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ADOPTION OF INNOVATION IN MOBILE PAYMENTS – FINANCIAL VIABILITY PREREQUISITES FOR BANKS

Introduction

Nowadays, mobile payments represent a culmination of innovations, combining payment systems with mobile devices and services, to enable users to initiate, authorize, and complete a financial transaction in which money or funds are transferred over mobile network or wireless communication technologies to the receiver through the use of a mobile device¹. Mobile payments offer users the first ubiquitous payment solution and thus a distinctive value over other payment systems. Their advantages are not restricted to certain transaction situations as they have the benefit of full mobility undermining the importance of ATMs availability². Forecasts by Gartner suggest that m-payment systems will have 448 million users and \$617 billion in transaction value worldwide by 2016³.

Nevertheless, banking sector represents a general reluctance to adopt new payment systems as a result of consumers' entrenched payment behavior and stakeholders' vested interest in existing payment systems. With the exception of a handful of countries, the application of various m-payment solutions has not been as successful in Europe and North America in comparison with Asian and developing countries. Although more recent banking initiatives has entered the

¹ S. Chandra, S.C. Srivastava, Y.-L. Theng: *Evaluating the Role of Trust in Consumer Adoption of Mobile Payment Systems: An Empirical Analysis*. „Communications of the Association for Information Systems” 2010, Vol. 27, p. 561-562.

² T.J. Gerpott, K. Kornmeier: *Determinants of customer acceptance of mobile payment systems*. „International Journal of Electronic Finance” 2009, Vol. 3(1), p. 2.

³ www.gartner.com (25.10.2013).

period of dynamic growth (especially in case of proximity systems), mobile payments have gained very little ground in Polish non-cash payment system⁴.

From the banking perspective, mobile payments are still considered as a very risky market niche, which stems from the fact that current mobile ecosystem is too defragmented to work out the common standard of payments acceptable by all value-chain parties (i.e. banks, merchants, Original Equipment Manufacturers (OEMs), software providers, Mobile network operators (MNO's), mobile network operators). In case of banks the challenge of m-payments mass adoption is even more tremendous because of substantial revenue from payment cards (interchange fee) and the predominant habit of Polish consumers to use cash in everyday payments. M-payments innovations present also a threat to banks as several of the innovative payment methods reduce the predominant role that banks play in their customers' transactions. In case of non-bank supplied m-payments after funds are initially transferred from a customer's account to their device, the bank is out of the picture. It can't collect transaction fees from payments made out of the device, observe the transactions or collect data. Consequently, it loses both the revenue and the 'information value' of handling the transactions⁵.

The aim of this paper is to pinpoint the main prerequisites to make m-payments financially viable business case in banking strategies on the basis of the prerequisites from supply and demand-side of the market. The structure of this paper is as follows. Firstly, concepts of mobile banking and mobile payments are analyzed in order to present "chicken and egg" dilemma that refrains development of market-wide m-payment instruments. The specific business-like issues surrounding the banks' adoption of mobile payments are then discussed in the second part. The final section is the outline for market prerequisites rooted in demand-side of the market and their relevance to m-payments development. This paper explores the existing research domains from which such value propositions or business models could be drawn, and extrapolates a theoretical basis for further research in the area of mobile payments.

⁴ Polish example are two banking initiatives aiming at setting up the market-wide standard of m-payments i.e. IKOplus as an agreement of six leading commercial banks and Bank Pekao's effort to launch PeoPay.

⁵ C. Kim, M. Mirusmonov, I. Lee: *An Empirical Examination of Factors Influencing the Intention to use Mobile Payment*. „Computers in Human Behavior” 2010, No. 26(3), p. 315.

1. The concept of mobile payments

Mobile banking is a recent trend in distribution channels which allow consumers to use their Internet enabled mobile phone to operate their bank account. Mobile banking has been unlocked by the growing availability of smartphones and ubiquitous Internet connection. It enables users to have a constant overview of their balance and an instant access to financial services as a natural extension of online banking. As the consequence, the whole suit of contexts 'traditionally' serviced in the customer's online banking environment is transposed to the mobile channel with new value added services, among which customized mobile payments are the most challenging⁶.

Mobile payments emerged in the 2000's, with early successes in the sale of mobile content and simple services based on SMSs. Later, mobile payments were adopted to more universal usage as an alternative for micro-payments. Consequently, mobile payment is defined as payment where a mobile device is used to initiate, authorize and confirm a transfer of value in return for goods and services⁷. Furthermore, the m-payments can be divided into contactless point-of-sales systems and remote Internet-based schemes. In both cases, mobile device is involved in both the initiation and confirmation of the payment and bank-based intermediation is not necessary. As compared to the mobile banking, the concept of a mobile payment is narrower in terms of financial services array but simultaneously more complex in terms of parties facilitating the payment process.

Many mobile payment solutions have been introduced so far, but most of them have failed or represents still a low penetration rate mainly because of the "chicken and egg" dilemma⁸. This dilemma is very representative for a number of financial innovations. In case of m-payments as emerging payment models it means that numerous merchants are needed to be on-board with a new payment solution to catch on with consumers as well, but in order to be appealing to merchants there must be a critical mass of consumers interested. It is often referred to the theory of network externalities to explain value creation in the networked

⁶ F. Carton, J. Hedman, J. Damsgaard, K.T. Tan, J.B. McCarthy: *Framework for Mobile Payments Integration*. „Electronic Journal of Information Systems Evaluation” 2012, Vol. 15(1), p. 13.

⁷ Y.A. Au, R.J. Kauffman: *The Economics of Mobile Payments: Understanding Stakeholder Issues for an Emerging Financial Technology Application*. „Electronic Commerce Research and Applications” 2008, Vol. 7(2), p. 145-146.

⁸ T. Dahlberg, N. Mallat, J. Ondrus, A. Zmijewska: *Past, Present and Future of Mobile Payments Research: A Literature Review*. „Electronic Commerce Research and Applications” 2008, Vol. 7(2), p. 165-170.

economy, suggesting that the value of such services to banks and their customers will increase as the network grows⁹.

A number of m-payment failures stems from the fact that they have not reached critical mass of users, either payers or merchants with little standardization and technology maturity as key requirements for expansion of mobile payments¹⁰. In order to analyze m-payments in terms of viable business cases in banking strategies, the most important triggers associated with supply and demand-side of the m-payment markets should be distinguished.

2. Supply-side triggers for m-payments

The mobile devices are capable of providing a bridge between the traditional and the new payment systems, supporting demand purchase and payment processes in a new innovative manner. Obviously, banks are interested in mobile payments as a new channel for payments. However from their retail point of view, they are primarily focused on protecting the market share in providing the current accounts with surrounding deposit and loan products. Mobile payments hold the allure for banks of providing full range of financial services and assisting in the ongoing battle to reduce the use of cash and its associated costs. The problem is that banks are far from controlling main triggers for successful deployment of m-payment services, the profitability of which is still very vague.

2.1. Complex of mobile eco-system

The mobile technology holds a vast commercial potential for not only banks but also a considerable number of other stakeholders including merchants, OEM's, software providers, MNO's, payment scheme owners and various payment institutions. In case of traditional credit card, payment is facilitated by banks as issuer and card companies as payment scheme operators. In the mobile eco-system (especially in proximity payments), all stakeholders play important roles in providing mobile payments to customers. A highly complex mobile eco-system is therefore major obstacle to work out the mass market standards and increase considerably the mobile payment adoption among customers and merchants.

⁹ Y.A. Au, R.J. Kauffman: *Op. cit.*, p. 150.

¹⁰ F. Carton, J. Hedman, J. Damsgaard, K.T. Tan, J.B. McCarthy: *Op. cit.*, p. 14.

To make matter worse, most underlying players in the mobile market are reluctant to change their existing business models. Banks and their customers have not reached consensus what represents a good value in terms of payment alternatives. Such a phenomenon can be also found among OEM's and software operators and device manufacturers. As the consequence, the transition processes from cash and payment cards to mobile phone driven payment is not smooth and the complexity of the m-payments value chain is a large barrier to the technology's expansion¹¹.

In order to move forward m-payments on the basis of real economies of scale, all these parties are under strong imperative to work together. Banks need to compete and cooperate simultaneously in order to both follow their own commercial strategies, develop the technology and create the market to its full potential. Among the new skills, banks will require the ability to venture into new areas such as co-creation of market strategies while engaging in much faster end to-end product development and increasing collaboration with outside parties. Only these banks that make progress in these areas have the potential to differentiate themselves from the competition and to gain a significant share of prospective m-payment market.

2.2. Merchant Deployment

As mobile payments are relatively new, they are much less likely to be accepted by merchants than traditional payment methods, such as debit and credit cards and especially cash. On the one hand, merchant acceptance is likely to be lowest for m-payment based on dedicated technology such as NFC technology. On the other hand, they prefer technologies, which are not as dependent on willingness to invest in new equipment because m-payments can be accepted with current equipment (such as digit codes or QR codes). In latter case, the merchants must be convinced that the mobile payment method will generate enough additional revenue to outweigh the fees charged by the mobile payment provider¹².

Intensive merchant deployment is crucial because consumers are more likely to adopt m-payment methods with high merchant acceptance. High merchant acceptance of a payment method makes consumers more willing to use the method and tends to encourage consumer adoption¹³. For these reasons, it is essen-

¹¹ C. Kim, M. Mirusmonov, I. Lee: Op. cit., p. 316-319.

¹² F. Hayashi: *Mobile Payments: What's in it for Consumers?* „Economic Review” 2012, s. 53.

¹³ R.J. Kauffman: *The economics of mobile payments: Understanding stakeholder issues for an Emerging Financial Technology Application*. „Electronic Commerce Research and Applications” 2008, Vol. 7(2), p. 141-144.

tial for an innovative payment service to leverage existing infrastructure. Using what is already available, rather than developing something entirely new, helps merchants and customers understand and adapt to new products and services quicker. A new m-payment method, for example, that requires a separate account to be opened, requiring pre-funding and monitoring (pay-before systems) usually turns out to be a hurdle that many customers do not bother to overcome. Using existing infrastructure also helps the service provider optimize operational costs and reduce exception items. Mobile payments needs strong push from banks and other stakeholders in order to gain market momentum. Otherwise, merchant acceptance of contactless m-payments is likely to remain low in the near term.

2.3. Costs structure

Taking into consideration complex eco-system of mobile payments and initial phase of development, the cost issues have crucial importance for banks to ensure the large market deployment and thus viable business based on the scale effects. The cost of proper infrastructure needed for m-payments is likely to vary significantly across payments system depending on the type of used mobile technology. The lowest barriers are associated with remote payments to operate in m-commerce, where traditional methods such as credit card or account based system live up to the consumer expectations. However, much more challenging are proximity payments where relatively few POS terminals are now equipped with the technology to launch market-wide dedicated m-payment technology (such as NFC). However, it may be inappropriate to view the entire cost of upgrading POS terminals as a cost of accepting proximity payments because for example NFC-enabled POS terminals may have other valued features for merchants. For the cost reasons it is much reasonable to make use of existing payment infrastructure to accept proximity payments. In a such a solution merchants would not be needed to buy new equipment stirring the popularity of non-NFC systems¹⁴.

The ongoing costs to merchants of accepting mobile payments ought to be lower than for traditional non-cash payment methods especially in terms of fees that merchants are charged by payment providers for using the various payment instruments loaded on mobile phones (i.e. merchant service charge). The relevant cost for the merchants is the fee, net of effects of loyalty programs for accepting m-payment instruments. Consequently, the growing acceptance of mobi-

¹⁴ J. Ondrus, Y. Pigneur: *An Assessment of NFC for Future Mobile Payment Systems in Management of Mobile Business*. „ICMB International Conference” 2007, p. 43.

le proximity payments must be supported by advantageous fees over traditional payment methods. In some cases, a merchant may be able, but unwilling to accept the m-payment method, especially when the merchant considers the fees charged by the m-payment provider to be too high or fears the payment will not be completed as promised¹⁵.

The banks' challenge of a right price strategy will be even more difficult to sustain in a near future as regulatory measures are to slash interchange fee levels below an arbitrary set price cap. As a consequence, banks' revenue from merchants' fees are to decrease considerably and in case of big merchants (such as chain retailers) a flat zero interchange fee in m-payments will not be a rare exception.

3. Demand-side triggers for m-payments

Research suggests that the high failure rate of mobile payment solutions is linked to their inability to provide the right value proposition to customers¹⁶. Banks promote payment instruments that earn them most revenue, but these tend to be centralized and thus inconvenient. Customers have little choice in selecting payment instruments, but are being seduced by the control and convenience of on-line and mobile payment solutions, which provide flexibility and convenience. Until a solid value proposition emerges that combines value for both banks and customers, the innovation in terms of bank m-payment solutions will remain sporadic and piecemeal.

3.1. Convenience

Payers' habits are notoriously difficult to change so it is challenging to assume that they change their regular method of payment simply because something innovative and better has come up. An m-payment service needs to have a highly attractive and compelling value proposition for consumers to make it worth their while to learn or adapt to something new¹⁷.

Mobile payments are likely to be more convenient than traditional payment methods in terms of portability. A mobile device eliminates the inconvenience of

¹⁵ F. Hayashi: Op. cit., p. 55.

¹⁶ J. Ondrus, Y. Pigneur: *A Disruption Analysis in the Mobile Payment Market*. „System Sciences, Proceedings of the 38th Annual Hawaii International Conference” 2005, p. 84.

¹⁷ T. Bradford, F. Hayashi: *Complex Landscapes: Mobile Payments in Japan, South Korea, and the United States*. „Federal Reserve Bank of Kansas City Briefing” 2007, s. 11.

carrying multiple plastic cards in a physical wallet by enabling consumers to link mobile payments to those card accounts. Because of this enhanced portability, consumers may have access to more card accounts than is feasible with plastic cards. These card accounts could include general purpose credit, debit, and pre-paid cards, as well as private labels cards that entitle the user to rewards or discounts. Finally, to the extent mobile payments can be used for small value transactions, they will eliminate the inconvenience to consumers of carrying coins and currency¹⁸.

Another convenience advantage of mobile payment methods over traditional payment methods is flexibility. In addition to various card accounts, a mobile device can carry other payment methods, that allow the consumer to pay directly from a bank account through Automated Clearing House. Among a number of payment instruments loaded on the mobile device, consumers can choose a payment instrument that best fits a type of payment. Many consumers may want to fund payments from a debit card account or directly from a bank account for small value everyday purchases, or from a credit card account for occasional large value purchases. To maximize their rewards, some consumers also may want the option of paying with a merchant-specific card rather than a general purpose credit or debit card. Mobile payments can make it easier for consumers to choose among these options at the POS.

A final convenience advantage of mobile payments to consumers is faster transaction speed for certain types of purchases. With contactless payment methods, including contactless cards and NFC-based mobile payments, the consumer need only tap or wave the contactless device in front of a reader to make a purchase. According to some estimates, this method of payment can be 15 seconds to 30 seconds faster than swiping a traditional card and signing the receipt or entering a PIN¹⁹. This small difference in transaction speed can be important in situations such as mass transit or highway toll gates where consumers need to move quickly through the checkout point. The main way mobile payments could be less convenient than traditional payments is that mobile payments could be difficult for some consumers to set up and learn to use. Compared with traditional payment methods, such as debit and credit cards, setting up mobile payments will require more informative steps.

¹⁸ F. Hayashi: Op. cit., p. 43.

¹⁹ M. Polasik, J. Górka, G. Wilczewski, J. Kunkowski, K. Przenajkowska, N. Tetkowska: *Time Efficiency of Point-of-Sale Payment Methods: The Empirical Results for Cash, Cards and Mobile Payments*. „Cards and Mobile Payments” 2011, p. 20.

Consumers usually need to download a mobile payment application and put multiple accounts into the application. They also need to devote time and effort to learning how to use the application. However, these setup and learning processes are likely to be much less burdensome for some consumers than others. In particular, younger consumers familiar with the technology of mobile devices may find it easy to learn how to use mobile payments. Indeed, for such consumers, downloading a mobile payment application and putting a payment account in the application may be faster and less burdensome than waiting for the delivery of physical devices, such as plastic cards or checkbooks. Consumer surveys have found that overall convenience and ease of use are primary reasons cited by consumers for using a particular payment instrument, while speed and ease of setting up an instrument are less important²⁰.

3.2. Valued-added services

Mobile payments enable consumers to replace their physical wallet, which is usually clustered with cash, coins and all sorts of loyalty cards, receipts, business cards, with a more convenient digital solution on their mobile phone. This sort of convenience renders the former obsolete and is driving interest and acceptance of innovative solutions as a large number of consumers already made the switch to a digital version of their wallet.

Various additional ‘value added services’ can be integrated in mobile payment solutions. Currently, the most successful mobile payment initiatives offer merchants with at least one of them. Integrating a mix of value added services in a mobile payment solution radically increases the chances of success. Merchants are ready to pay premium prices for services that can increase in-store traffic and average turnover per user, but not for just another payment method that only replaces existing ones.

Value added services come in different flavors to cover different needs and enable different types of transactions. Below some examples of value added services are highlighted in mobile payment initiatives currently available in the market:

1. Loyalty, rewards programs – Integrating loyalty solutions in mobile payments, companies have been exploiting the technology included in mobile phones to replace loyalty management solutions such as punch-cards and reward points.

2. Coupons, special offers – similarly to tickets, various other products can be redeemed by using a mobile phone as a presentment method. For example,

²⁰ F. Hayashi: *Op. cit.*, p. s. 56.

coupons and offers can be bought or stored in mobile devices and then shown at the point of sale to be converted in the actual discount or product associated with them. By including these services in a mobile payment proposition, merchants can better manage their campaigns and reconcile the redeemed offers with the relative payments.

3. Ticketing – mobile devices are often used to pay and receive digital content and store purchased material such as music and ticket passes on the go. Not only using a mobile device is convenient to browse and purchase, for example, movie tickets but it is often used to present these passes at the door to be granted access. The advantages of those solutions have also been adopted by the airline industry, that ever more often allows passengers to store their plane tickets as emails displayed on their phones. In particular countries, especially in Asia, mobile devices are used to store public transport tickets that can be then used via the contactless technologies widely available in those countries²¹.

Full integration with value added services seems conditional for the success of a mobile payment solution among merchants as retailers are interested in mobile payments, as they allow a much deeper interaction with clients and buying behavior patterns.

3.3. Security

Mobile payments have the potential to significantly reduce the likelihood of fraudulent POS transactions. One way is by facilitating dynamic authentication of the transaction at the point of sale. For card payments, authentication has traditionally relied on static data, such as a card account number, expiration date, PIN, or signature. Such data does not change from transaction to transaction. If intercepted by a criminal, static data can be used to make fraudulent payments. In contrast, a chip embedded in a mobile device can enable dynamic authentication, in which data unique to each transaction is used to authenticate the payment device. Data of this type cannot be used to make fraudulent transactions, even if intercepted by a criminal²².

Mobile payments are especially suited to dynamic authentication. The reason is that NFC-equipped mobile phones will have the necessary chip, and NFC-enabled merchant terminals will be able to communicate with the chip to perform dynamic authentication. It is important to note, however, that dynamic authentication is po-

²¹ A. Longoni, M. Gâza: *Report Mobile Payments 2013*. „Innopay”, p. 26.

²² P. Andreev, N. Pliskin, S. Rafaeli: *Drivers and Inhibitors of Mobile-Payment Adoption by Smartphone Users*. „International Journal of E-Business Research” 2012, Vol. 8(3), p. 50-55.

ssible with other payment methods. The required chip can be installed on a plastic card, as is common in other countries. A second way mobile payments could reduce the likelihood of fraudulent transactions is through password protection of the mobile phone and of the mobile payment application on the phone. Such password protection provides an extra layer of security that does not exist when consumers use plastic cards to make payments. Advances in mobile technology may also enable new forms of authentication, such as facial recognition²³.

While mobile payments have the potential to reduce the likelihood of fraud, such benefits will be realized only if mobile devices are protected from malicious software and hacking attacks. In order to fully exploit the convenience of mobile payments, consumers may store large amounts of sensitive payment information on their mobile phones. The concentration of such information in a single place may pose a greater risk of theft by criminals than when consumers carry cash, checks, and plastic cards in their wallets. Although payment information stolen from a phone could not be used to make payments that rely on dynamic authentication, that information might be used for other types of fraudulent payments. Stolen information might be used to make unauthorized transactions with magnetic stripe cards or unauthorized transfers from a consumer's bank account through the ACH network. Avoiding such information theft will require strong security for mobile applications, operating systems, and hardware. It will also require a commitment by consumers to update their systems and applications.

Conclusions

The attempt to identify supply and demand-side triggers for mobile payments gives grounds for some conclusions. The convenience advantage of mobile payments derives from the ability to link a mobile phone to a wide variety of cards and other payment instruments. On this background, the m-payments can be genuinely integrated into mobile banking services. The greater control over finances and spending comes from the ability to check account balances prior to making purchases and receive alerts when spending reaches designated thresholds.

However, in the near term, limited merchant acceptance is most likely to discourage consumer adoption especially in term of highly potential NFC system because NFC-enabled terminals are costly. Over the longer term, however, the current low rate of merchant mobile payments acceptance may be overcome to-

²³ J. Xu, T. Pan, L. Zheng: *Design and Implementation of High Security Mobile Payment System*. In *Communication Systems and Network Technologies*. „International Conference” 2012, p. 493-497.

gether with an active deployment of chip-based proximity payment cards and more streamlined mobile ecosystem.

Although mobile payments have the potential to be less vulnerable to fraud than traditional payments, uncertainty about security could slow consumer adoption. NFC technology can be used for dynamic authentication of mobile payments, making consumers' payment information harder to steal. Mobile payments can significantly increase the ability of consumers to receive value added services as targeted ads and promotions. However, it raises the unsolved question of the scope of privacy infringement. Migration of payments towards mobile devices will take place at different paces in local markets but it cannot be halted.

As the consequence more active and collaborative steps of the banking sector are need to allow banks stay as important player in Red Queen's race in the m-payment market.

References

- Andreev P., Pliskin N., Rafaeli S.: *Drivers and Inhibitors of Mobile-Payment Adoption by Smartphone Users*. „International Journal of E-Business Research” 2012, Vol. 8(3).
- Au Y.A., Kauffman R.J.: *The Economics of Mobile Payments: Understanding Stakeholder Issues for an Emerging Financial Technology Application*. „Electronic Commerce Research and Applications” 2008, Vol. 7(2).
- Bradford T., Hayashi F.: *Complex Landscapes: Mobile Payments in Japan, South Korea, and the United States*. „Federal Reserve Bank of Kansas City Briefing” 2007.
- Carton F., Hedman J., Damsgaard J., Tan K.T., McCarthy J.B.: *Framework for Mobile Payments Integration*. „Electronic Journal of Information Systems Evaluation” 2012, Vol. 15(1).
- Chandra S., Srivastava S.C., Theng Y.-L.: *Evaluating the Role of Trust in Consumer Adoption of Mobile Payment Systems: An Empirical Analysis*. „Communications of the Association for Information Systems” 2010, Vol. 27.
- Dahlberg T., Mallat N., Ondrus J., Zmijewska A.: *Past, Present and Future of Mobile Payments Research: A Literature Review*. „Electronic Commerce Research and Applications” 2008, Vol. 7(2).
- Gerpott T.J., Kornmeier K.: *Determinants of Customer Acceptance of Mobile Payment Systems*. „International Journal of Electronic Finance” 2009, Vol. 3.
- Hayashi F.: *Mobile Payments: What's in it for Consumers?* „Economic Review” 2012.
- Kauffman R.J.: *The Economics of Mobile Payments: Understanding Stakeholder Issues for an Emerging Financial Technology Application*. Electronic Commerce Research and Applications 2008, 7(2).
- Kim C., Mirusmonov M., Lee I.: *An Empirical Examination of Factors Influencing the Intention to use Mobile Payment*. „Computers in Human Behavior” 2010, No. 26(3).

- Longoni A., Gâza M.: *Report Mobile Payments 2013*. „Innopay”.
- Ondrus J., Pigneur Y.: *An Assessment of NFC for Future Mobile Payment Systems in Management of Mobile Business*. „ICMB 2007. International Conference” 2007.
- Ondrus J., Pigneur Y.: *A Disruption Analysis in the Mobile Payment Market*. „System Sciences, 2005. Proceedings of the 38th Annual Hawaii International Conference” 2005.
- Polasik M., Górka J., Wilczewski G., Kunkowski J., Przenajkowska K., Tatkowska N.: *Time Efficiency of Point-of-Sale Payment Methods: The Empirical Results for Cash, Cards and Mobile Payments*. „Cards and Mobile Payments” 2011.
- Xu J., Pan T., Zheng L.: *Design and Implementation of High Security Mobile Payment System*. *In Communication Systems and Network Technologies*. „International Conference” 2012.

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Streszczenie

W publikacji podjęto analizę uwarunkowań wdrożenia i rozwoju płatności mobilnych w strategiach rynkowych sektora bankowego. Analiza obejmuje zestaw uwarunkowań popytowych związanych z aktywnym udziałem banków w tworzeniu rynku innowacji płatniczych w obszarze instrumentów mobilnych, jak również główne determinanty popytowe z wykazaniem ich znaczenia w procesie wdrażania płatności mobilnych.