

NBP

Money Centre
in memory of Sławomir S. Skrzypek

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Bankoteka

HISTORY • ECONOMY • EDUCATION



Wystawa stała / Exhibition

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Pieniądz jest centralnym punktem każdej części ekspozycji. Zwiedzanie Centrum Pieniądza NBP rozpoczyna się od narodzin pieniądza i prezentacji pierwszych form, jakie przyjmował w starożytności. Dalsza podróż to spotkanie z pieniądzem monetarnym, a finalnie z wirtualnym.



Dear Readers

Starting from this issue, the “Bankoteka” magazine will be published on a quarterly basis. In the regular sections we are going to publish material which on the one hand draws attention to the most interesting elements of the NBP Money Centre, and on the other hand offers broader knowledge about the exhibits and issues presented in the exhibitions.

“Education” is the most important section of the magazine, devoted to the educational activities in the field of economics and finance carried out by Narodowy Bank Polski. The educational purpose is served by both the Money Centre and the activities of the Education and Publishing Department of Narodowy Bank Polski.

In this issue’s “Education” section we present the contemporary, post-war history of Polish money. Many people, and especially the young, who haven’t yet visited the NBP Money Centre, will be surprised to learn that there was once a 2 złoty banknote in Poland. They can find this out by viewing this banknote on display. On the cover of the magazine we present not only the 2 złoty banknote, but also a banknote with a denomination one million times higher. Yes, we used to have a 2,000,000 złoty banknote at one point as well!

In the “Exhibits” section you can read about the latest Polish banknote with a denomination of 500 zł, which went into circulation on 10 February 2017 and can be

viewed at the NBP Money Centre. We also describe the history of the smallest coin presented in the Money Centre. The enlarged photograph will allow you to see all the details of this miniature lump of ore.

“Multimedia” is a section in which we will disclose what is sometimes hidden in these items of the exhibition. Their secrets include texts with additional information on the topic presented in the given room, photographs and graphics. We begin with a discussion about the attractiveness of multimedia elements.

The Money Centre is adapted in order to enable viewing by visitors with various types of disabilities. This is confirmed by a certificate, and verified in practice by our guests. In this issue, we write about a visit of children and youth from one of Warsaw’s schools.

The last section is “Money museums of the world”. We travel from Warsaw to Lisbon, where the Museu do Dinheiro – the Money Museum – was opened last April. This facility presents the history of Lisbon and Portugal through the history of money. It’s an amazing place! I can say this with conviction, because I visited it during last year’s conference of the representatives of the European Union money museums.

Enjoy your reading.

Stanisław Gorący
Editor of the “Bankoteka” magazine

Education

The 2 złoty banknote

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Redenomination of the złoty, or how Poles stopped being “millionaires”

Once there was a 2,000,000 złoty banknote... part I [p. 8-10](#)



The 2 złoty banknote

The fate of the post-war banknote – with a denomination of 2 zł – is intertwined with the history of the head office of Narodowy Bank Polski. The reverse side of the banknote depicts the initial design of the NBP building, created by a team of architects led by Bohdan Pniewski. The building presented on the 2 zł banknotes was never erected and ultimately passed into oblivion in the 1960s when NBP ceased the issue of the 2 zł banknote.

The history of the 2 złoty banknote began in the summer of 1944, during the “second Soviet occupation”, that is, after Eastern Poland was seized by the Red Army. Three different types of money were used in those territories: German occupation-era złoty banknotes printed in Kraków, German marks and Soviet rubles. In this situation there was a clear need to issue new “unified” money, both as a means of economic exchange and as an excellent means of propaganda for the emerging Communist

regime of the Polish Committee of National Liberation.

The decree of the Polish Committee of National Liberation of 24 August 1944 introduced banknotes in denominations of 50 gr and 1, 2, 5, 10, 20, 50, 100 and 500 zł in the “liberated” territories. This currency, known as the “Lublin series”, appeared in the Białystok, Lublin and Rzeszów voivodeships as early as 27 August 1944. The banknotes were issued by the Central Treasury Office, established pursuant to a decree of the Polish Committee of National Liberation, which was subsequently transformed into the Ministry of Treasury, and in 1948 renamed as the Ministry of Finance.

The head of the Department of Economy and Finance of the Polish Committee of National Liberation, Jan Stefan Haneman, who was a former low-rank bank official and a member of the Polish Socialist Party, brought the new banknotes in hemp sacks aboard an aeroplane from Moscow. The banknotes, printed in the Moscow “Goznak” printing house, were designed by Soviet graphic designers from a team led by Ivan Dubasov, a famous designer of Russian banknotes, medals, military decorations and postage stamps (he co-designed the emblem of the Soviet Union).

The banknotes, released to the market by the Treasury and not by the bank of issue, were known as treasury notes (at that time it was impossible to resume the operation of Bank Polski SA, associated with the Polish government-in-exile). However, these first treasury notes already carried the name of the future bank of issue: Narodowy Bank Polski.

Before the new money appeared in eastern Poland, on 26 July 1944 Edward Osóbka-Morawski signed an agreement with the Soviet government in Moscow on the surrender of the Polish territory to the jurisdiction of the Red Army. Then on 27 August, he signed the “Agreement between the Polish Committee of National Liberation and the Soviet government on the Polish-Soviet border”, pursuant to which Poland lost nearly half of its pre-war territory to the Soviet Union.

On 15 January 1945, two days before the Soviets crossed over to the left bank of Warsaw, the Polish Committee of National Liberation established Narodowy Bank Polski. Its temporary head office was located in the building of the former National Agricultural Bank at Nowogrodzka Street, which survived the war unscathed. Narodowy Bank Polski was granted the exclusive right to issue banknotes. Less than a month later, in February 1945 the embryo of the NBP head office launched its activities.

Due to the destruction of the Polish Security Printing Works in Warsaw, the printing of banknotes was moved to Kraków and Łódź, where the company was relocated along with its pre-war employees. The first delivery of banknotes from the former National Printing House in Kraków, converted into the seat of the Polish Security Printing Works, arrived at Narodowy Bank Polski on 21 March 1945.

By May 1946, the banknotes introduced into circulation included the denominations of 1, 2, 5, 10, 20, 50, 100, 500 and 1,000 zł. Banknotes of the highest denominations (100, 500,



Postwar NBP head office at 50 Nowogrodzka Street in Warsaw. Photo by NAC.

1,000 zł) contained socialist-realist depictions of workers and peasants.

At the same time, the new authorities were preparing a large-scale money exchange operation. The exchange was announced on 28 October 1950 in the Journal of Laws No. 50, item 459. All the banknotes introduced into circulation in 1950 were designed by Waław Borowski. The face values of 2 and 5 zloty were printed in the Łódź branch of the Polish Security Printing Works, while the 10, 20, 50, 100 and 500 zloty banknotes (with the date of issue of 1 July 1948) were printed abroad – in Sweden, Czechoslovakia and Hungary. After 1950, the production of all denominations was moved to the Polish Security Printing Works in Warsaw.

The new zloty, equal to one ruble and one quarter of a dollar, with a theoretical value of 0.222168 grams of pure gold, entered into circulation on 30 October 1950. Salaries were exchanged at a rate of 100 old zloty to 3 new zloty, and cash at the rate of 100 old zloty to 1 new zloty. Less than ten days later, on 8 November 1950, the money that was in circulation prior to 30 October was invalidated.

Meanwhile, the press and the radio proudly informed that since 100 old zloty was now equal to 3 new zloty, the “purchasing power of the new zloty is more than 33 times higher than the purchasing power of the old zloty”. In reality, the introduction of the new zloty deprived the Poles of two-thirds of their savings. The “Sztandar Ludu” (People’s Banner) newspaper claimed at the time that the Soviet economy was developing so well because in the years 1947-1950 three currency reforms were carried out in the Soviet Union, combined with a reduction in the prices of basic consumer goods.

The exchange of 1950 was linked with the introduction of new banknotes that were harder to forge, and of virtually counterfeit-proof aluminium coins with face values of 1 and 2 gr and copper-nickel coins with denominations of 5, 10, 20, 50 gr and 1 zł. The new



CENTRAL BANK room. 2 zloty, issue from 1 July 1948.

coins facilitated small payments and were used in pay phones.

The banknote with the lowest denomination was the 2 zloty banknote with the date of issue of 1 July 1948. Few people know that after the war 2 zloty was not a coin like today, but a banknote with dimensions of 120 × 58 mm. It was printed in Łódź using letterpress technology, which is a relief printing technique. Banknotes of this series were in circulation

for nearly thirty years; only the denominations of 2, 5 and 10 zł were being withdrawn from circulation from 30 June 1960. The 2 zł denomination became a coin.

While the exchange banknotes were being prepared (1948), the architectural studio of Bohdan Pniewski was developing the design of the head office of Narodowy Bank Polski. The general design was featured on the reverse side of the 2zł banknote. It is noticeable that



CENTRAL BANK room. Glass showcase with the 2 zloty banknote.

this was the only banknote whose graphic design did not fit in with the socialist realism movement already coming from the East.

The graphic design of banknotes that went into circulation in 1950 was clearly dominated by socialist realism. The banknotes depicted a tractor ploughing a field, a peasant with hay stacks, a street vendor and the Cloth Hall in Kraków, a fisherman and a port, a labourer and a factory, and a miner with extracted coal in a mine.

The design of the NBP building was thoroughly modernist, which was quite inconsistent with the mandatory style of socialist realism. The construction of the head office of the bank was planned on a large plot of land in the centre of Warsaw – between Napoleon Square (today: Powstańców Warszawy Square) and Świętokrzyska Street and Warecka Street. The architectural design competition announced in January 1948 was won by the design team of Bohdan Pniewski, a prominent architect representing modernism and a professor at the Warsaw University of Technology.

Pniewski combined two shapes: a low block circling the entire plot along the construction lines, and a high office building in the shape of the letter H, located in the middle of the plot.

A spacious banking hall was supposed to be located from the side of Napoleon Square. The style of the planned building was similar to that of many of Warsaw's post-war designs, with visible influence of the architecture of the late inter-war period.

Meanwhile, on 3 July 1949 at the Warsaw Conference of the Polish United Workers' Party, Bolesław Bierut announced that arts and architecture should be subjected to the ideology of socialist realism modelled

on the socialist realism prevailing in the Soviet Union. From that point until 1956 socialist realism dominated in painting, sculpture, literature, cinema and construction.

Design offices were permeated with ideology and became suffocating places stifling creativity, where any criticism was silenced. As it was announced at the Conference of Party Architects in 1949, "the peoples of the Soviet Union" were supposed to erect new, socialist architecture. As a result, in the capital city palaces were designed for the people, music was composed for the people, and poetry was written for the people. Surprisingly, the burgeoning socialist realism, the condemnation of the architectural works of Pniewski and the suspended implementation of his design of the NBP head office, did not result in the withdrawal of the 2 zloty banknote, which depicted the original design of the NBP building.

After the war, 2 zloty was not a coin like today, but a banknote with dimensions of 120 × 58 mm. Banknotes of this series were in circulation for nearly thirty years, but the denominations of 2, 5 and 10 zł were being withdrawn from circulation from 30 June 1960. The 2 zł denomination became a coin.

During the period of political "thaw" after 1953, Pniewski presented further plans for the NBP building, and construction works based on a design that was not accepted by the author himself were ultimately launched five years after he won the competition. Three years later, in 1956 socialist realism began a slow retreat from the architectural design studios. At that point Pniewski was preparing subsequent improved versions of the design of the building.

In 1960, when the 2 zloty banknote depicting the design of the NBP building was withdrawn from circulation, Pniewski presented a new vision of the building's banking hall for the last time. Unfortunately, he did not live to see the completion of the construction works and died in 1965. The building of the NBP Head Office was commissioned for use in several stages and the last finishing works were completed in the early 1970s.

Today, both Bohdan Pniewski's design and the 2 zł banknote depicting his vision of the NBP building are a part of history. This history can be viewed in the "Central Bank" room at the NBP Money Centre.

■ *Magdalena Rakowska*

Redenomination of the złoty, or how Poles stopped being “millionaires”

Once there was a 2,000,000 złoty banknote... part I

Two million złoty in your wallet? Twelve thousand złoty to buy groceries? The cheapest daily newspaper for 5,000 złoty? A small car for 80 million złoty?! Are we talking about the spending habits of millionaires from the top spots of the list of 100 richest businessmen? Is this the world of virtual millionaires? No, this is just a brief illustration of the Polish economic reality at the turn of the 1990s. At that time the economic crisis of the Polish People’s Republic was reaching its peak, the soaring inflation was decreasing the purchasing power of money at a rapid pace and the majority of Poles earned and spent literally millions of złoty. During the most difficult years of inflation, the złoty was losing value at the rate of several tens of percent per month. Additional zeros were added to the prices and the monthly salaries, and new banknotes with ever higher denominations were introduced into circulation. Due to the dramatic economic situation in the early 1990s, the reform of money and the strengthening of the Polish złoty became a necessity.



Banknote with a denomination of 2,000,000 złoty and a date of issue of 14 August 1992. Despite the change in the name of the Polish State (the banknote bears the name: “Rzeczpospolita Polska”), the watermark still shows the image of the eagle from the state emblem of the Polish People’s Republic – without a crown. In addition, the first series of issue of this banknote was printed with an error - the letter “n” in the name “Sejm Konstytucyjny 1919 r.” (Constitutional Sejm 1919) was missing. Below – the second series of the issue of this banknote with the corrected word “Konstytucyjny”.



Banknote with a denomination of 100,000 zloty and a date of issue of 1 February 1990. Although the banknote was put into circulation after the formal renaming of the Polish State, it still included the symbols of the previous political regime: the banknote carried the country name of “Polska Rzeczpospolita Ludowa” (Polish People’s Republic), the emblem of the Polish People’s Republic and a watermark depicting an eagle without a crown.



Banknote with a denomination of 500,000 zloty and a date of issue of 20 April 1990. The banknote has a watermark characteristic of the previous regime, depicting an eagle without a crown (in the unprinted field). Despite this it was included among the banknotes of the Republic of Poland. The new name of the Polish State is visible above the denomination of the banknote. Below we can see the emblem of the Republic of Poland – an eagle with a crown.



Today banknotes with denominations of hundreds of thousands and millions of zloty are just historical relicts, presented in museums and numismatic exhibitions. The generation that grew up after the times of redenomination did not know or does not remember the means of payment used in the previous political system. For them, these banknotes are merely a testament to a bygone, unknown and culturally distant epoch. For their parents and grandparents, the banknotes with Sienkiewicz, Reymont or Paderewski are still a vivid memory, as they relate to a concrete value of goods that could be bought at the turn of the 1990s. Today, after 22 years have passed since the redenomination,

these banknotes are intriguing and attract the attention of the visitors at the NBP Money Centre. The banknotes used before and after the redenomination can be viewed in the “Transformation” room, among others.

Why do we need this redenomination?

In the 1980s, the economy of the Polish People’s Republic was in a state of progressing decay. The years 1981-1990 brought a sharp increase in inflation. To illustrate the gravity of the situation, it is enough to recall that in 1982 prices increased by 100.8% in relation to

the previous year, in 1987 by 25.2%, in 1988 by 60.2%, and in 1989 by as much as 250.1%. The highest inflation was recorded in 1990, when prices increased by over 585% in relation to the previous year.

The huge inflation at the turn of the 1990s became the main reason why Narodowy Bank Polski started working on a redenomination. The change of money was necessary – the zloty was constantly losing its purchasing power, forcing the introduction of subsequent, increasingly higher denominations of banknotes. While the Polish Security Printing Works was not able to keep up with the production of banknotes, coins



Banknote with a denomination of 1,000,000 zloty and a date of issue of 15 February 1991. In the watermark (in the unprinted field) we can see the image of the eagle from the emblem of the Polish People's Republic – without a crown, even though the banknote bears the name “Rzeczpospolita Polska”, the abbreviation of the state name “RP” and the emblem of the Republic of Poland – an eagle with a crown.



went almost entirely out of use. It was difficult to count money when denominations reached millions of zloty. While the redenomination of money was largely a technical monetary operation (the exchange of the old monetary unit to a new one, according to a fixed rate), it could not be detached from the economic reality. It had to be a part of a broad programme of economic reforms.

The redenomination of the zloty could be carried out successfully only after the stabilization of the economy, reduction of inflation and increase in the purchasing power of money. The redenomination of the French franc, carried out by General Charles de Gaulle in 1960, became a model for Poland. Given the previous historical experiences of Polish society, a thorough information campaign was an extremely important element of the proposed reform.

The method in which the redenomination was carried out had to be well prepared because in the public consciousness the very words “monetary reform” caused anxiety and the fear of a sudden loss of life savings. People still remembered the monetary reform of 1950, as a result of which Poles lost about 2/3 of their already modest financial resources.

There were at least two arguments in favour of the redenomination. The first concerned the image of the Polish economy. Prices and wages measured in millions clearly indicated that the country's economy was inflationary and that the value of money was uncertain and unstable. The exchange of money at a balanced level of inflation was supposed to confirm that the zloty was a strong and convertible currency.

In addition to issues of reputation, there was also a political argument – the old zloty was the currency of the past political and economic system. The Third Polish Republic wanted to symbolically cut ties with the communist past, personified especially by the figures depicted on the banknotes: Ludwik Waryński (100 zloty) and General Karol Świerczewski (50 zloty). The new zloty was supposed to represent

the new reality and symbolize the transition from a centrally planned economy to a market economy.

The desirability of redenomination was also confirmed by practical considerations. There was no longer enough space on the official forms for the long strings of numbers, and the calculators and computer programs used at the time had problems with counting increasingly high values. The increasing costs of cash transactions also played a part. Right before the redenomination, 16 banknotes of different face values were in circulation! The State Treasury was increasingly burdened by the cost of production and storage of banknotes (at that time coins practically went out of circulation, and the lowest denomination used was the banknote with a face value of 50 zloty).

■ Anna Brzyska



TRANSFORMATION room. Glass showcase with the 2,000,000 zloty banknote.

Exhibits

The new 500 złoty banknote in the NBP Money Centre

The latest Polish banknote [p. 12–13](#)

The hemihekte

The oldest coin in the NBP Money Centre [p. 14–15](#)



The new 500 złoty banknote in the NBP Money Centre

In February 2017, Narodowy Bank Polski put into circulation a new 500 zł banknote with image of King John III Sobieski.

The introduction of the 500 złoty denomination banknote is the central bank's response, as the exclusive issuer of the currency of the Republic of Poland, to the growth in value of cash circulation and the greater demand for high denomination banknotes. One of

the aims of Narodowy Bank Polski is to ensure the safe and effective circulation of cash in Poland, which will meet the needs of society and enterprises.





CREATOR of MONEY and MONEY PRODUCTION room. Glass showcase with 500 zloty banknote.

The 500 zloty banknote has modern security features which, apart from their high technological level, also ensure easy identification and good functionality.

Description of the 500 zloty denomination banknote and its security features:

Front side – portrait of King John III Sobieski

Reverse side – the palace in Wilanów and the image of an eagle in a crown with the Sobieski family coat-of-arms

Basic security features:

1. Watermark – the watermark field is free from print. When the banknote is held against the light, a multi-tone watermark is visible – a repeat of the image of the sovereign from the front of the banknote and a light monotone value numeral “500”.

2. Windowed security thread – fragments of the security thread can be seen on the surface of the front of the banknote, the whole thread is visible against the light.

When viewing the security thread the following effects are visible:

- when the banknote is tilted in vertical and horizontal directions the colour changes smoothly from green to blue,
- when the banknote is tilted in vertical and horizontal directions the pattern of two interweaving ribbons appears to move.

In addition, there is microlettering on the security thread with the value numeral “500” and “500 ZŁ”.

3. Colour-shifting ink – when the banknote is tilted, the ornamental graphic element to the right of the portrait (lobster-tailed pot helmet) smoothly changes colour from green to blue, and the pattern of a wavy line placed on it appears to move in a vertical plane.

4. Latent image:

- the value numeral “500” on the right side of the portrait of the sovereign becomes light or dark depending on the angle at which it is viewed,
- on the left side of the portrait, rectangular fields are visible in an escutcheon depending on the angle at which the banknote is viewed.

5. Iridescent ink – the ornament on the back of the banknote is printed with gold iridescent ink. The ornament is visible or almost invisible depending on the angle at which the banknote is viewed.

6. Markings for the visually impaired – elements that can be felt to the touch on the front of the banknote:

- two vertical stripes in the lower left-hand corner made up of tiny squares,
- a set of lines on the shorter edges of the banknote.

7. UV security features – UV light: a square with the value numeral “500” and the abbreviation “ZŁ”, to the left of the portrait, the serial number on the left side of the banknote, the stripe on the top right-hand side of the sovereign’s portrait and some other graphic elements on the front and back of the banknote.

8. Microlettering – tiny inscriptions made with high precision in offset or intaglio printing techniques.

Front of the banknote:

- Intaglio microlettering – „RZECZPOSPOLITA POLSKA”, „NBP 500” and „NBP 500 ZŁ”,
- Offset microlettering – „RZECZPOSPOLITA POLSKA” and „500”

Back of the banknote:

- Intaglio microlettering – „RZECZPOSPOLITA POLSKA”,
- Offset microlettering – „NARODOWY BANK POLSKI”, „NBP 500 NARODOWY BANK POLSKI”.

■ *Prepared by: The NBP Public Relations and Marketing Department*

The hemihekte

A small lump of ore known as Electrum, a natural alloy of gold and silver, is one of the smallest exhibits presented in the Money Centre. Due to the symbol impressed on this item, it is considered to be one of the first coins in the world.

The emergence of this coin is dated back to the middle of the 7th century BC. It is believed to have been put into circulation by one of the Lydian kings of the Mermnad dynasty – Gyges (ca. 685-652 BC), Ardys II (652-625 BC) or Alyattes II (609-560 BC). The Lydian kingdom, which at the height of its power extended between the Aegean Sea and the Black Sea, was a fertile land and the River

Paktolos flowing through this area supplied many riches in the form of gold nuggets and Electrum. Such conditions were conducive to the development of trade and the enrichment of its inhabitants, who were regarded by their Greek contemporaries as the first merchants. All settlements were conducted in non-monetary ore, which was simply weighed, and the ratio of gold to silver was probably

set at 1:13. One of the problems in settlements resulted from the use of natural lumps of Electrum, in which the gold and silver ratio varied, and could range from 17% to even 30% of silver content. In order to remedy these inconveniences and to unify the monetary system, the Lydian rulers adopted a solution which facilitated settlements in Electrum. The symbol of the ruler struck on a lump of



ANTIQUITY – MIDDLE AGES – MODERNITY room. Glass showcase with the hemihekte.



Hemihekte.

Electrum guaranteed equal value to all coins of the same weight. Such activities were also employed as political and propaganda tools.

The first Lydian coins from Electrum were only struck on one side. On their obverse, that is the main side, the coins carried the symbol of the royal authority – the head of the Lydian lion. The die with the image of the obverse was mounted on an anvil, and the lump of Electrum placed on the die was manually hammered using a piston in order to press the lump into the obverse die. In order to ensure that the Electrum didn't move in the die or didn't fall out, the piston had a special incision which formed a square

divided into cells. It left a concave imprint on the reverse side of the minted coin, known as "quadratum incusum". Over time, various inscriptions and images were included on the upper piston, which added an additional layer of information known as the reverse.

The unified denominational structure was based on the duodecimal system. The basic unit of account was the stater weighing 14 grams. Additional denominations were based on parts of the stater: the hemistater which was one half of a stater, the trite with a value of 1/3 of a stater, the tetarte (1/4), the hekte (1/6), the hemitetatron (1/8) and the hemihekte (1/12). There were also smaller Electrum coins

in circulation with a value of 1/24, 1/48, and even 1/96 of a stater weighing only 0.15 grams. According to various sources, an Electrum coin weighing 0.12 grams was enough to buy a sheep or a goat.

The Electrum coin exhibited in the NBP Money Centre is a hemihekte (1/12 of a stater) weighing 1.15 grams. It was added to the numismatic collection of NBP in 2009 after it was purchased at the 12th auction organized by Poznański Dom Aukcyjny (Poznań Auction House) and Podlaski Gabinet Numizmatyczny (Podlasie Numismatic Office) in Poznań.

■ *Marcin Madejski*

Discovering multimedia

Does interactive mean attractive? [p. 17-18](#)



Does interactive mean attractive?

On the one hand, touch screens make the content more appealing, but on the other hand – they may quickly become boring, especially if used in excess. The NBP Money Centre is an exhibition heavily saturated with multimedia. Why was this solution chosen and how does it work in practice?



The virtual aquarium allows the visitors to learn about the world of finance in a simple and pleasant way. It is great fun for the young, although their parents use it just as frequently.

Every educational facility or museum in our country dreams of being labelled an “interactive” facility. The creation of an interactive exhibition including multimedia elements is quite difficult, especially in Poland, which is saturated with modern technologies, and where young people extremely quickly absorb all the novelties. The main problem is that compared to Western Europe or the United States, after decades of being cut off from the modern world, our country instantly embraced IT technologies. Poles proved to be very adaptable and forward-thinking in this regard. What’s more, we are currently living in times of a technological leap counted in months rather than decades. Let us just mention the Internet, which used to be a fascinating novelty merely a dozen or so years ago and is now an integral part of life, especially for young people. “Today’s” novelty may end up as a historical relic of “tomorrow”. I found an excellent description of this situation on the aforementioned Internet. Helen Featherstone (Content and Visitor Researcher at the At-Bristol Science Centre) stated at one of the conferences that a museum cannot base its attractiveness on touch

screens at a time when the majority of visitors carry their own touch screen devices in their pockets. Isn’t this true?

The perfect situation is when we present certain phenomena and talk about physics, astronomy or biology. This allows us to use models that we can touch and see how something works in reality. This is the reason why the Copernicus Science Centre in Warsaw is enjoying its well-deserved and continued popularity. In the NBP Money Centre we are in an entirely different situation. We present the origins of money, the development of finance, payments or economics. This is undoubtedly very interesting and informative content, but it isn’t particularly suitable to be presented in ways other than on the pages of books.

We could just say – some have it easier. But this is not our approach and instead we strive to use the best available means of communication in order to reach the visitors. After six months of working with young people, we know that in our case we would not be able to present a significant part of the content without multimedia elements. The visitors expect to be able to “touch” the objects presented in our facility. The multimedia elements used in the NBP Money Centre exhibition complement the exhibits presented in traditional glass showcases and at the same time convey more independently a significant part of the knowledge to the visitors.

Attractiveness is of key importance

Devices and applications must be attractive and must allow for seamless integration. That is clear, but how can we do this? Any examples? Here are some. Today’s technology gives us many possibilities. A touch screen on the wall is great, but can only be used by one visitor at a time. So maybe we could lay it flat on the floor? Let’s shape it like a circle and divide the presentation into three equal parts, each of which can work independently. This is how we created the multimedia “wells” – virtual windows of time in which several people can become acquainted with the history of money.

We can also “talk” to the multimedia elements available at the NBP Money Centre. Of course, only figuratively and not to all of them.



The multimedia “wells” are virtual windows of time in which several people can become acquainted with the history of money.

However, at the entrance to the room devoted to the development of banking in Poland we are welcomed by the virtual character of Leopold Kronenberg, who will answer a couple of questions selected by the visitor. Similarly, in the room dedicated to the creators of contemporary money, we can “talk” to Andrzej Heidrich, who designed all the banknotes used today. In this attractive way, visitors will learn how the design of banknotes was prepared by listening to the “master” himself. And if they turn away from the screen, they will see sketches of the banknotes in the showcases. Thus the multimedia elements connect the virtual world with the real world, perfectly complementing the narrative presented by the NBP Money Centre.

That isn't everything. A bit further away we will see an ATM – an automated teller machine. Everyone knows what it looks like, but few understand how it works. The multimedia machine will show the visitors what is hidden inside and will teach the operation of the device to those who don't yet know how to use it. At the end, the ATM will print out a “certificate” of training in its operation. The subsequent screens present online bank accounts and

systems in which money flows between banks, as well as the construction and operation of payment cards. All of this is complemented by a showcase with devices used to read them. As I mentioned at the beginning, Poland quickly skipped the stage of embossed payment cards and cheques, becoming a European leader in the field of electronic payments. It's worth knowing how that happened, and in this case the multimedia elements are the best way to present this process.

Finally – let's not forget about parents and their youngest children who often get bored in museums. Let them play and have fun! The multimedia screens fit this purpose very well. Catching fish in a virtual aquarium and exchanging them for virtual money that can be used for virtual purchases is a simple and enjoyable way in which children can learn about the world of finance.

Multimedia is not everything

Is it possible, therefore, to create a good exhibition without multimedia elements? Probably yes, but for today's youth the world is a land of computers. Thus an exhibition without multimedia elements has no justification in today's reality and makes young people uncomfortable if it doesn't present unique and interesting contents through the exhibits alone. There is a catch, however, that we should not forget about. Multimedia elements cannot be the only platform of communication, because enabling contact with real exhibits is the main objective of any museum or educational facility such as the NBP Money Centre. They provide the perfect support for the real exhibition, allowing us to show processes and the functioning of various phenomena using animation – in our case these are, for example, the basics of finance or economics and the history of the development of monetary transactions since ancient times (barter) to the present (electronic payments). Multimedia items perfectly complement the contents of the showcases, allowing



An exhibition cannot consist of multimedia items alone. There is no substitute for contact with real physical exhibits, which is best evidenced by the gold bar that can be touched by every visitor to the NBP Centre Money.

for the presentation of longer texts along with graphics, which cannot be included in the showcases due to size. Applications also allow visitors to view the exhibits in a three-dimensional way. We also cannot forget about the website, which allows visitors to broaden the knowledge acquired at the facility.

Because of the ubiquity of electronic solutions in the contemporary world, we cannot, however, create an exhibition using only multimedia elements, without real exhibits or physical persons who are able to answer specific questions of the visitors. There is no substitute for contact with real tangible exhibits, which is best evidenced by the gold bar that can be touched by every visitor to the NBP Money Centre.

An exhibition consisting of multimedia items alone or using them as the primary means of communication wouldn't be much different from a computer placed on a desktop. And then the key question is – since we all have one in our homes, why would we go to a museum to see it?

■ Jacek Wownys

Guests of the NBP Money Centre

Special visit

Students of the “Give a Chance” School Complex **p. 20–21**

“Facility without barriers”

Certificate awarded to the NBP Money Centre **p. 22**



Special visit

Students of the “Give a Chance” School Complex

The NBP Money Centre is a facility directing its educational offer to all groups of visitors, including persons with disabilities. In 2016, the NBP Money Centre received the “Facility without barriers” certificate awarded by the Integration Foundation to institutions which are adapted to the needs of such persons in terms of the architectural solutions. The awarding of the certificate

was preceded by an architectural audit and a visit of persons with disabilities, who checked whether other solutions associated with the transfer of knowledge and information on a given topic were also created with consideration, for example, for visitors with impaired sight or hearing (this type of visitation is carried out in all cultural institutions).



The photos present the students of the “Give a Chance” School Complex in Warsaw.



Despite the fact that our facility is adapted to the needs of persons with disabilities, the visits of groups of children from mixed ability schools are a certain challenge for the Money Centre. They are always welcome, however, because reaching communities that are at risk of financial exclusion due to disability is one of the important objectives of the educational activities carried out by the Education and Publishing Department of Narodowy Bank Polski.

At the beginning of December 2016, the NBP Money Centre was visited by the students of the “Give a Chance” School Complex in Warsaw. The students learning at this school include children and young people with moderate and severe intellectual disabilities, with Down syndrome, autism, behavioural disorders and with multiple disabilities. Teachers at this Warsaw school devote a lot of attention in the education of students to the development of social

skills necessary for proper functioning, including the preparation of students for work and independent management of the household budget. The visit to the NBP Money Centre was therefore an element of education whose aim is to enable persons with intellectual disabilities to break out of isolation and to build self-reliance and empowerment. The group that visited our facility included more than 60 people: children from a primary school, a secondary school and a vocational school.

The “Vault” and the gold bar located there were the greatest attraction to our guests. Older students also appreciated the “The Numismatist’s study” and the designs of the banknotes and coins. The visit to the NBP Centre Money was also an opportunity to gain practical skills in using an ATM and to learn about the security features of Polish banknotes.

■ *Karolina Ziolo-Pużuk*

Money museums of the world

The Money Museum of the Bank of Portugal

Museu do Dinheiro – Numismatics and history museum in Lisbon **p. 24–26**



Numismatics and history museum

Money Museum – Museu do Dinheiro

The central bank of Portugal – Banco de Portugal

The Money Museum of the Portuguese central bank amazes visitors with its spaciousness and architectonic originality. It is located very close to the bank of the River Tagus, and is one of Lisbon's most interesting museums, a site definitely worth visiting in the capital. Following several years of in-depth restructuring initiated in 2008, the museum was opened for visitors in April 2016, i.e. almost at the same time as the NBP Money Centre.

The Money Museum presents various kinds of money, its history, and the role it plays

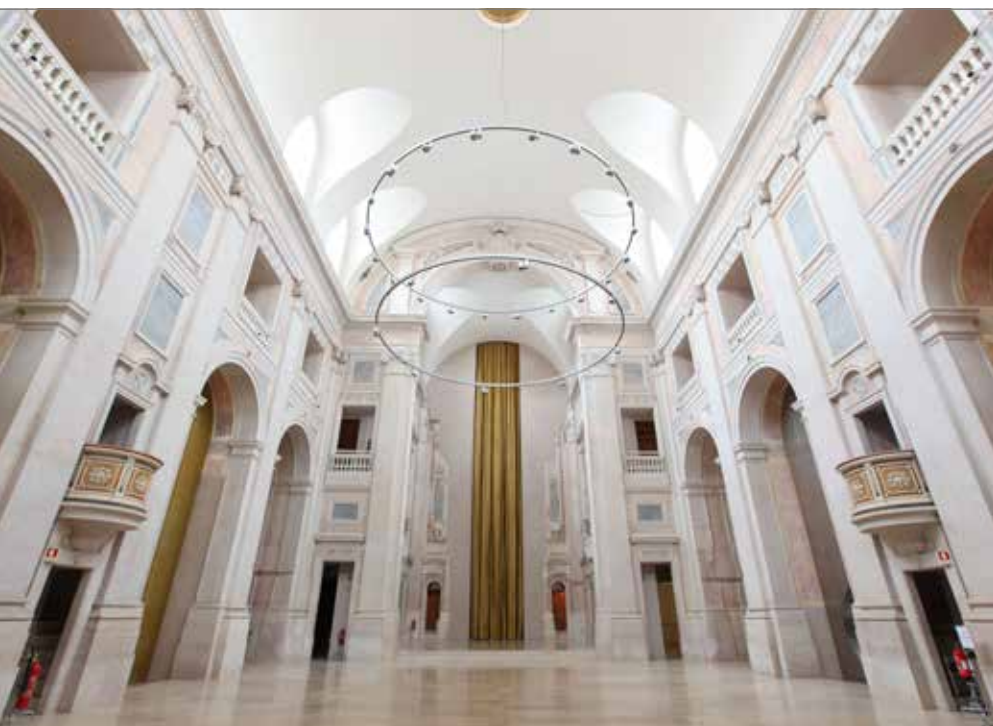
in the transformation of societies, both in the East and the West. The main exhibition

displays the numismatic, paper-money and art collections of Banco de Portugal in thematic rooms. Since it gives special attention to innovation and interaction, it is more than simply a traditional museum display. Thus it offers the opportunity to learn about the past and present of money, both in Portugal and in the whole of Europe.

Museu do Dinheiro offers a wide range of cultural and educational public programmes for all. It seeks to involve local communities, enhance knowledge about the collections, and foster critical thinking and creativity with its audiences.

The museum is located in the former church of S. Julião, desacralized in the 1930s. The main nave, entirely free of any furnishing, is a vast reception hall, and the exhibition rooms occupy the 4 levels of the building. The former church is attached to the bank's administrative building, forming an historical whole, a fine example of the architectural style and urban planning of Lisbon's city centre after the earthquake of 1755.

The upper floor boasts a unique contemporary architectural feature: an all-imposing corner window, creating the impression that the structural section of the building has been removed. The window



The impressive entrance through the main nave of the former church.

overlooks a typical Lisbon square where the city hall stands.

In the underground crypt, there is a reconstruction of the medieval city walls discovered during the renovation.

Museum facilities

The museum has a library, auditorium, conference room, café, and a shop. The remaining space – the main nave and the right nave, the sacristy and the choir – are occupied by temporary exhibitions. The whole building is accessible for people with motor disabilities, including the upper floors and underground space.

The total space available to the public, including the café, library and toilets is 2,435 m², while the exhibition space is 1,694 m².

The collection

The museum displays around 1,200 exhibits in 140 showcases. Numismatics – coins, banknotes, commodity money (i.e. cloths, shells) and other means of payment – represent 80% of the objects on display. The museum's collection includes interesting examples of the earliest coins from classic antiquity. Examples of industrial heritage are also presented in the collection: tools, machines, dies, printing plates, clay models, etc. The collection is supplemented by works of art: medieval sculptures, Greek vases, scales and weights, engravings, and a mosaic.

Architecture

The former church building is a major focal point of the museum, for it is a unique, totally refurbished building that presents Lisbon's 18th century architecture. The architectural aspect is fully explored in the material of the Museu do Dinheiro.



The hall in which visitors can buy souvenirs.

The museum boasts an extensive array of archaeological artefacts collected during excavation work of the medieval city wall. This collection is not yet entirely catalogued and treated – it is estimated that there are 230,000 objects from various historical epochs: Roman, Medieval and the modern period.

Some of the exhibitions are devoted to the Medieval Period. Among others, the 13th century wall from the rule of King Dinis is explored, both as a historical and urban object, and in connection with the history of money, which is the main theme of the museum.

The whole collection is extraordinary material evidence of the history of Lisbon, its inhabitants, daily life and major events.

Education

The museum endorses education based on dialogue, interaction and participation of audiences. As opposed to an instructional view of learning, the museum supports learning by doing, through active engagement with experience, questioning and verifying hypotheses. All activities seek to stimulate critical thinking and creativity for meaningful, lifelong construction of knowledge.

Banco de Portugal is part of the Eurosystem. The museum fully explores the concept behind the creation of the euro currency and the social and cultural implications of the introduction of the euro, making a direct link with Europe's contemporary history.



A 10 escudos banknote which visitors can design with their own portrait thanks to multimedia technology.



1200 exhibits presented in 140 showcases in 2,000 m² of floor space.

Multimedia

The Money Museum has many interactive devices to help visitors better understand the exposition. They help visitors view the exhibits in their proper historical and cultural context.

Visitors to the museum hold an interactive ticket where their activity during the tour of the museum is stored virtually. Going to the museum's website, they can access this information. Thanks to this tool, visitors are more involved and better retain the information presented.

The museum has an IT system that manages and monitors all devices, from the printing of

tickets to the remote control equipment. It also has a statistical information component. Much of the digital information presented across the exhibition (e.g. texts) can be edited. There is also the possibility of adding new content, making it a living, dynamic exhibition.

Admission to the museum and to all activities of the cultural and education programme is free.

For a video of the museum renovation plan, please go online to:

<http://www.museudodinheiro.pt/en/heritage/1/the-former-church-of-s-juliao>

Address:

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1100-150 Lisboa, Portugal
www.museudodinheiro.pt

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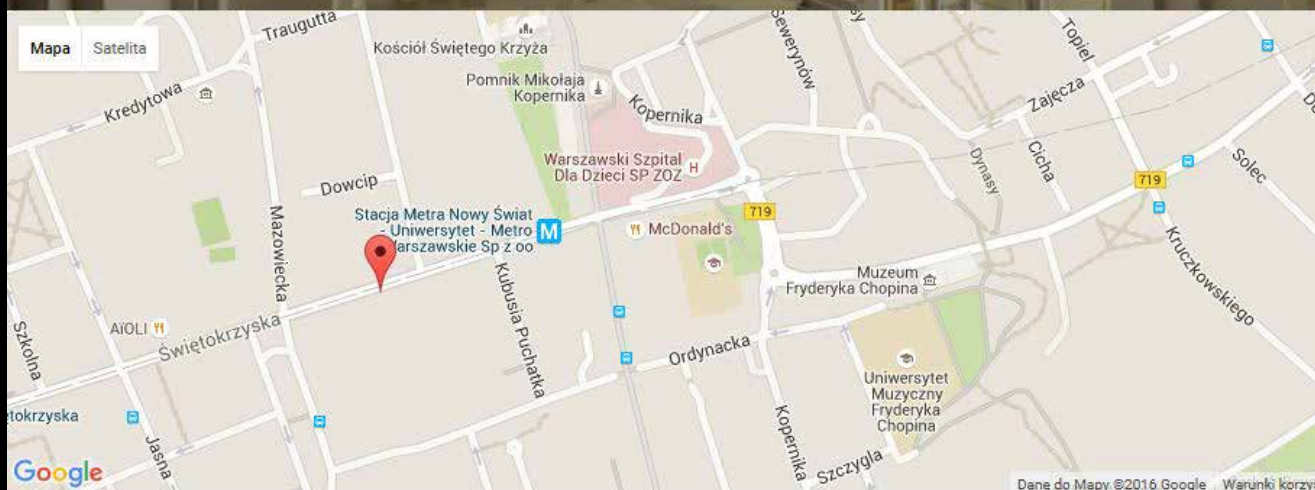
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