

CENTRALNA BANKA
BOSNE I HERCEGOVINE



ЦЕНТРАЛНА БАНКА
БОСНЕ И ХЕРЦЕГОВИНЕ

INFO CBBH



In This Issue:

20 YEARS SINCE PUTTING
THE CONVERTIBLE MARK IN
CIRCULATION MARKED BY THE
CONFERENCE „THE FUTURE OF
CASH“



TECHNICAL ASSISTANCE TO THE
CBBH'S CASH MANAGEMENT
DEPARTMENT



PAYMENT SYSTEMS: PERMANENT
IMPROVEMENTS ENABLE MORE
TRANSPARENT AND SAFE
BUSINESS



HOW TO RECOGNIZE CYBER
ATTACK



FINANCIAL LITERACY AND
INCLUSION AS NEW TASKS OF
CENTRAL BANKS



NEW YEAR'S RECEPTION FOR
JOURNALISTS FROM BH MEDIA



Publisher: The Central Bank of Bosnia and Herzegovina;
Address: Maršal Tito Street 25, 71000 Sarajevo

Prepared by: Public Relations Section

Translation in English: Public Relations Section

Proofreader (languages of BH nations and English version): Library and
Publications Section and Protocol and Translation Section

Web page: <http://www.cbbh.ba>
E-mail: pr@cbbh.ba
Contact phone: (033) 278 123

20 YEARS SINCE PUTTING THE CONVERTIBLE MARK IN CIRCULATION MARKED BY THE CONFERENCE „THE FUTURE OF CASH“

On the occasion of the 20th anniversary of the introduction of the convertible mark as the legal tender in Bosnia and Herzegovina, the international Conference “The Future of Cash” organized by the Central Bank of Bosnia and Herzegovina (CBBH) in cooperation with the United States Agency for International Development (USAID), was held in Sarajevo on 15th November 2018.

The Conference, which included the participation of recognized experts from Austria, Albania, Bulgaria, Macedonia, Montenegro and Bosnia and Herzegovina, offered interesting discussions on cash and non-cash payments, digitisation and fintech and, the fact was pointed out that, despite a significant technological progress achieved in financial mediation, the trend of a continuous increase of cash in circulation has been present since 2007, which is considered a direct effect of the global financial crisis.

In his speech, Governor Softić, Ph.D. emphasized that the convertible mark fully justified its introduction after 20 years of existence, and that in that period Bosnia and Herzegovina recorded an exceptional financial stability and low inflation.

“We have done a part of the work, we have established a

reliable and solid framework, now all of us, not only the CBBH, but also the executive authorities, need to implement structural reforms in order to accelerate economic growth, to reduce unemployment and to increase the standard of citizens of Bosnia and Herzegovina” said Governor Softić.

Deputy Director of the IMF for Europe Jörg Decressin said in a speech that the issue of digital payments has already matured, and they offer a variety of alternatives to cash. “Yet, the cashless or less-cash society, as appealing as it may sound, has so far remained elusive. But the tide could turn. Fintech innovations could provide ever more opportunities that favor digital payments” said Mr. Decressin and added that the central banks should face the challenges brought about by private digital currencies and crypto-assets.

Belma Čolaković, Ph.D., the Chief Economist of the CBBH, emphasized that reliance solely on the level of registered / legal economic activity in the country can result in inadequately formulated economic policies, and that with the growth of the importance of fintech, the assessment of real demand for money is additionally complicated and consequently the measuring of economic activities in the country.

When it comes to the age of digitisation in the financial sector, a strong impact of digital technologies on banking is something that is already happening, with great potential for further growth. Some of the participants of the conference forecast that in the developed countries, retail banking will be almost completely automated by 2020, and that automation will help banks to reduce their operating costs in some sectors by 30-40%.

In the conclusion of the conference, it was assessed that regulators would have to change their approach, to adjust the framework in which they operate, in order to follow up with the market developments.

Regarding the cryptocurrencies, it was mentioned that those are high risk assets and investments, and not standard money which includes some underlying liabilities.



INTERNATIONAL CONFERENCE IN SARAJEVO: IS THE FUTURE WITHOUT CASH POSSIBLE?

The international conference organized by the Central Bank of Bosnia and Herzegovina (CBBH) and the United States Agency for International Development (USAID) on 15 November 2018 in Sarajevo, entitled “The Future of Cash” was opened by the Governor of the CBBH Senad Softić, Ph.D.

Welcoming attendees of the conference, Governor Softić explained why the conference was entitled “The Future of Cash”.

“First, twenty years ago, we issued our own banknotes of a convertible mark. We thought that after the last year’s celebration of the 20th anniversary of the Central Bank of Bosnia and Herzegovina operations, it is appropriate to mark this anniversary, as well. Second, we are living in the era of



rapid changes in finance. There is a lot of challenges and the digitization of finance and fintech ask the question whether life is possible without banknotes and coins," Governor said.

Having in mind the global financial crisis, and especially the exponential digitization of finance, some anticipate the rapid disappearance of banknotes. Banknotes are generally considered impractical, costly and old-fashioned payment methods.

Explaining whether we should abandon the use of banknotes, the Governor recalled that there were opinions that banknotes of large denominations should be abolished, because they are mainly used for illegal activities. With the development of fintech and the rapid expansion of electronic money, individuals predict that even small denomination banknotes are not needed.

Thus, do we have a situation now with banknotes disappearing? "I do not believe it!", said the Governor, mentioning quotes from the European Central Bank (ECB) publication, according to which the results of the survey show that in 2016 cash is the dominant instrument of payment at sale sites. In terms of number, 79% of all transactions were made using cash, which represents 54% of the total value of all payments.

According to the Governor, things might have changed over the last two years, but cash is still "alive and healthy" in many countries, especially in the region, for various reasons.

"True, some countries like Sweden and Norway are fastly moving towards a cashless society. However, in several selected countries, demand on cash has increased from 7% to 9% of GDP since 2000. Global numbers reveal that in the near future, cash will continue to be with us," said Governor Softić.

The second question is how will central banks respond to all changes in financing. Until recently, we had the situation that "old" financial companies, banks, bought technology solutions from technology companies. Now we have a situation where tech companies sell financial products.

For example, the new Directive 2 on payment operations issued by the European Union opens the market to radical changes in the payment transactions. This is the reason why fintech is labeled as a disruptive technology, the Governor explained, adding that there is a lot of literature on this

subject, but that the central issue for the CBBH is how central banks should regulate these new issues. For now, there is no definitive answer on how to regulate this new area.

It seems that most agree that blockchain technology has a lot of potential, but it's not clear when using this technology on a daily basis will become functional and efficient. Huge consumption of electricity is one of the barriers to wider use of the blockchain. There are about 2,000 crypto currencies, and most of the largest international commercial banks use the options of commercial use of blockchain technologies.

It must be noted that blockchain and crypto currencies have already produced positive effects in other areas. For example, individuals and companies in the euro zone will be able to transfer money between themselves in a few seconds, regardless of the working hours of their local bank. This is an important thing and the CBBH will, as the Governor said, follow the development of this situation.

"My last remark is that I want to point to an increasing concern that is common to all, a cyber security. With increasing interdependence and interconnected institutions, including central banks, the consequences of a potential cyber-attack on the stability of the financial system are rising. We all remember the recent cyber-attacks on commercial and central banks. As I have already mentioned, we are very proud of 20 years of our institution's operations and the issuance of KM banknotes. We all work hard to maintain our credibility and defend the principles of the Currency Board that has served us well in the past. We will continue to do this in the future," said Governor Softić.

However, he added, we must be aware that threats to the Currency Board do not come only from those advocating different solutions, but also from anonymous hackers whose sole aim is to steal money. The consequences of both types of attacks may be negative for us.

Concluding the introductory speech at the conference, the Governor thanked USAID and associates within the FINRA project to help organize the conference, but also to the International Monetary Fund (IMF) for constant support Bosnia and Herzegovina's reforms and technical assistance in the process of building own capacities to respond to future challenges.

TECHNICAL ASSISTANCE TO THE CBBH'S CASH MANAGEMENT DEPARTMENT

DeNederlandscheBank

EUROSYSTEEM

During the period from April to November 2018, for the needs of the Cash Management Department, technical assistance was provided for education for the process of creating conditions for the redistribution of the convertible mark (KM) in Bosnia and Herzegovina and defining the minimum standards for manual

and machine processing of KM banknotes. These activities, at the initiative of the Cash Management Department, are planned in the Strategic Plan of the Central Bank of Bosnia and Herzegovina (CBBH) for the period 2016-2021 and refer to the training for the implementation of legal regulations in accordance with the practices of the European Central Bank (ECB) related to cash operations.

Defining conditions for redistribution of cash means that payers can redistribute banknotes and coins through pay-as-you-go cash machines or other devices handled by clients only if banknotes and coins are processed in the authenticity and suitability for circulation checking procedure by means of the use of the sorting devices that have passed the CBBH operating tests. Also, banknotes and coins whose authenticity has been verified manually can be redistributed through counters only by

a trained employee of a legal entity who has passed the training in the authenticity verification procedures for banknotes and coins at the CBBH.

This procedure would also set the minimum standards for the machine and manual sorting of KM banknotes in order to separate good quality banknotes suitable for circulation from the ones that are worn off and damaged and are unfit for circulation, which would certainly standardize and improve the banknote sorting in commercial banks. In this way technical procedures would be also established for operative testing of devices used for checking authenticity and eligibility of banknotes and coins for further circulation.

Preparation for defining these obligations implies a large number of complex activities and new operations the implementation of which require technical assistance of the central banks which have already prescribed and implemented the mentioned regulation.

During the period April-July 2018, through the United States Agency for International Development (USAID) FINRA project, the activities were implemented related to the technical assistance of the Croatian National Bank (HNB), which accepted to provide technical assistance in the field of cash management, and after the Cash Management Department described in details its needs in this process. Within the project, the HNB experts visited the CBBH twice and the CBBH employees visited the HNB once. During the first visit of the HNB experts (from April 23rd to 25th 2018), topics on minimum standards for machine and manual sorting of banknotes and coins were discussed in terms of training for work with spectrodensitometer and the methodology of measurement of soiling on a smaller sample of banknotes. During the second visit of the HNB experts (from May 23rd to 25th 2018), topics related to their "National Training Program" were studied - education of employees of lending institutions and other institutions in the process of checking the authenticity of banknotes and coins. The HNB's experts presented in detail the documentation and presentations they are using in the training, as well as the training model that they used to train a high number of bank employees. In the third part, employees of the Cash Management Department of the CBBH visited the Treasury Department (from July 10 to 13 2018), when they discussed additional technical issues arising from the activities carried out on the basis of the guidance of the HNB experts. The Treasury Department of the HNB has presented its

organization and work in details, including the activities carried out related to the redistribution process of Croatian currency (kuna and lipa).

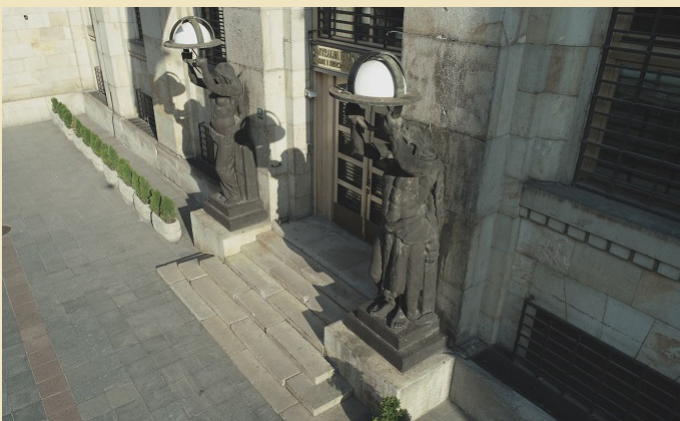
On 4th and 5th June 2018, the employees of the Cash Management Department and the competent Vice Governor visited the National Bank of Serbia (NBS), the Sector for Cash Operations, in order to exchange experiences in this field as well as to obtain information on the business practices of the NBS related to cash operations. During the visit, the processes related to the establishment of conditions for redistribution of cash and a series of activities carried out by the NBS in order to establish this system were discussed in details. The method of testing and licensing of devices for checking the authenticity and suitability of banknotes and coins, the principle of training of bank employees in determining banknote and coin authenticity, and the method of determining parameters for manual and machine sorting of banknotes and coins were presented, and other topics of interest were discussed too.

Based on the agreed technical assistance of the Nederlandsche Bank, its experts visited the CBBH in October 2018 in order to learn about the existing state of cash management in the CBBH and all the relevant information for continuing these activities.

The Nederlandsche Bank experts held a presentation to the representatives of the Cash Management Department related to cash operations, options for work improvement, cash management software solutions, banknote sorting devices, and training models for the banks employees. Representatives of the Cash Management Department presented to the experts the organization of cash operations in Bosnia and Herzegovina, analyses of counterfeits within the CBBH, the undertaken activities for introducing minimum standards for machine and manual cash handling, and also presented banknotes prepared for checking the work of the devices. The Nederlandsche Bank is ready to continue providing technical assistance and organizing workshops for all relevant areas in cash operations and counterfeiting expertise.

All the technical assistance was very useful in terms of preparation activities that have been carried out and are still being implemented. The continuation of cooperation with the Nederlandsche Bank and the HNB is scheduled, and in the forthcoming period it will be necessary to adopt and implement regulations related to the introduction of conditions for the redistribution of KM cash.

PAYMENT SYSTEMS: PERMANENT UPGRADING ENABLES MORE TRANSPARENT AND SAFE BUSINESS



The Central Bank of Bosnia and Herzegovina (CBBH) is the only institution in Bosnia and Herzegovina that is in charge of payment systems. The CBBH constantly improves payment systems by complying with SEPA (Single European Payment Area) and PSD2 (Payment System Directive 2). Changes in technology and payment system rules are very dynamic, and therefore, the CBBH is continuously working on building a stronger and more robust payment system in the future, which will, as much as possible, be at the service to local economy.

One of the activities that the CBBH conducted in the past period is the improvement of the established Registries. In addition to the Central Credit Registry (CRC), the CBBH also maintained the Single Registry of Transaction Accounts (SRTA). In order

to improve payment systems, the CBBH has upgraded the mentioned Registry into the Single Registry of Business Entities' Accounts (SRBEA) in Bosnia and Herzegovina. The upgraded Registry started working on the new platform and with new functionalities on October 1, 2018.

The Registry is run by the CBBH, while the commercial banks are responsible for accuracy and timeliness of the submitted data. For authorized users, access to data from the SRBEA is enabled directly via the Internet. For all other users it is enabled in the form of individual reports. Through its organizational units (Main Units and Branches), on the basis of a written request, the CBBH continues the distribution of data from SRBEA, in the form of individual reports.

There are several important new things brought by the Registry's upgrading. The basic one is that only the transaction accounts were in the previous Registry, whereas in the improved Registry, there are all accounts of business entities that make payment transactions in Bosnia and Herzegovina through accounts opened with banks and the CBBH. Another thing is that now, besides CBBH and Entities' Banking Agencies, free access via the Internet is provided to institutions, administrative bodies, local self-government units and commercial banks. This new thing enables those entities to access the necessary data through the Internet, which ensures more efficient use in relation to written requests. The third issue is that individual reports can be downloaded at the Branches of the CBBH in Brčko and Pale, while previously this could be done only in the Main Units in Sarajevo, Banja Luka and Mostar.

Permanent work on the improvement of payment systems brings about changes and progress in other fields, too. Thus, the upgrade of the SRBEA had a direct effect on the list of blocked accounts of business entities in Bosnia and Herzegovina, which is run by the CBBH. Concretely, after the upgrade of the SRBEA, commercial banks have updated the list of blocked accounts, and this has brought two changes in relation to the previous state. The first one is in the number of business entities having at least one blocked account, and the other one is in the number of blocked accounts of business entities.

These changes are another step towards transparency and safer business and in terms of the rapid development in this area, the CBBH in the forthcoming period continues intensive activities aimed at establishing another registry - Registry of physical entities' accounts.

The Single Registry of Transaction Accounts should, in the first place, be the great benefit to commercial banks, tax authorities, administration bodies, law enforcement agencies and other levels of government during the activity of discovering financial structures and transactions that companies and individuals can use, for example, for tax evasion and money laundering. But, the Registry also provides information to all legal entities and individuals who need to collect their claims in forced way, through authorized institutions.

UPGRADES OF THE BLOCKED ACCOUNTS OF BH LEGAL ENTITIES

On November 1, 2018, the Central Bank of Bosnia and Herzegovina (CBBH) published the updated list of the blocked accounts of the legal entities in Bosnia and Herzegovina.

There are two differences on the accounts list in relation to the numbers in the previous list. These differences are the direct effect of the upgrading of the Single Register of legal entities accounts in Bosnia and Herzegovina, since the CBBH requested from commercial banks to update the list of blocked accounts.

The first visible difference is in the number of the legal entities that have at least one account blocked, which is now reduced compared to previous reports, and it is the result of the updating by commercial banks.

Another visible difference is the total number of blocked accounts of the legal entities, which is now increased in comparison to previous reports, which is a logical consequence of the upgrading of the Single Register of legal entities accounts in Bosnia and Herzegovina, now containing all accounts of legal entities, and not only transaction accounts as it was the case before.

CENTRALNA BANKA
BOSNE I HERCEGOVINE



ЦЕНТРАЛНА БАНКА
БОСНЕ И ХЕРЦЕГОВИНЕ

JEDINSTVENI REGISTAR RAČUNA U BOSNI I HERCEGOVINI

PS P5. Izvještaj o blokiranim računima u Jedinostvenom registru računa Centralne banke Bosne i Hercegovine

Na dan 01.11.2018. u 08:29

ZBIRNI PODACI

Ukupan broj blokiranih računa:

91999

Ukupan broj firmi koje imaju najmanje jedan blokiran

50483

GOVERNOR SOFTIĆ ATTENDING THE CONFERENCE of BANK of ALBANIA AND LSE BANK

Governor of the Central Bank of Bosnia and Herzegovina (CBBH) Senad Softić, Ph.D., attended the conference of the Bank of Albania and the London School of Economics (LSE) entitled “Monetary Policy, Economic Integration and ‘New Normality’”, which was held on 1 November 2018 in Tirana, Albania.

Within the closing panel entitled “What does all this mean for integrating small economies?” Governor Softić, in his speech, stressed the relevance of the topic of the conference and added that after the fall of the Berlin wall, three decades ago, joining EU for our region seemed like a done deal, something that might happen quite soon. After the initial adjustment to the basics of the market economy, convergence was relatively fast, depending on a country. But, as it has been proved by past, processes are neither simple, nor linear. “Global financial crisis has changed the world we live in, especially for us, central bankers. Indeed, as our organizers pointed out in the conference announcement, it is time for some serious review of previous experience, and even more so of some future challenges”, Governor Softić said.

In further exposure, he gave a short insight into the following questions:

- What are the consequences of monetary policy changes in developed countries after the global financial crisis on the Central Bank of Bosnia and Herzegovina (CBBH) and Bosnia and Herzegovina itself (BH)?
- What do we expect from “normalization” of the policy and when do we expect it to happen?
- Role of foreign banks and the capital market,
- About FINTECH and artificial intelligence and
- What can the CBBH do on BH’s road to EU

Talking about the consequences of monetary policy changes in developed countries after the global financial crisis on the CBBH and on Bosnia and Herzegovina, Governor said that BH is a small open economy trying to be part of the European Union (EU), and therefore the euro area. Joining the EU will most probably be a long process, as nobody expects SEE countries to become the EU members before 2025. After he

gave the basic information about the monetary policy that the CBBH runs, the Currency Board arrangement, Governor Softić pointed out the fact that although with the Currency Board, the CBBH plays an important role in this process of joining the EU and the euro area and in monetary policy itself.

“This has not changed with the global financial crisis, i.e. we still have limited powers to stabilize the economy. Thus, we might be one of rare institutions that have not changed way of operations due to the global financial crisis”, said the Governor Softić in his speech. He reminded that the CBBH has some important instruments at its disposition and does the best to use them efficiently on BH’s road to the EU, including reserve requirement, as the first one. The CBBH used it actively in the past, especially after the global financial crisis, boosting the liquidity in the system. Furthermore, also the Decision on required reserves was amended in order to harmonize with the European Central Bank (ECB) policies. When ECB increased its „fine” on banks overnight deposits in March 2016, as part of non-conventional monetary policy measures, the CBBH almost immediately introduced negative interest rates on excess liquidity that commercial banks hold with us. Currently, it is being charged -0.2%, i.e. 50% of the ECB overnight deposit rate. In future, the CBBH will continue to follow trends in the euro area and in local economy and use the Decision on reserve requirement and excess reserves, as well.

The CBBH is in charge of the overall payment transactions in BH. The CBBH constantly improves it, adhering to the SEPA (Single European Payment Area) and the PSD2 (Payment System Directive 2). Changes in payment systems are dynamic and according to the Governor the CBBH is ready to continue building a robust and resilient payment system in the future that will serve our economy in the best possible way. “Fintech, innovations and in general disruptive technologies in this area are something that will keep us busy for a long time to come. We are learning to use „the latest” monetary policy instrument i.e. communication policies, as well. The CBBH research function, including Financial Stability Report and our Annual Report is a significant contribution to better understanding of economic trends in BH and contribution to the financial system’s development in BH”, Governor pointed this out. In addition, coordination of the Banking Supervision Agencies in BH and chairing of the Standing Committee for Financial Stability (SCFS) are part of the CBBH mandate. During the „collateral damage”, done to BH in the aftermath of the global financial crisis, the CBBH used very actively those coordinating mechanisms and reserve requirement and we intend to intensify coordination to be ready for the future crisis. If the exchange rate is nominally linked to the euro and nominal exchange rate cannot be used as a policy tool, this does not mean that it is not possible to influence competitiveness of the BH economy. “I am referring to the real exchange rate”, Governor said. First, by adhering to the Currency Board arrangement, the price stability is being maintained, with advocating quicker and deeper structural reforms at the same time. For the region, monetary history is important, Governor Softić said, and one must not forget ours, the hyperinflation and misuse of permanent devaluation in the former state. Having in mind the constant political pressures for the Currency Board



to be “weakened” or to be abandoned, it is very important for the CBBH to maintain the existing policy independence and thus, maintain and strengthen the credibility of the Currency Board. “Therefore, we do not think about the proper moment to exit the Currency Board and have ‘independent policy’, because we consider that we should enter the EU with the Currency Board and after that, the euro area, too, in the same or similar way as Baltic states successfully have done, not long time ago” Governor Softić concluded this part of his speech.

Further on, the Governor addressed the question what to expect from „normalization” of the policy and when it will happen. Answering the question whether interest rates will increase, he said that for the CBBH, it is the ECB policy, but also the global situation in the world, that are primarily taken in consideration when deciding on this issue. For example, low or negative interest rates on the CBBH’s assets (bonds, deposits) have led to a fall of its revenues. When the ECB changed its overnight deposit interest rates of banks in March 2016, the CBBH introduced a negative interest rate on excess reserves in bank accounts in the CBBH. In the future, it will continue along similar lines. Having in mind that some major central banks started to raise the rates, especially the FED, the ECB remains on alert related to interest rates, at least for the time being. Its forward guidance indicates that there might not be increase in the rates until mid-next year. In October, the ECB decided that “net purchases under the asset purchase programme (APP) at the new monthly pace of €15 billion will continue until the end of December 2018”. This may affect commercial banks interest rates in the euro area, thus influencing indirectly interest rates in BH. So, it seems reasonable to expect that interest rates will start increasing in the euro area, but probably very gradually. Of course, it is difficult to predict the trends, especially for the future. In order to answer the question when normalization will be achieved, it is necessary to define what „normalization” is, does it mean simply the average value of the past rates and if yes how many years it includes. Governor thinks that the current levels of interest rates are „not normal” but „exceptional”. But will „the new normal” be around 5% nominal rate or closer to 2%, is not clear at this point. “If the rates go up, we will look for “the advantage”, i.e. we expect this will have a positive impact on our revenues. As far as commercial banks interest rates are concerned, in our view, the ECB policies and external world do influence local rates, but the main causes of relatively high lending rates in BH are primarily related to Bosnia and Herzegovina itself: the sovereign risk, inadequate foreclosure procedures or more generally lack of enforcement of contracts – rule of law, etc. Thus, we in Bosnia and Herzegovina should worry less when the ECB will start raising rates and focus more on our own domestic problems, instead. Plus we have no influence on the ECB anyway”, Governor pointed out.

In BH, the capital market remains underdeveloped. The fact is that out of the very small market, both Entities created their own stock market infrastructure with separate stock exchanges. Operations on them started more than 15 years ago. But, due to the usual factors in such cases i.e. small size of the markets, lack of privatization, and public mistrust in previous privatization programs, these resulted in very shallow

market. Unfortunately, as a result of the global financial crisis, foreign investments are not growing, Governor explained, adding that most probably, the political instability contributed to the fact that foreign investors avoid BH. Thus, commercial banks are the main financial intermediaries. Most banks are foreign owned. Our systemic stability is influenced by behavior of systemically important banks in BH. All countries in our environment are small and for all of them foreign banks play a dominant role. NPL rate remains high in BH. That is why the CBBH strives for even stronger cooperation among countries.

Financial sector is heading toward significant changes, as digitalization is changing the financial industry landscape very rapidly. There is an abundance of literature on this topic, without a consensus view of the outcome for central banks. Some play with the idea to issue their own digital currencies, i.e. the Central Bank Digital Currency (CBDC), as done by Riksbank, the Reserve Bank of India, the People’s Bank of China, etc. But harsh reality is that Distributed Ledger Technology (DLT) i.e. blockchain and numerous and various crypto currencies make not only main headlines of mass media, but are increasing their share in the financial world. However, one cannot say what shall prevail in the future. “Our approach is to be careful with the own regulation of these issues. We believe that the conservative approach to crypto currencies is optimal for us and we will continue closely to monitor the development and the central banks’ position on this, and especially of Financial Stability Board (FSB), the BIS and the IMF and, of course, the main central bank for our Currency Board, the ECB. Because, it is better to be safe than sorry. We have been building our credibility for two decades now, and we are well aware that we can lose it in a moment. Yes, we know from Argentina’s Currency Board history, in particular, that confidence in the Currency Board can be lost quickly. And vice versa, especially from the Baltic States case, we see that it is possible to enter the EU and the euro area with the Currency Board regime. An example of Latvia, although extreme, says that when in economy policy we have a clear goal (entering the euro area) and when all policies are subordinated to it, then success is guaranteed”, Governor Softić said.

And finally, what can the CBBH do on the road to the EU? First of all, the CBBH intends to strictly adhere to the principles of the Currency Board in the future. “If it’s not broken, do not fix it,” said the Governor, adding that the Currency Board has served well over the past two decades. The CBBH will continue to closely monitor movements in the area of financial stability in BH and “warn” about the occurrence and accumulation of risks. Despite the fact that it does not have a supervisory role, the CBBH plays an important role in coordinating Banking Agencies and overall financial stability of the system. Lastly, in its communications, the CBBH will continue to emphasize the importance of structural harmonization on the road to the EU. BH’s convergence to EU standards has no alternative. However, we are aware that the Currency Board itself is not a sufficient condition for convergence. In the same time, we remember clearly the well-known words of the former German Minister of Economy, and later of Finance, Karl Schiller: “Stability is not everything, but without stability, everything is nothing” Governor Softić concluded.

GOVERNOR SOFTIĆ AT THE MEETING OF GOVERNORS OF THE CENTRAL BANKS FROM COUNTRIES 16 + 1 –CHINA AND CEEC

The Governor of the Central Bank of Bosnia and Herzegovina (CBBH) Senad Softić, Ph. D. took part in the meeting of the Governors of the Central Banks of the 16 + 1 countries –China and CEEC (Central and Eastern Europe), which was held from 9th to 10th November, 2018 in Budapest (Hungary).

The work at the meeting took place in three roundtables with the following topics: macroeconomic development of the economies of the 16 + 1 countries, the role of investments in renminbi (the Chinese currency - yuan) in the process of foreign exchange reserve management, and the cooperation between the central banks of the 16 + 1 countries.

The discussion has showed that economic trends in the region of Central and Eastern Europe are currently positive, and that many countries show signs of economic recovery, which is reflected in the reduction of unemployment rates that have been reduced in some countries to the levels prior to the global financial crisis. However, it has been emphasized that risks, such as possible escalation of global trade conflicts, must be carefully monitored. Governor Softić emphasized that, precisely because of such risks, it is necessary to continuously strengthen the process of cooperation and data exchange between central banks, especially taking into account the links between economies and banking groups operating in several countries, along with further activities to strengthen financial stability, in order to prevent and mitigate potential financial risks.

Beside discussions on the topic of economic trends and cooperation among the central banks of the region, a



roundtable on the topic of gradual strengthening of the share of Chinese renminbi in the foreign exchange reserves of many countries, has attracted great attention. According to the forecasts of asset managers, it is expected that by 2020, the share of renminbi in the world's foreign exchange reserves could reach 10% of the total amount which was USD11.5 trillion at the end of the second quarter of 2018, or 13% of the world's total GDP.

Countries that, beside Bosnia and Herzegovina, participated in this platform are China and 11 EU Member States: Bulgaria, Croatia, Czech Republic, Estonia, Hungary, Latvia, Lithuania, Poland, Romania, Slovakia and Slovenia; and four other European countries outside the EU: Albania, Macedonia, Montenegro and Serbia. The conference hosts are the central banks of Hungary and the People's Republic of China.

HOW TO RECOGNIZE CYBER ATTACK

Information security has become one of the fastest growing risks in the operation of financial institutions. World experts no longer ask if an attack on someone can happen, but the issue is only when. The seriousness of cyber risks is very well illustrated by a report by the Lloyd's insurance company that states that world companies are losing 400 billion dollars a year due to cyber attacks.

For example, it is estimated that the US retail trade company T.J. Maxx lost more than \$ 1.7 billion in cyber attacks in 2007. To make the situation more serious, reports of the attacks that have taken place around the world in 2018 also show that:

- Facebook reported in September 2018 that it had 50 million clients data compromise;
- In the same month Uber company reached a settlement to pay \$ 148 million for data breach that happened in 2016 when 57 million clients data were stolen;
- In August 2018, a teenager hacked the world known company Apple and stole 90 GB of data;
- Only in the first half of 2018, 4.5 billion records were compromised.

The seriousness of cyber risk is recognized by world regulators, so the cyber risk is a regulatory topic discussed by the International Monetary Fund (IMF), the World Bank, the

EBA (European Banking Authority), the BIS, the G7, the CPMI - IOSCO as well as other regulators.

Although cyber risk is recognized as the fastest-growing risk, the stunning fact is presented by the leading authorities, which is that 95 % of successful attacks are the result of a lack of basic "hygiene" in implementing information security measures. In its annual report, the IBM states that the three primary causes of an attack are human error (27 %), an attack using the supplied malicious code or techniques of direct attack (48 %), a systemic problem (25 %). By analyzing that report and report from Symantec, which states that the so-called "spear phishing" is number 1 attacking vector used by 71% of organized groups in 2017, it can easily be concluded that human mistake is the factor with the greatest potential, that allows the implementation of successful attacks.

With that aim, a presentation entitled "Social engineering - every employee the actor of defense or...?" was held for the employees of the Head Office of the Central Bank of Bosnia and Herzegovina (CBBH), in December 2018. The risks of cyber attacks through social engineering techniques, as well as what is expected of each employee in order to reduce the risk of successful cyber attacks by potential attackers, was presented to the employees. Below we list the most significant parts of this presentation.

Social engineering is a technique of manipulating people in order to disclose confidential information or access the resources which the manipulator by themselves cannot access. Manipulator “deceives” user by fraud to reveal confidential information or perform an action for him/her. This is a technique used for decades and does not require a high level of expertise. The basis of the technique is to use one of the human weaknesses (or virtues) in order to achieve the desired goal. These weaknesses / virtues most often include a human desire to help other people, easy acceptance of information as credible without checking them, the trust that most people are ready to give to others in advance and curiosity and ignorance.

Each of these weaknesses / virtues in a certain way makes it easier for the attacker to carry out the attack. Users are not even aware of how attackers get information about them, which allows them to establish the first contact with the victim. We will only mention one small example. How many users generally think about the information disclosed through social networks. A large number of them will publish information about where they work, who their family members are, what their hobbies are, the areas of interest, technologies they work

with, and so on. For the attacker it is enough to investigate your publicly disclosed information and to contact you with a query in which they ask you to do something that is related to the issues of interest for you. A large number of recipients of e-mail messages, immediately after receiving an e-mail from someone who at first seems credible or where the e-mail contains something that awakens the interest of the recipient of the message, will click on the link leading to an address, try to open an attachment or sign up to receive a reward. That's exactly enough for an attacker to get what they wanted and to continue the attack.

Enabling the installation of malicious code on the institution's network requires only a few seconds, but world-wide experience suggests that identification of their presence requires from 4 to 12 months, usually when the damage occurs. Then it's too late.

At the presentation, several cases of phishing were presented to the employees, the ways they were implemented and what the employees need to pay attention to. For the purpose of a shorter illustration, the following three images present the most important things that the employee should pay attention to and which one should consider before taking the next step.

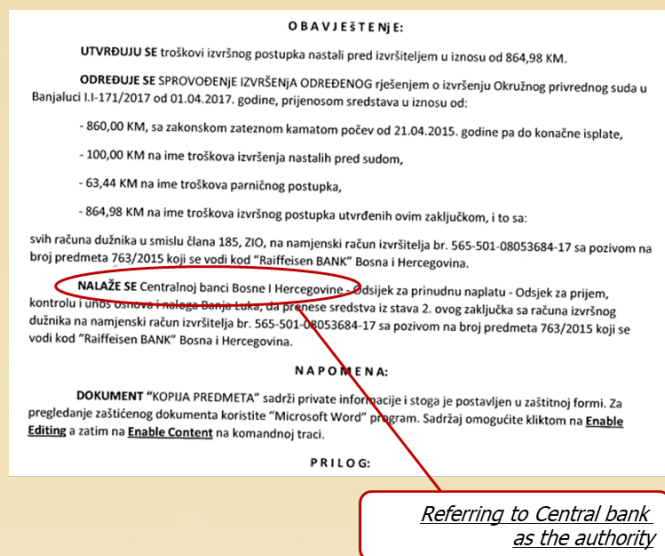


Photo1 The attacker refers to the authority that will make the victim act in accordance with what is required of him/her

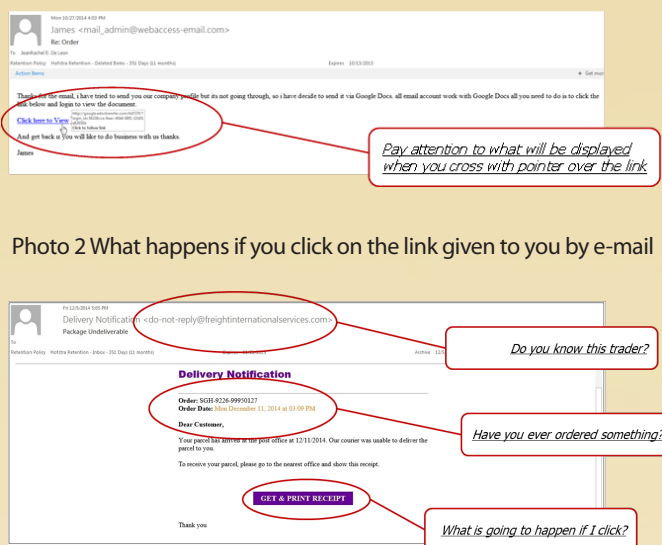


Photo3 The elements that one need to pay attention to when receiving an e-mail

The consequences of the attack can be huge:

- All the data on a computer, or more of them, can be permanently lost;
- There may be a standstill in the work of a whole or part of the bank's information system, because a person who has unknowingly made an action, may have endangered not only himself or herself but potentially made possible other computers in the bank to be infected;
- The bank can suffer huge financial consequences.

The Bank actively implements measures for protection against cyber attacks. However, modern tools cannot timely

identify every malicious action. In the introductory part, we have seen earlier that 95% of successful attacks are the result of failure to implement the basic “hygiene” of information security, and that 71% of organized crime groups use “spear phishing” as the most common technique for implementing attacks. In the light of the above, it can easily be established that one of the pillars of successful defense is the awareness and conscientiousness of all employees about potential risks and that the defense of the bank against these types of attacks depends on each employee.

The basic question that arises is what employees can and should do to protect the bank from these types of attacks. On previously presented pictures, it was possible to see

which elements the employee should pay attention to. When receiving a message, the official should consider three key issues:

- Is this message relevant to me and my work?
- Did I expect this / such message?
- Did the message really come from the person it represents? Did it come from an address different from the one I was used to?

In addition to the above, for each potentially suspicious email, employees are recommended to do the following:

- Check the identity of the person with whom you communicate and be careful in giving any data;
- Do not open unknown links, but rather enter a verified address yourself (for example, you get an e-mail from “your bank”, and the link leads to something unexpected);

- Never give personal information by phone or e-mail if you did not initiate the contact and if you are not sure about the identity of the person with whom you communicate.

- Carefully participate in surveys and make sure who you have contact with before you disclose sensitive information.

- If in message someone urges you to respond (for example, a quick purchase for a discount), be skeptical and never give in to pressure, but carefully consider your reaction and verify the identity / legitimacy of the sender of the email or website.

- Do not open CDs, DVDs or USB sticks if you are not 100% sure what they contain!

- Do not write your username and password on papers, do not stick it on the monitor, or keep it in the drawers of the desk.

- Finally, if you suspect an attack, report it to the IT Department and Chief Information Security Officer immediately.

FINANCIAL LITERACY AND INCLUSION AS NEW TASKS OF CENTRAL BANKS

Due to the impact on increasing economic growth and poverty reduction, financial inclusion has become a global topic. Achieving a satisfactory level of financial literacy is a very complex job, and its most important part is financial education. Therefore, it is necessary to conduct activities in order to increase financial literacy. But it is also not at all easy to determine exactly what kind of education to choose in order for citizens to become able to protect themselves against possible abuse and getting into financial difficulties. Practice has shown that conventional education is not effective enough to increase financial literacy, and education models need to be adapted.

Financial inclusion implies the share of citizens using financial products and services. The percentage of financial inclusion of citizens in one society can be an indicator of the very economic structure of individuals in one society, but also an indicator of the level of development of the financial sector itself. In practice, financial inclusion is directly related to financial education. Through the education process, the attempts are done to influence the increase in the share of the population using financial services, with a special emphasis on those parts of the society who, until now, have had no access to financial services. Financial inclusion provides opportunities for people who have not yet had the opportunity to access funding sources to get funds for startup of private business or to finance their other needs and thus directly affect the reduction of the informal economy share and positively affect the financial stability in the country. Financially-educated consumers and entrepreneurs make more reliable financial and business decisions.

Today, it is difficult to imagine life without using financial products and services, such as current accounts, debit and credit cards, loans, insurance, leasing, etc. Given the rapid development of the financial intermediation sector, where citizens are exposed to the increasing supply of various financial products, as well as the fact that new products are targeting increasingly parts of the population who traditionally have not been active participants in this process,

such as school children, financial literacy of the population continuously becomes important. In this regard, the financial literacy of children and young people is very important and useful because it represents a quality basis for acquiring the knowledge of money management, as well as, the skills necessary for making every day financial decisions. In discussions with pedagogues and professors of primary and secondary schools who visited the Central Bank of Bosnia and Herzegovina (CBBH), it was often emphasized that the introduction of a course related to financial education would be very helpful, because financial education creates the possibility for a person to be financially literate, in money management. Taking into account the experience of the indebtedness of individual citizens in Bosnia and Herzegovina in the past, it can be assumed that the level of financial literacy of citizens is not satisfactory. This is a potential problem for the whole society - it is difficult to find someone financially responsible if he does not possess the knowledge and skills that assist him in responsible personal finance management. Such person is a potential social and economic problem. Having this in mind, it is important to establish a planned comparative action of educational, financial, non-governmental organizations, the media and other institutions in promoting the idea of the importance of learning and financial literacy as a preventive behavior that contributes to the financial stability of the individual, the financial sector and the society as a whole.

The basic task of the CBBH is monetary and financial stability. Therefore, the CBBH seeks to promote the importance of financial inclusion of individuals through various models of education and information. By participating in the process of financial education, the CBBH helps create a financially educated population who, while rationally using this knowledge, will make rational financial decisions that will, as such, provide an additional pillar of stability for the entire system. Therefore, the CBBH often carries out activities aimed at the financial literacy of the citizens. It works through the preparation and dissemination of educational materials, the implementation of targeted educational activities and

the organization of visits to the CBBH, as well as, through informing the citizens about the responsible practices of financial behavior.

Through these activities, the CBBH strives to achieve a higher level of financial literacy and inclusion of children and youth. An integral part of the financial education that the CBBH has been conducting in recent years is the visits of students of elementary and secondary schools, visits of students from all over Bosnia and Herzegovina, various financial education activities through interactive workshops, quizzes, where students are informed about the work and role of the CBBH, how to manage the money, savings, and where they are informed about the basic characteristics of financial products. These activities are currently being implemented in cooperation with the support of the European Fund for South East Europe – Development Facility (EFSE) and within this cooperation, the first publication for children of its kind in Bosnia and Herzegovina entitled “Novko i Novčica u svijetu novca” was created and published.

Also, every year the CBBH has marked “World Savings Day” and “World Week of Money”, which are organized around the world at the initiative of the International Movement for the Financial Education of Children and Youth. This year, a debate on high school students was organized on the theme “Cash payment is more favorable than cashless”, which was attended by high school students from the Catholic school center “St. Josip” from Sarajevo and Public Institution High School Center “Istočna Ilidža” from East Sarajevo. In addition to this, in the framework of marking the 20th anniversary of the CBBH operations, in cooperation with the National Museum of Bosnia and Herzegovina, a numismatic exhibition “Trail of Money” was organized, which was set up at the National Museum in the period from August 11 to September 22, 2017 and provoked great public interest. Within the organization of this exhibition, an accompanying brochure was issued, which is an additional contribution to the education on money and its history on the territory of Bosnia and Herzegovina.

NEW YEAR'S RECEPTION FOR JOURNALISTS FROM BH MEDIA

The traditional New Year's reception for journalists from BH media, organized by the Governor of the Central Bank of Bosnia and Herzegovina (CBBH), Senad Sofić, Ph.D., took place this year too.

This time, around 30 journalists from all kinds of the media attended the reception, which was held in the premises of the Head Office of the CBBH in Sarajevo, Mehmeda Spahić Street 3.

Addressing the journalists, the Governor commented on the year at the end, summed up the results and presented some future activities of the CBBH.

At the end of his speech, he thanked the journalists for good cooperation and announced the continuation of this traditional event.



