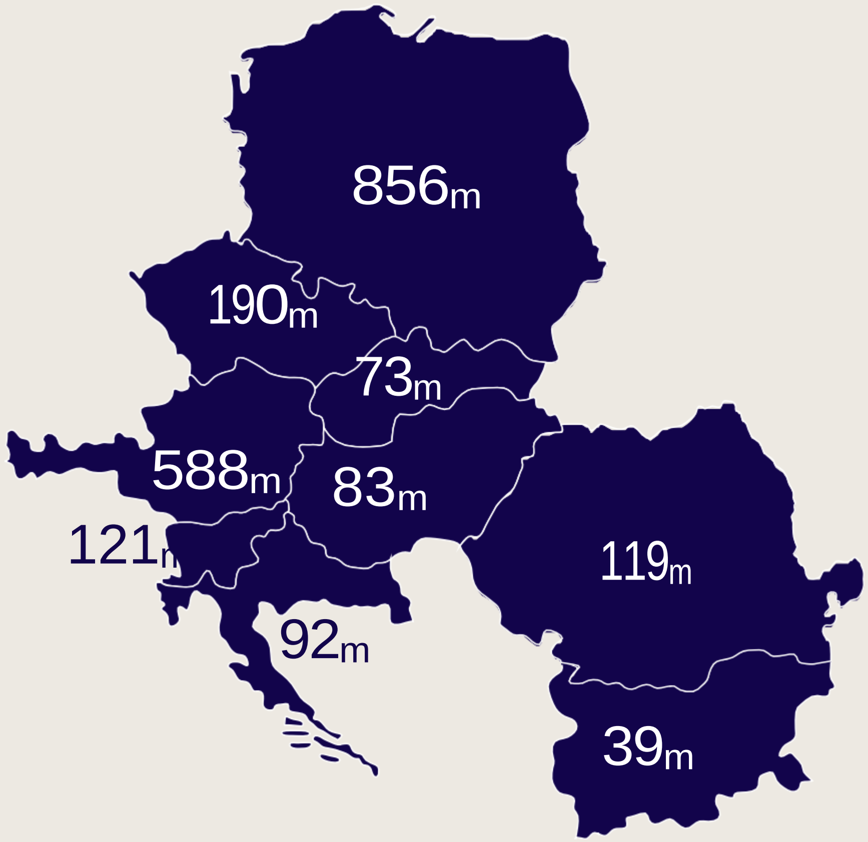
FINTECH IN CEE

Charting the course for innovation in financial services technology

Executive summary
CEE FinTech market size

The estimated size of the FinTech market across the nine CEE countries featured in this report is

EUR
2.2bn



The term "FinTech" refers to IT solutions dedicated to the financial sector, covering software technologies provided by any established or emerging entity. Here, we define the financial sector as consisting of eight sub-segments: banking, insurance, Asset management and capital markets, capital raising and personal finance, payments, data and analytics, cybersecurity and other software.

POLAND
SWOT analysis

Strengths

Poland has weathered the economic crisis fairly well compared to its European neighbours. Since the end of the financial crisis, GDP has increased each year by 3.1% on average (2009 – 2015).

Companies benefit from the large domestic market – Poland is the sixth-largest EU country in terms of population.

The Polish economy is fairly competitive (ranked 41st and as the third best CEE country according to the Global Competitiveness Report).

Gross hourly labour costs in Poland are three times lower than the EU average (EUR 8.4 vs. EUR 24.6).

The ratio of non-performing loans (NPL) is stable (between 4.3% and 5.2% between 2009 – 2015).

Poland is attractive to foreign investors (FDI net inflow totalled 3.2% of GDP in 2014).

Poland rose in the "Doing Business" ranking from 76th in 2009 to 25th in 2015.

Businesses can be registered in a one-stop shop at the National Court Register.

Government has set up 14 Special Economic Zones, locations dedicated to investors where business activity is coupled with preferential conditions such as tax relief and the strong support of municipalities.

Weaknesses

The non-observed economy is estimated to stand at a high 15.4% of GDP.

Poland is ranked 46th in the Global Innovation Index (among EU countries, only Romania is ranked lower).

Real GDP per capita (adjusted to reflect purchasing power) is only 68% of the EU average and is below the Czech Republic, Slovakia and Slovenia.

Poland has one of the lowest savings levels in CEE (1.9% of gross disposable income).

There is a relatively low usage of cloud services both by individuals and enterprises (respectively the third and second lowest in the EU).

Usage of online sales channels by SMEs is below average (EU – 14.5%, PL – below 10%).

Penetration of fixed and wireless broadband is fairly low compared to other OECD countries (18.5% vs 28.8% for fixed and 55% vs 85.5% for wireless).

The activities of regulatory authorities can hamper innovation in the financial sector (in areas including cloud computing, non-bank personal lending and bancassurance).

Opportunities

The high level of business-cycle synchronisation with the advanced German economy, due to an integrated supply chain (exports to Germany accounted for 26% of all Polish exports in 2014).

Poland is the largest beneficiary of EU support. The EU has allocated EUR 82.5 billion to Poland over the 2014–2020 period.

There is a possibility of obtaining dedicated public aid, granted on the basis of an agreement between the Minister of the Economy and the investor. Companies planning to invest in seven selected industries, including R&D and biotechnology sectors, can apply for support.

Numerous domestic FinTech start-ups and mature companies are operating both in Poland and abroad.

Threats

The working-age population is estimated to be set to decrease by 35% between 2013 and 2060 in Poland, and by just 13% in the EU.

The rural population accounts for around 40% of all citizens; this can slow the growth of innovative banking services due to the different preferences of customers (many of whom are clients of co-operative banks).

Poland has one of the lowest shares among OECD members of ICT specialists among the working population (2.4% vs the average 3.6%).

The number of IT students has fallen (from 100,000 to 70,000 between 2006 and 2013).

Source: All information based on publicly available sources (reports, databases, press releases, articles, analyses)

POLAND

Number of:

Commercial banks (2015)
38

Insurers (2015)
59

Asset management companies (2015)
58

Brokerage firms (2015)
53

Cooperative banks which are members of 2 groups: (1) PBS and (2) SGB
565

78%
Banked population

(2014)

50%
Trust in banks (2012)

Source: All information in this chapter is based on publicly available sources (databases, press releases, articles, annual financial reports of financial institutions, reports of financial supervisory bodies)

Financial sector

Banking

Market Outlook
The Polish banking sector is consolidating: there have been 10 major bank mergers since 2009

The top five banks represented 50% of the sector's total assets in 2014 and 64% of net profits[34]

Two thirds of the banking assets in the country belong to foreign-owned banking groups (four of the five biggest banks are part of international banking capital groups)

Regulatory Environment
The major financial regulatory authorities include: National Bank of Poland, Polish Financial Supervision Authority, Banking Guarantee Fund

Future Development
Banking incomes are under pressure (and forecast to decrease in years to come) due to[35]:
- Falling interest rates
- A potential law to convert Swiss franc mortgages (could mean up to EUR 10 billion in losses for the banking sector)
- Implementation of the bank levy: 0.44% of a bank's assets – applicable to banks with assets exceeding PLN 4 billion (~EUR 1 billion)
- Increased obligatory contributions to the Banking Guarantee Fund (the consequence of defaults by several co-operative banks)

As a result, banks have started to seek additional revenue in increased fees and commissions (e.g. on mortgages, current accounts, ATM withdrawals etc.)

Banking sector - TOP5 players

Bank	Assets [EUR bn]	CAGR '12-'14*	Ownership
PKO Bank Polski	58.3	8.8%	Poland
Bank Pekao	39.3	3.6%	Italy
Santander	31.6	30.9%	Spain
mBank	27.7	4.9%	Germany
ING	23.4	8.5%	Netherlands

* Assets

Insurance

Market Outlook

PZU, the biggest Polish insurer, accounts for 30% of the sector's total gross premiums and 66% of net profits (2014)[36]

Top five insurers (life and non-life) made up 57% of total sector gross premiums in 2014 and 88% of net profits (four of the five biggest insurers are part of international financial capital groups)[37]

Banks have a strong role as insurance intermediaries in the life segment (bancassurance generated 38% of GWP in the life segment in Q3 2015[38], but its share is decreasing)

Regulatory Environment

The insurance sector's authorities and regulators include: Polish Financial Supervision Authority, The Polish Insurance Association

Future Development

The expected challenges include:

- Income levels of major insurers will be affected by the introduction of additional tax (0.44% on assets over PLN 2 billion[39])
- New regulations, such as the implementation of Recommendation U (regulating the bancassurance market), restrict banks from being the insurer and the insured at the same time and require banks to give customers transparent product information along with freedom of choice regarding the insurer

Insurance sector - TOP5 players

Insurer	Gross premiums [EUR bn]	CAGR '12-'14*	Ownership
PZU	3.9	(2.5%)	Poland
ERGO HESTIA	1.2	12.6%	Germany
WARTA	1.2	(9.1%)	Germany
COMPENSA	0.6	15.3%	Austria
Allianz	0.6	(10.2%)	Germany

* Gross premiums

Asset management and capital markets

Market Outlook

The top five asset management companies accounted for 45% of total sector assets in 2014. They are owned by Polish capital groups

Total net assets grew by an average of 20% between 2012 and 2015[40]

The capital market is divided according to the size of the listed company: larger established firms are listed on the regulated market (the Warsaw Stock Exchange), while smaller companies are listed on the alternative stock exchange (New Connect)

In 2015, 487 companies (including 57 foreign entities) were listed on the Warsaw Stock Exchange[41]

CEE FinTech market size

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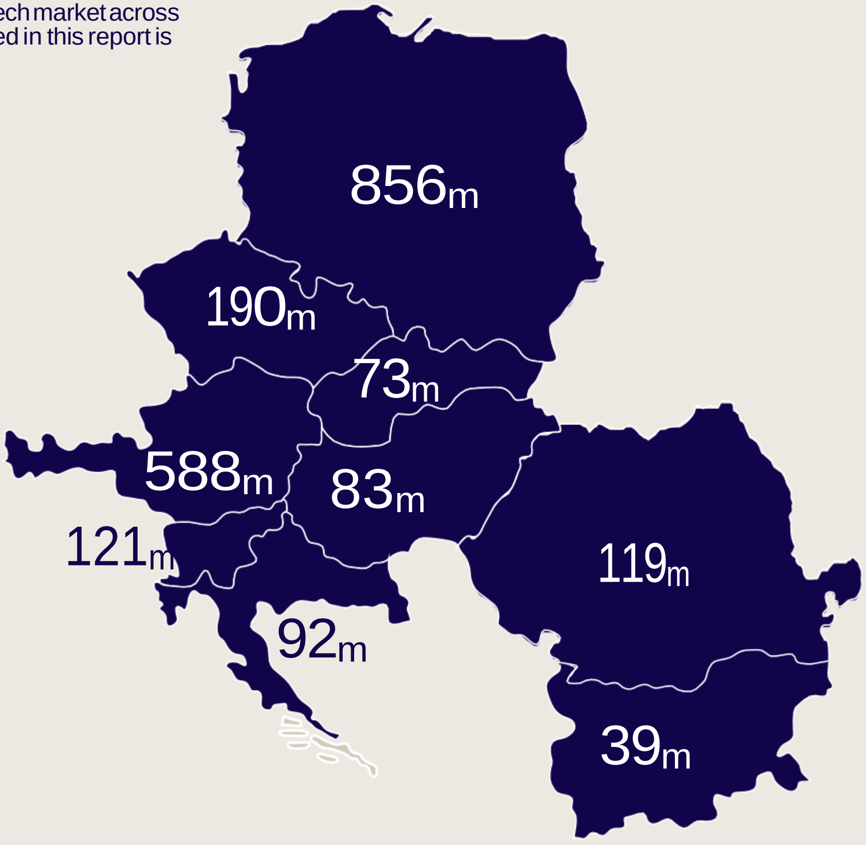
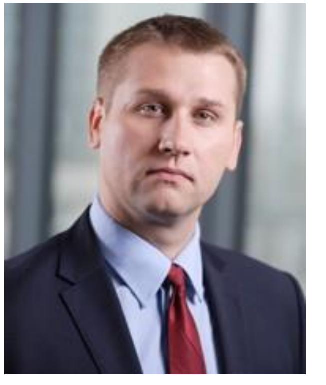


Source: Deloitte analysis

FinTech market outlook
Deloitte expert opinion

The market for financial technology in Poland is relatively innovative and open to new ideas. It provides FinTech vendors with a wide range of opportunities for launching original solutions. However, the technological awareness of customers is high, which translates into heightened expectations.



Szymon Stasczak
Manager
Deloitte Poland

The established financial services industry, in contrast to the emerging FinTech players, is somewhat focused on its core business and is highly regulated. Such asymmetry creates room for FinTech vendors to compete with banks and insurers on B2C services. On the other hand, a rapidly changing environment may motivate the established financial entities to change their approach and start entering new, non-core areas (e.g. screen scraping). This may in turn encourage FinTech companies to collaborate, rather than compete, with banks and insurers.

Regarding specific FinTech sub-segments, it seems that there is hidden potential in the payment area. The upcoming implementation of PSD 2 may tip the balance in favour of the FinTechs in the market due, for example, to easier market entry of global players such as Apple Pay and Google Wallet.

Another interesting trend is increasing demand generated by the public sector for FinTech solutions. For example, banks are supporting new government initiatives such as a new allowance for parents (with applications to be processed through internet banking) and other e-government developments.

The FinTech market in Poland should grow rapidly in the years to come, and there is still space for new players. However, the Polish market is highly competitive (also due to the low cost of labour), and eventual success will depend on the ability of FinTechs to offer advantages including competitive pricing. This is a great advantage for Polish vendors, who not infrequently succeed in expanding internationally (PayU and Asseco, for example).

Innovations in the banking sector Recent developments

Pro-innovation banking

In recent years, Poland has become a regional leader in technologically advanced, pioneering solutions in the banking sector. Mobile is emerging as an essential channel for Polish customers. According to the ING International Survey 2015, 60% of smartphone users have already used mobile banking or expect to use it. This is the third best score in Europe – right behind the Netherlands (67%), the UK (63%) and on a par with Spain[112]. It indicates that mobile banking services have enormous potential for growth in the coming years. On the other hand, 38% of established retail banks in Poland still do not offer their services through the mobile channel, neither via a dedicated app nor a website based on "lite" / RWD (responsive web design) architecture[113].

Another example of the high adoption of innovation in the Polish banking sector is the use of contactless functionality in debit cards. Almost 80% of all cards already have this feature in Poland[114], compared to 54% in the UK[115].

Some banking experts admit that "the digital maturity of Polish banks and the many interesting solutions offered to their clients may limit the development of non-banking innovators". Solutions that succeed on this challenging market will have to be top notch. As a result, FinTech start-ups may never manage to build a dense network similar to the one that may be observed in the UK.

Anticipating customer expectations

In response to shifting customer behaviour, particularly the strong preference towards self-service instead of branch visits, banks have been forced to start building eminence, capabilities and finally excellence in their digital offering. An example of one of the most innovative banks in Poland is mBank (owned by Commerzbank), which started with a fully branchless model, and is currently hailed as "the icon of mobility". To keep up with the digital revolution and stay at the forefront of banking innovation (being first fully-fledged virtual bank in Poland), mBank decided to upgrade its e-banking platform to provide customers with a state-of-the-art experience, look and feel. Among numerous cutting-edge functionalities, it is worth mentioning its real-time financial advice (both video and chat), virtual store, integrated personal finance management features, gamification, social media integration, and real-time credit scoring. All these features are available through its RWD website and most of them are supported through a native mobile application.

On the corporate front, Idea Bank with its SME-targeted services was a double winner at the 2015 Efma Distribution & Marketing Innovation Awards. The key distinguishing feature of its offer is the integration of current account with accounting services, allowing clients to perform settlements, archive documents and manage contacts. On top of that, Idea Bank launched its one-of-a-kind app-managed Mobile ATM (using a fleet of BMW i3 electric cars) to support the cash-management process for smaller companies.

"Innovations in banks do not necessarily translate into a boost of profits but may result in gaining a competitive edge."

Grzegorz Hansen
Director for Transactional Banking Strategy and Development, mBank

Key points

- Polish banks lead the regional pack in terms of innovation
- Key players are following digital market trends and delivering high-quality user experience backed by smart functionality
- Large IT vendors dominate the market
- Growing awareness and customer expectations are driving the need for alternative approaches to banking services

Established players

The vast majority of solutions for banks are developed in-house (leveraging in-house IT departments as well as in-sourcing) or delivered by vendors, in the form of customised solutions like data-driven risk models, front-end systems, CRMs and security solutions. As more and more banks become digital, the solutions delivered by established players will need to align with this market trend. One example, presented at the 2015 Finnovate conference, is a solution called Asseco CBP, created by Asseco, the largest Polish software developer. It is based on open architecture, enabling the bank to freely expand its catalogue of mini-applications (such as on/off credit cards, savings, payments modules) as well as to integrate any supplementary products and services.

Successful disruptor

Polish Finanteq has found its own way to collaborate with the banks in the area of digitalization. The company provides mobile finance applications such as m-banking, smartwatch apps and superwallets. These last ones are the combination of banking, payments and additional m-commerce services like remote bus tickets, parking fees, bill payments, coupons or event tickets. As the company Marketing Manager, Artur Małek, says, "We work closely with the banks. Co-operation underlies our business model".

Social shopping at a bank

In the age of platforms – marketplaces connecting suppliers and consumers – there is also a place for banking marketing schemes. Based on virality and network effect, a Polish FinTech company – yBanking – will soon be providing participants with unique benefits, allowing them to improve the parameters of both credit and saving products (such as better interest rates for deposits) by group shopping. Although yBanking reduces banks' revenues (by charging commission), it is also dealing with one of the most fundamental issues facing any retail bank – Customer Acquisition Cost (CAC).

How to join the pack?

It seems that the banking sector is very open to new, innovative solutions. They can be developed either by established players or new entrants and as long as they help improve the customer experience, the vendor's size might be of secondary importance. Key things to keep in mind when approaching the large players were pointed by Artur Malek from Finanteq:

- Working with a well-established institution means that the start-up may need to align with banking procedures and accept a certain pace of work characteristic for big companies
- Polish banking industry is highly regulated, which is good for the customers, but may complicate the compliance procedures for disruptors. It seems that the best case scenario for entrants is when their business model is not subject to regulations yet
- FinTech entrants should participate in the events organized for startups by the banks – an example is the Citi Mobile Challenge. During this event organized in Warsaw last year selected startups had the chance to demo their products to Citi executives. Winning on this event and then on the British Finovate with Superwallet helped Finanteq draw the attention of financial institutions.

"*I think that at some point many of the Polish Fintech companies that are now competing with banks, will switch to co-operation mode. Start-ups cannot count on VC companies to considerably fuel FinTech growth in CEE (as is the case in the USA) and competing with banks consumes a lot of assets. Furthermore, banks already have a considerable base of clients that can be introduced to innovative services provided by new entrants.*"

Artur Malek
Marketing Manager, Finanteq

Innovations in the banking sector Market outlook

Subsegment outlook

The Polish banking sector is counting on its capacity to innovate. E-banking has become an industry standard, with mobile banking becoming another must-have. In future, banks should polish their digital functionalities and make broad and deep use of analytics, user experience tools and customisation. All this will not only let them compete among themselves with new capabilities, but could also keep the FinTech entrants at bay. Polish customers, accustomed to high standards in digital banking, could only relinquish the traditional banking sector if its replacement offers this baseline and more. In the face of PSD2, banks will possibly need to open up to third-party providers and cope with the resulting competition. Some FinTech companies, meanwhile, should find opportunities by collaborating with the established banking sector.

Competitive landscape

Many banks in Poland use solutions provided by large IT vendors to secure high-quality, proven business results. However, increasing numbers of key players are choosing to work with much smaller tech companies and explore their ideas. There are also hybrid models: the Polish mBank is actually treated as a FinTech, winning the Finovate awards, while yBanking will soon offer social banking, making it a country first. It seems that new entrants may still have the chance to find their niche in this relatively large sector.

Key barriers

- Polish society is accustomed to trusting banks for money and financial advice – a reality which might be difficult to overturn
- The model of co-operation or co-opetition between banks and FinTech companies has not as yet been formed

Innovations in the insurance sector Recent developments

On the brink of technology-driven change

In recent years, the FinTech buzz has mainly centred on the banking industry. However, insurers are being forced to catch up in order to address changing consumer preferences: three out of every four representatives of insurance companies in Poland believe that the revolution in IT systems will have a huge impact on the industry in years to come[116]. Most admit that they are not well prepared for change, however.

Although it seems that innovation-driven change is finally set to dawn upon the insurance sector, insurers today tell us that they are concentrating on non-client facing IT systems, mainly on the back-office side. Executives believe that the market lacks vendors specialising in the "as-a-service" model offering. As most core insurance systems are delivered by global vendors like Genesis and Guidewire, there is clearly space for firms delivering single modules. Insurers would welcome an offering, based on the SaaS platform, delivering insurance-specific seamless modules such as compliance and data collection.

However, insurers in Poland are one by one starting to jump on the FinTech bandwagon. Their primary focus is on modifying and developing sales channels (especially direct) and responding to the emergence of online price comparison engines like Rankomat and Comperia. And, as mobile phones become a significant part of an average customer's everyday life, insurers need to respond. There are examples of the entire insurance process being managed end-to-end on a smartphone: from purchase, through damage reporting, up to appraisal and tracking the claims process, including communication with the damage assessor. An example would be Warta Mobile launched by Poland's third biggest insurer. Here, the application is integrated with the direct claims settlement system. Each document transmitted by the client using a smartphone is therefore placed automatically in the electronic briefcase, so allowing the damage assessor to respond immediately.

Some apps make the process of damage appraisal or buying new car insurance even more user-friendly by using QR codes imprinted in a vehicle's registration documentation. This function is available in the mobile application of Generali.

Mobile functionalities are also used in private health insurance, to facilitate making doctors' appointments. This kind of service is shared through the mobile app of PZU (the state-owned leading insurer in Poland).

Key points

- IT will drive the development of insurance sector in the coming years
- Smartphone apps facilitate the entire insurance process
- Internet of Things and gamification are two key trends in Poland

Internet of Insured Things

Gartner forecasts that the number of connected things used worldwide will reach 20.8 billion by 2020 (tripling from 2016)[117]. By the end of the decade, half of all sensors will be used in the financial sector. According to IDC, the Polish Internet of Things market is set to reach USD 3.1 billion in 2018 (half of the total value of the domestic e-commerce market in 2014)[118]. There is no doubt that the trend will also impact the Polish financial services sector.

To date, the best known application of the IoT in the Polish insurance sector is in the field of car insurance. The first company to introduce UBI (usage-based insurance) also known as PAYD (pay as you drive) is Link4 (owned by PZU). The concept is based on assessing risk and adjusting costs based on the vehicle usage pattern, measured against time, distance, behaviour and place. Link4's offer targets fleet managers and individual customers. In the first case, the fleet is equipped with telematic blackboxes and drivers use a dedicated mobile application. Individual customers use the app alone.

Competition in safe driving

As Generations Y and Z take the steering wheel, insurers are starting to look more closely at the "gamification" trend – the use of game design techniques and mechanics in a non-gaming context.

In Poland, the first insurer to implement gaming rules in their car insurance offer is Link4, whose PAYD offering is connected with a mobile application provided by a Polish start-up – forDrivers.

forDrivers is also available separately from Link4. The business model is intermediary-based and supported by loyalty programmes. Not only are customers helped to drive safely through the use of in-app notifications about weather conditions or traffic jams, they are also engaged in the solution by the opportunity to win attractive prizes. In addition, the application makes life easier for fleet managers who can reap the rewards of enabling safer driving by optimising maintenance costs (such as those of car repair). In addition, they can improve the image of employer as one that is concerned with safety.

"Even if financial sector is becoming more and more innovative in Digital globally, Polish insurers are focusing on lead management, sales and customer servicing processes revamp. The opportunity for the entrance of non-established, smaller players is emerging. It is possible that insurers will turn their attention to young businesses delivering high level of automation, as-a-service delivery model and settlement leveraging non-traditional fees model– all in competitive prices."

Lukasz Niedzielski
EMEA Head of Technology Planning & Effectiveness at MetLife

Zbigniew Stanik
Regional CIO for ESE Region at MetLife

Innovations in the insurance sector Market outlook

Subsegment outlook

The Polish insurance sector is unlikely to completely reinvent itself and transform into a technology-driven, top-tier digital environment. However, incremental changes are expected, especially those relating to the replacement or significant enhancement of legacy IT core systems, improvements in the back office and the opening up of the insurance sector to the possibilities offered by mobile channels and big data analysis. Even smaller companies can have a role to play, particularly if they offer small improvements that can be integrated into core systems without compromising their security. Telematics is bound to shape the future of insurance, although the speed of its development is not as yet known.

Competitive landscape

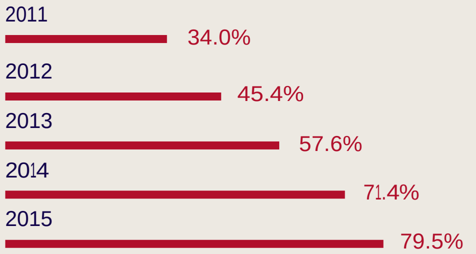
Insurers still prefer large IT vendors to smaller companies, although the latter are also present. A lack of vendors delivering 'as-a-service' solutions is creating a large demand gap, which it will be necessary to address in the near future.

Key barriers

- Digitisation has not been popularised among insurers as yet
- UX and innovativeness are not currently recognised as providing competitive edge in the insurance sector

Payments
Recent developments

Contactless financial smart cards in circulation (share of total financial cards)



Source: Euromonitor International

On the way to the cash-less society

Cash payments in Poland are definitely in decline. A decrease in the interchange fee in 2015 (currently 0.2% on debit cards and 0.3% on credit cards) helped popularise card payments even for low-value transactions. The wide acceptance of contactless cards (currently around 80%, up from 34% in 2011) is driving the dynamic development of the POS infrastructure. At the same time, the value of m-commerce grew more than fourfold between 2013 and 2015 (exceeding EUR 0.5 billion) and is forecast to grow at an annual rate of around 40% in years to come[119].

With the e-commerce market growing rapidly, by around 20% each year[120], the need for user-friendly, intuitive and secure payment solutions is evident. Among the numerous internet payment companies, the best known were created by Polish companies: PayU (a subsidiary of Allegro - the biggest e-commerce company in Poland – currently owned by the South African Naspers), DotPay, Przelewy24 and TPay. International players such as PayPal, Mobiamo, Paysafecard, EcoCard and MINT are less popular; an exception is FirstData (previously Polish Polcard, which was already widely popular by the time of acquisition).

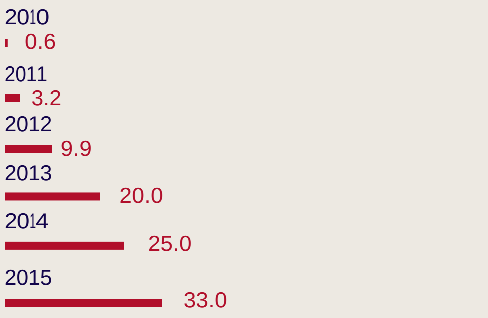
Poles took to the pay-by-link format (the second most popular payment method in e-commerce), where a dedicated link brings the e-buyer to their banking service provider's log-in page. After the client authenticates him/herself, all the transfer details are already prepopulated, with the transfer order ready for authorisation, by an SMS code among other options. Such a payment format is proven to be faster than traditional transfers and card payments, and resonates well with the entire e-commerce process.

Online exchange – a story about a spread

The success behind the FX online lies in the once extremely popular FX mortgages. Repaying loans in foreign currency seemed attractive, due to low interest rates. The so-called anti-spread law enabled borrowers to pay instalments directly in the currency in which the loan was granted (bypassing banks' broad spreads). This is now being leveraged by FX-focused entrepreneurs, who are offering "better exchange rate" to millions of FX borrowers, tourists and emigrants online.

The online Polish foreign exchange market is very successful. Since 2011, the segment has grown 10-fold, and around 80% of the market is split fairly evenly between two market leaders: Currency One and Cinkciarz. The segment is expected to be subject to further consolidation (decreasing the current number of some 50 players). In Cinkciarz, customers have access to a wide range of tools, such as standing orders, direct debit and FX alerts. Access via mobile devices as well as the FX wallet is a basic feature.

Estimated turnover of online foreign exchange companies and social FX platforms in Poland [EUR bn]



Source: Currency One
Note: Data for 2015 - forecast

Polish payments

The banking sector has tapped into a prospective m-payment market: the top six Polish banks have joined forces to deliver a common, national m-payment service called BLIK. The application is integrated with the banking apps of the founding institutions. The system is based on one-off authorisation codes and functions outside of the Visa and MasterCard payment schemes.

Based on the scale of transactions, BLIK has not joined the mainstream yet. So far, some 1.5 million Poles have access to this payment method, which is accepted at over 130,000 POS, as well as by the biggest acquirers[121]. Further development of BLIK is expected due to a strong marketing effort and a queue of banks waiting to join the club, as well as new functionalities to be launched in the near future (including P2P payments). However, Pekao SA, the second largest Polish bank, has developed its own m-payment solution (PeoPay).

A big question is whether customers will broadly accept the three-step payment procedure within BLIK (logging in to an app, generating a code, confirming the payment). So far, contactless cards seem to be the easiest and most user-friendly payment devices.

It is interesting to note that Polish banks are also joining forces to set up a national payment card based on the national payment scheme. This poses a direct threat to established players like Visa and MasterCard, since their products could be gradually bypassed.

How about e-money?

In 2015, the Polish start-up Billon launched the public pilot phase of an innovative project – implementing e-money. This will be the first legal (created by the banks) e-currency based on Bitcoin “blockchain” technology. The main advantages of the solution include decreased processing costs (by 90%[122]), complete security (blockchain technology) and independence from any particular TMT technology.

The only thing needed to join the Billon network is a smartphone. NFC technology is not necessary, as payments can be processed with the use of Bluetooth or Wi-Fi. Billon intends to promote banking inclusion for those who cannot, or do not want to, open a bank account.

Participants in the pilot phase include two Polish banks (Alior Bank and Plus Bank) and the eCard payment services provider. Billon is integrated with the established financial system, so its e-money can already be acquired in 15,000 retail outlets as well as transferred via a banking account[123].

Bitcoin bit by bit

The Polish market is not oblivious to the cryptocurrency either. InPay was created out of the need to enable customers to pay by Bitcoins in circumstances where they used to pay by regular currency. Lower commissions and shorter processing times have attracted a growing number of customers (currently over 20,000[124]). The solution requires customers to download a separate app serving as a Bitcoin wallet and is so far limited to transactions under PLN 5,000 (a little over EUR 1,000).Time will tell whether the blockchain-based Billon and Bitcoin will gain popularity in Poland.

More than just payment cards

The proliferation of loyalty programmes, club points and other plastic cards kept by customers in their wallets prompted the founders of ZenCard to integrate the payment process with bonus collection. This replaced the need to fill out forms, remember the card number or go through the process of customer verification to collect shopping points. Compatible with cards from the top three issuers (MasterCard, Visa and American Express), the solution is already available in selected stores in Poland. Current retail trends and observations from the West support the view that the payment card should and could be more than just a physical link to a bank account.

HCE – the future begins

Host Card Emulation (HCE) is a new NFC cloud-based payment standard. Customers do not need to be bound to any specific mobile network operator (because MNOs are not involved in the payment process, which bypasses the SIM card). Instead, the payment data is stored on the bank's servers and the details of payment card are kept in the mobile app. To date, five Polish banks have adopted HCE: first Pekao SA, followed by PKO BP, BZ WBK, Eurobank and Getin.

The biggest Polish bank – PKO BP – launched HCE in its mobile banking app (IKO) in partnership with Visa in January 2016. In March 2016, in a global first, Pekao Bank delivered HCE technology for users of Windows 10 mobile devices.

On the vendor side, FirstData has launched its First Data™Mobile Platform (banking software that enables the servicing of HCE payments). Eurobank carried out the first implementation on the European market. The solution facilitates the end-to-end functionality of a virtual card. It is interesting to note that FirstData used Polish specialists to design, develop and launch the platform. Poland will also become a regional (EMEA) center of expertise supporting the solution.

With 60% of Poles saying they are interested in mobile payments[125], 83% of POS accepting the NFC standard[126], and the strong development of contactless payments in various forms (cards, stickers, keyrings etc.), HCE technology is clearly not a fad but an inevitable future reality.

Payments on thego

As is the case with many European countries, the development of the payments market in Poland is supported by regional organisations. Municipalities across the country enable contactless payments (including mobile) for public transport and parking fees. For example, passengers in Warsaw can choose between a pre-paid card serving as a ticket, on-board ticket machines accepting contactless cards, and mobile apps (mPay, SkyCash) that enable the instantaneous purchase of tickets. Based on agreements between banks and municipalities, a monthly public transport ticket can be coded directly on to a bank's debit cards (those of BZ WBK, for example, which leverage the SuperWallet solution provided by the Polish Finanteq company).

> *"Banks need to be aware of the emerging competition and adjust their approach to the revenue generation model. New rivals may originate from various industries. Take, for example, an e-commerce portal offering several banking services associated with its own e-wallet solution. A 10% discount on purchased items can be much more enticing to customers than receiving interest on deposits."*
>
> ***Grzegorz Hansen***
> *Director of Transactional Banking Strategy and Development, mBank*

Key players in the mobile payments market for utilities are based in Poland:

- mPay was founded in 2003; its offering has evolved from mobile payments with the use of USSD codes, through CardMobile (integrating payment cards with phone numbers) and an e-wallet based on MasterPass technology, to the launch of a mobile app for iOS and Android. Additional features include the ability to purchase train and cinema tickets. The company has recently expanded into the Bahrain market.
- SkyCash has operated since 2009 and offers a similar range of products to mPay.

Leave it in robotic hands

In 2015, Polish company Blue Media (owner of the Kokos.pl – see Chapter Poland – Capital raising and personal finance) launched the Financial Robot. The solution consists of several components:

1. Recurring transfers to utilities: customers indicate the invoices they would like to move to the Financial Robot, and all necessary data can be obtained automatically from the provider. Customers are notified via SMS and e-mail prior to the date of payment and can accept or delay the settlement. The solution does not require the customer to contact the bank or the utility provider. Blue Media promotes the service through a cash-back programme (returning up to PLN 100 spent on bills per month)
2. Instant transfers: BlueCash enables transfers to be completed within just 15 seconds. The service is available from 27 banks, and money can be transferred to 78 banks. The company has opened current accounts in most of the biggest banks to facilitate the service. BlueCash delivers an important upgrade to traditional transfers, which normally take place in just three sessions each day. There is also an option of transferring the money to a phone number – the recipient receives an SMS and can indicate the target account number
3. Insurance brokerage: the Financial Robot allows easy comparison of insurance offers and then walks the customer through the purchasing process. So far, no market leader has confirmed their participation.

Further components can be easily added to the platform, which is already considered to be one of the most innovative in the region.

Key points

- The Polish payment market is highly innovative and the latest technologies are quickly adopted
- Online foreign exchange and HCE are on the rise, with optimistic prospects for future development
- Polish banks are tapping into the payment market with joint initiatives like m-payment systems and a planned national payment card
- Latest developments on the market include promising niche solutions such as e-money, loyalty programmes integrated with payment cards and Bitcoin payments

83%

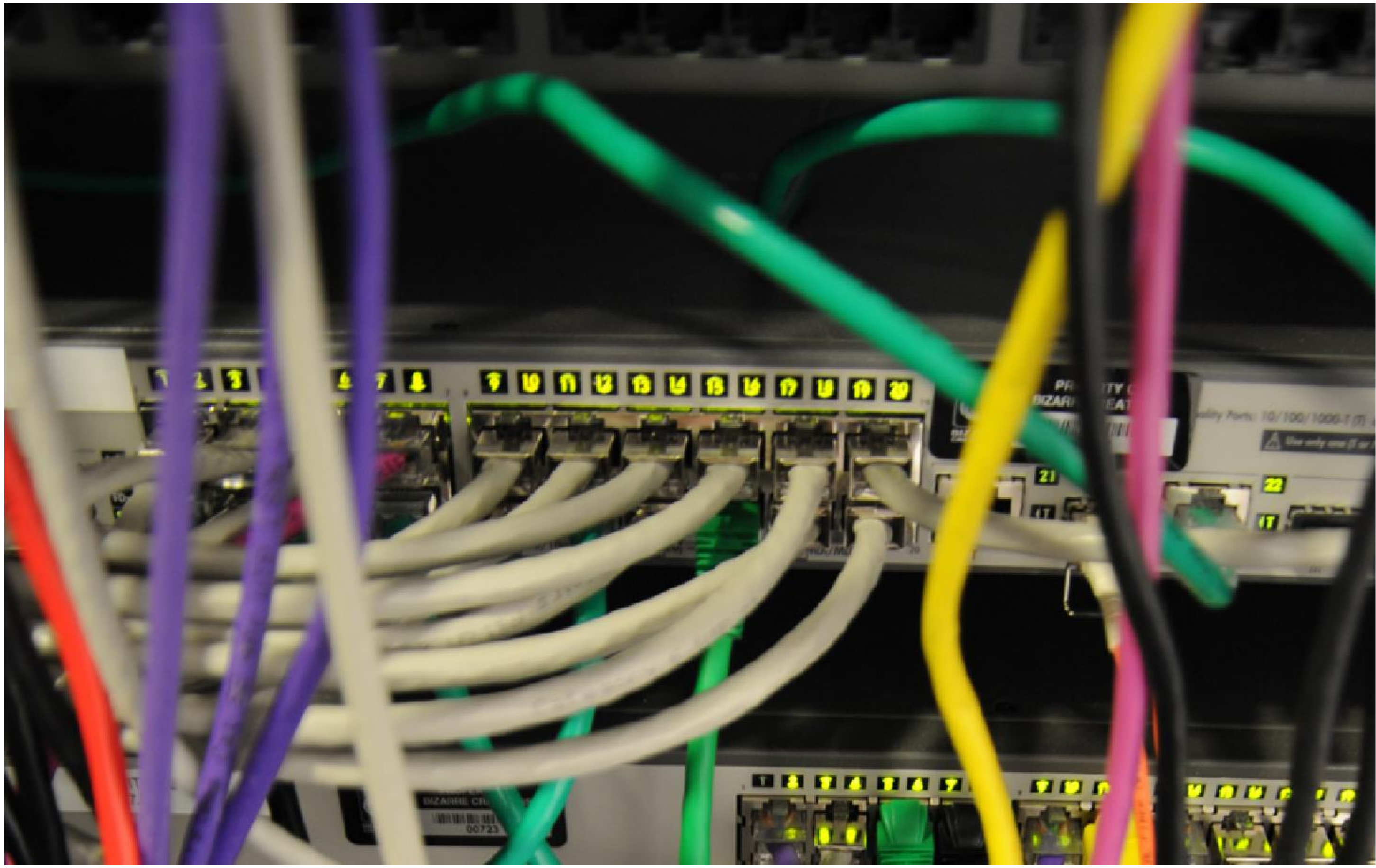
of points-of-sale accept the NFC standard

Should banks fear the competition?

The upcoming Payment Services Directive (PSD 2) is certain to change the Polish payment environment, bringing some unique opportunities to non-banking financial organisations. However, banking experts stress that each company has its own focus, business goals and positioning within the market.
It seems unlikely that PSD 2 will disrupt the financial sector and marginalise the banks. They will remain an integral part of the financial ecosystem.

Bigger players, including international giants such as Alibaba and PayPal, need to be watched closely. Their universal approach to service delivery has already conquered numerous markets. However, banks will almost certainly find their place in this broader, more dynamic ecosystem.

FinTech is an industry designed to deliver high-volume, low-margin services. To remain competitive in the FinTech era, banks and insurers will need to forego some revenues they took for granted, instead capitalising on long-term customer relationships and cross-selling.



Payments
Market outlook

Subsegment outlook

The Polish payments sector is among the best developed in the CEE region. All sorts of contactless technologies have already been tested in the Polish market or introduced to it. In future, non-cash payments will continue to influence customer behaviours. With key global players (Apple, Samsung, Android) rumoured to be entering the Polish market soon, competition in the sector might prove even more challenging, which would be to the benefit of end-users. With galloping growth in m-commerce and the promise of more in e-commerce, payments could become the key battlefield between established and emerging players.

Despite high levels of development in the payments area, there is a long way to go. HCE technology is only budding, cryptocurrency has not caught on as yet and banks dominate the market for instant money transfers.

Competitive landscape

Banks and non-banking institutions alike are active in the payments sector. Polish companies (PayU, mPay, SkyCash) have proven successful in delivering solutions to customers. However, the pending implementation of PSD2 is likely to shift the center of gravity towards new entrants, including global players. Although competition in the market is fierce, the pie is growing, making space for new providers

Key barriers

- There is strong competition within the banking sector
- The expectations of customers regarding new payment solutions are high

Capital raising and personal finance Recent developments

Semi-regulated market for online personal loans

Demand for consumer loans in Poland is rising (by a quarterly average of 25% since 2012). The main drivers of this trend are historically low interest rates (currently at their lowest level since the transition to democracy in 1989) and the increasing value of disposable and discretionary income (with an annual growth rate of 5% between 2012 and 2014)[127].

To meet customers' expectations – particularly to shorten the time taken to receive money – lending companies are digitalising their offering. Thanks to a fully-automated credit-risk scoring process, clients can receive a money transfer in under 15 minutes and applications are available 24/7. Apart from well-known foreign players – Wonga and Creamfinance – there are also Polish firms, such as Pandamoney, which aim to target more digitally-focused customers. Data provided in the credit application is restricted to personal information, e-mail and phone number. It is possible to decrease the cost of loan by evaluating a client's activity on e-commerce and social media portals. On top of that, the whole process can be carried out also on a mobile or special Facebook application.

On the other hand, new regulations affecting companies that lend money using their own funds could slow down the impressive growth of the Polish market. In general, such implemented amendments bring about increased regulation of the maximum cost of non-interest consumer credit. At the same time, interest costs are limited to four times the Lombard rate or, in the case of late payment, six times.

After the implementation of similar changes in the UK in 2014, the market fell by almost 50%[129].

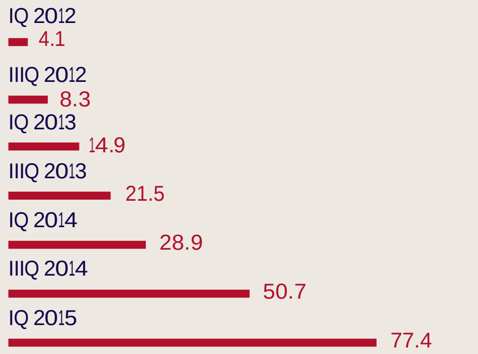
Cutting out the banking middle-man

Lending platforms, (marketplaces matching borrowers and lenders) are quickly gaining momentum in finance. The popularity of this model – so-called P2P (peer-to-peer) or social lending – is growing thanks to win-win outcomes for its participants: better interest rates, quicker lending decisions and simplified application processes than with traditional bank loans.

The social lending market in Poland emerged in 2008, with the launch of Kokos.pl, the first Polish P2P platform focused exclusively on social loans. To date, participants have lent PLN 130 million through this platform[130].

The business models of P2P platforms are diversified. With Kokos.pl, it is the participants that establish the interest rates. In Lendico.pl – a new P2P player, owned by the German Rocket Internet – the platform provider is responsible for assessing credit risk (through credit bureaus) and therefore for setting interest rates. Other P2P platforms that have gained recognition include Sekrata, Pozycz, Zakra and Finansowo.

Value of non-bank consumer loans (KPF participants M PLN)[128]



Source: Gospodarka.pl

Kick-starting Polish innovation

Media coverage of crowdfunding tends to focus on its role as an alternative to traditional venture capital. However, its importance is much broader. It is aimed at sharing underutilised assets to obtain monetary or non-monetary benefits. Generally, platforms are divided into:

- reward crowdfunding – users receive various rewards in exchange for their investment
- equity crowdfunding - users are actual investors who receive company shares in exchange for funds.

PolakPotrafi and Wspieram.to are major reward crowdfunding players. Examples of equity platforms include Beesfund, Wspolnicy, Crowdangels and Ideowi. The Polish crowdfunding market is still underdeveloped in terms of funds gathered through platforms (around EUR 1.5 million in Poland compared to about EUR 150 million in the UK)[131].

In Poland, there are legal challenges with running equity crowdfunding, such as the need for each investor to accept their shares by notary and register all changes in the Legal Register of Companies. This compromises the agility of the investment process. However, equity crowdfunding investors face similar restriction in most European countries.

Key points

- Demand for consumer loans in Poland is rising
- Lending platforms are gaining momentum
- Despite legal ambiguities, crowdfunding remains a promising area

Capital raising and personal finance Market outlook

Subsegment outlook

Although the capital raising market in Poland has been growing so far, with strong demand reported both by banks and non-financial institutions, the latter might face deceleration in the near future due to new regulations regarding the maximum level of credit cost. Another form of alternative lending – via P2P platforms – is gradually gaining in importance. Although the market is not very large at present, it should grow in the years to come. The crowdfunding activity faces legal challenges and can be described rather as a niche solution but appears to be growing in popularity nonetheless.

Competitive landscape

There are numerous providers of capital raising services in Poland, both in more established sector of online lending and the alternative area of social lending and crowdfunding. This high market saturation, however, does not preclude new entries, as the demand is still raising steadily. Several global players are already on the market, competing fiercely with local players.

Key barriers

- Regulations might soon reduce the profitability of online lenders
- Market for crowdfunding is still underdeveloped

Cybersecurity
Recent developments

The S-word

Security has always been a major concern for banks. Recently however, in response to the growing scale of cyber-attacks on the financial sector, cybersecurity has become a strategic rather than just an operational issue.

Banks' aspirations to deliver a seamless omnichannel experience pose natural risks and are driving the need to ensure the highest security standards in every channel available to customers. At the same time, in the pursuit of an excellent user experience, banks wish to make the process of customer authentication as smooth and effortless as possible. So far, the two desires seem to be somewhat mutually exclusive.

Cybersecurity vendors

Poland has emerged as home to shared services centers for large banking groups (including UBS, Credit Suisse, UniCredit, Deutsche Bank, Nordea, BNP Paribas and the Royal Bank of Scotland). The growing supply of Polish IT security specialists is lagging behind the soaring demand. While every bank needs – and aspires to develop – a Security Operations Centre, buying in solutions from large vendors is so far proving to be a more popular approach.

The market is dominated by large, international players whose offerings cover areas including:

- Infrastructure security – McAfee, Blue Coat, Check Point, HP, Palo Alto Networks, Juniper, IBM, Cisco, FireEye, Fortinet etc.
- Endpoint security – McAfee, F-Secure, Microsoft, Symantec etc.
- Application security – Qualys, IBM, Fortinet etc.
- Web security – Blue Coat, Cisco, FireEye, Symantec, Websense, Trend Micro etc.

Other players include Oracle, Veracomp, Ratels, Balabit and Akamai.

Unsurprisingly, with only a few vendors and a relatively limited range of security products, financial institutions rely heavily on ready-made solutions. There is a strong concentration in the area of advisory services (where the Big 4, including Deloitte, share the market). On the other hand, technical services and more short-term engagements are the domain of numerous local boutiques.

The market is still on the way to realising that cybersecurity is a strategic business issue for the financial services sector. However, local expertise in security is well-developed, encompassing both subject matter experts and communities driven by international organisations (such as ISC2, ISACA and OWASP).

Key points

- Security is becoming increasingly important as the number of cyber-attacks is soaring
- Banks usually choose established vendors for security products and consulting companies for auxiliary services
- Ensuring the security of mobile banking and cloud-based solutions is a future trend, with little recognition for biometrics on the Polish market
- Regulatory bodies are placing special emphasis on the issue of security, especially in the era of digital transformation among financial services institutions

The authentication dilemma

The shift towards solutions supporting mobile applications and branches of the future (including client authentication schemes) is evident. Identification and access management is a hot topic in the banking debate, especially in the light of the latest innovations. There is a strong belief that biometrics will be the ultimate trend for the financial sector. However, the high cost of such solutions and low levels of trust in them appear likely to delay their adoption.

VoicePin is one of a few Polish companies present in this market. It intends to provide end-users of banks, call centers and IVR help desks with convenient authentication based on voice recognition. Access to personal data is given without the necessity to indicate logins or passwords. Software can be provided both on the premises and in the SaaS format. The company has already announced it is working with Polish banks and leading Polish insurers.

The eye of the regulator

The security of the financial system, with a special emphasis on the personal data of customers, remains among the top concerns of the European and Polish authorities.

The Polish Financial Supervision Authority (KNF) has recently issued a recommendation regarding online payments that concerns all payment organisations, including banks. The key point is the necessity to provide strict rules for client authentication, as well as sensitive data processing. Moreover, banks should apply mechanisms to monitor transactions.

The critical role of market education was also highlighted: client infrastructure is usually the most vulnerable link of the payment chain. These recommendations are all in line with those issued by the European Forum on the Security of Retail Payments (SecuRe Pay).

Another important document regulating security in banks is the KNF's Recommendation D. This emphasises the need to create a cohesive IT governance infrastructure supporting the latest technologies in banking. Such an environment would need to be built with the co-operation of numerous stakeholders within a bank, both from the IT and business departments.

In the near future, financial services institutions in Poland will need to comply with further security regulations – including recommendations from the Inspector General for Personal Data Protection, as well as PSD 2 and the Network and Information Security directive.

Cybersecurity
Market outlook

Subsegment outlook

The importance of cybersecurity is growing due to the increasing number of potential threats to financial systems. At the same time, customers require ever more innovative and hassle-free authentication methods that cannot function without strict security protocols. The banking sector is expected to be open to implementing solutions delivered by smaller companies, as long as they meet the necessary standards.

Competitive landscape

The market is dominated by large IT vendors and complemented by advisory services provided by consulting companies. FinTech start-ups still have difficulties in reaching out to the biggest banks. The only model acceptable to the banking sector is likely to be one of collaboration, with solutions tailored to the needs and systemic requirements of individual institutions.

Key barriers

- There is a heavy reliance on large, established IT vendors
- Europe-wide regulations favour global providers with significant market experience and proven business models

Data and analytics Recemt developments

Knowledge is power

The exponential growth of the volumes of data available to companies is driving the need for solutions that can analyse this information and deliver valuable business insights. The interconnected, digitised world provides opportunities that were unheard of a few years ago, including targeted marketing campaigns, predictive models prompting next best offers, or improved credit scoring algorithms. Such solutions decrease business risk and are paving the way towards the development of offers that are almost perfectly tailored to a client's individual needs.

Poland is tapping into this trend and financial institutions are among those who can benefit the most from the smart use of big data's potential. Customer profiling has become the Holy Grail of the banking sector, with predictive models used for customer churn analysis, next best action (NBA) and next best offer (NBO) being treated as the source of potential competitive edge.

Established players at the forefront

The financial sector in Poland relies heavily on large vendors for their analytical solutions. SAS, IBM and TeraData would be the companies of choice for most financial institutions. Solutions developed by smaller companies seem to be less popular. However, the general trend of leveraging open source also in the area of data processing indicates that off-the-shelf commercial solutions are past their prime which may spell the opportunity for FinTech disruptors.The banking sector is developing internal competences in the analytics area, although software development is certain to be bought-in rather than created in-house.

What the banks need now

Polish banks are focused on finding solutions addressing basic issues related to data (such as integration and consolidation) rather than developing advanced analytical tools. The process of consolidation in the Polish banking sector is resulting in the need for continuous improvement in data quality.

Most projects concern data governance and data architecture, as banks are obliged to comply with international regulations. Tight compliance deadlines in the case of Basel Committee on Banking Supervision (BCBS) 239 have revealed that a number of Polish financial institutions maintain insufficient standards of data management. Lack of properly implemented processes, together with no clearly defined roles and responsibilities around managing data, may result both in a low quality of data and an inability to meet all regulatory requirements.

Consolidation of the banking market has left many players with a chaotic patchwork of core banking systems and data warehouses. Most Polish players (many of whom have gone through mergers with other organisations) need to integrate their data, ensure they have "golden" customer records and adjust their data architecture to achieve a single version of the truth without the need for time-consuming manual reconciliations. As a result, only those banks with a relatively well-orchestrated IT architecture are well-advised to build their competitive advantage on advanced big data solutions.

Key points

- The Polish banking industry is mainly focused on basic issues related to data quality, although some players are ready for more aggressive expansion into data and analytics solutions
- National and European regulations concerning data management may be a significant challenge for many financial institutions
- Large vendors are the most popular providers of analytical solutions
- The key competencies of emerging entities in the data analytics market are collection, analysis and processing of data in order to deliver in-depth knowledge and insight regarding clients' behaviour

Solutions designed for financial institutions

Even though Polish banks are not highly active in the data analytics market, there are entities operating in this area that create solutions tailored to the needs of the financial services industry. Kontomatik is one example, offering services that enable analysis of banking transactions, aggregation, analysis and data processing systems to identify the most attractive products for each customer. Similar services are provided by Solemis and Sanmargar, both of which specialise in Business Intelligence products that support customer management and sales in the financial services sector.

The information that banks can leverage is not only related to the analysis of customer behaviour. Cenatorium, for instance, offers multidimensional statistics about the real estate market and provides financial institutions with analytics and prices consistent with the recommendations of the Polish Financial Supervision Authority.

Turbine Analytics is an example of a firm providing services dedicated to asset management companies. Turbine Fund software is a financial app ecosystem designed to automate, streamline and simplify a range of investment management processes.

Taking advantage of non-financial products

Financial institutions also use services originally designed for the non-financial segment. SentiOne, a leading provider of online brand monitoring services, developed a system for Idea Bank that tracks and analyses comments regarding its product offering.

Two Polish banks, ING and BZ WBK, have used products from Sotrender, a company focused on social media analytics, to evaluate the effectiveness of their marketing. PZU, a leader in the Polish insurance market, has used a similar tool from Fokus.

Datawise, a firm operating in the area of analytics and data science, has provided leading Polish banking and insurance institutions (including Aviva, PEKAO, ING Group, PKO Group and PZU) with specialist analytics to support decisions around optimising the branchnetwork.

Data and analytics Market outlook

Subsegment outlook

So far, more has been said than done in the area of data analytics. This trend should reverse in future. With financial institutions storing loads of potentially priceless data, it takes as little and as much as a smart analytical engine to draw valid business conclusions. As customers insist on getting exactly what they want without ever expressing the actual need, behavioural analysis could become indispensable to tailor the products to the specific expectations of each customer and predict their future actions. Little is known about the impact PSD2 implementation will have on the sector, when access to bank accounts will be granted to third-party providers almost without limits, and credit rating models will depend entirely on the creativity and accuracy of algorithms.

Competitive landscape

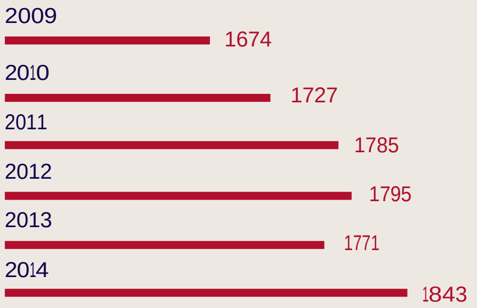
The data and analytics sector is dominated by established IT vendors, although smaller entities do emerge with good business results. FinTech start-ups are particularly welcome in the areas of sentiment analysis and financial market analysis. Also, smaller companies can deliver targeted marketing without compromising security standards.

Key barriers

- The lack of cohesion in banking IT architecture – it is often a patchwork of systems based on legacy infrastructure
- There is a strong preference for large vendors

Other software
Recent developments

Number of micro, small and medium-sized companies in Poland (2009-2014, in thousands)[133]



Source: Activity of non-financial enterprises in Poland, GUS (Central Statistical Office of Poland)

more...

In the age of online accounting

Growing numbers of micro, small and medium-sized companies are turning away from traditional paper-based accounting services to make settlements as quickly, professionally and cost-effectively as possible. The estimated value of online accounting in 2013 exceeded EUR 50 million, and its potential annual growth is estimated at 12%[132].

As a result, demand is soaring for self-service accounting and/or remote communications with accountants. The vast majority of solutions are delivered based on the SaaS model. Most products are equipped with RWD-based architecture, a modern and user-friendly interface and integration with invoicing, CRM and e-commerce systems. Players among the many worth mentioning include wFirma, iFirma, Szybkafaktura and inFakt. Platforms allow customers to automate debt collection, communicating with the tax office and financial control.

Most banks offer corporate accounts. To attract new customers, banks are therefore starting to offer online accounting services integrated with their transactional systems. Entrepreneurs using, for example, the mBank platform can issue an e-invoice with a built-in “pay” button linking the payer directly to the payee.

Key points

- SMEs are increasingly interested in automated and cloud-based solutions for the management of their finances
- Accounting offices will likely be at the forefront of innovation in the segment
- Robotics may seem a distant future but BPO/SSC units will happily experiment with such solutions to cut costs, adopting them if the business case is favourable

Likelihood of automation of finance-related jobs[135]

Source: goingconcern.com

Delivery of products for accounting offices

The value of the Polish market for accounting services targeting SMEs totalled PLN 5 billion in 2013, divided between approximately 45,000 accounting offices and self-employed accountants[134]. The increasing number of accounting offices, and the resulting need for competitive edge, is translating into growing demand for a dedicated platform. As well as basic functions including office management, automated form generation and OCR, such platforms can be integrated with client-side accounting systems and enable bank statements to be downloaded directly from most e-banking systems. Established market players include Taxxo, Eksp, Wapro (provided by Asseco) and Optima (provided by Comarch). Some SaaS-based solutions, like mojebiuro24.pl, can be accessed through mobile devices.

Robots in finance and accounting

Automation and robotics are firmly embedded in the manufacturing industry, reducing human intervention in simple, repetitive tasks. A similar pattern is becoming more and more evident in the field of financial and accounting processing. Full automation will occur gradually, initially with robots in BPO / SSC, then in medium and large companies.

Despite the rapid growth of Polish BPO / SSC, the number of established players in the field of process automation is relatively low. One of the most recognisable, CyberProductivity – which has developed the CostKiller solution – automates processes such as budgetary reporting (real-time), workflow and accounting.

Other software
Market outlook

Subsegment outlook

Automated and robotics solutions in accounting are growing in popularity. Increasing numbers of newly opened companies and the strong development of SMEs is making the online or cloud-accounting business model particularly profitable, especially for accounting offices. Furthermore, as banks started to bundle their core product offerings with affiliated services, the integration of 'financial services in a cloud' with a current account is a foreseeable future development

Competitive landscape

There are numerous smaller companies providing finance-management automation or cloud-based solutions. There are no strong barriers to entry, and local and international players alike have the opportunity to secure a healthy market share. Only large process factories (BPO/SSC) may prefer established IT vendors to avoid reputational risk.

Key barriers

- There is little knowledge of RPA solutions and no evident use cases so far
- Collaboration by some players with the banks may lead to market consolidation in future

POLAND

Insurance

Despite the somewhat non-transactional character of insurance services, which are based mainly on a one-time meeting with a broker, insurers' clients should eventually start to require a complete digital experience during the purchase of a policy. To meet this upcoming challenge, insurers are starting to build mobile applications, which will enable actions like making a call for help in an emergency or buying a new insurance package. When you consider that most of the insurance technology stack is legacy-based, it is clear that FinTech companies should concentrate on nimble, modular and easily integrated solutions. This feature could attract the attention of executives, who tend to seek quick time-to-market and cost-effective solutions. Hype around the Internet of Things trend will probably change insurance before any other financial sector, because of pay-as-you-drive products. Potential market space should be seen for sensor-makers and mobile-application providers.

Data and analytics

As big data is a buzzword for every IT and business employee, it seems that demand should surge for solutions supporting the analysis of structured and unstructured packages of data. What may change is the approach to implementation of such systems. They could become more nimble and easy-to-integrate, mostly cloud-based (Big Data-as-a-Service). Data will be gathered from social media activity, Internet of Things (IoT) sensors, internal systems and external databases. It should be used as leverage for behavioural analysis, building pricing models and process optimisation initiatives.

Payments

A high-volume, low-margin payment business will require a large volume of transactions to ensure profitability. As the largest market within the CEE region, Poland would seem to be the best place for setting up new initiatives. On the other hand, most innovative technologies (such as HCE) have been already tested and enthusiastically welcomed in Poland. New initiatives could therefore comprise global technologies that have not yet been implemented in Poland. These include Apple Pay, Google Pay, Samsung Pay and Google Wallet. Some emphasis may be also put on the blockchain distributed database technology, which may have potential for decreasing the costs of foreign currency exchange (which are still relatively high despite the implementation of new interchange regulations).

POLAND

Market conditions

- Companies benefit from the large domestic market – Poland is the sixth-largest EU country in terms of population
- The government has set up 14 Special Economic Zones, locations dedicated to investors where business activity is coupled with preferential conditions such as tax relief and the strong support of municipalities
- The activities of regulatory authorities can hamper innovation in the financial sector (in areas including cloud computing, non-bank personal lending and bancassurance)

Established financial technologies

- In recent years, Poland has become a regional leader in technologically advanced, pioneering solutions in the banking sector
- In response to shifting customer behaviour, particularly the strong preference for self-service over branch visits, banks have been forced to develop their digital offering
- Polish banks are CEE leaders in terms of innovation. Key players follow digital market trends and deliver a high-quality user experience backed by smart functionality
- The vast majority of solutions for banks are developed in-house or delivered by large IT vendors in the form of customised solutions
- Evolution of insurance-related technologies will drive the development of the Polish insurance sector in the years to come
- Internet of Things and gamification are two key trends in Polish insurance sector

Emerging financial technologies

- The Polish payments market is highly innovative, rapidly adopting the latest technologies. Recent developments in the payment market include promising niche solutions such as e-money or loyalty programmes integrated with payment cards
- Polish banks are tapping into the payments market with joint initiatives like m-payment systems and a planned national payment card
- Demand for consumer loans in Poland is rising and lending platforms are gaining momentum
- Cybersecurity is becoming increasingly important as the number of cyber-attacks is soaring. Banks usually choose established vendors for security products
- The Polish banking industry is mainly focused on basic issues related to data quality, although some players are ready for more aggressive expansion into data and analytics solutions
- Large vendors are the most popular providers of analytical solutions. In the case of emerging entities, key competencies are collection, analysis and processing of data to deliver insight regarding customer behaviours
- SMEs are increasingly interested in automated and cloud-based finance-management solutions