DOI:10.17951/h.2018.52.6.87-96

ANNALES
UNIVERSITATIS MARIAE CURIE-SKŁODOWSKA
LUBLIN – POLONIA
VOL. LII, 6 SECTIO H 2018

John Paul II Catholic University of Lublin

JUDYTA PRZYŁUSKA-SCHMITT

ORCID ID: https://orcid.org/0000-0002-5320-2410
judytap@kul.pl

Cash or Non-Cash?

Pieniądz gotówkowy czy bezgotówkowy?

Keywords: cash money; cashless turnover; institutions of public trust; grey zone

Słowa kluczowe: pieniądz gotówkowy; obrót bezgotówkowy; instytucje zaufania publicznego; szara strefa

JEL code: G2; E40; E500

Introduction

Contemporary monetary systems based on decree money have led to the creation of the problem of public and private debt that is growing almost all over the world. This raises numerous problems and forces governments and central banks to take measures that will stop the spectre of rising inflation and ensure a steady flow of funds to the budget at low cost. One such solution is a gradual elimination of cash. The issue of the “fight” with cash stirs many economists who study this phenomenon on many levels and points to the consequences of getting rid of physical money on a micro- and macroeconomic scale. Eliminating cash from trade is a good solution for governments and central banks that have monopolized the monetary system in the pursuit of seigniorage and fiscal benefits.

The purpose of this article is to present the advantages and threats of de-cashing in favour of non-cash transactions. The analysis shows that the real reasons for limiting cash turnover become insignificant when governments and central banks have the potential for relatively free creation of money.

1. Non-cash trade in Poland and Germany – a comparative analysis

Statistics show that Polish society "likes" to use cash. At the same time, the infrastructure of available cash payment facilities is conducive to Polish habits. However, according to the assumptions of the Ministry of Finance (MF), the share of cash in transactions in Poland is expected to fall by nearly 30% within five years from 21.5% to 15%. Therefore, since January 1, 2017, the limit of cash transactions has been reduced to PLN 15,000. The National Bank of Poland (NBP) and the government have divergent goals here. The NBP wants to increase the money supply, while the government aims to implement a pan-European trend, gradually withdrawing cash (Figure 1).

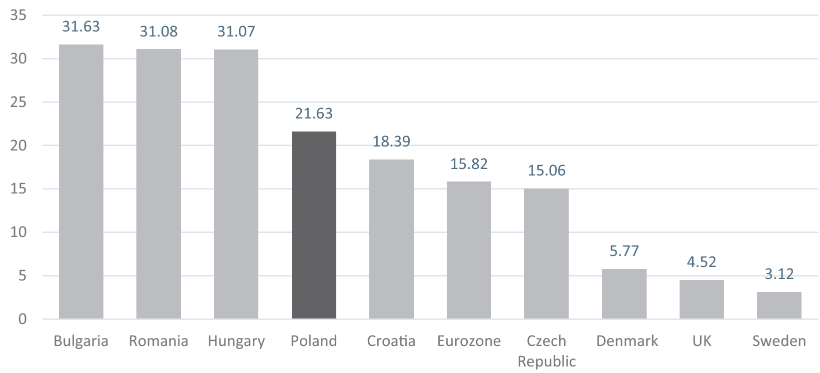

Figure 1. Share of cash in the money supply aggregate M1 in EU countries in 2015 (in %)

Source: NBP [2016, p. 41].

Further analyses of statistical data show that Poles do not have payment cards in excess, as do residents of other European Union (EU) countries, which may result from several factors. In Poland, the infrastructure of cash payment points is much better developed than in other EU countries (Figure 2). At the same time, the number of ATMs and POS terminals for cash payments is much lower than the EU average, which means that Poles have limited access to non-cash payments, in favour of traditional contact with employees of facilities where they make payments, validating the transaction with a stamp. From the point of view of entrepreneurs-traders, banks impose too high interchange fees, which significantly reduces the willingness to extend non-cash payments. According to the cited statistics, there is also no correlation between the number of bank accounts per one inhabitant in Poland and the number of payment cards issued (Figure 3). In the first case, it is 40% higher in Poland than

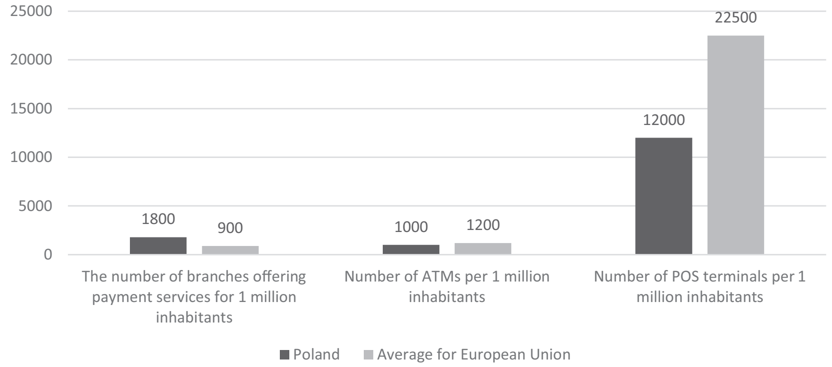

Figure 2. Access to the payment infrastructure in Poland against the EU average

Source: Author's own study based on NBP [2016].

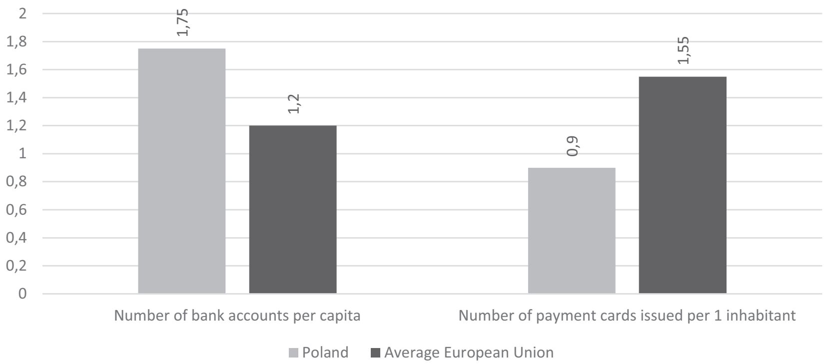

Figure 3. Number of bank accounts and payment cards per one inhabitant in Poland compared to the EU average

Source: Author's own study based on NBP [2016].

the EU average, but in the second case, Poland is below the EU average. These data indicate that Poles have more bank accounts (1.7) than payment cards (0.9).

Comparing, in turn, the number of non-cash transactions made with payment cards in Poland and other EU countries, it turns out that in 16 Member States, residents make significantly fewer such transactions than the average for the EU (Figure 4). Among these countries, Germany deserves special attention because it is not only a leading European economy, but it also plays a dominant role in the EU structures. In 2015, there were only 45 transactions with payment cards per one inhabitant of Germany, with the EU average of nearly 104 and an average of 66 such operations in Poland.

The fact that the residents of Germany also "like" cash is indicated by the report of Deutsche Bundesbank [Thiele, 2015] that shows that cash is still the most frequently used payment instrument. In all, 99% of respondents carry it in their wallets, and the use of Girocard (97% of respondents) is due to a full availability and high retail acceptance (Figure 5). Innovative payment methods are becoming more and more commonly known in Germany, but still are very rarely used (Figure 7). The users of contactless cards are close to 9%, mobile payments by smartphone in shops are made only by 2%, and outside shops by 4% of their holders. In this area, Poles are leaders of contactless payments.

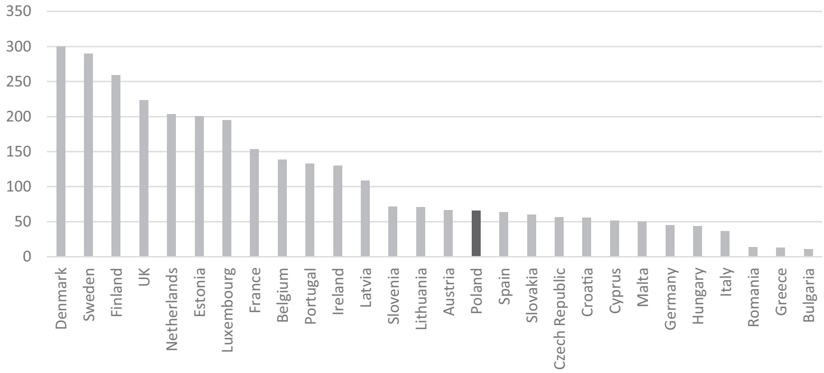

Figure 4. Number of non-cash transactions made with payment cards per one inhabitant in Poland in 2015 compared to EU countries

Source: NBP [2016, p. 18].

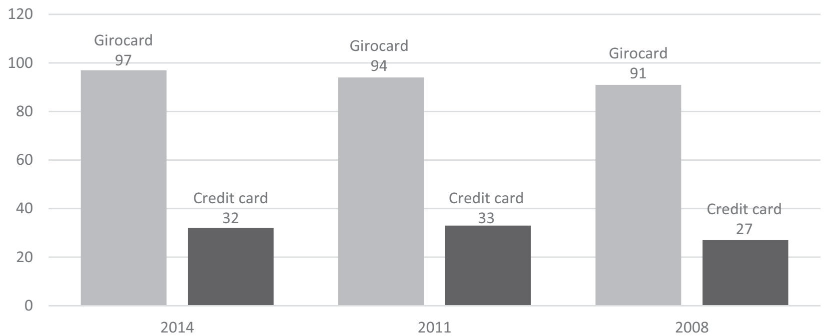

Figure 5. Possession of a payment card (Girocard, credit card) according to the respondents' self-assessment (in %)

Source: Author's own study based on *Pressegespräch „Zahlungsverhalten in Deutschland…*, p. 6.

In addition, there are no comprehensive statistics on the payment behaviours of individuals in Germany, so Bundesbank conducts its own research on consumer payment behaviours. These data indicate that cash is still the most commonly used payment instrument in Germany (Figure 6), and the use of Girocard (instant payments) is decreasing at a slow pace due to the widespread availability and high acceptance of cash in retail trade. Moreover, in Germany, many people act according to their payment habits (33% of respondents pay only in cash), and rapid changes in their payment behaviours are not possible, because changes in payment habits are, by their nature, very slow [Bundesbank, 2015].

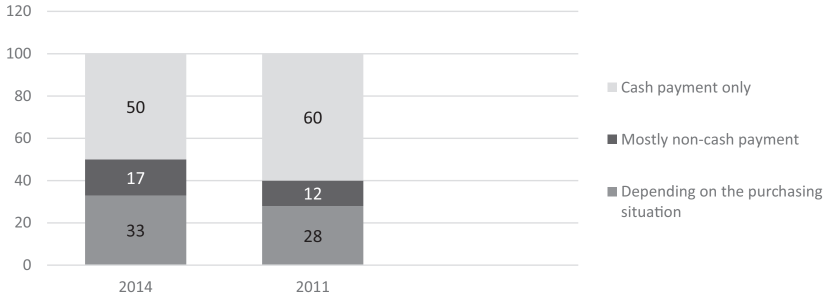

Figure 6. Self-assessment of respondents regarding the choice of payment type in 2011 and 2014 (in %)

Source: Author's own study based on *Pressegespräch „Zahlungsverhalten in Deutschland*..., p. 7.

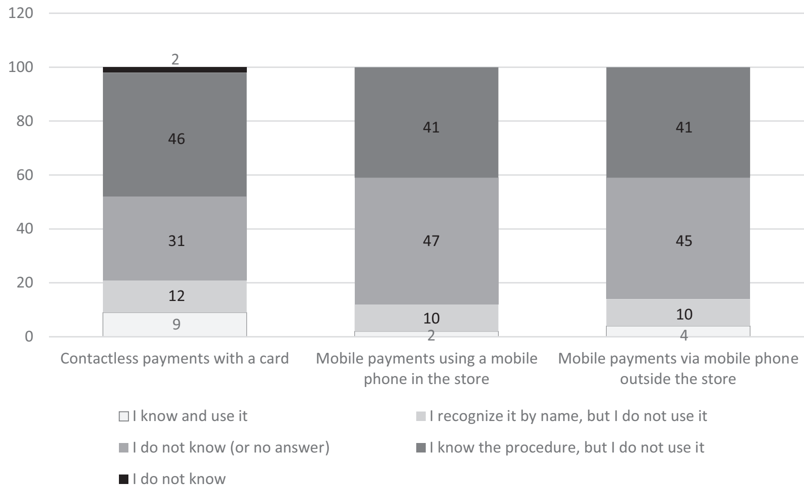

Figure 7. Knowledge and use of innovative payment methods in 2014 (in %)

Source: Author's own study based on *Pressegespräch „Zahlungsverhalten in Deutschland*..., p. 15.

The Masterindex Report for 2017 shows that although 43% of cards in Europe are contactless, there are discrepancies among countries. Nearly 90% of such cards are in use in Poland and the Czech Republic, but in Germany, 83% of the cards are not contactless, and in Belgium, this number reaches 90%. Only 7% of Europeans make contactless payments every day, 26% – once a week, and 38% – once a month. However, almost half of the population never uses them [Masterindex, 2017]. In the Czech Republic, Germany, the Netherlands and Poland, online banking is twice as popular as cards. However, the measures taken by governments and central banks are gradually seeking to strengthen non-cash transactions.

Particularly noteworthy is the analysis of the share of cash in the money supply aggregate M1, which is systematically decreasing. Out of the 9 EU Member States that do not belong to the eurozone, only 5 do not reach the EU average, that is, the 16.5% of the cash share in the M1 monetary base: Bulgaria, Romania, Hungary, Poland and Croatia. The Czech Republic is slightly below this limit, and much below the EU average are countries such as Denmark, the United Kingdom and Sweden, where cash turnover has been largely eliminated. These data indicate that tendencies to get rid of cash seem obvious. The best examples are Scandinavian countries, especially the Swedish model of non-cash transactions.

2. Scandinavian countries in non-cash trade

Scandinavian countries – Denmark, Norway and Sweden – dominate in the elimination of cash of which Swedes, who use credit cards several times more often than the European average, are the most striking example of non-cash transactions. About 900 out of 1,600 Swedish bank branches do not keep cash at the counter or accept deposits, and many areas, especially rural ones, do not have access to ATMs. The Swedish crown turnover in 2009 fell from around 106 billion to 80 billion in 2015, and payment cards became the main form of payment. VISA statistics show that Swedes use them three times more often than the average for Europeans, which in 2015 gave an average of 207 payments per card. Payments *via* the Swedish Swish application are also accepted on the so-called flea market. Such payments are accepted by both small street vendors and churches. In Stockholm, only 15% of donations were accepted in cash, which indicates a far-reaching adaptation to new methods of payment, with the use of mobile phones [Henley, 2016].

The official reason for switching to non-cash transactions has become a very popular argument of effective fight against corruption. This approach means that people who pay with banknotes are increasingly suspiciously viewed in Sweden, and Swedish national law even requires notifying the police about transactions made with cash. Sweden is currently one of the few countries in the world where the value of banknotes and coins in circulation is constantly decreasing [Liman, Magnusson, 2017] (Figure 8).

According to estimates by Prof. Niklas Arvidsson from the Royal Technological Institute in Stockholm, in the next 5 to 6 years, cash in Sweden will play a marginal role, and after 2030, it may disappear completely from the market. Also, according to calculations by the Swedish central bank Riksbank, in 2016, the cash turnover accounted for only 2% of the value of all payments. According to forecasts, by 2020, this figure will fall to 0.5% [Henley, 2016]. Swedish statistics [Trading Economics, 2017] shows banknotes and coins in public circulation fell below SEK 55 billion in the second quarter of 2017.

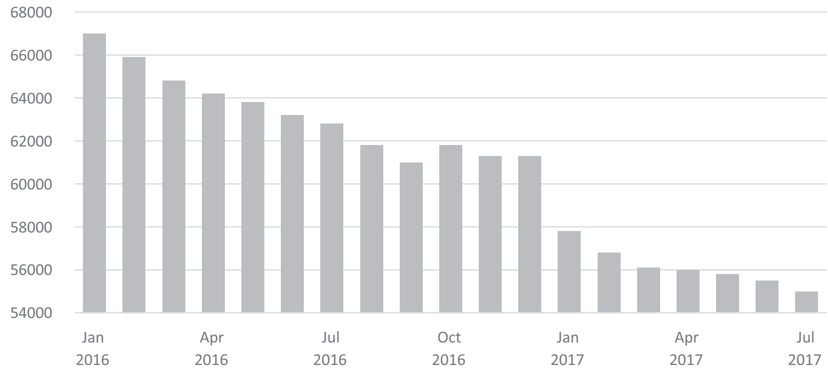

Figure 8. Share of cash in the money supply aggregate M0 (in million SEK)

Source: Author's own study based on tradingeconomics.com, Sveriges Riksbank [access: 25.05.2018].

The reason for the rapid development of non-cash transactions in Sweden is the fact that banks are not allowed to impose surcharges on withdrawing money from bank accounts with payment cards and the introduction of the Swish electronic payment system launched in 2012, which is used by 40% of Swedes [Ahlfort, 2015]. The new smartphone application, developed by Swish together with such banks as Nordea, Handelsbanken, SEB, Danske Bank and Swedbank, enables the use of phone numbers to transfer money between accounts in real time. The system is currently being used to make over 9 million payments monthly. It is worth comparing this figure with the number of inhabitants which, according to the World Bank, in 2016 amounted to 9.903 million people. Similarly, the Danish MobilePay application used by over 3 million Danes (Denmark's population reaching 5.7 million) in 2015 enabled the execution of approximately 90 million transactions [Henley, 2016].

The Swedish model shows that we are dealing with a dynamic development of non-cash transactions, which entail tangible benefits, primarily functionality, comfort and convenience. Meanwhile, fears are also born. Organizations representing older people are afraid that people who, for various reasons, prefer cash – whether for the lack of skills or reluctance to use new technology or their own conviction that it is easier for them to control their expenses – will be disadvantaged. Still others point out that young people will become even more inclined to borrow and spend money that they do not actually have. In addition, there are growing numbers of cases of fraud and electronic theft. Many critics are questioning whether a system in which each payment is registered does not threaten privacy. Do the public trust institutions, entrusted with our money, present adequate credibility? Can we have full confidence in them?

3. Negative interest rates and their consequences

The modern monetary system controlled by the government raises yet another serious problem. The created money goes to the economy through the banking sector, which means that inflation does not cause a steady increase in prices, but spreads unevenly throughout the economy, causing some prices of goods and services to rise faster than others. As a consequence, the economy adapts to the growth of the money supply in a heterogeneous way. In a period of excessive inflation, the level of interest rates is artificially low. The central bank and commercial banks create new money by granting new loans. The only way to gain borrowers for these loans is to lower their prices, and thus the interest rate. The debates on the reduction of cash turnover and its consequences are prompted by financial crises recurring with increasing intensity, provoked by the activities of banks and the consequences of using unconventional monetary policy measures [Zieliński, 2013, p. 673].

Since the beginning of the recent financial crisis in 2007, many central banks have implemented unprecedented and non-standard monetary policy measures, reducing key interest rates to around zero. Such actions were taken to stimulate economies that, after the crisis, were characterized by low growth and low inflation. Some of them, including the European Central Bank (ECB)[1], even adopted negative interest rates, justifying this by providing the additional monetary stimulus, giving banks the incentive to lend to the real economy sector and thus supporting growth and return to the inflation target [Cœuré, 2014].

Outside the eurozone, negative interest rates were also introduced by Japan, Sweden, Denmark, Switzerland and recently also Hungary. Monitoring economic and political reports, it can be expected that the easing cycle will soon commence in the US, and the latest analyses indicate that interest rates in the largest world economies can be reduced to -1.3% (in the US) and as much as -4.5% (in the EU).

According to Hannoun [2015], the adopted policy of long-term low or negative interest rates depends on transmission channels with uncertain effectiveness and potentially serious, unintended consequences. In the case of central banks, such a policy increases the risk of financial, fiscal and exchange rate dominance, i.e. the threat that monetary policy will become subordinated to the requirements of supporting financial markets aimed at lowering the rate and maintaining low public refinancing costs in the face of the unprecedented public debt. These threats have existed before, but they have never manifested themselves as sharply as they do today.

The debate about low interest rates boils down to a compromise between the short-term and long-term interest rate. The effectiveness of the ECB's monetary pol-

[1] In the early 1970s, the Swiss government introduced a negative interest rate regime to counter the currency's appreciation due to investors fleeing inflation in other parts of the world. Negative interest rates were applied by Sweden in 2009–2010 and Denmark in 2012 to stop the inflow of new money to its economies. In 2014, the ECB introduced a negative interest rate only on bank deposits, which was intended to prevent the eurozone from falling into a deflationary spiral.

icy may be reduced by the persistence of high indebtedness. Indeed, the persistently high private debt, often accompanied by significant public debt, is one of the obstacles to stable economic growth in some eurozone countries. This may reduce the effectiveness of the ECB's unconventional monetary policy instruments and encourage the prolongation of the policy of very low interest rates. On the one hand, very low interest rates support domestic demand, but on the other hand, they can be reflected in a further increase in private sector debt and property price increases [CNB, 2016].

Conclusions

This analysis shows that the convenience associated with non-cash payment usability will probably prevail over the concerns related to the creation and use of huge databases, which in the face of the massification of the bases relativize the problem of identifying individual identities. Looking at the problem from this perspective, it turns out that the elimination of cash is harmful to the economy, but, at the same time, it is a direction that we will inevitably follow. In the interest of the banking cartel, the absolute priorities are security of banks and solvency of governments. The use of modern technologies will entail limitation of freedoms for society that will be exchanged by society for convenience. These benefits of the 21st century offer a number of advantages while at the same time carrying certain threats. Keeping cash in circulation seems extremely important. However, it should be remembered that the greatest enemy allowing for eliminating cash is we ourselves. The advantages of using payment cards and online banking, such as convenience, functionality and usability, may outweigh the concerns of possible losses.

For the public to be able to accept various forms of payment and even increase the use of existing payment methods, concerns about trust and security should be addressed. Many studies indicate that the scope of using e-commerce services expands when comfort and lack of the sense of loss (related to the psychological understanding of exchange) prevails. Such financial policy is primarily beneficial to debtors, especially governments and banks, which can create even more debt and earn on fees from trade in financial instruments.

References

Ahlfort, K., *Cashless future for Sweden? Popularity of Swish hastens digitalisation of country's money*, 2015, https://www.kth.se/en/forskning/artiklar/cashless-future-for-sweden-1.597792 [access: 3.02.2016].

Cœuré, B., *Life below zero: Learning about negative interest rates*, 2014, https://www.ecb.europa.eu/press/key/date/2014/html/sp140909.en.html [access: 15.01.2018].

CNB, 2016, *Financial stability report 2015/2016*, Czech National Bank.

Henley, J., *Sweden leads the race to become cashless society*, 2016, https://www.theguardian.com/business/2016/jun/04/sweden-cashless-society-cards-phone-apps-leading-europe [access: 15.10.2016].

Hannoun, H., *Ultra-low or negative interest rates: what they mean for financial stability and growth*, 2015, https://www.bis.org/speeches/sp150424.pdf [access: 1.06.2017].

Liman, L., Magnusson, N., *In Cashless Sweden, Even God Now Takes Collection Via an App*, 2017, https://www.bloomberg.com/news/articles/2017-05-14/in-cashless-sweden-even-god-now-takes-collection-via-an-app [access: 15.05.2017].

Masterindex, 2017, *Pan-European e-commerce and new payment trends*, https://newsroom.mastercard.com/wp-content/uploads/2017/03/Masterindex-2017.pdf [access: 20.05.2017].

NBP, 2016, *Porównanie wybranych elementów polskiego systemu płatniczego z systemami innych krajów Unii Europejskiej za 2015 r.* https://www.nbp.pl/systemplatniczy/obrot_bezgotowkowy/porownanie_UE_2015.pdf [access: 10.05.2017]

Pressegespräch „Zahlungsverhalten in Deutschland 2014" Dritte Studie über die Verwendung von Bargeld und unbaren Zahlungsinstrumenten, Carl-Ludwig Thiele, Mitglied des Vorstands der Deutschen Bundesbank, Frankfurt am Main 2015.

Thiele, C., *Zahlungsverhalten in Deutschland 2014*, 2015, https://www.bundesbank.de/Redaktion/DE/Downloads/Veroeffentlichungen/Studien/zahlungsverhalten_in_deutschland_2014_praesentation.pdf?__blob=publicationFile [access: 15.05.2018].

Trading Economics, 2018, *Sweden Money Supply M0 2008–2018*, https://tradingeconomics.com/sweden/money-supply-m0 [access: 25.05.2018].

Zieliński, T., *Współczesny bank wobec paradygmatu zaufania publicznego*, „Annales UMCS" 2013, Vol. XLVII(3).

Pieniądz gotówkowy czy bezgotówkowy?

Celem artykułu było przedstawienie korzyści i zagrożeń wynikających z pozbycia się gotówki na rzecz obrotu bezgotówkowego. Analizie poddano dane dotyczące obrotu bezgotówkowego w Polsce na tle wybranych krajów europejskich. Ponadto opisano szwedzki model płatności bezgotówkowych. W podsumowaniu zostały przedstawione scenariusze możliwych rozwiązań. Z analizy wynika, że rzeczywiste powody ograniczenia obrotu gotówkowego mogą być zupełnie inne niż walka z korupcją, szarą strefą czy przestępstwami finansowymi, a zmiany nawyków płynnościowych zachodzą w społeczeństwie bardzo powolnie. Mimo to istnieje ważny element, który może przeważyć na korzyść obrotu bezgotówkowego – jest nim wygoda w dokonywaniu transakcji bezgotówkowych.

Cash or Non-Cash?

The purpose of this article was to present the benefits and risks of cash-out for cashless trading. The article analyses data on non-cash trade in Poland against selected European countries. In the following part, the Swedish model of non-cash payments is described. The summary provides scenarios for possible solutions. The analysis shows that the real reasons for limiting cash turnover can be completely different than the fight against corruption, the grey zone and financial crimes. Nevertheless, there is an important element that can outweigh the benefits of non-cash transactions, namely the convenience in making non-cash transactions.