</u>

Source: Orbis | 2021 Financials

Local & Alternative Payment Methods

Mobile payment apps are on the rise in the Nordic countries. Paying with a debit or credit card is still the most common payment method, but the use of mobile payment apps is increasing in all countries of the region. Danes were the most frequent users of mobile payment apps as of September 2019, when almost half the population used this payment method at least once a week⁶⁸⁷.

Finally, MobilePay is establishing itself as the major mobile payment method in the Nordic countries. It is widely used in Denmark and Finland, while Swedes use their local mobile app called Swish. At the end of 2021, Danske Bank (MobilePay's parent company) announced the merger of MobilePay with the Norwegian Vipps and the Finnish Pivo. The ambition of these deals is to create Europe's best and most comprehensive mobile wallet - serving 11 million users and over 330.000 shops and web-shops⁶⁸⁸. The merger of MobilePay and Vipps was approved by the relevant authorities in October 2022⁶⁸⁹. Just 7 weeks after Vipps MobilePay came into being, the company passed 1 billion transactions during 2022⁶⁹⁰.

Other major payment methods include buy-now pay-later company Klarna and account-to-account solution Trustly. Both tend to be more international. However, as these payment methods are widely used in the Nordic countries, it was essential to include the two companies in the regional section.

⁶⁸¹ https://www.globenewswire.com/en/news-release/2021/10/18/2315913/0/en/Worldline-completes-the-acquisition-of-Handelsbanken-s-card-acquiring-activities-in-the-Nordics.html

⁶⁸² https://www.tietoevry.com/en/newsroom/all-news-and-releases/press-releases/2022/05/wordline-strategic-partnership/

https://www.neonomics.io/blog/open-banking-is-evolving-and-so-are-we

⁶⁸⁴ https://www.neonomics.io/blog/neonomics-wins-fintech-finance-2022-award-open-banking-category

⁶⁸⁵ https://www.neonomics.io/blog/10-nordic-fintechs-to-watch-in-2022-2023

⁶⁸⁶ https://thefintechtimes.com/worldline-launches-nordic-payments-services-through-open-banking-partner-neonomics/

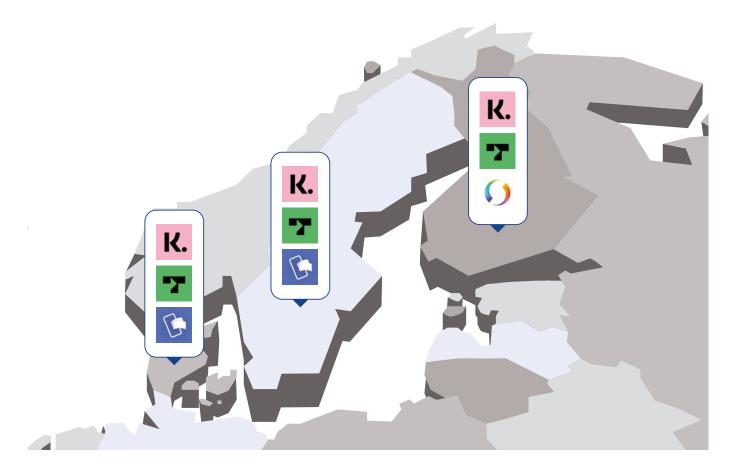
https://www.statista.com/topics/6279/mobile-payments-in-the-nordics/#dossierkeyfigures%20

⁶⁸⁸ https://danskebank.com/news-and-insights/news-archive/company-announcements/2021/ca30062021

https://danskebank.com/news-and-insights/news-archive/company-announcements/2022/ca21102022

⁶⁹⁰ https://vippsmobilepay.com/news/2022/12/20/nordic-payment-challenger-passes-1-billion-transactions

Local Payment Method	Group	Number of employees	Revenue (Million €)	Net Income (Million €)	LinkedIn
Klarna Holding	pParent company	n/a	1.363,00	-696,00	<u>Link</u>
Trustly Group	Parent company	429	187,75	31,55	<u>Link</u>
<u>MobilePay</u>	Danske Bank	82	n/a	-29,00	<u>Link</u>



Denmark

Introduction

The Danish market is typical of the Nordic region in that it is characterised by high internet penetration (96,5% in 2020) and very low cash usage (12% share of total payment transactions in 2022⁶⁹¹).

Card-based payments account for 50% of Danish payments⁶⁹², in which debit cards are the most widely used type, representing approximately 80% of the total number of cards of 2021⁶⁹³. Moreover, the card transactions market is expected to grow at 7,5% over the next 5 years.

Additionally, wallet payments are also important in Denmark, with 25% of the market share⁶⁹⁴ due notably to MobilePay, which is the most popular mobile wallet brand in Denmark (4,4 million users out of 5,8 million Danes), followed by the international brand PayPal. Apple Pay and Google Pay also have a presence in the market⁶⁹⁵.

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, developed by Nets Denmark. Nowadays, Dankort debit cards are co-branded with Visa debit cards which allows Danes to make purchases abroad and in shops where Dankort is not accepted. Dankort is the most popular payment scheme as it is used by 85% of the Danish population⁶⁹⁶. In 2019, 71% of the Danish annual cards distributed were Dankort branded, while Mastercard and Visa distribution represented only 17% and 11% respectively⁶⁹⁷.

Banks

Danish domestic banks hold 87,5% of the industry's total assets, while foreign banks hold 12,5%. The largest banks in the country are Danske Bank, Nykredit, Nordea and Jyske bank.

Danske Bank is the largest bank in Denmark, holding almost 30% of the domestic market share⁶⁹⁸. It issues Mastercard and Visa cards co-branded Dankort. Concerning mobile payments and wearables, it offers payment services from MobilePay, Apple Pay, Google Pay, Fitbit and Garmin Pay.

The second largest bank is Nykredit. Like Danske Bank, it issues Mastercard credit cards and debit cards co-branded Visa and Dankort, and offers mobile payment solutions through MobilePay, Google Pay, Apple Pay, Fitbit and Garmin Pay.

Jyske Bank is the third largest bank in the country⁶⁹⁹. The bank became famous for being the world's first bank to launch a negative interest rate on mortgages⁷⁰⁰. Jyske Bank offers Mastercard credit cards, Visa debit cards and Dankort debit cards. In combination with these cards, Jyske Bank offers mobile payment solutions such as Visa Mobile and the other mobile payment solutions cited above.

The Finnish Nordea Bank is the fourth largest bank in the country. It offers Visa and Dankort debit cards and Mastercard credit cards that can also be linked to mobile payment solutions.

Many other local banks are present on the market, including Spar Nord Bank, Arbejdernes Landsbank, Sydbank, Ringkjoebing Landbobank, Sparekassen Kronjylland, Sparekassen Vendsyssel, Vestiysk Bank and Kompasbank.

Other foreign banks are also present in Denmark - particularly major Swedish banks including Handelsbanken, Swedbank and SEB Bank. SEB Bank issues its Mastercard credit cards through Eurocard, while Swedbank issues its Mastercard credit cards through EnterCard.

The Danes also use the Danish Lunar app, a neobank offering Visa cards. Finally, international fintechs such as Revolut, N26 and Monese are also present on the Danish market.

- $\underline{ \text{https://www.nationalbanken.dk/en/publications/Documents/2022/03/ANALYSIS_no3_The \%20use \%20of \%20 cash \%20 in \%20 society.pdf} \\ \underline{ \text{https://www.nationalbanken.dk/en/publications/Documents/2022/03/ANALYSIS_no3_The \%20 use \%20 of \%20 cash \%20 in \%20 society.pdf} \\ \underline{ \text{https://www.nationalbanken.dk/en/publications/Documents/2022/03/ANALYSIS_no3_The \%20 use \%20 of \%20 cash \%20 in \%20 society.pdf} \\ \underline{ \text{https://www.nationalbanken.dk/en/publications/Documents/2022/03/ANALYSIS_no3_The \%20 use \%20 of \%20 cash \%20 in \%20 society.pdf} \\ \underline{ \text{https://www.nationalbanken.dk/en/publications/Documents/2022/03/ANALYSIS_no3_The \%20 use \%20 in \%20 society.pdf} \\ \underline{ \text{https://www.nationalbanken.dk/en/publications/Documents/2022/03/ANALYSIS_no3_The \%20 use \%20 in \%20 use \%20 in \%20 use \%20 in \%20 use \%20$
- 692 https://www.ppro.com/countries/denmark/
- 693 https://www.statista.com/statistics/1096788/credit-card-and-debit-card-numbers-in-denmark/
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- 696 https://www.multisafepay.com/be_fr/solutions/methodes-de-paiement/dankort
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- 698 https://thebanks.eu/countries/Denmark/major_banks
- 699 https://jyskebank.com/about
- 700 https://www.globaldata.com/store/report/denmark-cards-and-payments-market-analysis/

Bank	Group	Number of employees	Revenue (Million €)	Net Income (Million €)	LinkedIn
Danske Bank	Parent company	21.754	6.396,40	1.738,61	<u>Link</u>
<u>Jyske Bank</u>	Parent company	3.257	1.238,29	427,39	<u>Link</u>
Nykredit Bank	Forenet Kredit FMBA	974	853,97	377,33	<u>Link</u>
<u>Sydbank</u>	Parent company	2.077	640,14	189,87	<u>Link</u>
Spar Nord Bank	Parent company	1.608	506,78	184,09	<u>Link</u>
Arbejdernes Landsbank	Parent company	1.804	489,88	178,83	<u>Link</u>
Ringkjobing Landbobank	Parent company	626	329,76	165,42	<u>Link</u>
<u>Sparekassen</u>	Parent company	841	315,53	134,94	<u>Link</u>
<u>Vestjysk Bank</u>	Parent company	657	273,90	145,30	<u>Link</u>
Sparekassen Kronjylland	Parent company	757	196,00	57,11	<u>Link</u>
Kompasbank	Independent company	20	0,02	-5,86	<u>Link</u>
Resurs Bank	Resurs Bank	75	n/a	n/a	<u>Link</u>
SEB Kort Bank	SEB Kort Bank	n/a	n/a	n/a	<u>Link</u>
Nordea Danmark	Nordea Bank	7.500	n/a	n/a	<u>Link</u>
<u>Handelsbanken</u>	Svenska Handelsbanken	750	n/a	n/a	<u>Link</u>
SEB Danmark	SEB	350	n/a	n/a	<u>Link</u>
<u>Ikano Bank</u>	Ikano Bank AB	75	n/a	n/a	<u>Link</u>
<u>Lunar Bank</u>	Lunar Group	19	n/a	-23,67	<u>Link</u>

Electronic Money Institutions

There are four e-money institutions in Denmark⁷⁰¹, including the renowned local brand MobilePay (described in the 'Local Payment Methods' section below). The three others are international companies: the expense management company Pleo, the finance app Ziglu and the Swedish Entercard.

ЕМІ	Group	Number of employees	Revenue (Million €)	Net Income (Million €)	LinkedIn
<u>Pleo</u>	Pleo Holding	850	n/a	7,97	<u>Link</u>
Ziglu	Ziglu	80	n/a	-0,01	<u>Link</u>
<u>MobilePay</u>	Danske Bank	274	n/a	-28,02	<u>Link</u>
EnterCard Danmark	Entercard Group	35	n/a	n/a	<u>Link</u>

Source: Orbis | 2021 Financials

Payment Service Providers

There are 18 payment institutions registered and authorised in Denmark⁷⁰².

The largest payment gateways are Nets and Point Transaction System (Verifone Denmark). As mentioned in the section above, these two players are present in all the Nordic countries and also in the Baltic countries.

Nets uses its services thanks to its agreement with BOKIS, a Danish payment and card co-operative of 52 banks (including domestic banks such as Nykredit, Sydbank, Arbejdernes Landsbank and Spar Nord). BOKIS ensures 45% of the country's payment market through these 52 banks⁷⁰³. In January 2023, Nets extended its partnership with BOKIS. As a result, BOKIS continues to issue and process Dankort and international payment cards through Nets⁷⁰⁴.

Moreover, Nets has also partnered with Softpay.io. Together they launched SoftPOS, a system that enables companies to accept contactless payment through smartphones or tablets. SoftPay is already used by Salling group, namely the largest retailer in Denmark⁷⁰⁵, as well as by DSB, the largest operating train company⁷⁰⁶.

Other local payment service providers include Altapay, Paylike, Reepay and QuickPay.

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 handles transactions for 33.000 merchants daily. It has a strong presence in Denmark as the company holds more than 20% of the market share in the country⁷⁰⁷.

- 701 EUCLID
- 702 EUCLID
- 703 https://www.bokis.dk/Sider/AboutUs.aspx
- 704 https://www.crowdfundinsider.com/2022/12/200137-danish-payment-firm-bokis-extennds-partnership-with-nets/
- 705 https://www.nets.eu/Media-and-press/news/Pages/Nets-launches-Softpay-together-with-Softpay-turning-the-mobile-phone-into-a-contactless-payment-terminal.aspx
- 706 https://www.nets.eu/Media-and-press/news/Pages/DSB-rolls-out-new-mobile-payment-solution-powered-by-SoftPay-and-Nets.aspx
- 707 https://www.clearhaus.com/about/

PSP	Group	Number of employees	Revenue (Million €)	Net Income (Million €)	LinkedIn
NETS Denmark	Nexi	1.773	625,74	2.580,33	<u>Link</u>
Clearhaus	Clearhaus Holding	58	100,88	11,00	<u>Link</u>
Verifone Denmark (Point Transaction System)	Francisco Partners Feeder	62	n/a	8,84	<u>Link</u>
<u>Multisafepay</u>	Multisafepay	n/a	n/a	n/a	<u>Link</u>
Reepay	INI	7	n/a	0,85	<u>Link</u>
Pensopay	Independent company	13	n/a	0,39	<u>Link</u>
Scanpay	Independent company	n/a	n/a	0,00	<u>Link</u>
Lunar Payments (Paylike)	Lunar Bank	3	n/a	0,18	<u>Link</u>
Altapay	Fjeslsted Rasmussen Invest	28	n/a	0,30	<u>Link</u>
QuickPay	Pow Invest	17	n/a	2,36	<u>Link</u>
OPEN POS Denmark	Opensolution Nordic Group Holding	n/a	n/a	0,11	<u>Link</u>

Local & Alternative Payment Methods

Dankort is Denmark's preferred payment scheme. Similarly to local payment schemes, Dankort is often co-branded with international schemes such as Visa and Mastercard. During the third quarter of 2022, more than 64% of card transactions were made with a co-branded Dankort card. 30% of transactions were made with an international debit card and only 1% were made with a credit card. This ratio has remained steady over the last few years⁷⁰⁸.

Launched in 2013 by Danske Bank, MobilePay is an app that facilitates payments in-store as well as online. It is now the most common mobile payment app in Denmark and is used by 85% of the population, which makes MobilePay the main actor in the Danish payments landscape⁷⁰⁹. The app registered 97.000 daily active users in January 2020. It was used by 100% of Danes aged between 20 and 29, and 99% of 30-39 year olds in April 2021.⁷¹⁰

As said in the above section, the Swedish companies Klarna and Trustly are also present in Denmark. Klarna is competing with Safepay and Viabill, which are two buy-now-pay-later services operating in Denmark.

Finally, Inpay and November First are two cross-border payment providers based in Denmark. Inpay is the fastest growing company in Denmark, and the sixth fastest growing fintech in Europe, with more than 160 employees. November First offers cross-border payment services to small and medium-sized companies.

Local Payment Method	Group	Number of employees	Revenue (Million €)	Net Income (Million €)	LinkedIn
Viabill	The holding Co.	50	10,62	3,53	<u>Link</u>
Inpay	Inpay Holding	160	23,80	10,01	<u>Link</u>
Safepay	Parent company	n/a	n/a	-0,57	<u>Link</u>
<u>MobilePay</u>	Danske Bank	274	n/a	-28,02	<u>Link</u>
<u>Klarna</u>	Klarna Bank	15	n/a	n/a	<u>Link</u>

Source: Orbis | 2021 Financials

Others

Unwire is a platform specialised in mobile mobility and payment solutions. Cardlay is a strategic partner to banks, card issuers, processors and other financial institutions in the digital transformation process.

Other	Group	Number of employees	Revenue (Million €)	Net Income (Million €)	LinkedIn
<u>Unwire</u>	Parent company	18	n/a	-0,01	<u>Link</u>
Cardlay Holding	Parent company	n/a	n/a	-3,17	<u>Link</u>

https://www.dst.dk/en/statistik/emner/oekonomi/digitale-betalinger/betalingskort

https://www.mordorintelligence.com/industry-reports/denmark-payments-market

⁷¹⁰ https://www.statista.com/statistics/1097937/share-of-mobilepay-users-in-denmark-by-age-groups/

Finland

Introduction

Like the other Nordic countries, Finland has very low cash usage and a strong preference for electronic payments; 92% of Finns primarily make payments electronically⁷¹. Nevertheless, according to a consumer survey conducted by the Bank of Finland in March 2021, 96% of Finns used physical cards, 48% used mobile devices and 69% still used cash in some situations. Cash therefore remains an important means of payment in Finland in specific circumstances⁷¹².

Bank transfers, card-based payments and wallets are relatively well distributed and account for 31%, 26% and 23% of e-commerce transactions respectively 713 . Concerning wallets, the Danish app MobilePay is also well-known 714 in Finland and play a major role in the score of the wallets solution in the mix 715 .

As regards payment schemes, there are no local payment schemes. Both Visa and Mastercard are used more or less equally. Visa has a market share of 55% while Mastercard holds 45% of the market 716 .

Banks

The Finnish banking market is dominated by four major players: Nordea Bank, OP Financial Group, Danske Bank and Municipality Finance. Together, the four banks hold around 75% of the market share⁷¹⁷.

The largest bank in Finland is Nordea Bank, with a 61% market share. The bank issues Mastercard credit and debit cards and mobile payment solutions from Apple Pay, Google Pay, Siirto and Nordea Wallet. As seen in the above section, the Finnish bank is also one of the leading banks in the Nordic region. It serves around 3 million customers in Finland and more than 10 million in the Nordic region⁷¹⁸.

OP Financial Group is the second biggest bank with 11% of the market. It issues Visa credit and debit cards and Mastercard credit cards. It offers bill and e-invoice payments, and mobile payments from Siirto. OP Financial Group also developed the mobile app Pivo⁷¹⁹. Originally, Pivo was only available for OP customers. The app is directly linked to the OP bank account and its bank card. It also operates in the Baltics through OP Corporate Banks⁷²⁰. Note that Pivo was supposed to merge with the Danish leader MobilePay in 2022⁷²¹. However, the merger did not take place as it would have adversely affected competition in the mobile payment space in Finland⁷²².

Finally, Municipality Finance is the third largest bank and holds 6% of the market share, followed by Danske Bank which has also a significant share of the Finnish banking market⁷²³.

Next to these four leaders are local players such as Aktia Bank, S-Pankki, Ålandsbanken and Pop Pankki. Aktia Bank offers mobile payment services with its own app, Aktia Wallet. Apart from Danske Bank, there are other foreign players present on the market such as SEB, Resurs Bank, Ikano Bank and BNP Paribas Fortis.

Concerning the use of neobanks, Finns use Revolut, N26 and Monese, as well as domestic players such as Holvi, which does not yet hold a banking licence. Holvi offers online payment accounts and issues Mastercard credit cards for businesses.

- 711 https://www.privacyshield.gov/article?id=Finland-Methods-of-Payment
- 712 https://www.bofbulletin.fi/en/2021/2/covid-19-pandemic-causing-permanent-change-in-payment-habits/
- 713 https://www.ppro.com/countries/finland/
- 714 https://www.adyen.com/payment-methods/mobilepay
- 715 https://www.paytrail.com/en/this-is-how-mobilepay-works
- 716 https://www.ppro.com/countries/finland/
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- 720 https://www.op.fi/op-financial-group/debt-investors/corporate-governance-op-corporate-bank-plc/structure-of-op-financial-group-and-pohjola-group
- 721 https://mobilepay.dk/nyheder/2021/06/30/mobilepay-to-merge-with-norwegian-vipps-and-finnish-pivo
- 722 https://www.mobilepay.dk/nyheder/2022/09/16/mobilepay-merger
- 723 https://pdf.co/largest-banks-in-finland

Bank	Group	Number of employees	Revenue (Million €)	Net Income (Million €)	LinkedIn
Nordea Bank	Parent company	29.239	9.669,00	3.831,00	<u>Link</u>
OP Corporate Bank	OP Osuuskunta	767	655,00	215,00	<u>Link</u>
Municipality Finance	Parent company	164	305,69	191,61	<u>Link</u>
Aktia Bank	Parent company	854	257,27	67,36	<u>Link</u>
<u>S-Pankki</u>	Parent company	687	187,00	19,55	<u>Link</u>
<u>Alandsbanken</u>	Parent company	527	174,60	39,85	<u>Link</u>
Pop Pankki	Parent company	822	167,41	37,11	<u>Link</u>
Oma Saastopankki	Parent company	344	147,18	66,25	<u>Link</u>
Svenska Handelsbanken	Svenska Handelsbanken	750	0,10	n/a	<u>Link</u>
Resurs Bank	Resurs Bank	75	20,00	n/a	<u>Link</u>
SEB Kort Bank	SEB Kort Bank	35	15,00	n/a	<u>Link</u>
BNP Paribas	BNP Paribas	7	1,50	n/a	<u>Link</u>
<u>Danske Bank</u>	Danske Bank	1.000	0,10	n/a	<u>Link</u>
<u>Ikano Bank I</u>	Ikano Bank	35	0,10	n/a	<u>Link</u>

Electronic Money Institutions

The neobank Holvi offers online payment accounts and issues Mastercard cards for businesses. Zevoy is an expense management company present in both the Nordics and the Baltics. Zevoy issues Visa business cards. Narvi also offers business accounts.

Enfuce is the "one-stop shop for card issuing and payment processing". The company holds an e-money institution licence. This company will be described in more detail in the following sub-section. It provides payment and banking services for banks, fintechs and merchants. Concerning payments, it issues prepaid, debit and credit cards, and processes transactions from Apple Pay, Google Pay and Samsung Pay. It also offers open banking services for financial institutions and fintechs to deliver financial and banking services compliant with PSD2.

ЕМІ	Group	Number of employees	Revenue (Million €)	Net Income (Million €)	LinkedIn
Holvi Payment Services	Holvi Payment Services	80	6,21	-5,46	<u>Link</u>
Enfuce License Services	Enfuce Financial Services	1	0,06	-0,09	<u>Link</u>
Zevoy	Supersonic Helsinki AB	14	0,03	-1,74	<u>Link</u>
Narvi Payments	Independent company	n/a	n/a	n/a	<u>Link</u>

Source: Orbis | 2021 Financials

Payment Service Providers

There are currently 18 active payment institutions in Finland⁷²⁴. Paytrail, which is part of Nets Group, is Finland's local payment solution service. This payment institution currently serves more than 10.000 merchants.

PSP	Group	Number of employees	Revenue (Million €)	Net Income (Million €)	LinkedIn
<u>Verifone</u>	Verifone Nordic	99	42,19	4,37	<u>Link</u>
<u>Paytrail</u>	Nets Group	59	18,27	4,53	<u>Link</u>
Enfuce Financial Services	Parent company	68	7,85	-6,43	<u>Link</u>
OPEN POS	OY Piinom	44	7,63	1,18	<u>Link</u>

Source: Orbis | 2021 Financials

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Local & Alternative Payment Methods

When shopping online, the Finns' preferred payment methods are online bank transfers through Paytrail and Trustly. These methods are followed by the classic international credit and debit card brands Mastercard and Visa, followed by the Swedish BNPL Klarna and the MobilePay app⁷²⁵.

Used by 20% of the Finnish population, the Danish MobilePay app is the most common mobile payment app in Finland. However, this figure is quite low in comparison to Denmark, where the app is used by 85% of the local population⁷²⁶.

Finally, Siirto is a Finnish mobile application that enables users to transfer and receive payments with a phone number. Siru Mobile is another mobile payment method from Finland.

Local Payment Method	Group	Number of employees	Revenue (Million €)	Net Income (Million €)	LinkedIn
Klarna	Klarna Holding	18	5,43	2,20	<u>Link</u>
Siru Mobile	Parent company	n/a	1,08	-0,05	<u>Link</u>
Trustly Finland	Trustly	4	0,78	0,00	<u>Link</u>
Siirto Brand	OP Osuuskunta	n/a	n/a	-0,17	<u>Link</u>

Source: Orbis | 2021 Financials

Others

Smaller companies play out of scope roles in the Finnish payment ecosystem. ePassi, for example, offers solutions to companies that want to reward their employees with non-monetary revenue, notably with well-being activities. On the other hand, Zervant helps hundreds of thousands of SMEs across Europe to manager their invoices⁷²⁷.

Other	Group	Number of employees	Revenue (Million €)	Net Income (Million €)	LinkedIn
ePassi Payments	Asianajotoimisto Dla Piper Finland	34	191,29	7,59	<u>Link</u>
Zervant	Parent company	37	3,23	-4,60	<u>Link</u>
<u>Bankify</u>	Parent company	5	0,15	-0,19	<u>Link</u>

⁷²⁵ https://www.about-payments.com/e-commerce-markets/which-online-payment-methods-to-accept-in-finland

⁷²⁶ https://www.statista.com/statistics/1097937/share-of-mobilepay-users-in-denmark-by-age-groups/

^{727 &}lt;a href="https://www.zervant.com/en/about-us/">https://www.zervant.com/en/about-us/

Sweden

Introduction

Sweden is widely referred to as a pioneer in the move towards a cashless society. According to Sweden's central bank (Riksbank), the proportion of Swedes using cash decreased from 39% to 9% from 2010 to 2020. Currently, cash is mainly used to make small payments and by the elderly⁷²⁸. In 2022, cash usage has once again decreased by 5% and the central bank Riksbank has indicated that it would continue following this trend, while reassuring that cash would still have a role to play in Sweden's future⁷²⁹.

This decrease is 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. Additionally, the pandemic also played a role in this trend to a lesser extent⁷³⁰.

Moreover, to meet the needs of an increasingly cashless society, the Riksbank is piloting a digital currency (CBDC) called the e-Krona. The currency is currently available for purchasing and selling⁷³¹.

In terms of payment schemes, Mastercard dominates, with Visa a strong second. However, consumers tend to have no preference for one or the other and changes in the operator landscape are mainly due to banks changing operators⁷³².

Finally, Sweden is one of the leading countries in terms of fintech performance. According to a European fintech opportunity report, it is just one step away from the UK, which is currently in first position, and outperforms the almighty US⁷³³. This position explains the success of the abovementioned fintechs but also other Swedish fintechs that are currently booming, including the open banking enabler Tink and the mobile banking application Rocker.

Banks

Sweden's banks are usually considered as strong and high-performing compared to their European peers⁷³⁴. There are currently around 150 banks. In 2020, the three largest banks in Sweden in terms of assets were – in descending order – Svenska Handelsbanken, Skandinaviska Enskilda Banken (abbreviated SEB) and Swedbank, with the first two having a market share of around 20% while the third bank has approximately 13%⁷³⁵. The first two banks are in a fierce dispute for first place, such that SEB succeeded in coming in first in 2021.

Handelsbanken issues Mastercard debit and credit cards and Maestro debit cards. It also offers mobile payments through Samsung Pay, Apple Pay and Swish. The bank also operates in the other Nordic countries (accounting for 8% of its operating revenue). However, following a new strategic decision, it is going to withdraw from the other Nordic countries and thus dispose of its Finnish and Danish subsidiaries⁷³⁶.

SEB issues Mastercard debit and credit cards, and offers payment methods through wearables with Fitbit, Garmin, Samsung and Fidesmo, as well as mobile payment through Samsung Pay, Apple Pay and Swish. The bank has a subsidiary called SEB Kort Bank that issues private and corporate cards in Sweden and in the other Nordic countries. The card issued and administered by SEB Kort Bank is called Eurocard.

Finally, Swedbank (operating in the Nordics, the Baltics and the US), issues Mastercard debit and credit cards. To give an order of magnitude, Baltic banking activities account for one fifth of Swedbank's activity⁷³⁷ while 1,6 million, or slightly less than one third of the region's total inhabitants, used SEB Baltics' products and services in 2020⁷³⁸. It also offers mobile payments through Google Pay, Samsung Pay, Apple Pay, Swish and Masterpass, and wearable payments through Fidesmo Pay, Fitbit Pay and Garmin Pay. Furthermore, the company also has a subsidiary called EnterCard that issues credit cards in Sweden and other Nordic countries.

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.

Sweden's banking sector is also represented by a large number of foreign banks, accounting for approximately 20% of the total number of banks⁷³⁹, the main ones being from the neighbouring countries: Nordea from Finland and Dankse from Denmark which are the fourth and fifth biggest banks in Sweden⁷⁴⁰.

- 728 https://sweden.se/life/society/a-cashless-society
- https://www.riksbank.se/en-gb/payments--cash/
- https://www.riksbank.se/en-gb/payments--cash/payments-in-sweden/payments-report-2021/1.-trends-on-the-payment-market/pandemic-730 hastening-development-towards-digital-payments/
- 731 https://www.riksbank.se/en-gb/payments--cash/e-krona/
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- https://nordiccreditrating.com/uploads/2021-02/NCR The Swedish banking market 2021.pdf https://nordiccreditrating.com/uploads/2021-02/NCR The Swedish banking market 2021.pdf 735
- 736 https://www.is.fi/taloussanomat/art-2000008345318.html
- https://www.swedbank.com/about-swedbank/organisation/baltic-banking.html
- https://www.checkpoint.com/customer-stories/seb-baltics/
- https://www.swedishbankers.se/en-us/reports/the-swedish-banking-market/banks-in-sweden/
- 740 https://thebanks.eu/banks/17527/market_share

Bank	Group	Number of employees	Revenue (Million €)	Net Income (Million €)	LinkedIn
Skandinaviska Enskilda Banken	Parent company	15.500	5.335,19	2.483,55	<u>Link</u>
Swedbank	Parent company	17.700	4.580,64	2.038,97	<u>Link</u>
Svenska Handelsbanken	Parent company	10.793	4.577,71	1.909,14	<u>Link</u>
IKANO Bank	ICAF Antillen	1.069	585,03	-9,89	<u>Link</u>
Lansforsakringar Bank	Parent company	638	438,42	180,80	<u>Link</u>
SBAB Bank	Regeringkansliet	839	401,31	203,29	<u>Link</u>
SVEA Ekonomi	Parent company	2.113	387,54	84,69	Link
Avanza Bank	Parent company	603	322,37	199,97	Link
Entercard Group	Parent company	452	321,29	82,62	Link
Resurs Bank	Resurs Holding	630	300,89	92,54	Link
Collector Bank	Collector AB	301	257,61	73,56	Link
ICA Banken	ICA Handlarnas Forbund	452	140,48	-3,00	Link
Marginalen Bank	ESCO Marginalen	281	74,19	5,27	Link
Westra Wermlands Sparbank	Parent company	106	40,11	22,40	Link
FOREX Bank	Parent company	334	27,70	-21,99	Link
Danske Bank	Danske Bank	1.750	n/a	n/a	Link
Santander Consumer Bank	Banco Santander	350	n/a	n/a	<u>Link</u>
Nordea Bank	Nordea Bank	7.500	n/a	n/a	<u>Link</u>
Seb Kort Bank	Skandinaviska Enskilda Banken	350	n/a	n/a	<u>Link</u>
BNP Paribas	BNP Paribas	75	n/a	n/a	<u>Link</u>

Electronic Money Institutions

Finansinspektionen is in charge of the management of the e-money institutions (EMIs) in the territory⁷⁴¹. There are 5 operating EMIs in Sweden according to the EUCLID register, two of which have a global scope: Talkremit AB and Intergiro International Stockholm AB. The others either serve the Nordics (Mynt AB) or only their home country (Steven AB, formerly Pei Development AB, and Smart Refill i Helsingborg AB).

ЕМІ	Group	Number of employees	Revenue (Million €)	Net Income (Million €)	LinkedIn
<u>Smartrefill</u>	BGA Invest	37	62,15	-0,68	<u>Link</u>
<u>Edenred</u>	Edenred	51	12,49	67,27	<u>Link</u>
<u>Intergiro</u>	Parent company	89	2,41	-7,92	<u>Link</u>
<u>Steven</u>	Parent company	5	0,00	-1,58	<u>Link</u>

⁷⁴¹ https://www.fi.se/en/bank/apply-for-authorisation/electronic-money/

Payment Service Providers

Sweden is home to two payment gateways operating on an international level: Zettle, which is part of PayPal, and Bambora, which is part of Worldline. PayEx is another payment gateway operating on a regional level. It has taken over MedMera Bank's store cards for Coop⁷⁴². DIBS Payment from Nets in Denmark is also a regional player and offers gateway and acquiring services.

Moreover, 57 other payment institutions are currently active in Sweden⁷⁴³ under the supervision of the Swedish institution Finansinspektionen. Among them, Swish distinguishes itself from the others by its importance in the Swedish payment system and Trustly also has to be mentioned for its international renown. They both provide online PoS via Bank transfer (see local payment methods for further details).

PSP	Group	Number of employees	Revenue (Million €)	Net Income (Million €)	LinkedIn
<u>Payex</u>	Swedbank AB	683	310,74	-40,36	<u>Link</u>
Bambora	Worldline	156	179,51	5,78	<u>Link</u>
Open Pos	Opensolution Nordic Group	52	7,79	-2,38	<u>Link</u>
Nets	Nets	35	0,01	n/a	<u>Link</u>
Adyen Nordic Bank	Adyen	35	n/a	n/a	<u>Link</u>

Open Banking Enablers

Through its commitment to fintech development, Sweden is seen as a future major actor in Open Banking disruptive innovation⁷⁴⁴. Tink is a good example of this with an open banking solution for businesses. It offers financial services that allow banks and fintechs to develop a wider range of banking and payment services. It initiates invoices and P2P transactions through its own app without having to open several banking apps at the same time, thus improving the customer's journey.

Open Banking Enabler	Group	Number of employees	Revenue (Million €)	Net Income (Million €)	LinkedIn
<u>Tink</u>	Parent company	339	18,58	-26,82	<u>Link</u>

⁷⁴² https://www.euromonitor.com/financial-cards-and-payments-in-sweden/report

⁷⁴³ EUCLID

⁷⁴⁴ https://nordigen.com/en/banks/open-banking/location/se/

Local & Alternative Payment Methods

International 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 US players such as Garmin Pay and Fitbit Pay, as well as a Swedish startup called Fidesmo Pay. The most common mobile payment app in Sweden is Swish (GetSwish AB), which is mainly an e-commerce gateway provider and which enables the integration of its services into physical PoS through bank agreements⁷⁴⁵.

According to a 2020 survey conducted by the Swedish Trade Federation, 94% of Swedes used Swish and the remaining 6% knew the app but did not use it⁷⁴⁶. The app was launched in 2012 as a cooperation between six of the largest banks in Sweden, and is today owned by Danske Bank, Handelsbanken, Länsförsäkringar, Nordea, SEB, Swedbank and Sparbankerna. It offers online and in-store payments for individuals and businesses, and P2P mobile payments through QR codes and payment requests.

Some cafés, restaurants and supermarkets have recently started to display QR codes to give customers the option of paying directly though their mobile application. The verb swisha (to swish) has even entered the day-to-day language. It refers to making a payment with the mobile app Swish⁷⁴⁷. Sweden is home to international alternative payment methods, including Klarna and Trustly.

Trustly offers account-to-account payments which can be used for online shopping. Klarna is a buy-now pay-later service. It is one of the most prominent European paytechs and one of the most valuable startups. Paynova is also an important buy-now pay-later solution. Fidesmo and Rocker are both Swedish e-wallets. While Rocker has around 200.000 users and only operates in Sweden⁷⁴⁸, Fidesmo is present in most European countries. Fidesmo makes it possible to connect contactless services to a variety of devices such as wearables, cards and phones.

Headquartered in Sweden, Klarna is the largest fintech company in the Nordic region. However, 2022 was a hard year for the company (and many other tech companies). Klarna's losses amounted to 200 million US\$ in the third quarter of 2022 after its valuation was chopped by 85% (6,7 million US\$)⁷⁴⁹. Despite the growing losses, the company's CEO has stated that the company has made huge progress towards profitability. The world-renowned BNPL is expected to hit profitability by the second half of 2023⁷⁵⁰.

Similarly, the account-to-account payment method Trustly grew to become the leading global payment platform for digital account-to-account transactions⁷⁵¹.

Local Payment Method	Group	Number of employees	Revenue (Million €)	Net Income (Million €)	LinkedIn
Klarna Bank	Klarna Holding	4.789	1.343,66	-692,86	<u>Link</u>
Trustly Group	Parent company	429	187,75	31,55	<u>Link</u>
<u>Getswish</u>	ilndependent company	15	18,82	-1,07	<u>Link</u>
Rocker	Schibsted ASA	46	8,88	-7,21	<u>Link</u>
Sileon	Parent company	36	3,85	-4,80	<u>Link</u>
<u>Fidesmo</u>	Parent company	12	1,40	-1,38	<u>Link</u>

⁷⁴⁵ https://www.swish.nu/losning/cash-register

⁷⁴⁶ https://www.euromonitor.com/financial-cards-and-payments-in-sweden/report

⁷⁴⁷ https://sweden.se/life/society/a-cashless-society

⁷⁴⁸ https://rocker.com/

⁷⁴⁹ https://news.crunchbase.com/business/2022-vc-startup-tech-top-news-timeline/

https://sifted.eu/articles/klarna-news-losses-double-profitability-2023/

⁷⁵¹ https://www.trustly.net/press/2022/02/trustly_launches_new_growth_strategy_organizational_structure_and_regional_management_teams

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Despite our best efforts, mistakes may have been made. If you wish to send us a correction, don't hesitate to contact us at thebault.de.barsy@thepaymentsassociation.eu

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 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 updated

Banking as a Service (BaaS)

BaaS players offer complete banking processes, such as payments or credit, as a service through modern API- driven platforms.

ePayments-as-a-service (PaaS)

PaaS players operate 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.

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 can be reused later for other electronic payments.

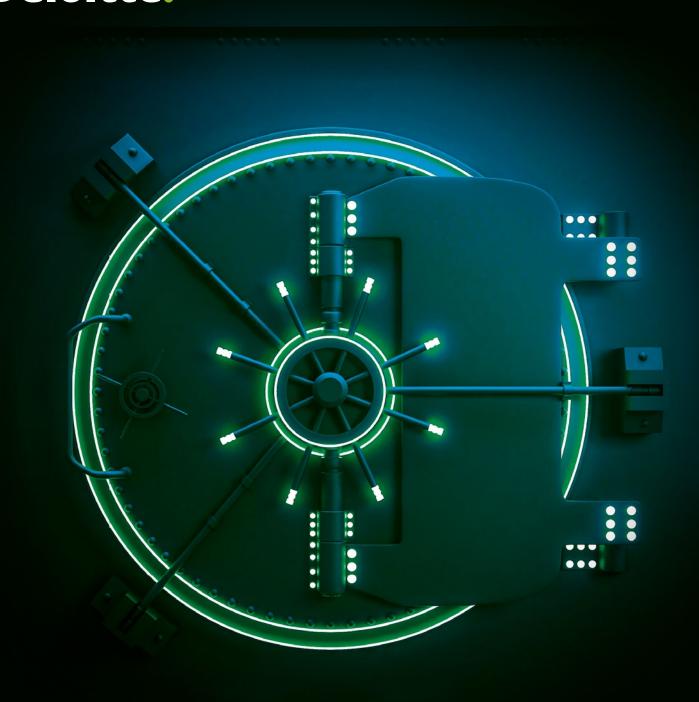
Payment Methods

Payment methods refer to the entire set of means through which shoppers 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.

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Pascal Martino Partner

Partner pamartino@deloitte.lu +352 451 452 119

Pascal Eber Partner peber@deloitte.lu +352 451 452 649 Alexandre Havard Partner ahavard@deloitte.lu +352 451 453 148