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UDRUŽENJE BANAKA  
CRNE GORE  
ASSOCIATION OF  
MONTENEGRIN BANKS

# Bankar

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# YOLO PAKET

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## Uvodna riječ glavnog urednika

Poštovani čitaoci,

Sa zadovoljstvom prezentujemo novi broj časopisa Bankar. Ovaj broj u uvodnim stranicama daje četiri velika imena nauke, četiri nobelovca koji su dali za naše studente kratke poruke, a u okviru naučnog skupa pod nazivom „Dani dijaspore i prijatelja Crne Gore 2023“, koji je u oktobru organizovao Univerzitet Crne Gore. Poruke su zapravo ujedno i odgovori na pitanja zašto su dobili Nobelovu nagradu, koji savjet imaju za studente, šta pamte iz studentskih dana i kako vide Crnu Goru i šta preporučuju kao korake za razvoj nauke u njoj. Skup se bavio temama kao što su: vještačka inteligencija, prednosti u softverskom inženjeringu, digitalni patenti, superprovodnici itd. Što i jesu teme u razvoju bankarskih sistema.

Tekstovi su na fonu prezentacije dostignuća i šta je ono šta nas čeka u neposrednoj budućnosti. Crna Gora prati savremene monetarne trendove, tako da su u toku tri vrlo važna procesa, od uvođenja digitalnog eura u naš sistem, preko SEPA projekta do PSD2 procesa uvođenja otvorenog bankarstva. Naravno sve prisutna je opasnost od Syber napada, tako da prezentujemo tekst koji ukazuje da samo u 2022. napadi na kompanije u švajcarskom finansijskom centru, kao u svijetu prepoznatljivom, povećani su za 120 odsto u odnosu na prethodnu godinu.

Potom tu je tekst koji daje odgovore „Šta je to FinTech, a šta digitalni euro?“ „Uzajamnost edukacije i digitalizacije“ i šta nas očekuje kod PSD2 a onda kroz PSD3 „Evolucija platnog okvira EU i omogućavanje otvorenih finansija“ koji se već gromoglasno najavljuje nakon PSD2 koji se implementira u našem sistemu, a koji predstavljamo u osnovnim crtama i pojašnjenjima šta je to API, PIS, AIS i koja im je funkcija. Ovdje regulativa ima za cilj podstaknuti tehnološke inovacije i njihovu implementaciju u sistem monetarnih transakcija.

Tekst edukativnog karaktera je kako stечi povjerenje u onlajn bankarstvo uz obrazlaganje šta je to Phishing, kako prepoznati i kako se odbraniti od krađe identiteta, šta je to token, što jesu teške razumljive riječi za građane koji imaju druge preokupacije, ali moraju biti svjesni opasnosti pristupa mrežama i otvaranje zlonamjernih mail-ova.

Naravno da smo morali dati osvrt i na borbu sa inflacijom kroz tekst „Izgledi inflacija i monetarna politika u zoni eura“ kao i tekst koji daje osvrt na pandemiju, ratni sukob u Evropi, sankcije i mjere Evropske Centralne Banke. Nismo zanemarili vrlo važnu temu koja se odnosi na Klimatske rizike i bankarski sektor kojim se ukazuje da ukoliko je banka svjesna klimatskih rizika i na vrijeme preduzme aktivnosti na diverzifikaciji klimatskog rizika, efekat od razornih klimatskih događaja na njenu finansijsku strukturu može biti ublažen ili umanjen.

Srdačan pozdrav,  
Glavni i odgovorni urednik  
mr Bratislav Pejaković

## Foreword of the Secretary General

Dear Readers,

We are pleased to present the new issue of the Bankar magazine. As introduction of this issue, we give you four big names in science, four Nobel laureates who presented short messages to our students during the scientific event "Days of the Diaspora and Friends of Montenegro 2023", which was organized by the University of Montenegro in October. The messages are actually also answers to the questions of why they received the Nobel Prize, what advice they have for students, what they remember from their student days, and how they see Montenegro and what they recommend as steps for the development of science in it. The event dealt with topics such as: artificial intelligence, advantages in software engineering, digital patents, superconductors, etc. which also present topics in the development of banking systems.

The articles are underlying the presentation of achievements and what awaits us in the immediate future. Montenegro follows contemporary monetary trends. In that regard, three very important processes are underway, the introduction of the digital euro into our system, the SEPA project and the PSD2 process of introducing open banking. Of course, the danger of cyber attacks is ever-present, so we give you a feature indicating that in 2022 alone, attacks on companies in the Swiss financial center, as recognized in the world, have increased by 120 percent compared to the previous year.

This is followed by the article that gives answers to "What is FinTech, and what is the digital euro?" "Two-way relationship between financial education and digitalization" and what awaits us with PSD2 and then through PSD3 "An evolution of the EU payment framework and enabling open finance", which is already loudly announced after PSD2, which is implemented in our system, and which we present in basic outlines and clarifications, what is API, PIS, AIS and what is their function. Here, the regulation aims to encourage technological innovation and its implementation in the system of monetary transactions.

The feature of an educational character is how to gain trust in online banking while explaining what Phishing is, how to recognize and how to defend against identity theft, what a token is, which are difficult to understand words for citizens who have other preoccupations, but must be aware of the dangers of access networks and opening malicious emails.

Of course, we had to give an overview of the fight against inflation through the text "Inflation prospects and monetary policy in the euro zone" as well as the text that provides an overview of the pandemic, war conflict in Europe, sanctions and measures of the European Central Bank. We have not neglected the very important topic related to climate-related risks and the banking sector, which indicates that if the bank is aware of climate-related risks and takes timely actions to diversify climate-related risk, the effect of devastating climate events on its financial structure can be mitigated or reduced.

Best regards,  
Editor-in-Chief,  
Bratislav Pejaković, M.Sc

# BANKAR

Broj 63 / novembar 2023.

## IZDAVAC

Udruženje banaka Crne Gore  
Novaka Miloševa bb/3 Podgorica  
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## BANKAR

Časopis Udruženja banaka Crne Gore  
Broj 63 / novembar 2023.

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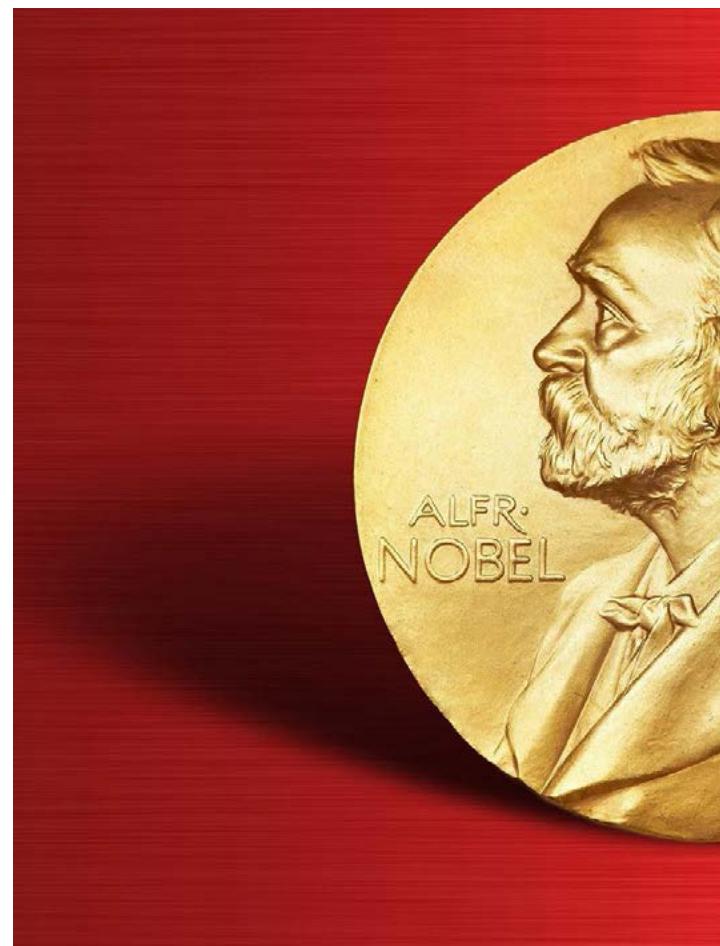
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# Nauka oblikuje budućnost čovječanstva. Učestvujte!

Na poziv akademika profesora dr Veljka Milutinovića, predstavnici Udruženja banaka Crne Gore prisustvovali su otvaranju naučnog Simpozijuma "Dani Dijaspore i akademskih prijatelja", koji se održao 18. i 19. oktobra 2023. godine u Podgorici. Uz učešće dobitnika Nobelove nagrade iz fizike, dr Koste Novoselova, akademika dr Ivana Božovića sa Univerziteta Jejl, mnogih akademika, profesora i naučnih radnika, ovaj simpozijum su otvorili: rektor dr Vladimir Božović, akademik CANU Predrag Miranović i ministarka Biljana Šćepanović. Skup se bavio temama kao što su: vještačka inteligencija, prednosti u softverskom inženjeringu, digitalni patenti, superprovodnici itd. gdje na upotrebi Vještačke inteligencije u bankarstvu je UBCG već uradilo dvije radionice. Našli smo za korisno, da neke životne stavove nobelovaca iskazane u Crnoj Gori prezentujemo i našim čitaocima uz dopust organizatora državnog Univerziteta Crne Gore od kojih smo preuzeли tekst.



Četiri velika imena nauke, četiri nobelovca, u susret naučnom skupu pod nazivom *Dani dijasporе i prijatelja Crne Gore 2023*, koji u oktobru organizuje Univerzitet Crne Gore, dali su za naše studente kratke poruke. Poruke su zapravo ujedno i odgovori na pitanja zašto su dobili Nobelovu nagradu, koji savjet imaju za studente, šta pamte iz studentskih dana i kako vide Crnu Goru i šta preporučuju kao korake za razvoj nauke u njoj.

Nobelovca Dena Šehtmana (Dan Schechtman) imali smo već prilike da čujemo na prošlogodišnjem skupu koji je UCG organizovao zajedno sa Crnogorskom akademijom nauka i umjetnosti. Nobelovac Konstantin Kostja Novoselov (Konstantin Kostya Novoselov) otvara skup ove 2023. godine. Nobelovce Žan Mari Lena (Jean Marie Lehn) i Kurt Vutriča (Kurt Wüthrich), pozvali smo da otvore naredne skupove, 2024. i 2025. godine.

# Science shapes the future of humanity. Get involved!



The representatives of the Association of Montenegrin Banks attended, at the invitation of academician professor Veljko Milutinović, PhD, the opening of the Scientific Symposium "Days of Diaspora and (Academic) Partners", which took place on 18 -19 October 2023 in Podgorica. This Symposium was opened by the Rector professor Vladimir Božović, PhD, CANU academician Predrag Miranović and the Minister professor Biljana Šćepanović, PhD, and the Nobel Prize winner in Physics, Kosta Novoselov, PhD, Ivan Božović, PhD from Yale University, many academicians, professors and scientific workers attended this Symposium. The Symposium covered topics such as: artificial intelligence, advantages in software engineering, digital patents, superconductors, whereby the UBCG has already held two workshops on the use of Artificial Intelligence in banking. We found it useful to present to our readers some views expressed by the Nobel Laureates in Montenegro, with the permission of the organisers, the State University of Montenegro, to use their document.

Four prominent figures in the field of science, four Nobel Laureates, have provided brief messages for our students as a prelude to the scientific conference titled "Days of the Diaspora and Friends of Montenegro 2023," organised by the University of Montenegro in October. These messages also serve as responses to questions regarding why they received the Nobel Prize, the advice they have for students, their memories from their own student days, their

views on Montenegro, and their recommendations for the advancement of science in the country.

We had already had the opportunity to hear the Nobel Laureate Dan Shechtman at last year's event organised by the University of Montenegro and the Montenegrin Academy of Sciences and Arts. Nobel Laureate Konstantin Kostya Novoselov opens the event in 2023. We invited Nobel Laureates Jean Marie Lehn and Kurt Wüthrich to open the next events in 2024 and 2025.



### **DEN ŠEHTMAN**

je dobitnik Nobelove nagrade u oblasti hemije, 2011. godine.

#### **Šta je suština naučnog otkrića zbog kojeg ste dobili Nobelovu nagradu?**

Nauka o kristalografskoj započela je osnovnim eksperimentom fon Louea koji je izveo prvi rendgenski snimak eksperimenta difrakcije na kristalu. Kristal koji je fon Lu proučavao bio je uređen i periodičan, kao i hiljade kristala proučavanih tokom 70 godina, sve do 1982. Vremenom je definicija kristala usvojena od strane zajednice kristalografa i cijele naučne zajednice. U suštini, definicija je bila – kristal je čvrsta supstanca, materijal u kome su atomi uređeni i periodični. Ova definicija je zasnovana prije na zapažanjima nego na teoriji. 1982. otkrio sam novu klasu kristala koji su poređani, ali ne periodični, prenosnim elektronom mikroskopijom. Novi poredak je nazvan kvaziperiodični. Moje otkriće je stvorilo promjenu paradigme u kristalografskoj znanosti, za koju sam dobio mnoge nagrade, uključujući i Nobelovu nagradu.

#### **Šta je vaša najvažnija poruka studentima Univerziteta Crne Gore?**

Dobar naučnik je osoba koja razumije prirodu, koja razumije zakone hemije, fizike, matematike, informatike, fiziologije i termodinamike, ali prije svega, on ili ona je "stručnjak" u jednoj oblasti nauke. Ako želite da uspijete kao naučnik, izaberite temu koja vam se sviđa i pokušajte da budete broj jedan u njoj, broj jedan u vašem razredu, broj jedan u vašoj školi, u vašoj zemlji, u svijetu. Uz obilje informacija koje su danas dostupne, to možete učiniti. Ako to uradiš, obećavam ti veliki uspjeh kao naučnika.

#### **Koja je vaša najimpresivnija spomena iz studentskih dana?**

Bio je to naporan rad tokom mojih bečelov godina na Tecnionu, Haifa, Izrael, zatim tokom vremena kada sam radio master istraživanje počeo sam uživati u nauci. Sviđao mi se kreativni dio naučnog rada. Tokom doktorskih studija postao sam stručnjak za analizu mikrostrukture metalnih kristala transmisijskom elektronском mikroskopijom i zaljubio se u nevjerojatnu sposobnost mikroskopa.

#### **Kakvu predstavu imate o Crnoj Gori i šta predlažete za unapređenje nauke u Crnoj Gori?**

Posjetio sam Crnu Goru više puta na poziv i ljubazno gostoprivrštvo profesora Veljka Milutinovića. Crna Gora je prekrasna zemlja sa prekrasnim krajolikom. Ima minerale i plodno poljoprivredno zemljište, s obiljem vode. Bio sam impresioniran ljepotom zemlje i Boke kotorske. Unapređenje nauke u Crnoj Gori zahtijeva stratešku odluku Vlade. Zahtijeva nekoliko akcija, među kojima – podučavanje mlađih modernoj nauci, počevši od

vrtića, velika ulaganja u naučne univerzitetske odsjeke, stipendije talentovanim studentima nauke i ponudu pozicija univerzitetskih profesora istraživačima tek nakon postdoktorskih studija u vodećim svjetskim laboratorijima, s dokazanim uspjehom kao što je autorstvo dobro citiranih naučnih članaka.



### **KONSTANTIN KOSTJA NOVOSELOV**

dubitnik je Nobelove nagrade za fiziku 2010. godine, za zajednički rad sa naučnikom Andreom Geimom. On će ove godine otvoriti naučni skup.

#### **Šta je suština naučnog otkrića zbog kojeg ste dobili Nobelovu nagradu?**

Pokazali smo da dvodimenzionalni materijali mogu biti stabilni i dostupni za istraživanje i primjenu. Takođe, demonstrirali smo veoma neobična svojstva grafena – dvodimenzionalnog oblika ugljenika.

#### **Šta je vaša najvažnija poruka studentima Univerziteta Crne Gore?**

Ne slušajte savjete. Slijedite svoja interesovanja.



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Iznos oročenog depozita: 50.000,00 EUR / Period oročenja: 36 mjeseci /  
NKS: 4,00% / EKS: 4,00% / Ukupan iznos oročenog depozita: 55.892,67 EUR\* /  
Period: 01.11.2023 - 01.11.2026. godine

\*u ukupan iznos oročenog depozita nije uračunat porez, koji za rezidente i nerezidente iznosi 15%.

**Koja je vaša najimpresivnija uspomena iz studentskih dana?**

Puno slobode, puno otvorenih prilika. Imao sam sreću što sam mogao da se oprobam u različitim oblastima nauke, tehnologije, biznisa. To mi je puno pomoglo u životu.

**Kakvu predstavu imate o Crnoj Gori i šta predlažete za unapređenje nauke u Crnoj Gori?**

Prelijepa zemlja sa veoma vrijednim i posvećenim ljudima. Postoji samo jedan put za prirodne nauke – podrška talentima. Crna Gora ima dovoljno talentovanih, ali svakom talentu treba podrška.



**ŽAN MARI LEN**

nobelovac pozvan da otvoriti naučni skup u 2024. godini na Univerzitetu Crne Gore. Prestižnu svjetsku nagradu je dobio zajedno sa još dva naučnika Donald J. Cram i Charles J. Pedersen za razvoj i korišćenje molekula sa strukturno specifičnim interakcijama visoke selektivnosti.

**Šta je suština naučnog otkrića zbog kojeg ste dobili Nobelovu nagradu?**

Proučavanje hemijske osnove prepoznatljivosti molekula, a zatim se razvila supramolekularna hemija.

**Šta je vaša najvažnija poruka studentima Univerziteta Crne Gore?**

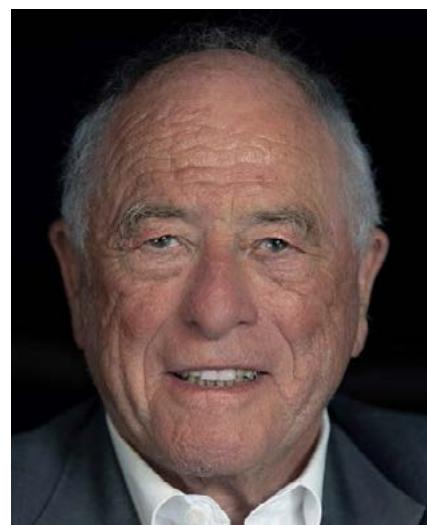
Nauka oblikuje budućnost čovječanstva. Učestvujte!

**Koja je vaša najimpresivnija uspomena iz studentskih dana?**

Čekanje da uradim osnovno istraživanje.

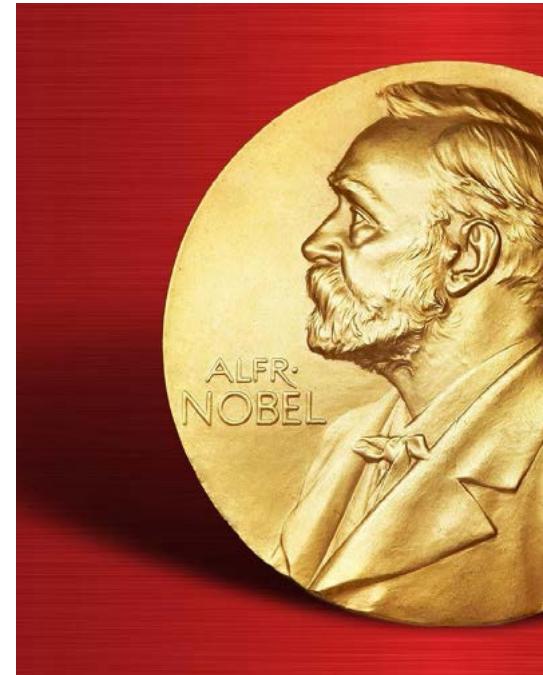
**Kakvu predstavu imate o Crnoj Gori i šta predlažete za unapređenje nauke u Crnoj Gori?**

Ne pada mi ništa na pamet osim da radite naporno i da budete kreativni!



**KURT VUTRIĆ**

dobjitnik je Nobelove nagrade za hemiju 2002, koju dijeli sa kolegama naučnicima ( John B. Fenn i Koichi Tanaka). On je pozvan da otvoriti naučni



skup na Univerzitetu Crne Gore u 2025. godini.

**Šta je suština naučnog otkrića zbog kojeg ste dobili Nobelovu nagradu?**

Sposobnost vizualizacije bioloških makromolekula u miljeu rastvora koji liči na okruženje u telesnim tečnostima, gde ova jedinjenja obavljaju svoje fiziološke funkcije.

**Šta je vaša najvažnija poruka studentima Univerziteta Crne Gore?**

U svakom trenutku vašeg života potrudite se da izvučete ono što je najbolje u dатој situaciji.

**Koja je vaša najimpresivnija uspomena iz studentskih dana?**

Osjećaj uzbudjenosti zbog prvih originalnih otkrića.

**Kakvu predstavu imate o Crnoj Gori i šta predlažete za unapređenje nauke u Crnoj Gori?**

Uvijek pokušajte ono što najbolje možete i uz to se zabavite.

**DAN SHECHTMAN**

was awarded The Nobel Prize in Chemistry 2011.

**What is the deep essence of your discovery, for which you got The Nobel Prize?**  
 The science of crystallography started with the seminal experiment by von Loue who performed the first x-ray diffraction experiment on a crystal. The crystal that von Loue studied was ordered and periodic as so were many thousands of crystals studied for 70 years until 1982. Over time a definition of a crystal was adopted by the community of crystallographers and the whole scientific community. In essence the definition was – a crystal is a solid material in which the atoms are ordered and periodic. This definition was based on observations rather than on theory. In 1982 I discovered a new class of crystals that are ordered, but not periodic, by transmission electron microscopy. The new order was named quasi-periodic. My discovery created a paradigm shift in crystallography for which I was awarded many prizes, including the Nobel prize.

**What is your most important message for students of the University of Montenegro?**

A good scientist is a person that understands nature, who understands the laws of chemistry, physics, mathematics, computer science as well as physiology and thermodynamics, but above all, he or she is an "expert" in one field of science. If you want to succeed as a scientist, choose a subject you like, and try to be number one in it, number one in your class, number one in your school, in your country, in the world. With the wealth of information available today, you can do it. If you do that, I promise you great success as a scientist.

**What is your most impressive memory from the times when you were a student?**

It was hard work during my bachelor's years at the Technion, Haifa, Israel, then during the time I performed my Master research I started to enjoy science. I liked the creative part of my scientific work. During my PhD study, I became an expert in analysing the microstructure of metallic crystals by transmission electron microscopy and fell in love with the amazing capability of the microscope.

**What is your basic image of Montenegro and what do you suggest for advancement of science in Montenegro?**

I visited Montenegro several times with invitation and the gracious hospitality of Professor Veljko Milutinović. Montenegro is a beautiful country with amazing scenery. It has minerals and fertile agricultural land, with plenty of water. I was impressed by the beauty of the land and the Bay of Kotor. Advancement of science

in Montenegro requires a strategic decision by the government. It calls for several actions, among which – teaching modern science to the young, starting in kindergartens, large investment in scientific university departments, scholarships to gifted science students and offering university professorships to scholars only after post-doc in leading world laboratories with proof of success such as authorship of well cited scientific articles. The offer by a university or research laboratory should come with meaningful support to establish a laboratory.

**KONSTANTIN KOSTYA NOVOSELOV**

was awarded The Nobel Prize in Physics 2010, for his joint work with the scientist Andrei Geim. He will open the scientific event this year.

**What is the deep essence of your discovery for which you got The Nobel Prize?**

We demonstrated that two-dimensional materials can be stable and available for research and applications. Also,

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we demonstrated the very unusual properties of graphene – the two-dimensional form of carbon.

**What is your most important message for students of the University of Montenegro?**

Don't listen to any advice. Follow your own interests.

**What is your most impressive memory from the times when you were a student?**

Lots of freedom, lots of opportunities. I was lucky to be able to try many different areas of science, technology, business. It helped me a lot in my life.

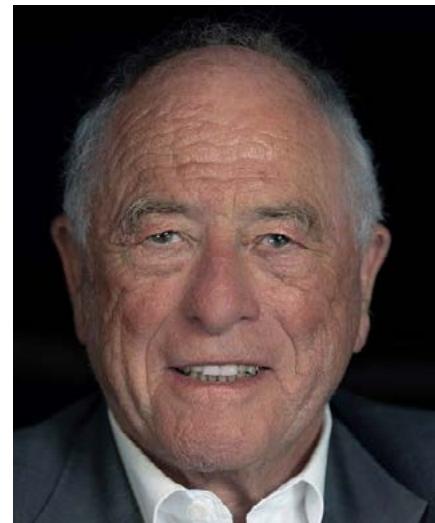
**What is your basic image of Montenegro and what do you suggest for advancement of science in Montenegro?**

Beautiful country with hard-working, dedicated people. There is only one way to nurture science – to support talents. There are enough talents in Montenegro, but any talent needs a support.

**JEAN-MARIE LEHN**

a Nobel laureate is invited to open a scientific event in 2024 at the University of Montenegro. He was awarded The Nobel Prize together with two other scientists Donald J. Cram and Charles J. Pedersen for their development and use of molecules with structurally-specific interactions of high selectivity.

**What is the essence of your discovery for which you got The Nobel Prize?**



The study of the chemical basis of molecular recognition. It developed and thereafter it became supramolecular chemistry.

**What is your most important message for students of the University of Montenegro?**

Science shapes the future of humanity. Participate!

**What is your most impressive memory from the times when you were a student?**

Waiting to do basic research.

**What is your basic image of Montenegro and what do you suggest for advancement of science in Montenegro?**

I have no idea except work hard and be creative!

**KURT WÜTRICH**

was awarded The Nobel Prize in Chemistry 2002, which he shares with fellow scientists (John B. Fenn and Koichi Tanaka). He is invited to

open a scientific event at the University of Montenegro in 2025.

**What is the deep essence of your discovery, for which you got The Nobel Prize?**

The ability to visualize biological macromolecules in a solution milieu resembling the environment in body fluids, where these compounds perform their physiological functions.

**What is your most important message for students of the University of Montenegro?**

At every moment of your life, try to make the best out the given situation.

**What is your most impressive memory from the times, when you were a student?**

The excitement about the first original discoveries.

**What is your basic image of Montenegro and what do you suggest for advancement of science of Montenegro ?**

Always try your best and have fun doing so.

# PSD2 u Crnoj Gori

ABC TECH je vodeći regionalni provajder naprednih bankarskih rješenja, i prvi je na području Republike Hrvatske napravio zaokruženo PSD2 rješenje Hrvatske

U sklopu konstantne težnje za unapređenjem tržišta financijskih usluga na tržištu EU, od strane EK donesena je druga Direktiva o platnim uslugama na unutrašnjem tržištu (PSD2) usvojena prvenstveno zbog podsticanja tehnološkog napretka odnosno radi rješavanja pitanja besprijekornih i sigurnih platnih usluga. Regulativa je za cilj imala podstaknuti tehnološke inovacije i njihovu implementaciju u sistem monetarnih transakcija. Ovim su, pored uspostavljanja boljih sigurnosnih zahtjeva i poboljšanja zaštite korisnika platnih usluga, uvedena i regulisana dva nova osnovna platna servisa za učesnike izvan bankarskog sistema koja bankama učesnicama na tržištu EU omogućava otvaranje pristupa tekućim računima fizičkih i pravnih osoba:

- ▷ Usluge iniciranja plaćanja (PIS)
- ▷ Informacijske usluge računa plaćanja (AIS)

*„Direktiva o platnim uslugama (PSD2) usvojena je prvenstveno zbog podsticanja tehnološkog napretka i rješavanja pitanja besprijekornih i sigurnih platnih usluga*

**Usluge iniciranja plaćanja** omogućavaju nalogodavcu (kupcu) direktno pozivanje plaćanja sa svog računa putem PISP-a, bez posrednika u plaćanju (kao što su danas kartične kuće). U praksi to znači da se kroz navedenu regulativu sami trgovci mogu registrirati kao pružaoci servisa plaćanja u svoje ime, te vršiti plaćanja bez ikakvih posrednika, i što je najvažnije: bez naknada. Kod kupovine nekog artikla na web shop-u, trgovac će inicirati transfer sredstava sa računa kupca na svoj račun, bez posrednika.

**Informacijske usluge o platnom računu** omogućava certifikovanim entitetima (AISP) da krajnjim korisnicima nude agregatne – objedinjene informacije o jednom ili više računa za plaćanje koje vodi nekoliko pružaoca platnih usluga, a kojima se može pristupiti putem interneta preko interfejsa pružaoca platnih usluga. Korisniku platnih usluga je na taj način omogućen potpuni pregled cijelokupne finansijske situacije sa svih platnih računa koje korisnik posjeduje, ali je istovremeno

omogućeno kreiranje novih usluga na tržištu gdje se ponajviše ističe usluga jednostavnijeg kreditnog skoringa analizom sada lako dostupnih podataka o korisnikovom tekućem računu (uz pristanak korisnika naravno).

Uvođenjem novih platnih usluga, tržište je otvoreno za nove pružaoce usluga: **pružaoce usluga inicijacije plaćanja** (PISP) i **pružaoce usluga provajdera informacija o računu** (AISP).

Do sada su pristup podacima o korisničkom računu bile isključivo u vlasništvu banaka. Međutim, banke koje se usklade sa PSD2 će morati da "otvore" svoja sučelja (interfejs) aplikacijskih programa novim provajderima platnih usluga, koji će moći pristupiti informacijama o korisničkom računu (**samo putem ovog kanala**), pregledavati plaćanja i izdavati potvrde o stanju. Istovremeno, sigurnost pružanja ovih usluga strogo je regulisano tako da podaci ili resursi korisnika nisu ugroženi.

Takođe, PSD2 je uveo stroge sigurnosne zahtjeve za **pokretanje i obradu elektronskih platnih transakcija**. Ova direktiva usmjerava pružaoce platnih usluga da primjenjuju takozvanu **“Strong Customer Authentication (SCA)”** kada platilac inicira transakciju elektronskog plaćanja jer će to bolje zaštititi njihove podatke i smanjiti rizik od prevare.

Stoga će banke i drugi pružaoci platnih usluga morati da uspostave **i potrebnu infrastrukturu za povezdanu provjeru autentičnosti**

# PSD2 in Montenegro

ABC TECH is the leading regional provider of advanced banking solutions, and was the first in the Republic of Croatia to create a comprehensive PSD2 solution in Croatia

In the constant effort to improve the financial services market in the EU market, the second Directive on payment services in the internal market (PSD2) was adopted by the European Commission, primarily to encourage technological progress i.e. to solve the issue of seamless and secure payment services. The regulation was aimed at encouraging technological innovations and their implementation in the system of monetary transactions. In addition to establishing better security requirements and improving the protection of users of payment services, two new basic payment services for participants outside the banking system were introduced and regulated. These new payment services mandate opening of access for participating banks in the EU market to current accounts of natural and legal persons:

- ▷ Payment initiation services (PIS)
- ▷ Payment account initiation services (AIS)

**Payment Account Information Services** enables certified entities to offer end users aggregated - unified information about one or more payment accounts maintained by several payment service providers, which can

be accessed online through the payment service provider's interface. A payment service user may, in this way, have a complete overview of the entire financial situation from all of its payment accounts, and simultaneously, it is possible to create new services in the market, where the service of simpler credit scoring stands out. This is achieved by analysing easily available data on the user's current account (with the user's consent).

**Payment initiation services** enable the principal (customer) to directly call payment from their account via PISP, without payment intermediaries (such as card houses today). In practice, it means that the merchants may register as payment service providers in their name, and make payments without any intermediaries, and most importantly: without fees. When purchasing an item on the web shop, the merchant will initiate the transfer of funds from the customer's account to his account, without an intermediary.

With the introduction of new payment services, the market is open to new service

providers: **Payment Initiation Service Providers** (PISPs) and **Account Information Service Providers** (AISPs).

Until now, access to user account data was exclusively owned by banks. However, PSD2-compliant banks will have to "open up" their application program interfaces to new payment service providers, who will be able to access customer account information (**only through this channel**), review payments and issue balance confirmations. At the same time, the security of the provision of these services is strictly regulated, so that the user's data or resources are not endangered.

Also, PSD2 introduced strict security requirements for the **initiation and processing of electronic payment transactions**. The Directive directs payment service providers to apply "**Strong Customer Authentication (SCA)**" when the payer initiates an electronic payment transaction, as this will better protect their data and reduce the risk of fraud.

Therefore, banks and other payment service providers will have to establish the **necessary infrastructure for strong customer authentication**. In addition to higher security requirements, the payment service providers are required to manage the associated operational and security risks and report related incidents. A

*„The Directive on payment services (PSD2) was adopted primarily to encourage technological progress and to solve the issue of seamless and secure payment services*

<sup>14</sup> „*Predložene izjene Zakona o platnom prometu Crne Gore vode ka usklađivanju sa PSD2 regulativom, uvode se novi provajderi platnih usluga, podstiče se tržišna konkurentnost,...*

**klijenta.** Pored viših sigurnosnih zahtjeva, od provajdera platnih usluga se traži da upravljaju povezanim operativnim i sigurnosnim rizicima i prijavljuju incidente u vezi s tim. Uveden je rok za odgovaranje na pritužbe potrošača i skraćen rok (sa 12 na šest mjeseci) nakon kojeg korisnik platnih usluga može bez naknade otkazati okvirni ugovor.

Ova direktiva takođe identificira i detaljnije usluge koje nisu kategorisane kao usluge plaćanja. **Primjeri uključuju usluge kolektivne kupovine i trgovačke kartice** koje se mogu koristiti u ograničenoj mreži (poput kupovine u pojedinačnim trgovinama, maloprodajnim lancima i još mnogo toga).

Koji je krajnji benefit za Banke? Prvenstveno u kvalitetnijem screeningu potencijalnih novih klijenata kroz AIS uslugu, te predstavljanje novih i inovativnih usluga kroz PIS, gdje u suradnji s trgovcima mogu ostvariti razne benefite korištenjem direktnih sistema plaćanja bez kartičnih posrednika. Ali uzevši u obzir otvorenost sistema i napredne sigurnosne zahtjeve, mogućnosti inovacija su nebrojene.

Predloženi Zakon o izmjenama i dopunama Zakona o platnom prometu Crne Gore vodi ka usklađivanju sa opisanom PSD2 regulativom, uvode se novi provajderi platnih

usluga, podstiče se tržišna konkurenčnost, **omogućava dalji razvoj inovativnog mobilnog i internet platnog prometa**, povećava se sigurnost za elektronika plaćanja i pružatelje platnih

usluga i očekuje se smanjenje cijene usluga platnog prometa za krajnje korisnike uz jednostavan, pristupačan i inovativan način plaćanja.

### APLIKATIVNI PROGRAMSKI INTERFEJS

PSD2 propisuje da klijenti imaju pravo da koriste bilo kojeg pružaoca treću stranu za svoje onlajn bankarske usluge. Kao rezultat toga, banke su ovlaštene da obezbijede otvorene aplikativne programske interfejsе ili API-je kako bi omogućili softveru jedne kompanije da pristupi informacijama o računu za plaćanje i iniciranju plaćanja iz druge.

### ŠTA JE API U OBRADI PLAĆANJA?

API za plaćanje (ili aplikativni programski interfejs) je softverska aplikacija koja se koristi za prenos podataka o plaćanju između dva sistema. Ostin Kelš, Staksov vođeći softverski inženjer, je rekao da: „Jednostavno rečeno, API je način da računari razgovaraju sa računarima“.

### ŠTA JE API U BANKARSTVU?

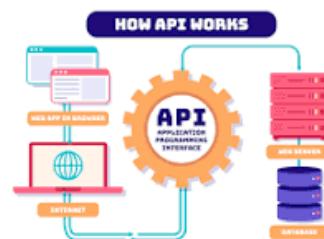
API bankarstvo koristi API-je (KSML/JSON kodove) za komunikaciju između servera banke i servera klijenta, čineći prenos

podataka između ova dva sistema besprekornim, obezbeđujući besprekornu i bezbjednu integraciju između sistema klijenta i banke.

### KOJI SU PRIMJERI API-JA U BANKARSTVU?

Samo nekoliko ključnih primjera bankarskih API-ja uključuje analitiku, autentifikaciju računa, informacije o računu, obradu plaćanja, pa čak i programe lojalnosti. Banke koriste API-je iz jednog ili više od sledeća četiri glavna razloga - doseg, brzina, domeni ili Internet stvari (IoT).

### ŠTO JE API U FINTECH?



Aplikativni programski interfejs (API) je dio koda koji omogućava dva programa da razmjenjuju informacije i, u nekim slučajevima, određene funkcionalnosti. Na primjer, kada treba da dodate integraciju treće strane u svoju aplikaciju, API to omogućava.

### VRSTE API-JA PO ARHITEKTURI

- ▷ Monolitni API-ji. Većina javnih API-ja su monolitni API-ji, što znači da su dizajnirani kao jedinstvena, koherentna kodna baza koja omogućava pristup složenom izvoru podataka. ...
- ▷ Mikroservisni API-ji. ...
- ▷ Kompozitni API-ji. ...
- ▷ Objedinjeni API-ji.

deadline was introduced for responding to consumer complaints and a shortened deadline (from 12 to six months) after which the payment service user can cancel the framework agreement without compensation.

This Directive also identifies in more detail services that are not classified as payment services. **The examples include collective purchasing services and merchant cards** that can be used in a limited network (such as shopping at individual stores, retail chains, and more).

What is the ultimate benefit for banks? Primarily, in the better screening of potential new clients through the AIS, and the presentation of new and innovative services through PIS, where, in cooperation with merchants, they can achieve various benefits by using direct payment systems without card intermediaries. But given the openness of the system and advanced security requirements, the possibilities for innovation are endless.

The proposed Montenegro Law amending the Payment System Law leads to alignment with the described PSD2 regulation; it introduces new payment service providers, encourages market competition, **enables further development of innovative mobile and internet payment transactions**, increases security for electronic payments and payment service providers. In addition, it is expected that the price of payment services for end users will decrease with a simple, accessible and innovative payment method.

## APPLICATION PROGRAMMING INTERFACES

PSD2 specifies that consumers have the right to use any third-party

provider for their online banking services. As a result, banks are mandated to provide open Application Programming Interfaces or APIs to allow software at one company to access payment account information and payment initiation from another.

### WHAT IS API IN PAYMENT PROCESSING?

A payment API (or application programming interface) is a software application used for payment data transmission between two systems. Stax's Lead Software Engineer Austin Kelsch said that: "Simply put, an API is a way for computers to talk to computers."

### WHAT IS API IN BANKING?

API Banking. API Banking makes use of APIs (XML/JSON codes) for communication between bank and client servers, making data transfer between these two systems seamless, ensuring seamless and secured integration between the customer's and bank's systems.

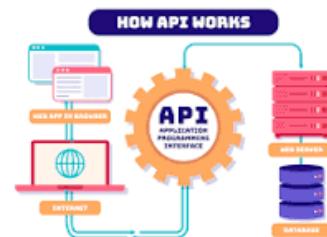
### WHAT ARE EXAMPLES OF API IN BANKING?

Just a few key examples of banking APIs include analytics, account authentication, account information, payment processing, and even loyalty programs. Banks are using

*„The proposed amendments to the Payment System Law lead to the alignment with the PSD2 regulation; they introduce new payment service providers, encourage market competition,...*

APIs for one or more of the following four main reasons — reach, speed, domains, or the Internet of Things (IoT).

### WHAT IS API IN FINTECH?



An application programming interface (API) is a piece of code that allows two programs to exchange information and, in some cases, certain functionality. For example, when you need to add a third-party integration to your app, an API makes it possible.

### API TYPES BY ARCHITECTURE

- ▷ Monolithic APIs. Most public APIs are monolithic APIs, meaning they are architected as a single, coherent codebase providing access to a complex data source. ...
- ▷ Microservices APIs. ...
- ▷ Composite APIs. ...
- ▷ Unified APIs.



Supriya Dahiwelkar  
Glavna konsultantkinja  
za platni promet u  
Delta Capita

# PSD3: Evolucija platnog okvira EU i omogućavanje otvorenih finansijskih usluga

Programabilni novac centralne banke mogao bi da spoji tokenizovani novac i sredstva komercijalnih banaka na jednoj platformi kako bi omogućio transakcije i ugovore u realnom vremenu. Nova finansijska infrastruktura bi bila revolucionarna, što bi omogućilo nove vrste ekonomskog aranžmana koji bi mogli iz temelja da promijene monetarni i finansijski sistem.

Evropska komisija je 28. juna 2023. godine objavila predlog za modernizaciju platnih usluga i otvaranje podataka o finansijskim uslugama s ciljem uvođenja plaćanja i šireg finansijskog sektora u 'digitalno doba'.

Ovo je ključni korak u tranziciji industrije sa Otvorenog bankarstva na Otvorene finansije. Nije iznenadujuće da se ovo savršeno poklapa sa ovogodišnjom Sibosovom temom „Kolaborativne finansije u fragmentiranom svijetu“, pri čemu su Otvorene finansije identifikovane kao ključni trend za postizanje ovog cilja.

## RAZUMIJEVANJE PSD3

Okvir Direktive o platnim uslugama (PSD) prošao je značajne revizije od svog početka.

PSD1: Usvojena 2007. godine, pruža pravni temelj za jedinstveno tržište Evropske unije za plaćanja.

PSD2: Implementirana 2018. godine, uvela je nekoliko revolucionarnih promjena, uključujući pouzdanu provjeru autentičnosti klijenta (SCA) i zahtjeve

Otvorenog bankarstva, kako bi se povećala sigurnost i konkurenčija.

PSD3 se sada nadograđuje na prethodne direktive, sa primarnim fokusom na dalje unapređenje zaštite potrošača, sigurnosti, inovacija i finansijske inkluzije. Predlog Evropske komisije sastoji se od dva zakonodavna akta:

**Direktiva o platnim uslugama** (PSD3) je direktiva koja zahtijeva od država članica Evropske unije da ih prilagode u nacionalno zakonodavstvo. Ovo ostavlja prostor za tumačenje i potencijalne nedosljednosti u zemljama članicama EU.

S druge strane, **Regulativa o platnim uslugama** (PSR) je regulativa koja uključuje pravila koja uređuju obavljanje platnih usluga u EU. Ovo jača usaglašenost i sprovođenje nedosljednosti uočenih do PSD2.

Dakle, na koga to utiče i koji su vremenski okviri? Treća Direktiva o platnim uslugama će uticati na kompanije koje pružaju ili planiraju da pružaju usluge elektronskog plaćanja u EU ili klijentima u EU. PSR

# PSD3: An evolution of the EU payments framework and enabling Open Finance

Programmable central bank money could knit together tokenised commercial bank money and assets on a single platform to enable transactions and contracts in real time. New financial infrastructure would be a game-changer, making possible new types of economic arrangement that could revolutionise the monetary and financial system.

Supriya Dahiwelkar  
Principal Consultant-  
Payments at Delta Capita

**O**n 28th June 2023, the European Commission announced the proposal for modernising payment services and opening financial services data with the aim of bringing payments and the larger financial sector into ‘the digital age’.

This is a key step in the transition of the industry from Open Banking to Open Finance. Not surprisingly, this coincides perfectly with this year’s Sibos theme of “Collaborative finance in a fragmented world” with Open Finance identified as a key trend to achieve this.

## UNDERSTANDING PSD3

The Payment Services Directive (PSD) framework has undergone significant revisions since its inception.

**PSD1:** Adopted in 2007, provides the legal foundation for an EU single market for payments.

**PSD2:** Implemented in 2018, introduced several groundbreaking changes, including strong customer authentication (SCA) and Open Banking requirements, to boost security and competition.

Now, PSD3 builds upon its predecessors, with a primary focus on further enhancing consumer protection, security, innovation and financial inclusion. The proposal by the European Commission consists of two legislative acts:

**Payment Services Directive** (PSD3) is a directive that requires EU Member States to adapt them into national legislation. This leaves room for interpretation and potential inconsistencies across EU member states.

**Payment Services Regulation** (PSR) on the other hand is a regulation which incorporates the rules governing the conduct of payment services in the EU. This strengthens harmonisation and enforcement of inconsistencies seen up to PSD2.

So who does it impact and what are the timelines? Firms providing, or planning to provide, electronic payment services in the EU or to EU customers will be impacted by the third Payment Services Directive. PSR will become mandatory once the scope has been decided and ratified in EU law. PSD3

## „Treća Direktiva o platnim uslugama će uticati na kompanije koje pružaju ili planiraju da pružaju usluge elektronskog plaćanja u EU ili klijentima u EU“

će postati obavezna nakon što se donese odluka o opsegu i nakon što se ratificuje u pravu Evropske unije. Države članice EU moraće da transponuju PSD3 u nacionalno zakonodavstvo. Pružaoci platnih usluga (banke i nebankarske institucije) moraće tada da se pridržavaju novog režima zakonskih ovlašćenja koji je uveo PSD3 u roku od 2-3 godine nakon što postane lokalni zakon, dakle do otprilike 2026. godine.

### KLJUČNE KARAKTERISTIKE I PREDNOSTI PSD3

**1. Sprečavanje prevara:** Iako je evaluacija PSD2 zaključila da je značajno poboljšala sprečavanje prevara, nije u potpunosti opremljena za borbu protiv novih vrsta prevara koje su se od tada pojavile. Predlozi uključeni u PSD3/PSR sastoje se od daljih mjera koje pomažu u sprečavanju prevara:

- ▷ Implementacija usluge verifikacije IBAN-a/ime za sve kreditne transfere,
- ▷ Pouzdana provjera autentičnosti klijenta (SCA), izuzeća od primjene SCA, opcije koje nisu SCA mehanizmi zasnovani na pametnom telefonu (npr. hardverski tokeni, pametne kartice),
- ▷ Pružanje pravne osnove za PSP (pružaoce platnih usluga) da međusobno dijele informacije u vezi s prevarama u pogledu GDPR-a (Opšta regulativa o zaštiti podataka), jačanje praćenja transakcija,
- ▷ Obaveza pružaoca platnih usluga (PSP) da sprovode edukaciju o svijesti svojih klijenata,
- ▷ Dodatne mjere protiv prevara koje se odnose na sprečavanje i zaštitu od prevara
- Produženje prava na povraćaj novca

**2. Poboljšanje prava klijenata i informacije:** Veća transparentnosti za kreditne transfere i doznake novca iz EU u treće zemlje, Veća transparentnost za izvode

sa računa za plaćanje i naknade za bankomat i druge naknade za konverziju valuta i slično.

**3. Podrška otvorenom bankarstvu:** Implementacija namjenskih aplikativnih programskih interfejsa (API) za pristup podacima, eliminiranje dva interfejsa za pristup podacima (namjenski i njegova rezerva), osiguravanje pristupa podacima za neprekidne poslovne operacije u nepredviđenim okolnostima, uspostavljanje kontrolnih ploča klijenata za upravljanje pravima pristupa podacima.

**4. Ista pravila za banke i nebankarske institucije:** Omogućavanjem nebankarskim pružaocima platnih usluga pristup svim platnim sistemima EU, uz odgovarajuće zaštitne mjere, i osiguranjem prava tih pružaoca na bankarski račun. Platne institucije treba da budu uključene kao mogući učesnici u određenim platnim sistemima. S obzirom na hitnost uvođenja ove neophodne mjere za jednake uslove, države članice imaju rok od 6 mjeseci da je prenesu u svoje nacionalno zakonodavstvo.

**5. Poboljšanje dostupnosti gotovine:** Mjere za poboljšanje dostupnosti gotovine u trgovinama i na bankomatima biće sprovedene, omogućavajući trgovcima da ponude gotovinske usluge bez potrebe za kupovinom, te pružajući jasnoću u vezi sa propisima koji regulišu nezavisne operatere bankomata.

**6. Konsolidacija institucija za elektronski novac i platnih institucija:** Pod jedinstvenim regulatornim režimom, pojednostavljinjem pravila plaćanja koja se primjenjuju na PSP u regulativu koja se može direktno primijeniti, osiguravajući jednostavniji i dosljedniji okvir.

***“Firms providing, or planning to provide, electronic payment services in the EU or to EU customers will be impacted by the third Payment Services Directive”***

will need to be transposed into national law by EU member states. Payment Service Providers (bank and non-banks) will then have to comply with the new legal authorisation regime introduced by PSD3 within 2-3 years after becoming local law hence by circa 2026 onwards.

#### **KEY FEATURES AND BENEFITS OF PSD3**

**1. Fraud prevention:** Although the evaluation of PSD2 concluded that it immensely improved fraud prevention, it is not fully equipped to combat the new types of fraud that have emerged since. PSD3/PSR proposals consist of further measures to help prevent fraud:

- ▷ Implementing IBAN/name verification service for all credit transfers,
- ▷ Strong Customer Authentication (SCA), exemptions from the application of SCA, options other than SCA mechanisms based on smartphone (e.g., hardware tokens, smartcards),
- ▷ Providing a legal basis for PSPs (Payment Service Providers) to share fraud-related information between themselves in respect of GDPR (General Data Protection Regulation), the strengthening of transaction monitoring,
- ▷ Payment service providers (PSPs) obligation to carry out education awareness for their customers,
- ▷ Additional anti-fraud measures regarding both fraud prevention and redress
- ▷ Extension of refund rights

**2. Improve consumer rights and information:** More transparency for credit transfers and money remittances from the EU to third countries, More

transparency for payment account statements and ATM charges and other charges for currency conversion and the likes.

**3. Support Open Banking:** Implementation of dedicated Application Programming Interfaces (APIs) for data access, eliminating the two data access interfaces (a dedicated one and its “fall-back”), ensuring contingency data access for uninterrupted business operations, establishing consumer dashboards for managing data access rights.

**4. Level the playing field between banks and non-banks:** By allowing non-bank payment service providers access to all EU payment systems, with appropriate safeguards, and securing those providers' rights to a bank account. Payment institutions are to be included as possible participants in designated payment systems. Given the urgency of introducing this indispensable level-playing-field measure, Member States are given 6 months to transpose it into their national law.

**5. Improve the availability of cash:** Measures will be implemented to enhance the availability of cash through shops and Automated Teller Machines (ATMs), enabling retailers to offer cash services without requiring a purchase, and providing clarity on regulations governing independent ATM operators.

**6. Consolidation of e-money institutions and payment institutions:** Under a unified regulatory regime, streamlining payment rules applicable to PSPs into a directly enforceable regulation, ensuring a more straightforward and consistent framework.

*„PSD3 će poboljšati zaštitu potrošača  
i osigurati široko usvajanje najviših  
sigurnosnih standarda, uključujući i  
instant plaćanja“*

### **OMOGUĆAVANJE PRELASKA SA OTVORENOG BANKARSTVA NA OTVORENE FINANSIJE**

PSD2 je pokrenula Otvoreno bankarstvo gdje pružaci usluga trećih strana mogu dobiti bezbjedan i dozvoljen pristup informacijama o bankovnom računu korisnika. Otvorene finansije predstavljaju korak dalje gdje se ne radi samo o podacima o bankarskim računima, već i klijenti mogu na siguran način putem API-ja dijeliti svoje nebankarske podatke kao što su hipoteke, penzije, osiguranje, porezi, štednja itd.

Saopštenje Evropske komisije od 28. juna 2023. uključuje i zakonski predlog o pristupu finansijskim podacima (FIDA). Ovo ima za cilj da obijezbidi siguran pristup širokom spektru finansijskih podataka osim podataka o bankarskim računima kako bi industrija prešla sa otvorenog bankarstva na otvorene finansije.

Ovaj pomak ka otvorenim finansijama sa pristupom podacima iz više izvora izvan bankarstva osnažio bi klijente i promovisao inovacije, omogućavajući trećim stranama da pružaju usluge s dodatom vrijednošću klijentima (i preduzećima).

### **PSD3 I INSTANT PLAĆANJA**

Strategija plaćanja na malo Evropske komisije promoviše razvoj instant plaćanja u EU. PSD3 i PSR ispunjavaju ključno opredjeljenje za Strategiju plaćanja na malo tako što osiguravaju da pravila koja se primjenjuju na industriju plaćanja na malo u EU i dalje odgovaraju svrsi.

PSD3 će poboljšati zaštitu potrošača i osigurati široko usvajanje najviših sigurnosnih standarda, uključujući i instant plaćanja. Nova direktiva će takođe pomoći da se olakšaju rješenja za prekogranična plaćanja stvaranjem više izbora i osiguravanjem da pravni okvir pokriva sve važne tržišne igrače u ekosistemu plaćanja.

### **SLJEDEĆI KORACI**

Pružaoci platnih usluga treba da razumiju zahtjeve PSD3/PSR. Oni bi trebali da razmotre njegove implikacije i izvrše procjenu uticaja o tome koje su promjene potrebne da bi se postigla blagovremena uskladenost. Potencijalne oblasti u kojima će PSD3/PSR imati uticaja su:

- ▷ IBAN/usluga provjere imena,
- ▷ Ponovno podnošenje zahtjeva za dobijanje dozvole za PSP (pružaoce platnih usluga) u skladu sa PSD3 za platne institucije i institucije za elektronski novac,
- ▷ Pružanje korisničkih kontrolnih ploča za upravljanje pravima pristupa podacima,
- ▷ Implementacija novih/revidiranih zahtjeva za SCA,
- ▷ Kreiranje namjenskog interfejsa za razmjenu podataka sa TPP,
- ▷ Implementacija šema razmjene finansijskih podataka u skladu sa FIDA, itd.

Saradnja između tradicionalnih banaka i fintech kompanija će se vjerovatno povećati, podstičući inovativna rješenja kako bi se ispunili zahtjevi propisa/direktiva, ali i kako bi se omogućio razvoj novih finansijskih proizvoda i usluga usmjerenih na klijente.

*“PSD3 will improve consumer protection, and ensure wide adoption of the highest security standards, including instant payments*

## **ENABLING THE TRANSITION FROM OPEN BANKING TO OPEN FINANCE**

PSD2 kickstarted Open Banking where third-party service providers can gain secure and permissioned access to users' bank account information. Open Finance is a step further where it's not just the bank account data, but consumers can also share their non-banking data like mortgages, pensions, insurance, taxes, savings, etc, securely via APIs.

The European Commission announcement on 28th June 2023 also includes a legislative proposal on Financial Data Access (FIDA). This aims to provide secure access to a wide range of financial data beyond bank account data to transition the industry from Open Banking to Open Finance.

This move towards Open Finance with access to data from multiple sources beyond banking would empower customers and promote innovation by enabling third parties to provide value-added services to customers (and businesses).

## **PSD3 AND INSTANT PAYMENTS**

The Retail Payments Strategy of the European Commission promotes the development of instant payments in the EU. PSD3 and PSR fulfil a key commitment to the Retail Payments Strategy by ensuring the rules applicable to the EU retail payments industry remain fit for purpose.

PSD3 will improve consumer protection, and ensure wide adoption of the highest security standards, including instant payments. The new directive will also help facilitate cross-border payment solutions by creating more choices and ensuring the legal framework covers all important market players in the payments ecosystem.

## **NEXT STEPS**

Payment Service Providers should understand the requirements of PSD3/PSR. They should consider its implications and perform an impact assessment of what changes are required to achieve timely compliance. Potential areas where PSD3/PSR will have an impact are:

- ▷ IBAN/name verification service,
- ▷ Reapplication for a PSP (Payment ServiceProvider) licence under PSD3 for PIs (payment institutions) and EMIs,
- ▷ Provision of consumer dashboards for managing data access rights,
- ▷ Implementation of new/revised requirements for SCA,
- ▷ Creation of a dedicated interface for exchanging data with TPPs,
- ▷ Implementation of financial data sharing schemes in line with FIDA, etc.

Collaboration between traditional banks and fintech companies is likely to increase, driving innovative solutions to meet regulatory/directive requirements but also to enable the development of new, customer-centric financial products and services.



Roman Studer, CEO,  
Swiss Banking

# Zajednički rad za bolju sajber bezbjednost

Samo u 2022. godini, napadi na kompanije u švajcarskom finansijskom centru povećani su za 120 procenata u odnosu na prethodnu godinu. Iako oni do sada nisu izazvali trajnu štetu, pokazuju da svi moramo biti na oprezu

**P**odaci koji pripadaju našoj finansijskoj privatnosti, kao i samim bankama, jedna su od najpopularnijih meta za sajber napade. Samo u 2022. godini, napadi na kompanije u švajcarskom finansijskom centru povećani su za 120 procenata u odnosu na prethodnu godinu. Iako oni do sada nisu izazvali trajnu štetu, pokazuju da svi moramo biti na oprezu. To se odnosi na nadležne organe i banke kao i na svakog od nas kao korisnika digitalnih finansijskih usluga.

Rizik od sajber napada značajno se povećao u Švajcarskoj posljednjih godina. To je podstaknuto globalnim pomakom u digitalizaciji uzrokovanim pandemijom koronavirusa, ali i ratom u Ukrajini: tehnologija i IT se sve više koriste kao političko oružje, kao i od strane kriminalaca. Zahvaljujući tehnoškom napretku, moguće je stalno

razvijati nove vrste napada i metoda koje prodiru u sve složenije sredine.

Kada se takvi napadi izvrše na banke, oni ne samo da predstavljaju veliki rizik za reputaciju, već i rizik za stabilnost finansijskog centra. Uspješan, široko zasnovan sajber napad takođe bi mogao da ima uicaja na švajcarsko stanovništvo i ekonomiju, potencijalno čineći ozbiljnu kolateralnu štetu.

Shodno tome, mjere predostrožnosti i moćna i dobro koordinisana organizacija u situacijama kriza imaju visoki prioritet. Udruženje švajcarskih bankara, zajedno sa nadležnim organima i partnerima iz bankarske i osiguravajuće industrije, postiglo je važnu prekretnicu u proljeće 2022. godine osnivanjem Centra za sajber bezbjednost švajcarskog finansijskog sektora (Swiss FS-CSC). Ovo udruženje jača otpornost finansijskog sektora na sajber rizike i stvara potrebne strukture

kako bi sajber napadi mogli biti otkriveni u ranoj fazi, problemi se mogu brzo otkloniti i velika šteta može biti uspješno izbjegnuta u budućnosti.

Međutim, ne djelujemo samo na nivou javnih nadležnih organa i industrije kako bi povećali sajber

bezbjednost švajcarskog finansijskog centra. Čak i unutar samih banaka, stotine hiljada zaposlenih širom svijeta rade danonoćno na zaštitu podataka klijenata od potencijalnih napadača. Obuka novih specijalista, kao i kontinuirano usavršavanje je stoga s pravom na našoj listi prioriteta.

Podjednako je jasno da svi imamo koristi kada biznis, nadležni organi i finansijski centar rade zajedno kako bi održali zaštitu od sajber napada kroz sopstvene mjere i ciljanu saradnju. Jer samo zajedno možemo održati korak u ovoj nemilosrdnoj trci za stalnu sajber bezbjednost. Iz tog razloga, Udruženje bankara se već ranije zalagalo za postepeno širenje međusektorske saradnje i to vidi kao važan prioritet i za budućnost.

Na kraju, ali ne i najmanje važno, svi klijenti daju važan doprinos sajber bezbjednosti, zaštitu svoje finansijske privatnosti i imovine od napada ili onlajn prevara, ako štite svoj računar ili IT sistem ili održavaju zdravo nepovjerenje u slučaju neočekivanih onlajn prevara. To se odnosi i na fizička lica i na kompanije. I upravo zbog toga želim da vam se kao čitaocu ovog članka zahvalim na vašem interesovanju za ovu važnu temu, vašoj budnosti i osjetljivosti u rješavanju vaše digitalne privatnosti. Budite oprezni!

*„Podjednako je jasno da svi imamo koristi kada biznis, nadležni organi i finansijski centar rade zajedno kako bi održali zaštitu od sajber napada kroz sopstvene mjere i ciljanu saradnju“*

# Working together for better cybersecurity

In 2022 alone, attacks on companies in the Swiss financial centre increased by 120 percent compared to the previous year. Although these have not caused any lasting damage so far, they show that we all need to be on our guard.

Roman Studer,  
CEO, Swiss  
Banking

Data that belongs to our financial privacy, as well as the banks themselves, is one of the most popular targets for cyberattacks. In 2022 alone, attacks on companies in the Swiss financial centre increased by 120 percent compared to the previous year. Although these have not caused any lasting damage so far, they show that we all need to be on our guard. This applies to the authorities and banks as well as to each and every one of us as customers of digital financial services.

The risk of cyberattacks has increased markedly in Switzerland in recent years. This is driven by the global digitalization push caused by the coronavirus pandemic, but also by the war in Ukraine: technology and IT are increasingly being used as political weapons as well as by criminals. Thanks to technological advances, it is possible to constantly develop new types of attacks and methods that penetrate increasingly complex environments.

When such attacks are perpetrated on banks, they not only pose a major reputational risk, but also a risk to the stability of the financial centre. A successful, broad-based cyber-attack could also have an impact on the Swiss population and economy, potentially causing severe collateral damage.

Accordingly, precautionary measures and a powerful and well-coordinated crisis organization have high priority. The

Swiss Bankers Association, together with authorities and partners from the banking and insurance industry, reached an important milestone in spring 2022 with the establishment of the Swiss Financial Sector Cyber Security Centre (Swiss FSCSC). This association strengthens the resilience of the financial sector against cyber risks and creates the necessary structures so that cyber-attacks can be detected at an early stage, problems can be rectified quickly and major damage can be successfully averted in the future.

However, it is not only at the level of public authorities and the industry that we are doing everything we can to increase the cybersecurity of the Swiss financial centre. Even within the banks themselves, hundreds of thousands of employees around the world are working around the clock to protect customers' data from potential attackers. The training of new specialists as well as continuous further training is therefore rightly on our list of priorities.

It is equally clear that we all benefit when business, authorities and the financial centre work hand in hand to uphold protection against cyberattacks

through their own measures and targeted cooperation. Because only together can we keep up in this relentless race for ongoing cybersecurity. For this reason, the Bankers Association has already advocated a gradual expansion of cross-cutting cooperation in the past and sees this as an important priority for the future as well.

Last but not least, all customers make an important contribution to cybersecurity, to the protection of their financial privacy and assets against attacks or online scams, if they protect their computer or IT system or maintain a healthy distrust in the event of unexpected emails. This refers to both private individuals and companies. And that is precisely why I would like to thank you, as a reader of this article, for your interest in this important topic, your vigilance and sensitivity in dealing with your digital privacy. Stay alert!

*„It is equally clear that we all benefit when business, authorities and the financial centre work hand in hand to uphold protection against cyberattacks through their own measures and targeted cooperation*



Generalni sekretar UBCG  
mr Bratislav Pejaković

# Šta je to FinTech, a šta digitalni euro

Crna Gora prati savremene monetarne trendove, tako da su u toku tri vrlo važna procesa, od uvođenja digitalnog eura u naš sistem, preko SEPA projekta do PSD2 procesa uvođenja otvorenog bankarstva

*„Digitalna zrelost  
je pokretna meta.  
Najuspešnije banke  
razumiju gdje nove  
tehnologije podržavaju  
strateške ciljeve i ne  
budu uhvaćene u gužvi  
oko nove, neprovjerene  
tehnologije“*

Opšteno govoreći, pojam „finansijska tehnologija“ može se primijeniti na bilo koju inovaciju u načinu na koji ljudi obavljaju poslove, od izuma digitalnog novca do dvojnog knjigovodstva. Od internet revolucije, finansijska tehnologija je eksplozivno porasla.

U razvijenim zemljama dostupni su razni elementi fintech-a na dnevnoj osnovi. Neki primjeri uključuju prenos novca sa vašeg debitnog računa na vaš tekući račun putem vašeg iPhone-a, slanje novca prijatelju putem Venmo-a, ili upravljanje investicijama putem onlajn brokera. Prema EY-ovom Globalnom indeksu usvajanja FinTech-a, dvije trećine klijenata koristi najmanje dvije, ili više fintech usluga, a ti klijenti su sve svjesniji fintech-a kao dijela njihovog svakodnevnog života. Regulativa fintech kompanija se pojavila kao briga broj jedan među vladama kako su fintech kompanije uzletjele.

Sjeverna Amerika još uvijek proizvodi većinu fintech startup kompanija, dok je Azija druga, a slijedi je Evropa. Neka od najaktivnijih područja fintech inovacija uključuju, ili se vrte oko sljedećih oblasti (između ostalih):

- Kriptovaluta (Bitcoin, Ethereum, itd.), digitalni tokeni (npr. nezamjenjivi tokeni, ili NFT) i digitalna gotovina. Oni se često oslanjaju na blokčejn tehnologiju, odnosno tehnologiju distribuirane knjige (DLT) koja održava evidenciju na mreži računara, ali nema centralnu knjigu. Blokčejn omogućava i tzv. pametne ugovore koji koriste kod za automatsko izvršavanje ugovora između strana kao što su kupci i prodavci.

# What is FinTech, and What is Digital Euro

Montenegro follows modern monetary trends, with three very important processes underway: the introduction of the digital euro into our system, the SEPA project and the PSD2 process of introducing Open banking

UBCG Secretary General,  
Bratislav Pejaković, M.Sc.

**B**roadly speaking, the term "financial technology" can be applied to any innovation in the way people do business, from the invention of digital money to double-entry bookkeeping. Since the Internet revolution, financial technology has grown exponentially.

In developed countries, various elements of fintech are available on a daily basis. Some examples include money transfers from debit account to current account using iPhone, sending money to a friend through Venmo, or managing investments via an online broker. According to EY Global FinTech Adoption Index, two-thirds of clients use at least two or more fintech services, and these clients are increasingly aware of fintech as part of their daily lives. The regulation of fintech companies has emerged as the number one concern among governments as fintech companies have taken off.

North America still produces the majority of fintech startups, while Asia is second, followed by Europe. Some of the most active areas of fintech innovation include, or revolve around, the following areas (among others):

- Cryptocurrency (Bitcoin, Ethereum, etc.), digital tokens (e.g., non-fungible tokens or NFTs) and digital cash. They often rely on blockchain technology or distributed ledger technology (DLT) that maintains records on a computer network, but has no centralized ledger. Blockchain enables the so-called smart contracts that use code for automated execution of contracts between parties such as buyers and sellers.

*„Digital maturity is a moving target. The most successful banks understand where new technologies support strategic goals and don't get caught up in the hype around new, unproven technology*



# **CKB - najbolja banka u Crnoj Gori**

**Prema izboru prestižnog  
finansijskog magazina „The Banker“**

- Open banking, a concept that proposes that all people should have access to banking data to build applications that create a connected network of financial institutions and third-party providers. An example is MiInt, an all-in-one money management tool.

- Regtech, which seeks to help firms that provide financial services to meet industry compliance rules, particularly those covering anti-money laundering and know-your-customer (KYC) protocols that combat fraud.

Digital maturity is a moving target. The most successful banks understand where new technologies support strategic goals and don't get caught up in the hype around new, unproven technology. The features of a true digital leader are organisational flexibility and agility. Banks need to demonstrate to supervisors (and other stakeholders) that they understand the risks associated with new technologies and are pursuing innovation in a way that improves — or at least maintains — operational and financial resilience.

The Central Bank of Montenegro launched the project of Montenegro's accession to the Single Euro Payments Area (SEPA). The SEPA represents an area where consumers, business entities and authorities can make and receive payments in euros under the same basic conditions, rights and obligations as in the EU Member States, regardless of their location. The CBCG reminds that, in the past two years, they fully harmonised their payment regulations with those of the EU, and full convergence with SEPA conditions is close.

In addition to regulations in the field of payment transactions and supervision of credit institutions, there is a whole series of other legal acts, such as the Law on Prevention of Money Laundering and Terrorist Financing, tax laws, and other acts that must be harmonised with SEPA requirements. A coordinated amendment of the law is a necessary condition for rounding off this process, which will primarily depend on the synchronised work of the Government of Montenegro and the CBCG.

*„The accession of Montenegro to SEPA would, in addition to the benefits felt by citizens and the economy of Montenegro, represent one of the clearest signals of Montenegro's entry into the final phase of EU integration*

The SEPA area includes 36 countries: all EU Member States, Great Britain, Iceland, Liechtenstein, Norway, Switzerland, Monaco, San Marino, Andorra and the Vatican. The inclusion of Montenegro in SEPA will lead to the removal of technical, legal and market barriers between countries that support payments in euros, safer international payment transactions, equal time of executing remittances for all transactions in euros with countries within the EU, a unique, safer, faster and cheaper payment method in euros with EU Member States. At the same time, the accession of Montenegro to SEPA would, in addition to the benefits felt by citizens and the economy of Montenegro, represent one of the clearest signals of Montenegro's entry into the final phase of EU integration, the CBCG concluded.

## WHAT IS DIGITAL EURO?

There is a lot of talk about digitalisation, but to demystify it in one sentence, digitalisation, which in itself has a broader meaning, in monetary terms is everything that computers or software, applications, can do for us. Blockchain is the revolutionary technology that initiated many changes and it represents a database that is not centralized, but consists of several bases, blocks that are interconnected and have their wide application from cadastral, property records to monetary applications. To put it simply, several parties would own copies of the ledger, and individuals would be able to verify that the record is authentic, making it a universal record of every transaction. The blockchain is a ledger of finances, or a log of those transactions, and users of the network collaborate to verify them whenever they happen. Nevertheless,

*„Ulaganje Crne Gore u SEPA bi pored benefita koje bi osjetili građani i privreda Crne Gore, predstavljao i jedan od najjasnijih signala ulaska u Crne Gore u završnu fazu integracije u EU“*

- Otvoreno bankarstvo, odnosno koncept koji predlaže da svi ljudi treba da imaju pristup bankovnim podacima za izgradnju aplikacija koje stvaraju povezanu mrežu finansijskih institucija i pružaoca trećih strana. Primjer je MInt, alat za upravljanje novcem „sve na jednom mjestu“.
- Regtech, koji nastoji da pomogne firmama za finansijske usluge da ispune pravila usklađenosti s industrijskim propisima, posebno ona koja pokrivaju protokole protiv pranja novca i „upoznaj svog klijenta“ (KYC) koji se bore protiv prevara.

Digitalna zrelost je pokretna meta. Najuspešnije banke razumiju gdje nove tehnologije podržavaju strateške ciljeve i ne budu uhvaćene u gužvi oko nove, neprovjerene tehnologije. Oznake pravog digitalnog lidera su organizaciona fleksibilnost i agilnost. Banke treba da pokažu supervizorima (i drugim zainteresovanim stranama) da razumiju rizike povezane sa novim tehnologijama i da teže inovacijama na način koji poboljšava — ili barem održava — operativnu i finansijsku otpornost.

Centralna banka Crne Gore pokrenula je projekat priступanja Crne Gore jedinstvenom području plaćanja u eurima (SEPA – Single Euro Payments Area). SEPA predstavlja područje na kojem potrošači, poslovni subjekti i tijela izvršne vlasti mogu uplaćivati i primati plaćanja u eurima pod jednakim osnovnim uslovima, pravima i obavezama, kao u zemljama Evropske unije, nezavisno od njihove lokacije. Iz CBCG podsjećaju da su protekle dvije godine u potpunosti usaglasili svoju regulativu platnog prometa sa onom u EU, a blizu je i puna konvergencija sa uslovima SEPA.

Osim regulative iz oblasti platnog prometa i nadzora kreditnih institucija, postoji čitav niz drugih zakonskih akata, poput Zakona o sprečavanju pranja novca i finansiranja terorizma, poreskih zakona, i drugih akata koji se moraju uskladiti sa zahtjevima SEPA. Koordinisana izmjena zakona je neophodan uslov za zaokruživanje ovog procesa, koji će prvenstveno zavisiti od sinhronizovanog rada Vlade Crne Gore i CBCG.

Područje SEPA obuhvata 36 država: sve članice EU, Veliku Britaniju, Island, Lihtenštajn, Norvešku, Švajcarsku, Monako, San Marino, Andoru i Vatikan. Uključivanje Crne Gore u SEPA doveće do uklanjanja tehničkih, pravnih i tržišnih barijera između zemalja koje podržavaju plaćanja u eurima, sigurniji međunarodni platni promet, jednako vrijeme izvršenja doznaka za sve transakcije u eurima sa zemljama unutar EU, jedinstven, sigurniji, brži i jeftiniji način plaćanja u eurima sa zemljama članicama EU. Ujedno, ulazak Crne Gore u SEPA bi pored benefita koje bi osjetili građani i privreda Crne Gore, predstavljao i jedan od najjasnijih signala ulaska u Crne Gore u završnu fazu integracije u EU zaključak je iz CBCG.

### ŠTA JE TO DIGITALNI EURO?

Mnogo se priča o digitalizaciji, ali da demistifikujemo u jednoj rečenici, digitalizacija koja sama po sebi ima šire značenje, u monetarnom smislu je sve ono što računari, odnosno softveri, aplikacije, mogu da urade umjesto nas. Revolucionarna tehnologija koja je pokrenula mnoge promjene je blockchain koja predstavlja bazu podataka koja nije centralizovana, već je čini više baza, blokova koji su međusobno povezani i imaju svoju široku primjenu od katastarskih, svojinskih evidencijskih do monetarnih primjena. Pojednostavljeno, više strana bi posjedovalo kopije glavne knjige, a pojedinci bi mogli da provjere da li je evidencija vjerodostojna, što je predstavlja kao univerzalnu evidenciju svake transakcije. Blokčejn je knjiga finansija, ili dnevnik tih transakcija, a korisnici mreže saraduju na verifikaciji kad god se one dogode. Ipak, pored nekih neravnina koje bi trebale da se definisu kod ove tehnologije u smislu još jače zaštite od malicioznih napada, stoji stav

in addition to some bumps that should be defined in this technology in terms of even stronger protection against malicious attacks, there is a stance that until now, blockchain may not have changed the world, but it has made many people think.

Therefore, the digital euro imposes itself on the needs of prosperity conditioned by new technological, technical, innovative solutions that are already in operation at different levels of life. The role and nature of money is being transformed, or to put it more simply, the digital euro stems from the evolution of people's payment habits, where spending habits are changing. In recent years, two trends have been prominently imposed, the first in the form of increased online banking, the use of payment cards, or payments through applications via phones and smart watches. Another trend is online shopping, which includes food, clothes and various arrangements. These are changes that have directly called for central banks to respond and protect the role they play. Half of the existing central banks in the world are working on digitizing their currencies. The goal is to ensure that central bank money remains a pillar of stability in the monetary system.

The ECB has a vision of a digital euro for retail use that could even be transferred offline thanks to digital wallets in phones. Early designs call for a standard application, along with the use through the existing online banking apps. This would not replace cash, but it would add another way to store euros.

The digital euro complements cash, provides the same services that are already present with banknotes through the possibility of payment in a new digital form, without any intention of replacing it. It should be emphasized that the digital euro has nothing to do with crypto-assets, where Bitcoin is the most popular. Bitcoin is not backed by production or gold, nor do you have any guarantees of its value, indicating a speculative instrument with no intrinsic value. Due to the fact that the Central Bank stands behind the digital euro, it is free from any risk, whether from market, credit, or liquidity risk, i.e., it has the same nature as banknotes or notes existing in financial systems.

*„The ECB has a vision of a digital euro for retail use that could even be transferred offline thanks to digital wallets in phones*

Montenegro follows modern monetary trends, with three very important processes underway: the introduction of the digital euro into our system, the SEPA project and the PSD2 process of introducing Open banking. With regard to the digitization of the euro, the CBCG has agreed the cooperation with the provider of crypto and blockchain solutions, the company "Ripple", in order to develop a strategy and implement a pilot programme for launching the first digital currency in the country - the central bank digital currency (CBDC). The second project is the accession of Montenegro to the Single Euro Payments Area (SEPA). The goal is that Montenegro, using technical assistance provided by the Council of Europe, applies by the end of 2024 by adopting technical solutions and adjusting the accompanying regulations with the.

The third segment, which is shaped by law and enabling regulations, is open banking where, in addition to banks, third parties can provide services of payment transactions. The application of PSD2 is binding in euro area, and the revised regulation allows non-EU countries and those that do not use euro as a currency to access this project. The focus of PSD2 is standardisation, integration and improvement of payment efficiency, better protection of payment service users, further promotion of innovations and reduction of transaction costs, increased transparency in new payment methods, and in mobile and online payments, unification of fees and costs of payment order execution, as well as improving the security of payment processing.

The Association of Montenegrin Banks actively monitors and participates in all these processes in order to enable optimal conditions while reducing the costs of payment transactions for clients of banks in Montenegro.

*„ECB ima viziju digitalnog eura za maloprodajnu upotrebu koji bi čak mogao da se prenosi i oflajn zahvaljujući digitalnim novčanicima u telefonima“*

da do sada, blokčejn možda nije izmijenio svijet, ali je zato naveo mnoge ljude na razmišljanje.

Dakle, digitalni euro se nameće potrebama prosperiteta uslovljenog novim tehnološkim, tehničkim, inovativnim rješenjima koja su već u funkciji na različitim nivoima življjenja. Transformiše se uloga i priroda novca, ili jednostavnije rečeno digitalni euro proizilazi iz evolucije platnih navika ljudi, gdje se mijenjanju navike potrošnje. Zadnjih godina naglašeno nametnula su se dva trenda, prvi u vidu pojačanog onlajn bankarstva, korištenja platežnih kartica, ili plaćanja putem aplikacija preko telefona i pametnih satova. Drugi trend je onlajn kupovina, od hrane, odjeće do raznih aranžmana. Ovo su promjene koje su direktno prozvale centralne banke da reaguju i zaštite ulogu koju imaju. Polovina od postojećih centralnih banaka na svijetu radi na digitalizaciji svojih valuta. Cilj je osigurati da novac centralne banke ostane uporište stabilnosti monetarnog sistema.

ECB ima viziju digitalnog eura za maloprodajnu upotrebu koji bi čak mogao da se prenosi i oflajn zahvaljujući digitalnim novčanicima u telefonima. Rani dizajni zahtijevaju standardnu aplikaciju, zajedno sa korišćenjem kroz postojeće aplikacije za onlajn bankarstvo. To ne bi zamijenilo gotovinu, ali bi dodalo još jedan način čuvanja eura.

Digitalni euro nadopunjuje gotovinu, pruža iste usluge koje su već prisutne kod paprinog novca kroz mogućnost plaćanja u novoj digitalnoj formi, gdje decidno nema intenciju zamjene iste. Treba naglasiti da digitalni euro nema veze sa kripto imovinom gdje je najglasovitiji Bitkoin. Bitcoin nema uporište niti u proizvodnji, niti u zlatu, niti imate kakve garancije

za njegovu vrijednost, što ukazuje na špekulativni instrument bez unutrašnje vrijednosti. Samim tim što iza digitalnog eura staje Centralna banka, oslobođen je bilo kakvog rizika, kako od tržišnog, kreditnog, ili rizika likvidnosti, odnosno ima istu prirodu kao banknote, ili novčanice postojeće u finansijskim sistemima.

Crna Gora prati savremene monetarne trendove, tako da su u toku tri vrlo važna procesa, od uvođenja digitalnog eura u naš sistem, preko SEPA projekta do PSD2 procesa uvođenja otvorenog bankarstva. Kod digitalizacije eura CBCG je dogovorila saradnju sa provajderom kripto i blokčejn rješenja, kompanijom „Ripple“, u cilju razvoja strategije i realizacije pilot programa za pokretanje prve digitalne valute u zemlji - digitalne valute centralne banke (CBDC). Drugi projekt je pristupanja Crne Gore jedinstvenom području plaćanja u eurima (SEPA – Single Euro Payments Area), a cilj je da uz tehničku pomoć koju je obezbjedio Savjet Evrope Crna Gora aplicira do kraja 2024. godine. Kroz usvajanje tehničkih rješenja i upodobljavanje prateće regulative.

Treći segment, koji je zakonski i podzakonski uobličen i treba da zaživi je segment otvorenog bankarstva gdje tzv. „treća lica“ mimo banaka mogu da se pojave u servisu platnog prometa. Primjena PSD2 je obavezujuća na teritoriji Euro-zone, a revidirani propis omogućava i zemljama koje nijesu članice EU ili čak i da ne koriste euro kao valutu, da pristupe ovom projektu. U fokusu PSD2 su standardizacija, integracija i unapređenje efikasnosti plaćanja, bolja zaštita korisnika platnih usluga, dalja promocija inovacija i smanjenje troškova transakcija, povećanje transparentnosti u novim metodama plaćanja, a prije svega kod mobilnih i on-line plaćanja, ujednačavanje naknada-troškova izvršenja naloga, kao i unapređenje bezbjednosti procesuiranja plaćanja.

Udruženje banaka Crne Gore aktivno prati i participira u svim ovim procesima u želji da se omoguće optimalni uslovi uz smanjenje troškova platnog prometa za klijente banaka u Crnoj Gori.



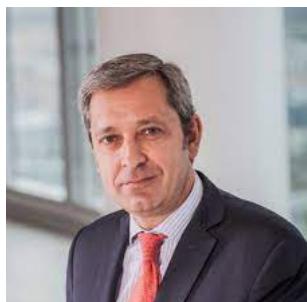
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Juan Carlos Delrieu,  
direktor za održivost i društvenu  
odgovornost u Udruženju  
banaka Španije

# Dvosmerni odnos između finansijskog obrazovanja i digitalizacije

*„Veća lakoća plaćanja, pozajmljivanja novca ili ulaganja ušteđevine koju nudi tehnologija, olakšava naše živote, ali može dovesti i do ishitrenih, nepomišljenih ili neinformisanih odluka*

Finansijsko obrazovanje igra ključnu ulogu u osnaživanju ljudi da donose promišljene odluke o svom novcu i pruža osnovu za razumijevanje osnovnih finansijskih koncepata kao što su planiranje budžeta, štednja, ulaganje i upravljanje dugom. Podučavajući ljude kako da efikasno upravljaju svojim finansijama, finansijsko obrazovanje im može pomoći da ostvare svoje kratkoročne ciljeve, kao što su kupovina kuće ili otplata duga, kao i dugoročne ciljeve, kao što je planiranje penzionisanja.

U isto vrijeme kada Španija ima relativno nizak nivo finansijske pismenosti, poslednjih godina je napravljen značajan napredak u digitalnoj transformaciji. Iako 49% odraslih osoba u Španiji ima osnovno finansijsko znanje – prema najnovijoj studiji koju je proveo OECD o finansijskim veštinama – prodror digitalizacije u Španiji

dostigao je 70% 2022. godine u poređenju sa 52% 2020. godine, u skladu sa naporima Vlade predloženim u Planu za digitalizaciju Španije do 2026, prema studiji KPMG. Ključno je da uz ovako brz napredak tehnologije i digitalne transformacije građani dobro razumiju finansijske koncepte i alate za efikasno kretanje kroz digitalno okruženje.

Finansijsko obrazovanje, kao i svaka druga vrsta obuke, može iskoristiti prednosti novih tehnologija kako bi stigla do mnogo šire publike, prilagodila nastavne sadržaje specifičnim potrebama, koristila inovativne pedagoške alate i osmisnila efikasne i efektivne ankete za provjeru dobijenih rezultata. Sa digitalizacijom, obrazovni izazov postaje lakši. Ali istovremeno postaje složeniji.

Digitalna transformacija omogućava personalizovana i interaktivna

Juan Carlos Delrieu, Director of Sustainability and Social Responsibility of the Spanish Banking Association

# The two-way relationship between financial education and digitalization

Financial education plays a crucial role in empowering people to make informed decisions about their money and provides the foundation for understanding basic financial concepts such as budgeting, saving, investing, and debt management. By teaching people how to effectively manage their finances, financial education can help them achieve their short-term goals, such as buying a home or paying off debt, as well as long-term goals, such as retirement planning.

At the same time that Spain has relatively low levels of financial literacy, considerable progress has been made in digital transformation in recent years. While 49% of adults in Spain have basic financial knowledge – according to the latest study carried out by the OECD on financial skills – digital penetration in Spain

reached 70% in 2022 compared to 52% in 2020, in line with the Government's effort proposed in the Digital Spain 2026 Plan, according to a KPMG study. With this rapid advancement of technology and digital transformation, it is crucial that citizens have a solid understanding of financial concepts and tools to navigate the digital landscape effectively. Financial education, like any other type of training, can take advantage of new technologies to reach a much wider audience, adapt teaching content to specific needs, use innovative pedagogical tools and design efficient and effective surveys to check the results obtained. With digitalization, the educational challenge becomes easier. But simultaneously it becomes more complex. Digital transformation enables personalized and interactive learning

*„The greater ease of making payments, borrowing money or investing the savings offered by technology, makes our lives easier but can also lead to hasty decisions, reckless or uninformed*

iskustva učenja. Aplikacije i platforme za finansijsko obrazovanje mogu prikupljati podatke o finansijskim navikama i ciljevima svakog korisnika i ponuditi personalizovane preporuke i uvide. Ovaj personalizovani pristup ne samo da poboljšava razumijevanje ljudi o vlastitoj finansijskoj situaciji, već i promoviše angažman i motivaciju za učenje. Elementi gejmifikacije takođe mogu da učine finansijsku edukaciju efikasnijom, posebno među mlađim ljudima.

Iako je tradicionalna nastava i dalje važna, finansijske institucije

## *„Ključno je da ljudi dobiju smjernice i podršku kako bi se snašli u digitalnom okruženju i razlikovali pouzdane od obmanjujućih izvora informacija*

u Španiji su se takođe odlučile za digitalizaciju kako bi unaprijedile finansijsko obrazovanje, o čemu svjedoči i pristup koji je sektor napravio kroz Finansijsku i digitalnu učionicu. Ova inicijativa bankarskog sektora, koju promovišu AEB, CECA i UNACC, olakšava pristup sadržajima različitih subjekata na internet stranici kako bi ljudi mogli proširiti svoja finansijska znanja i digitalne vještine.

U svakom slučaju, vjerovatno bi bilo poželjno njegovati nastavne metode koje, osim jačanja osnovnih finansijskih znanja, imaju za cilj povećanje kritičkog mišljenja, što pomaže u doноšenju dobro oblikovanih odluka kako u oblasti finansija tako i u drugim oblastima.

Prepoznavanje potencijalnih rizika i izazova koje donosi digitalna transformacija u finansijskom obrazovanju je takođe važno. Obilje informacija i resursa dostupnih na internetu može biti pretjerano i zbunjujuće za ljude, posebno one sa niskom finansijskom pismenošću. Veća lakoća plaćanja, pozajmljivanja novca ili ulaganja uštedevine koju nudi tehnologija, olakšava naše živote, ali može dovesti i do ishitrenih, nepomišljenih ili neinformisanih odluka. Otuda potreba da se poveća sposobnost klijenata da razumiju rizike, procijene prikladnost proizvoda za njihove posebne potrebe i, generalno, uživaju u neospornim prednostima finansijske inovacije. To takođe predstavlja i korist za banke koje takođe žele da imaju klijente sa osnovnim finansijskim znanjem i kritičkim mišljenjem koje olakšava donošenje dobro oblikovanih finansijskih odluka.

Još jedan rizik, koji je sve češći, jeste da su ljudi žrtve prevara i prevarnih aktivnosti u digitalnom prostoru, pa je potrebno poboljšati znanje korisnika putem kampanja o sajber bezbjednosti.

Isto tako, digitalizacija ima ogromnu sposobnost da se integriše, ali postoje grupe koje mogu biti

izložene potencijalnom riziku isključenja, jer nemaju osnovno znanje ili, jednostavno, odbijaju ovaj pristupni kanal. Stoga je ključno da ljudi dobiju smjernice i podršku kako bi se snašli u digitalnom okruženju i razlikovali pouzdane od obmanjujućih izvora informacija. Osim toga, mora se izbjegići rizik pretvaranja digitalne podjele, geografske ili generacijske, u još jedan izvor finansijske isključenosti. U tu svrhu, Udruženje banaka Španije (AEB), CECA i Nacionalna unija kreditnih zadruga (Unacc), predložili su plana – osim inicijativa za obuku koje je osmislio svaki od poslodavaca i njihovih saradnika – za jačanje finansijske inkluzije u ruralnim područjima, s ciljem osiguravanja adekvatnog pružanja direktnih finansijskih usluga za 100% španske teritorije.

Digitalizacija i finansijsko obrazovanje u Španiji imaju dvo-smjeran odnos. Finansijsko obrazovanje ospozobljava lude sa znanjem i vještinama potrebnim za donošenje promišljenih odluka o svom novcu, dok digitalna transformacija čini finansijsko obrazovanje dostupnijim, personalizovanim i zanimljivijim. Stoga, kako Španija nastavlja da napreduje u digitalnom razvoju, od ključne je važnosti da pojedinci razumiju finansijske koncepte i alate i znaju kako da se na efikasan način snađu u digitalnom okruženju, što je dvostruki cilj koji ima posvećenost i potpunu predanost finansijskih institucija.

experiences. Financial education apps and platforms can collect data on each user's financial habits and goals and offer personalized recommendations and insights. This personalized approach not only improves people's understanding of their own financial situation, but also promotes engagement and motivation to learn. Gamification elements can also make financial education more effective, especially among younger people.

Although face-to-face classes are still important, Spanish financial institutions have also opted for digitalization to improve financial education, as evidenced by the approach made by the sector through the Financial and Digital Classroom. This initiative of the banking sector, promoted by the AEB, the CECA and the UNACC, facilitates access to content from various entities on a website so that people can expand their financial knowledge and digital skills.

In any case, it is likely to be desirable to cultivate teaching methods that, in addition to boosting basic financial knowledge, aim to increase critical thinking, which helps facilitate well-formed decisions both in finance and elsewhere.

It is also important to recognize the potential risks and challenges that come with digital transformation in financial education. The abundance of information and resources available online can be overwhelming and confusing for people, especially those

with low financial literacy. The greater ease of making payments, borrowing money or investing the savings offered by technology, makes our lives easier but can also lead to hasty decisions, reckless or uninformed. Hence the need to increase customers' ability to understand risks, assess the suitability of products for their particular needs and, more generally, reap the indisputable benefits of financial innovation. A benefit that extends to banks that also want to have customers with basic financial knowledge and critical thinking that facilitates well-formed financial decisions. Another risk, increasingly frequent, is that people are victims of scams and fraudulent activities in the digital space, so it is necessary to sensitize users through cybersecurity campaigns.

Likewise, digitalization has an enormous capacity to integrate, but there are groups that may suffer a potential risk of exclusion, because they lack basic knowledge or, simply, because they reject this access channel. It is therefore crucial that people receive guidance and support to navigate the digital landscape and distinguish reliable from misleading sources of information. In addition, the risk of turning the digital divide, geographical or generational, into another source of financial exclusion must be avoided. To this end, the Spanish Banking Association (AEB), CECA and the National Union of Credit

Cooperatives (Unacc), have proposed a roadmap – beyond the training initiatives designed by each of the employers and their associates – to strengthen financial inclusion in rural areas, with the aim of ensuring an adequate provision of face-to-face financial services for 100% of the Spanish territory.

Digitalization and financial education in Spain have a two-way relationship. Financial education equips people with the knowledge and skills needed to make informed decisions about their

*„It is crucial that people receive guidance and support to navigate the digital landscape and distinguish reliable from misleading sources of information*

money, while digital transformation makes financial education more accessible, personalized and engaging. Therefore, as Spain continues to advance in digital development, it is crucial that individuals understand financial concepts and tools, and know how to effectively navigate the digital landscape, a dual objective that has the dedication and total commitment of financial institutions.



Džesika Tirion,  
savjetnik,  
Financial Education  
Luksemburg

# Steknite povjerenje u onlajn bankarstvo

**U**vijeme kada se sve više bankarskih transakcija obrađuje online, ABBL fondacija za finansijsku edukaciju pomaže ljudima da steknu povjerenje u korišćenje usluga digitalnog bankarstva pokretanjem Sécher am Internet platforme. Ova platforma predstavlja internet stranicu za dobijanje inluksformacija/obuku o onlajn bankarstvu i internet bezbjednosti, uključujući alat za simulaciju internet stranice za transakciono bankarstvo.

## Podrška u prevazilaženju bojazni u vezi sa uslugama digitalnog bankarstva

„Postoji sve više načina na koje možete da obavite finansijske transakcije u bilo koje doba dana, gdje god da se nalazite“, objašnjava

Džeri Grbić, predsjednik ABBL fondacije za finansijsku edukaciju. „Možemo da vidimo da upotreba digitalnih usluga postaje sve raširenija u Luksemburgu, kao što prikazuju podaci Evropske centralne banke.“

On nastavlja: „Ali znamo i da su neki naši sugrađani preopterećeni ovom digitalnom evolucijom“. Barijere koje se najčešće postavljaju su:

- ▷ Bezbjednost: zabrinutost zbog prevara, ali i zbog greške

u rukovanju koja bi mogla dovesti do gubitka novca,

- ▷ Strah da će određeni lični podaci biti proslijeđeni trećim licima za komercijalnu upotrebu,
- ▷ Nedostatak kontakta sa savjetnikom banke.

Štaviše, kako ističe Džesika Tirion, koordinatorka ABBL fondacije za finansijsku edukaciju, „nivo digitalne finansijske pismenosti među stanovnicima Luksemburga je alarmantan“. Prema studiji koju su prošlog proljeća naručili ABBL fondacija i CSSF od ILRES-a, samo je 54% anketirane populacije bilo u stanju da tačno odgovori na pitanja koja se odnose na adekvatno znanje, ponašanje i stavove. Brojka je bila samo 47% za starosnu grupu 18/30.

## Projekat sa dvojnim porijekлом: civilno društvo i mladi hakatonci

Ne samo banke, već i CSSF putem svoje internet stranice Lëtzfin, Ministarstvo za digitalizaciju i zainteresovane strane kao što je BeeSecure rade na podizanju svijesti, informisanju i obučavanju građana za mudro korišćenje internet bankarstva.

Uprkos tome, potrebne su dalje akcije. „Ono što je zanimljivo u vezi sa ovim projektom je da je ideja za ovu platformu potekla od civilnog društva i da su alat u velikoj mjeri razvili mladi srednjoškolci koji su učestvovali u hackatonu

*„Ideja za ovu platformu potekla je od civilnog društva ali su alat u velikoj mjeri razvili srednjoškolci koji su učestvovali u hackatonu Luksemburške tehničke škole“*

# Gain confidence in online-banking

Jessica Thyrion,  
Adviser  
Financial Education  
Luxemburg

**A**t a time when more and more banking transactions are processed online, the ABBL Foundation for Financial Education is helping people to gain confidence in using digital banking services by launching the Sécher am Internet platform. This platform is an information/training website on online banking and Internet security, including a simulation tool for a transactional banking site.

## Helping to overcome apprehensions about digital banking services

"There are more and more ways of carrying out your financial transactions at any time of day, wherever you are," explains Jerry Grbić, President of the ABBL Foundation for Financial Education. "We can also see that the use of digital services is becoming more widespread in Luxembourg, as shown by data from the European Central Bank."

He continues: "But we also know that some of our fellow citizens feel overburdened by this digital evolution". The barriers most often put forward are:

- ▷ Security: concerns about frauds, but also about making a handling error that could result in the loss of money,
- ▷ Fear that certain personal data will be passed on to third parties for commercial use,
- ▷ Lack of contact with a bank advisor.

Moreover, as Jessica Thyrion, coordinator of the ABBL Foundation for Financial Education, points out, "the level of digital financial literacy among Luxembourg residents is alarming". According to a study commissioned last spring by the ABBL Foundation and the CSSF from ILRES, only 54% of the population surveyed were able to answer correctly to questions relating to adequate knowledge, behaviour and attitudes. The figure was only 47% for the 18/30 age group.

## A project with a dual parentage: civil society and young hackatonians

Not only the banks, but also the CSSF via its Lëtzfin website, the Ministry for Digitalisation and players such as BeeSecure are working to raise awareness, inform and train citizens in the wise use of online banking.

Despite this, further action is needed. "What's interesting about this project is that the idea for this platform came from civil society and that the tool was largely developed by young high school students taking

*„The idea for this platform came from civil society and that the tool was largely developed by young high school students taking part in a hackaton organised by the Luxembourg Tech School*

koji je organizovala Luksemburška tehnička škola (LTS) u saradnji sa Fondacijom", objašnjava Džesika Tirion. Projekat je zapravo pokrenut nakon LTS FinTech Hackathona, koji je održan u julu 2021. godine. U isto vrijeme, ne-profitna organizacija ErwuesseBildung identifikovala je nedostatak u obrazovnoj ponudi. „Sve banke nude svojim klijentima demo prezentacije svojih sajtova za izvršavanje transakcija, ali je još uvek nedostajala ponuda prave simulacije sajta za elektronsko bankarstvo“, objašnjava Džesika Tirion.

### **Obrazovni sajt u kombinaciji sa alatom za simulaciju**

Internet stranica Sécher am Internet ima za cilj da uvede fizička lica u onlajn bankarstvo kroz niz tematskih poglavlja o temama kao što su digitalni identitet, upravljanje lozinkama, autentifikacija u dva faktora i pravi refleksi za izbjegavanje onlajn prevara.

Platforma je povezana sa simulatorom usluga e-bankarstva. Ovo omogućava korisnicima da se stave u stvarnu situaciju. Korisnik je vođen kroz tipične radnje koje nudi onlajn bankarstvo, kao što je prijava sa tokenom i drugim LuxTrust proizvodima, provjera stanja na računu ili izvođenje transakcija.

Platformi i internet stranici se može pristupiti na <https://learn-ebanking.fondation-abbl.lu/en/home/> i dostupni

su na francuskom, njemačkom i engleskom jeziku.

### **Šta je phishing (fišing)?**

Phishing se odnosi na lažno pribavljanje ličnih podataka putem lažnog email-a, internet stranice ili SMS-a. Lični podaci mogu biti, na primjer, lozinka ili broj kreditne kartice.

Phishing je jedna od najčešće korišćenih onlajn prevara. Navedeni ste da vjerujete da je osoba koja šalje poruku od povjerenja, na primjer, neko iz vaše banke ili društva za osiguranje. Čineći to, prevarant pokušava da vas prevari da preduzmete određenu radnju za dobijanje vaših ličnih podataka. Phishing emailovi često izgledaju varljivo stvarno i teško ih je razlikovati od legitimnih emailova.

### **Kako se zaštитiti od ovoga?**

Po pravilu, za sve na Internetu važi sledeće: Budite mirni i razmislite dvaput o tome šta radite. Naročito kada je u pitanju prosleđivanje osjetljivih podataka (npr. lozinke ili informacije o vašem bankarskom računu). Ako bolje pogledate phishing emailove, često možete vidjeti greške. Pravopisne greške u tekstu ili netačan pozdrav ili čestitka mogu biti tragovi. Danas su, međutim, phishing emailovi ponekad vrlo dobro napisani i gotovo bez grešaka. Čak i ako e-mail nema očiglednu karakteristiku koja ga identificuje kao lažnog, on i dalje može biti lažan.

### **Kako prepoznati phishing email?**

Adresa email-a posiljaoca je netačna ili sumnjiva.

E-mail sadrži gramatičke ili pravopisne greške.

Sadržaj email-a je upitan. Na primjer, od vas se traži da uradite nešto nepoznato.

E-mail poziva na hitnu akciju. Na primjer, spominje se da je radnja pošla po zlu i da je treba ponoviti.

U većini phishing emailova od vas se traži da otvorite link do internet adrese koja ne odgovara navedenom pošiljocu. Ovo se može provjeriti odlaskom na stranicu poput whois.domaintools.com da vidite pod kojim imenom je ova internet adresa registrovana.

### **Šta je lozinka?**

Lozinka se koristi za zaštitu vaših korisničkih naloga na internetu, kojima pristupate putem računara, pametnog telefona ili tableta.

Lozinke su nizovi brojeva, slova i specijalnih znakova. Oni se koriste za kontrolu pristupa onlajn računu (na primjer, u banci ili kompaniji) i za dokazivanje nečijeg identiteta.

### **O čemu treba razmišljati kada kreirate lozinku?**

Hakeri imaju alate koji automatski isprobavaju sve moguće kombinacije znakova, testiraju čitave rječnike, uključujući dodate brojeve, ili isprobavaju pristupne podatke nakon objavljivanja na Internetu o svim vrstama usluga.

Postoji nekoliko osnovnih pravila za kreiranje lozinke da bude što jača i sigurnija:

Lozinke treba da imaju najmanje 12 znakova. Što je lozinka duža, to je teže pogoditi.

Kombinacija malih i velikih slova, brojeva i specijalnih znakova (npr. &, ?, !, %...) je idealna.

*„Platforma je povezana sa simulatorom usluga e-bankarstva. Ovo omogućava korisnicima da se stave u stvarnu situaciju*

part in a hackathon organised by the Luxembourg Tech School (LTS) in collaboration with the Foundation", explains Jessica Thyriion. The project was in fact initiated following an LTS FinTech Hackathon, which was held in July 2021. At the same time, the non-profit organisation ErwuesseBildung identified a gap in the educational offering. "All the banks offer their customers demos of their transactional sites, but offering a real simulation of an e-banking site was still lacking," explains Jessica Thyriion.

### **An educational site combined with a simulation tool**

The Sécher am Internet site aims to introduce private individuals to online banking through a series of themed chapters on topics such as digital identity, password management, two-factor authentication and the right reflexes to avoid online fraud.

The platform is linked to an e-banking services simulator. This allows users to put themselves in a real-life situation. The user is guided through the typical actions offered by online banking, such as logging in with the token and other LuxTrust products, checking account balances or carrying out transactions.

The platform and website can be accessed at <https://learn-ebanking.fondation-abbl.lu/en/home/> and are available in French, German and English.

### **What is Phishing?**

Phishing refers to the fraudulent acquisition of personal data by means

of fake emails, websites or SMS. Personal data can be, for example, a password or a credit card number.

Phishing is one of the most widely used online scams. You are led to believe that the person sending the message is trustworthy, for example, someone from your bank or insurance company. In doing so, the scammer tries to trick you into taking a specific action to obtain your personal data. Phishing emails often look deceptively real and are difficult to distinguish from legitimate emails.

### **How to protect yourself from this?**

As a rule, the following applies to all on the Internet: Keep calm and think twice about what you are doing. Especially when it comes to forwarding sensitive data (e.g. passwords or information about your bank account). If you have a closer look at phishing emails, you can often see mistakes. Spelling mistakes in the text or an incorrect salutation or greeting can be clues. Nowadays, however, phishing emails are sometimes very well written and almost error-free. Even if an email doesn't have an obvious feature identifying it as a fake, it can still be fraudulent.

### **How to recognize a phishing email?**

The sender's email address is incorrect or suspicious.

The email contains grammatical errors or spelling mistakes.

The content of the email is

*„The platform is linked to an e-banking services simulator. This allows users to put themselves in a real-life situation*

questionable. For example, you are asked to do something unfamiliar.

The email calls for urgent action. For example, it is mentioned that an action has gone wrong and needs to be repeated.

In most phishing emails, you are asked to open a link to a web address that does not match the sender listed. This can be checked by going to a page like whois.domaintools.com to see under which name this web address is registered.

### **What is a password?**

A password is used to protect your user accounts on the Internet, which you access via computer, smartphone or tablet.

Passwords are sequences of numbers, letters and special characters. These are used to control access to an online account (for example, at a bank or company) and to prove one's identity.

### **What should you think about when creating a password?**

Hackers have tools that automatically try out all possible character combinations, test entire dictionaries, including appended numbers, or try out access data once published on the Internet on all kinds of services.

There are a few basic rules to create a password that is as strong and secure as possible:

Trebalo bi da kreirate posebnu lozinku za svaki važan nalog. U tom slučaju, ako je jedna lozinka probijena, napadači neće imati pristup svim vašim nalozima.

Bolje je izbjegavati sljedeće:

Nikada nemojte kreirati lozinku od jedne riječi koja se može naći u rječniku.

Jednostavni nizovi brojeva (12345) ili riječi s brojem na početku ili kraju nisu sigurni.

Nisu prikladni ni rođendani, imena članova porodice ili kućnih ljubimaca, mjesto stanovanja, omiljeni pjevač, itd.

Takođe ne bi trebalo da se sastoji od uobičajenih varijanti i/ili šablonu tastature, kao što su "asdfgh" ili "1234abcd".

### Kako čuvati svoje lozinke?

Nikada ne dijelite svoju lozinku ni sa kim. Pogotovo ako neko to zatraži putem email-a ili SMS-a (pogledajte Phishing).

Nije preporučljivo da zapisujete svoje lozinke na papir i držite ih blizu računara. Međutim, ako ne možete dobro zapamtiti lozinke i držati ih van mreže na sigurnom mjestu, ovo je moguća alternativa.

Možete koristiti i menadžera lozinki za upravljanje različitim lozinkama. Tada morate da zapamtite samo jednu glavnu lozinku i još uvijek možete svuda koristiti jake i različite lozinke.

### Šta učiniti ako ste zaboravili lozinku?

Svaki nalog omogućava korisnicima da resetuju lozinku ako je

zaboravljena. Da bi to bilo moguće, identitet korisnika se provjerava. Na primjer, odmah nakon što zatražite novu lozinku, dobijete e-mail u kojem se od vas traži da kliknete na određeni link kako biste mogli bezbjedno da resetujete lozinku.

### Digitalni identitet

Za onlajn bankarstvo potreban vam je digitalni identitet. Ovo možete zamisliti kao virtualnu ličnu kartu, kojom dokazujete autentičnost kada se prijavite (= dokažete da ste to zaista vi).

To je dokaz podržan od strane nezavisnog provajdera od povjerenja. U Luksemburgu, LuxTrust je jedno takvo sertifikaciono tijelo. Uz LuxTrust, možete uspostaviti sigurnu vezu sa vašom bankom u samo nekoliko klikova i potvrditi svoje bankarske transakcije u vašem području onlajn bankarstva.

### Koje mjere digitalne identifikacije postoje?

Postoji nekoliko vrsta LuxTrust proizvoda:

Token: mali elektronski uređaj sa ekranom koji stane na vaš privjezak za ključeve.

SmartCard: izgleda kao kreditna kartica ili vozačka dozvola. Možete ih povezati sa svojim računarom: ili direktno u ulaz predviđen za ovu svrhu, ili uz pomoć čitača.

Mobilna aplikacija: mobilna aplikacija koja se može preuzeti na vaš pametni telefon sa Apple App Store ili Google Play.

Skeniranje: mali uređaj sa ekranom, malom kamerom i dugmetom za uključivanje/isključivanje.

### Šta je multifaktorska autentifikacija?

LuxTrust proizvodi se koriste za takozvanu multifaktorsku autentifikaciju, koja pruža dodatni nivo sigurnosti. Multifaktorska autentifikacija znači da morate nekoliko puta potvrditi svoj identitet kada se prijavite. To se uglavnom radi u obliku dodatnog koda, koji se šalje jednom za određeni zahtjev za prijavu na račun i mora se unijeti. Ovaj kod se može dobiti putem tokena, aplikacije ili SMS-a.

Multifaktorska autentifikacija se često radi u 2 koraka. Ovo se naziva 2-faktorska autentikacija (2FA).

### Šta je token?

Token je proizvod koji se trenutno najčešće koristi za provjeru vašeg digitalnog identiteta. To je elektronički uređaj koji generiše jednokratnu lozinku (OTP) pritiskom na dugme, koju kombinujete sa svojim podacima za prijavljivanje (login) (korisnički ID i lozinka). Ovo povećava sigurnost i štiti vaše povjerljive informacije od neovlašćenog pristupa.

### Kako bi trebalo da čuvate svoj token?

Pažnja: ako token dođe u ruke druge osobe, ona ga može koristiti i pretvarati se da ste vi. Zato je važno čuvati token na sigurnom mjestu gdje niko nije dozvoljen pristup. U slučaju Token App, ovo je malo drugačije, jer se nalazi direktno na vašem mobilnom telefonu. Međutim, važno je napomenuti da ako izgubite mobilni telefon ili ako ga ukradu, morate odmah blokirati svoj LuxTrust pristup.

Passwords should be at least 12 characters long. The longer the password, the harder it is to guess.

A mixture of lowercase and uppercase letters, numbers and special characters (e.g. &, ?, !, % ...) is ideal.

You should create a separate password for each important account. In this case, if one password is cracked, the attackers will not have access to all of your accounts.

It is better to avoid the following:

Never create a password from a single word that can be found in the dictionary.

Simple sequences of numbers (12345) or words with a number at the beginning or end are not safe.

Birthdays, names of family members or pets, place of residence, favorite singer, etc. are also not suitable.

It should also not consist of common variants and/or keyboard patterns, such as "asdfgh" or "1234abcd".

### **How to store your passwords?**

Never share your password with anyone else. Especially if someone asks for it in an email or SMS (see Phishing).

It is not advisable to write down your passwords on paper and keep them near the computer. However, if you can't remember passwords well and keep them offline in a safe place, this is a possible alternative.

You can use a password manager to manage your different passwords as well. You then only have to remember one main password and can still use strong and different passwords everywhere.

### **What to do if you have forgotten your password?**

Each account allows users to reset the password if it has been forgotten. To make this possible, the identity of the user is verified. For example, immediately after requesting a new password, you will receive an email asking you to click on a specific link in order to be able to reset the password securely.

### **Digital Identity**

For online banking, you need a digital identity. You can think of this as a virtual ID card, with which you authenticate yourself when you log in (= prove that it is really you).

It's a piece of evidence backed by an independent, trusted provider. In Luxembourg, LuxTrust is one such certification body. With LuxTrust, you can establish a secure connection to your bank in just a few clicks and confirm your banking transactions in your online banking area.

### **What digital identification measures exist?**

There are several types of LuxTrust products:

Token: a small electronic device with a screen that fits on your keychain.

SmartCard: looks like a credit card or driving licence. You can connect them to your computer: either directly into the slot provided for this purpose, or with the help of a reader.

Mobile App: a mobile application that can be downloaded to your smartphone from the Apple App Store or Google Play.

Scan: a small device with a screen, a small camera and an on / off button.

### **What is multifactor authentication?**

LuxTrust products are used for so-called multifactor authentication, which provides an additional layer of security. Multifactor authentication means that you have to confirm your identity several times when you log in. This is mainly done in the form of an additional code, which is sent once for the specific account login request and must be entered. This code can be obtained via token, app or SMS.

Multifactor authentication is often done in 2 steps. This is referred to as 2-factor authentication (2FA).

### **What is a Token?**

The Token is currently the most commonly used product for verifying your digital identity. It is an electronic device that generates a one-time password (OTP) at the touch of a button, which you combine with your login information (user ID and password). This increases security and protects your confidential information from unauthorized access.

### **How should you store your token?**

Attention: if the token comes into the hands of another person, they can use it and pretend to be you. That's why it's important to keep the token in a safe place where no one has access. In the case of the Token App, this is a little different, as it is located directly on your mobile phone. However, it is important to note that if you lose your mobile phone or if it gets stolen, you must immediately block your LuxTrust access.



Luis de Guindos  
potpredsjednik ECB

# Izgledi inflacije i monetarna politika u eurozoni

Uvodni govor Luisa de Guindosa, potpredsjednika ECB-a, na Prvoj godišnjoj konferenciji koju je organizovala Centralna banka Kipra

**Z**apočeo s pregledom ekonomskih izgleda za eurozonu, prije nego što pogledamo kako je ECB prilagodila svoju monetarnu politiku tim izgledima. Zatim ću detaljnije razmotriti transmisiju naše monetarne politike u trenutnom okruženju i izvore neizvjesnosti koji se u ovoj fazi čine posebno relevantnim.

## IZGLEDI ZA INFLACIJU I RAST U EUROZONI

Ekomska aktivnost uglavnom je stagnirala tokom prve polovine godine i vjerovatno će ostati ublažena u narednim mjesecima. Slabija devizna tražnja i strogi uslovi finansiranja usporavaju rast, posebno u sektoru proizvodnje. Sektor usluga, koji je do sada bio otporan, počinje sada da se „hvata“ za proizvodnju.

*,Iako inflacija nastavlja da se smanjuje, očekuje se da će i dalje predugo ostati previška*

Tržište rada i dalje je otporno uprkos usporavanju aktivnosti, a stopa nezaposlenosti bila je u avgustu na istorijski najnižem nivou od 6,4 procenta. Međutim, postoje znaci usporavanja zamah tržišta rada kako ekonomija slabiti. Indeks zaposlenosti menadžera nabavke znatno se smanjio između drugog i trećeg kvartala 2023., uprkos blagom porastu u septembru. Sektor usluga, koji je bio glavni pokretač rasta zaposlenosti od sredine 2022., sada takođe stvara manje radnih mesta.

U septembru je osoblje ECB-a smanjilo projektovani rast BDP-a, posebno za ovu i sljedeću godinu, zbog većeg kontrakcionog efekta strožih uslova finansiranja i slabljenja međunarodnog trgovinskog okruženja. U kratkom roku, osoblje ECB-a očekuje oporavak rasta zbog većeg

realnog raspoloživog prihoda zahvaljujući rastu zarada i padu inflacije, što će poduprijeti potrošnju. Osoblje ECB-a sada očekuje da će se ekonomija eurozone povećati za 0,7% 2023., 1,0% 2024. i 1,5% 2025.

Inflacija je osjetno pala sa dvocifrenog vrhunca prošlog oktobra, s ukupnom stopom koja je pala na 4,3% u septembru (brza procjena). Oštra povećanja zabilježena u jesen 2022. godine će u narednim mjesecima nestati iz godišnjih stopa, što će dodatno podržati usporavanje inflacije. Istovremeno, osnovni cjenovni pritisci i dalje su jaki, iako je većina inflatornih mjera počela da popušta zahvaljujući tome što su agregatna tražnja i ponuda postale usklađenije, a niže cijene energije posljednjih mjeseci prenijele su se na druge dijelove ekonomije. Troškovi rada sve više doprinose domaćoj inflaciji, dok najnoviji podaci pokazuju da je doprinos dobiti pao prvi put od početka 2022. godine. Većina mjera dugoročnijih inflatornih očekivanja trenutno iznosi oko 2%; međutim, povećanje nekih pokazatelja treba da se pomno prati.

Makroekonomске projekcije osoblja ECB-a iz septembra predviđaju prosječnu inflaciju od 5,6 % 2023., 3,2 % 2024. i 2,1 % 2025. godine. U poređenju sa projekcijama osoblja Eurosistema iz juna, ovo je revizija naviše za 2023. i 2024. – što uglavnom odražava višu

# The inflation outlook and monetary policy in the euro area

Keynote speech by Luis de Guindos, Vice-President of the ECB, at the First Annual Conference organised by the Central Bank of Cyprus

I will start by giving you an overview of the economic outlook for the euro area before going on to look at how the ECB has adjusted its monetary policy to this outlook. I will then discuss in more detail the transmission of our monetary policy in the current environment and the sources of uncertainty that appear particularly relevant at this stage.

## THE OUTLOOK FOR INFLATION AND GROWTH IN THE EURO AREA

Economic activity broadly stagnated over the first half of the year and is likely to remain subdued in the coming months. Weaker foreign demand and tight financing conditions are dampening growth, especially in the manufacturing sector. The services sector, which had been resilient so far, is now starting to “catch down” to manufacturing.

The labour market remains resilient despite the slowdown in activity, with the unemployment rate standing at its historical low of 6.4 per cent in August. However, there are signs that labour market momentum is slowing as the economy weakens. The employment Purchasing Managers' Index declined significantly

between the second and the third quarters of 2023, despite a slight uptick in September. The services sector, which has been a major driver of employment growth since mid-2022, is now also creating fewer jobs.

In September ECB staff revised down projected GDP growth, particularly for this year and next, due to a greater contractionary effect from tightening financing conditions and the weakening international trade environment. Beyond the near term, ECB staff expect growth to recover owing to higher real disposable income thanks to rising wages and falling inflation, which is set to underpin spending. ECB staff now expect the euro area economy to expand by 0.7% in 2023, 1.0% in 2024 and 1.5% in 2025.

Inflation fell markedly from its double-digit peak last October, with the headline rate having declined to 4.3% in September (flash estimate). In the coming months, the sharp increases recorded in the autumn of 2022 will drop out of the yearly rates, lending further support to a deceleration in inflation. At the

Luis de Guindos  
Vice-president of ECB

same time, underlying price pressures remain strong, although most measures of inflation have started to ease thanks to aggregate demand and supply becoming more aligned and lower energy prices

*„While inflation continues to decline, it is still expected to remain too high for too long*

in recent months being passed on to other parts of the economy. Labour costs are increasingly contributing to domestic inflation, while the latest data indicate that the contribution of profits fell for the first time since early 2022. Most measures of longer-term inflation expectations currently stand at around 2%, but the increase in some indicators needs to be closely monitored.

The September ECB staff macroeconomic projections see average inflation at 5.6% in 2023, 3.2% in 2024 and 2.1% in 2025. Compared with the June Eurosystem staff projections, this is an upward revision for 2023 and 2024 – which mainly reflects a higher projected path for energy prices – and a downward revision for 2025. ECB staff have revised down slightly the projected path for inflation excluding energy and food, to an average of 5.1% in 2023, 2.9% in 2024 and 2.2% in 2025. This is on account of tighter

prognoziranu putanju za cijene energije – i reviziju prema dolje za 2025. Osoblje ECB-a malo je revidiralo prognoziranu putanju inflacije isključujući energiju i hranu, na prosječnih 5,1% u 2023., 2,9% u 2024. i 2,2% u 2025. Ovo je zbog strožijih uslova finansiranja – koji takođe odražavaju restriktivni uticaj

*„Smatramo da su ključne kamatne stope ECB-a sada dosegle nivoe koji će, ako budu dovoljno dugo održani, dati značajan doprinos blagovremenom povratku inflacije na naš cilj“*

pooštravanja naše monetarne politike – i slabijih ekonomskih izgleda.

#### ODGOVOR MONETARNE POLITIKE ECB-A

Ukratko, iako inflacija nastavlja da se smanjuje, očekuje se da će i dalje predugo ostati previsoka. ECB je odlučna da osigura da se inflacija blagovremeno vrati na naš srednjoročni cilj od 2%. Kako bismo pojačali napredak prema ovom cilju, na septembarskom sastanku Upravnog savjeta smo odlučili da podignemo tri ključne kamatne stope ECB-a za 25 baznih poena. Ovu odluku donijela su tri dijela naše reaktivne funkcije: prvo, izgledi inflacije u svjetlu pristiglih ekonomskih i finansijskih podataka; drugo, dinamika osnovne inflacije; i treće, snaga transmisije monetarne politike. Podigavši kamatne stope za ukupno 450 baznih poena od

jula 2022., smatramo da su ključne kamatne stope ECB-a sada dosegle nivoe koji će, ako budu dovoljno dugo održani, dati značajan doprinos blagovremenom povratku inflacije na naš cilj. Naša reaktivna funkcija nastaviće da bude okvir za buduće odluke i nastavićemo da slijedimo pristup koji zavisi od podataka za određivanje odgovarajućeg nivoa i trajanja restriktivne monetarne politike.

#### NEIZVJESNOST U POGLEDU TRANSMISIJE MONETARNE POLITIKE

Kao dio ovog pristupa koji zavisi od podataka, kontinuirano procjenjujemo kako se monetarna politika prenosi na uslove finansiranja, realnu ekonomiju i, na kraju, na inflaciju. U trenutnom ciklusu povećanja, prvi krak transmisije monetarne politike – na uslove finansiranja – bio je vrlo jak. U poređenju sa prethodnim ciklusima povećanja, kamatne stope na kredite kompanija rasle su bržim tempom, a obimi kredita osjetno su oslabili. Transmisija na kanal odobravanja kredita banaka vjerovatno će se i dalje razvijati, jer bi zajmodavci mogli da postanu oprezniji u svjetlu rastućih troškova finansiranja i ekonomskog usporavanja. Štoviše, kamatne stope na neizmireni dug će se i dalje povećavati kako se cijene kredita budu postepeno mijenjale. Sve u svemu, po mom mišljenju, čini se da je transmisija naše politike pooštravanja na uslove finansiranja uveliko u toku.

Drugi dio transmisije odnosi se na način na koji će promjene u uslovima finansiranja uticati na ekonomsku

aktivnost, budući da kompanije i domaćinstva prilagođavaju svoje planove potrošnje, ulaganja i štednje u skladu s tim. Transmisija pooštravanja monetarne politike na realnu ekonomiju odvija se sporije, a znatan dio transmisije tek je u pripremi. Na primjer, aktivnosti vezane za nekretnine su usporene zbog slabljenja procjena vrijednosti nekretnina. Za ekonomiju u cjelini, procjene zasnovane na modelima i dalje ukazuju na to da se očekuje da će se, zbog tipičnih kašnjenja u monetarnoj transmisiji, većina uticaja našeg pooštravanja materijalizovati tek tokom ove godine i nakon toga. Procjenjuje se da će silazni uticaj našeg dosadašnjeg pooštravanja na BDP i inflaciju iznositi prosječno oko 2 procentna poena u periodu 2023. – 2025. godina, pri čemu se očekuje najjači uticaj na rast BDP-a ove godine i na inflaciju u sljedeće dvije godine.

Takođe je vrijedno napomenuti da se brzina transmisije razlikuje u državama eurozone. Konkretno, transmisija na stanovništvo će vjerojatno biti brža u zemljama u kojima hipoteke s promjenjivom stopom prevladavaju nad hipotekama s fiksnom stopom.

U isto vrijeme ostaju nejasnoće oko transmisije, uglavnom u vezi sa dva izvora. Prvo, trenutni ciklus povećanja je po brzini bez presedana. Štoviše, on prati i dug period akomodativne monetarne politike, uz ponovno podešavanje politika bilansa stanja, što sve ograničava uporedivost sa istorijskim zakonitostima. Drugo, stav pooštravanja naše politike dogodio se kao reakcija na neviđenu konstelaciju šokova koji su pogodili eurozonu u posljednje tri godine,

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a koji su imali remetilački efekat na ekonomske uslove i inflatorno okruženje. Činjenica da smo još uvijek suočeni s preklapajućim naslijednim efektima ovih šokova može značiti da se transmisija monetarne politike ovoga puta odvija drugačije u poređenju sa onim na što istorijske zakonitosti mogu ukazivati.

*„Iako možemo biti sigurni da se naše pooštavanje monetarne politike snažno prenosi na finansijska tržišta i sve više ostavlja trag u realnoj ekonomiji, brzina i opseg transmisije ostaju neizvjesni“*

Ekonomija eurozone i svijeta takođe su izloženi raznim rizicima koji prate ovo pooštavanje monetarne politike. Na osnovu naše najnovije procjene, rizici za ekonomski rast u eurozoni su nagnuti prema dolje. Rast bi mogao biti sporiji ako su efekti monetarne politike snažniji od očekivanih ili ako svjetska ekonomija slabí bržim tempom nego što se trenutno predviđa, zbog, na primjer, kontinuiranog usporavanja u Kini. To bi zauzvrat moglo oslabiti domaću ekonomsku aktivnost i podstaknuti privrednu, banke i stanovništvo da budu oprezniji, čime bi se opteretila ponuda bankarskih kredita, ulaganja i potrošnja klijenata. Impuls pooštavanja može se snažnije prenijeti na realnu ekonomiju u takvom okruženju zbog efekata ubrzanja koji često djeluju tokom perioda prigušenog rasta i visoke neizvjesnosti. Suprotno tome, rast bi mogao biti veći od projektovanog ako

snažno tržište rada, rastući realnih prihodi i opadanje neizvjesnosti znače da ljudi i kompanije postaju samopouzdani i troše više.

Na strani inflacije, slabija tražnja zbog jače transmisije monetarne politike ili pogoršanja međunarodnog ekonomskog okruženja mogla bi da izvrši jači pritisak na niže

cijene nego što se trenutno očekuje. Suprotno tome, obnovljeni pritisci na povećanje troškova energije i hrane – uz cijene nafte koje su već porasle posljednjih mjeseci – i krizu povezana sa klimatskim promjenama koja se razvija mogli bi da povećaju cijene roba više od očekivanog. Uloga dinamike zarada i fiskalne politike

su od velike važnosti u određivanju budućeg kretanja inflacije. Zarade su porasle; povećani rast zarada stoga je ugrađen u naše projekcije, iako sporijim tempom. Ali trajno povećanje inflatornih očekivanja iznad našeg cilja zbog, na primjer, povećanja zarada ili profitnih marži viših od očekivanih, moglo bi povećati inflaciju, uključujući i srednjoročno. Slično tome, kako energetska kriza jenjava, vlade ukidaju mjere fiskalne podrške koje su sprovedene tokom krize. Međutim, sporije smanjivanje ove fiskalne podrške ili ekspanzivni stav fiskalne politike u godinama ispred nas predstavljalo bi značajne izazove za obuzdavanje inflacije i njeno vraćanje na naš cilj. Izazovno makroekonomsko okruženje zahtjeva dosljednu kombinaciju monetarnih i fiskalnih politika, s većim rizicima za stabilnost cijena ako te politike budu vukle u suprotnim smjerovima.

## ZAKLJUČAK

Da zaključim, iako možemo biti sigurni da se naše pooštavanje monetarne politike snažno prenosi na finansijska tržišta i sve više ostavlja trag u realnoj ekonomiji, brzina i opseg transmisije ostaju neizvjesni. To je djelimično zbog još uvijek promjenjivog ekonomskog okruženja u kojem se nalazimo, pri čemu su izgledi za inflaciju i ekonomsku aktivnost posebno neizvjesni zbog naslijedjenih efekata prethodnih šokova i obnovljenih rizika. Osim toga, trenutni ciklus povećanja je jedinstven, uz niz povećanja stopa koja su po brzini bez presedana.

Dugoročnije gledano, strukturne promjene u ekonomskim interakcijama takođe mogu izvršiti pritisak na inflaciju na temeljniji način. Na globalnom nivou, promjene u trgovinskim obrascima i energetskim tržištima, rastući rizici povezani sa klimatskim promjenama i predanost dekarbonizaciji ekonomije, kao i geopolitički rizici, mogu imati dugotrajnije implikacije, što bi moglo predstavljati veće izazove za stabilnost cijena.

Iz tih razloga, svaka procjena koja se zasniva na poređenjima sa istorijskim zakonitostima i procjenama zasnovanim na modelu mora biti dopunjena praćenjem transmisije na finansijske i ekonomske uslove u realnom vremenu. Iako postoje znaci snage prvog dijela transmisije, očekuje se da će u pripremi još uvijek biti značajan udio transmisije sa uslova finansiranja na realnu ekonomiju, i da će biti podložan daljim kašnjenjima. To pojačava potrebu za pristupom koji zavisi od podataka za određivanje odgovarajućeg nivoa i trajanja stanovišta restriktivne monetarne politike.

financing conditions – which also reflect the restrictive impact of our monetary policy tightening – and a weaker economic outlook.

### THE ECB'S MONETARY POLICY RESPONSE

In summary, while inflation continues to decline, it is still expected to remain too high for too long. The ECB is determined to ensure that inflation returns to our 2% medium-term target in a timely manner. In order to reinforce progress towards this target, we decided to raise the three key ECB interest rates by 25 basis points at the September meeting of the Governing Council. This decision was informed by the three legs of our reaction function: first, the inflation outlook in light of the incoming economic and financial data; second, the dynamics of underlying inflation; and third, the strength of monetary policy transmission. Having raised interest rates by a total of 450 basis points since July 2022, we consider that the key ECB interest rates have now reached levels that, maintained for a sufficiently long duration, will make a substantial contribution to the timely return of inflation to our target. Our reaction function will continue to serve as the framework for future decisions, and we will continue to follow a data-dependent approach to determining the appropriate level and duration of a restrictive monetary policy stance.

### UNCERTAINTY REGARDING THE TRANSMISSION OF MONETARY POLICY

As part of this data-dependent approach, we continually assess how

monetary policy is transmitted to financing conditions, the real economy and, ultimately, to inflation. In the current hiking cycle, the first leg of monetary policy transmission – to financing conditions – has been very strong. Compared with previous hiking cycles, firms' lending rates have increased at a faster pace and credit volumes have weakened more markedly. Transmission to the bank lending channel is likely to continue unfolding as lenders may become more prudent in light of rising funding costs and a slowing economy. Moreover, interest rates on outstanding debt will continue to increase as loans are progressively repriced. All in all, in my view, the transmission of our policy tightening to financing conditions seems to be well underway.

The second leg of transmission relates to the way in which changes in financing conditions will affect economic activity, as firms and households adjust their plans for consumption, investment and savings accordingly. The transmission of monetary policy tightening to the real economy is proceeding at a slower pace, with a substantial share of the transmission still in the pipeline. For example, real estate activity has slowed down amid the weakening of property valuations. For the economy as a whole, model-based estimates continue to suggest that, owing to the typical lags in monetary transmission, the bulk of the impact of our tightening is expected to materialise only in the course of this year and thereafter. [1] The downward impact of our

tightening so far on GDP and inflation is estimated to average around 2 percentage points over the 2023-25 period, with the strongest effect expected on GDP growth this year and on inflation over the next two years.

It is also worth noting that the speed of transmission varies across the euro area. In particular, the transmission

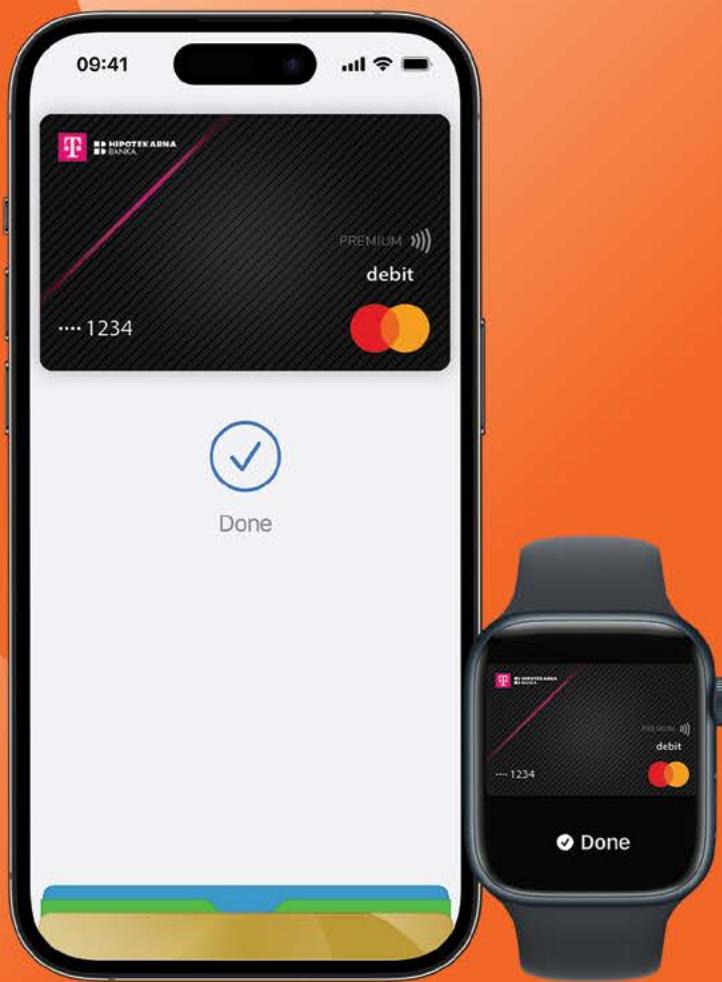
*„We consider that the key ECB interest rates have now reached levels that, maintained for a sufficiently long duration, will make a substantial contribution to the timely return of inflation to our target*

to households is likely to be faster in countries where variable rate mortgages predominate over mortgages at fixed rate.

At the same time, uncertainties regarding transmission remain, mainly in relation to two sources. First, the current hiking cycle is unprecedented in speed. Moreover, it follows a long period of accommodative monetary policy and was accompanied by the recalibration of balance sheet policies, all of which limits comparability with historical regularities. Second, the tightening of our policy stance occurred in reaction to an unprecedented constellation of shocks hitting the euro area over the last three years, which had a disruptive effect on economic conditions and the inflation environment. The fact that we are still confronted with the overlapping legacy effects of these shocks may imply that monetary policy transmission

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is proceeding differently this time around compared with what historical regularities might suggest.

The euro area and the world economy are also exposed to a variety of risks that accompany this monetary policy tightening. Based on our latest assessment, risks to economic growth in the euro area are tilted to the downside. Growth could be slower if the effects of monetary policy are more forceful than expected or if the world economy weakens at a faster pace than currently projected, owing, for example, to a continued slowdown in China. This may, in turn, dampen domestic economic activity and encourage firms, banks and households to be more cautious, thereby putting a strain on bank credit supply, investment and consumer spending. The tightening impulse may be transmitted more forcefully to the real economy in an environment of this kind owing to acceleration effects that often operate during periods of subdued growth and high uncertainty.<sup>[2]</sup> Conversely, growth could be higher than projected if the strong labour market, rising real incomes and receding uncertainty mean that people and businesses become more confident and spend more.

On the inflation side, weaker demand owing to the stronger transmission of monetary policy or the worsening of the international economic environment could put stronger downward pressure on prices than currently expected. Conversely, renewed upward pressures on the costs of energy and food – with oil prices having already increased in recent months – and the unfolding climate crisis could push commodity prices up by more than expected. The role of

wage dynamics and fiscal policy are of great importance in determining the future path of inflation. Wages have been catching up; elevated wage growth is therefore embedded in our projections, albeit at a decelerating pace. But a lasting increase in inflation expectations above our target owing, for instance, to higher-than-anticipated increases in wages or profit margins, could drive inflation higher, including over the medium term. Similarly, as the energy crisis fades, governments are rolling back the fiscal support measures implemented during the crisis. But a slower rollback of this fiscal support or an expansionary fiscal policy stance in the coming years would pose significant challenges to taming inflation and bringing it back to our target. The challenging macroeconomic environment requires a consistent mix of monetary and fiscal policies, with greater risks to price stability if these policies pull in opposite directions.

## CONCLUSION

To conclude, while we can be sure that our monetary policy tightening is transmitted forcefully to financial markets and is increasingly leaving a footprint in the real economy, the speed and scope of the transmission remain uncertain. This is partly due to the still-fluid economic environment in which we are navigating, with the outlook for inflation and economic activity being rendered particularly uncertain owing to both the legacy

effects of previous shocks and renewed risks. In addition, the current hiking cycle is unique, with the sequence of rate hikes being unprecedented in speed.

Taking a longer-term view, structural changes in economic interactions may also exert upward pressure on inflation in a more fundamental way.

*While we can be sure that our monetary policy tightening is transmitted forcefully to financial markets and is increasingly leaving a footprint in the real economy, the speed and scope of the transmission remain uncertain*

At the global level, changes in trade patterns and energy markets, rising climate-related risks and the commitment to decarbonise the economy, as well as geopolitical risks, may have longer-lasting implications, which could pose greater challenges to price stability.

For these reasons, any assessment based on comparisons with historical regularities and model-based estimates must be complemented by real-time monitoring of the transmission to financial and economic conditions. While there are signs of the strength of the first leg of the transmission, a substantial share of the transmission from financing conditions to the real economy is expected to still be in the pipeline, subject to longer lags. This reinforces the need for a data-dependent approach to determining the appropriate level and duration of a restrictive monetary policy stance.

# Klimatski rizici i bankarski sektor

Miloš Martinović  
Centralna banka Crne Gore,  
Podgorica

Mahatma Gandhi je jednom prilikom izjavio da je priroda dovoljna da zadovolji sve čovjekove potrebe, ali ne i pretjeranu pohlepu. Savremeno doba donosi brojne izazove pa i opasnost od razornih posljedica koje donose klimatske promjene, izazvane u najvećoj mjeri negativnim antropogenim dejstvom i prekomjernim uzimanjem resursa prirodnih ekosistema, stvarajući disbalans koji može ugroziti brojne društvene aktivnosti, pa i uticati na finansijsku sferu i poslovanje finansijskih institucija. Dok se vrijeme odnosi na kratkoročni okvir u vidu meteroloških prilika na dnevnom ili nedjeljnog nivou, klima predstavlja dugoročne šeme ili stanja u vidu prosječne temperature, vlažnosti vazduha, količine padavina na određenom geografskom prostoru ili regionu zaključenih na osnovu dugih višegodišnjih promatranja i analiza. Klimatske promjene predstavljaju promjene dugoročnih okvira klime za neki prostor, koji se obično ispoljavaju u neobičnim vremenskim okolnostima (pr. duži sušni ili kišni periodi) koji značajno odstupaju od tzv. „klimatskih očekivanja“ ili „klimatske normalnosti“.

*„Finansijske institucije moraju vršiti konstantni monitoring klimatskih prilika, imajući posebno u vidu geografski aspekt njihovog poslovanja*

Posmatrajući rast prosječnih godišnjih temperatura u posljednjem milenijumu, Mikael Man u svoj knjizi „Novi klimatski ratovi“ navodi da grafik rasta temperature ima oblik hokejaškog štapa. Ova ilustracija jasno ukazuje da je „ubrzanju“ klimatskih promjena dominantno doprinio proces industrijalizacije, imajući u vidu da je danas zabilježen rast prosječnih temperatura od 1,10C u odnosu na predindustrijski period, uz navode naučnika da 1,50C predstavlja tačku nakon koje nema povratak. S tim u vezi, svjedoci smo sve većih klimatskih oscilacija u vidu suša, poplava, učestalih i razornih požara, uragana, zemljotresa i drugih fenomena, dok dolazi do sve većih zagadenja i acidifikacije okeana, deforestacije šuma i pretjerane urbanizacije, koja dovodi do sve veće potrošnje fosilnih goriva i koncentracije štetnih gasova u atmosferi, sa brojnim negativnim efektima na zdravlje ljudi, biodiverziteta i izazovima za očuvanje i zaštitu životne sredine. Klimatske promjene zahtijevaju dužnu pažnju i kolektivnu akciju. Organizacije moraju biti svjesne postojanja klimatskih promjena i posljedično uključiti klimatske rizike u cjelokupnu ili holističku rizik arhitekturu. Menadžment i adekvatno upravljanje klimatskim promjenama može biti krucijalni faktor uspjeha organizacija u budućnosti, imajući u vidu da su klimatski rizici jedni od najočiglednijih rizika u upravljanju organizacija u budućnosti.

Posmatrajući ljeto 2023. godine u svijetu sa aspekta klimatskih dešavanja, francuski list Le Monde zaključuje da se radi o najtoplijem ljetu ikad zabilježenom u istoriji, sa pregršt ekstremnih vremenskih nepogoda, od kojih je moguće izdvojiti sljedeće kao najrelevantnije:

# Climate Risks and Banking Sector

Miloš Martinović

Central Bank of Montenegro,  
Podgorica

Mahatma Gandhi once said that Earth provides enough to satisfy every man's needs, but not every man's greed. The modern age brings numerous challenges as well as the danger of devastating consequences brought by climate change, caused to the greatest extent by negative anthropogenic effects and excessive taking of resources of natural ecosystems, thereby creating an imbalance that can threaten numerous social activities, and also affect the financial sphere and the operations of financial institutions. While weather refers to the short-term framework in the form of meteorological conditions on a daily or weekly level, climate represents long-term patterns or conditions in the form of average temperature, air humidity, amount of precipitation in a certain geographical area or region concluded on the basis of long multi-year observations and analyses. Climate changes mean changes in the long-term framework of the climate for a certain area, which are usually manifested in unusual weather circumstances (e.g. longer dry or rainy periods) that deviate significantly from the so-called "climate expectations" or "climate normality".

Observing the growth of average annual temperatures in the last millennium, Michael Mann in his book "The New Climate Wars" states that the graph of temperature rise has the shape of a hockey stick. This illustration clearly indicates that the process of industrialisation contributed dominantly to the "acceleration" of climate change, bearing in mind that today there is an increase in average temperatures of 1.10C compared to the pre-industrial period, with scientists stating that 1.50C is the point of no return.

In this regard, we are witnessing increasing climate fluctuations in the form of droughts, floods, frequent and devastating fires, hurricanes, earthquakes and other phenomena, while there is increasing pollution and ocean acidification, deforestation and excessive urbanization, which leads to increasing consumption of fossil fuels and the concentration of harmful gases in the atmosphere, with numerous negative effects on human health, biodiversity and challenges for the preservation and protection of the environment. Climate change requires due attention and collective action. Organisations must be aware of the existence of climate change and consequently include climate risks in the overall or holistic risk architecture. The management and adequate governance of climate change can be a crucial factor in the success of organisations in the future, bearing in mind that climate risks are one of the most obvious risks in the management of organisations in the future.

Observing the summer of 2023 in the world from the aspect of climate events, the French newspaper

*„Financial institutions must constantly monitor climate conditions, taking especially into account the geographical aspect of their operations“*

Zemlja/e	Klimatski događaji	Posljedice
Kanada	Požari i poplave	Gorjala je površina u rangu 5 veličina Belgije, dok su u regionu Nove Škotske zabilježene ekstremne količine padavina u kratkom vremenskom intervalu
SAD	Ekstremno visoke temperature i oluje	U Arizoni (Finiks) je za 31 uzastopni dan izmjerena temperatura iznad 43°C, dok je u Kaliforniji nakon rekordnih temperatura koje su dostizale i 54°C uslijedila oluja Hilari, a u Nju Jorku je proglašeno vanredno stanje uslijed poplava i posljedičnih gubitaka ljudskih života
Španija i Grčka	Ekstremni požari	Kanarska ostrva su pogodena najvećim požarom u istoriji, dok se Grčka na gotovo cijeloj teritoriji suočavala sa razornim požarima tokom ljeta
Holandija	Olujni vjetar	Tokom oluje Poli zabilježena je brzina vjetra od 146km/h, najbrže ikad izmjereno za dati vremenski period
Kina, Japan i Indija	Ekstremne temperature, tajfuni i kiše	Tajfun Doksuri je donio ogromne padavine u Pekingu, sa smrću preko 60 ljudi na navedenom području, dok je u regionu Sinkjanga izmjerena najveća temperatura od 52,20°C. Takođe, u Japanu i Indiji je došlo do velikih padavina i poplava sa brojnim smrtnim ishodima.

Tabela I: Ekstremni vremenski događaji – ljeto 2023. godine

Izvor: Le Monde, 2023.

Crna Gora je ovog ljeta iskusila ekstremne vremenske prilike u vidu većih kišnih perioda, dok su skoro trećinu Slovenije pogodile poplave sa značajnom materijalnom i finansijskom štetom. Samim antropogenim uticajima, ovog ljeta su se pridružili prirodni fenomeni El Niño, fluktuacije sunčeve energije i velike podvodne vulkanske erupcije, kreirajući izuzetno ekstremne vremenske uslove.

Prilagođavanje poslovnih aktivnosti ekstremnim vremenskim uslovima u domenu organizacije, kao i uključivanje klimatskih promjena kao faktora pri donošenju strateških i investicionih odluka, mora biti jedan od prioriteta odgovornog upravljanja u budućnosti. Finansijske institucije moraju vršiti konstantni monitoring klimatskih prilika, imajući posebno u vidu geografski aspekt njihovog poslovanja, kao i sprovoditi različita klimatska stresna testiranja i scenario analize, kako bi optimizovale svoj poslovni portfolio, izgradili odgovorne i otporne strategije u odnosu na klimatske promjene i učvrstili svoje institucije sa stanovišta klimatskih rizika.

## KLIMATSKI RIZICI – KLASIFIKACIJA I ZNAČAJ

Klimatski rizici predstavljaju potencijal za negativna dejstva u odnosu na živote ljudi i biodiverziteta, kao i štete na imovini i objektima, izazvanih klimatskim promjenama. Klimatski rizici se mogu podijeliti u dvije široke grupe: fizičke i tranzicione klimatske rizike. Fizički klimatski rizici imaju direkstan i snažan uticaj na predmet rizika, a ispoljavaju se u ozbiljnim vremenskim nepogodama (pr. suše, požari, poplave itd.) i dužim negativnim uticajem na određene ekosisteme (pr. topljenje glečera, podizanje nivoa mora, acidifikacija okeana itd.). Tako se u domenu fizičkih klimatskih rizika može govoriti o akutnim rizicima (ekstremni vremenski događaji) i hroničnim rizicima (duži periodi negativnog dejstva na prirodnji ambijent). Tranzicioni rizici se odnose na promjene i težnju za zaštitom životne sredine, kroz mјere za dekarbonizacijom ekonomije i uspostavljanje politika i postulata održivog razvoja, a čine ga politička i regulatorna komponenta (pr. uvođenje poreza na ugljenik, sudske kazne za zagadivače itd.), tehnološka komponenta (pr. cijena investiranja u obnovljive izvore energije), reputaciona komponenta (pr. lojalnost potrošača na osnovu slijedenja „zelenih“ poslovnih praksi) i tržišna komponenta (pr. sve veća tražnja za proizvodima iz „održivih“ industrija). S tim u vezi, zaključuje se da klimatski rizici predstavljaju širok spektar pojava koje utiču na poslovni ciklus kompanije, a time i na njen bonitet i kreditnu sposobnost, od kojeg zavisi kvalitet portfolija banke i njena profitabilnost.



Grafik I: Klasifikacija klimatskih rizika

Izvor: Ilustracija autora.

Posmatrano iz ugla bankarskih institucija, rizici koji su imanentni bankarskom poslovanju bivaju usložnjeni i isprepreljetani u svijetu kojeg karakteriše stalna dinamika i nevjerojatan stepen promjena. Stoga, rizik menadžeri bankarskih institucija moraju biti svjesni

Le Monde concludes that it is the hottest summer ever recorded in history, with a handful of extreme weather events, of which the following can be singled out as the most relevant:

This summer, Montenegro experienced extreme weather conditions in the form of heavy periods of rain, while almost a third of Slovenia was affected by floods with significant material and financial damage. In addition to the anthropogenic influences, this summer the natural phenomena of El Niño, solar energy fluctuations and large underwater volcanic eruptions were added, creating extremely extreme weather conditions. Adapting business activities to extreme weather conditions in the domain of an organisation, as well as including climate change as a factor when making strategic and investment decisions, must be one of the priorities of responsible management in the future. Financial institutions must constantly monitor climate conditions, taking especially into account the geographical aspect of their operations, as well as conduct various climate stress tests and scenario analyses, in order to optimize their business portfolio, build responsible and resilient strategies in relation to climate change, and strengthen their institutions from the point of view of climate risks.

### **CLIMATE-RELATED RISKS – CLASSIFICATION AND IMPORTANCE**

Climate-related risks represent the potential for negative effects in relation to lives of people and biodiversity, as well as damage to property and objects, caused by climate change. Climate-related risks can be divided into two broad groups: physical and transition climate risks. Physical climate-related risks have a direct and strong impact on the subject of the risk, and are manifested in severe weather events (e.g. droughts, fires, floods, etc.) and a longer negative impact on certain ecosystems (e.g. melting glaciers, rising sea levels, acidification of the oceans, etc.). Thus, with regard to physical climate risks, one can talk about acute risks (extreme weather events) and chronic risks (longer periods of negative impact on the natural environment). Transitional risks refer to changes and the aspiration to protect the environment, through measures to decarbonize the economy and establish policies

Country/s	Climate events	Consequences
Canada	Wildfires and floods	The burned area was 5 times the size of Belgium, while in the Nova Scotia region, extreme amounts of precipitation were recorded in a short time interval.
USA	Extremely high temperatures and storms	In Arizona (Phoenix), the temperature was measured above 43°C for 31 consecutive days, while in California, storm Hillary followed the record temperatures that reached 54°C, and in New York, a state of emergency was declared due to floods and consequent loss of human life.
Spain and Greece	Extreme wildfires	The Canary Islands were hit by the biggest fire in history, while Greece faced devastating fires in almost its entire territory during the summer
The Netherlands	Storm wind	During storm Poli, a wind speed of 146km/h was recorded, the fastest ever measured for the given time period
China, Japan and India	Extreme temperatures, typhoons and rains	Typhoon Doksuri brought heavy rainfall to Beijing, with the death of over 60 people in the said area, while the highest temperature of 52.2°C was measured in the Xinjiang region. Also, Japan and India were hit by heavy rainfalls and floods with numerous deaths.

Table I: Extreme weather events – summer 2023

Source: Le Monde, 2023.

and postulates of sustainable development, and it consists of a political and regulatory component (e.g. the introduction of a carbon tax, court fines for polluters, etc.), technological component (e.g. the price of investing in renewable energy sources), reputation component (e.g. consumer loyalty based on following "green" business practices) and market component (e.g. increasing demand for products from "sustainable" industries). In this regard, it is concluded that climate risks represent a wide range of phenomena that affect the business cycle of a company, and thus its solvency and creditworthiness, on which the quality of the bank's portfolio and its profitability depend.

From the point of view of banking institutions, the risks that are inherent in banking operations are complicated



Graph I: Classification of climate-related risks

Source: Author's illustration.

*„Sajber bezbjednost je u 2022. godini viđen kao najveći rizik za poslovanje banaka, dok ga prate kreditni rizik i rizik od klimatskih promjena“*

važnosti rizika koji su izvan tradicionalnog seta bankarskih rizika (kreditni, tržišni, likvidnosni i operativni rizik), i posmatrati uticaj rastućih rizika (pr. sajber bezbjednost, klimatske promjene, digitalizacija itd.) na tradicionalne bankarske rizike. Time možemo reći da je potrebno promijeniti paradigmu i proširiti opseg bankarskih rizika, koji pored tradicionalnih u obzir moraju uzeti nove rastuće rizike, koji su od presudnog značaja za uspješnost poslovanja svih organizacija u budućnosti. Na osnovu redovne godišnje ankete o globalnim rizicima za poslovanje, koja podrazumijeva poglede i stavove glavnih rizik menadžera banaka, a sprovodi je E&Y i Institut za međunarodne finansije (IIF), sajber bezbjednost je u 2022. godini viđen kao najveći rizik za poslovanje banaka, dok ga prate kreditni rizik i rizik od klimatskih promjena. Ova anketa je dobijena na osnovu podataka od 88 banaka iz preko 30 zemalja. Takođe, važno je pomenuti rezultate ankete iz 2021. godine, gdje je 91% glavnih rizik menadžera banaka navelo klimatske promjene kao glavni izazov za njihove banke u narednih pet godina, dok je takođe sajber bezbjednost drugi glavni „problem“ za većinu bankara orijentisanih na rizike (80%).

Sudeći po izvještaju Svjetskog ekonomskog foruma vezanog za rizike (Global Risk Report 2023), navodi se da svijet može ući u period „krize na više frontova“ ili „polikrise“, imajući u vidu da pored rata u Ukrajini i velikog povratka „starog poznanika“ inflacije, treba

razmišljati i o brojnim rastućim izazovima, o kojima se prestalo voditi računa. Izvještaj naglašava jasno odsustvo kolektivne strategije za borbu protiv klimatskih promjena, i neusaglašenu primjenu mjera za adaptaciju i ublažavanje klimatskih promjena. Od 10 najvažnijih rizika sa aspekta ozbiljnosti uticaja, 5 se odnosi na klimatske promjene i to: prirodne katastrofe i ekstremne vremenske prilike, odsustvo primjene mjera za mitigaciju klimatskih promjena, katastrofalne posljedice na prirodu i prirodne ekosisteme – ekološki incidenti, neusvajanje mjera za prilagođavanje klimatskim promjenama i kriza u upravljanju prirodnim resursima. Klimatski rizici samo „pogrijavaju“ već dovoljno užaren set globalnih rizika, koji svojom složenosti predstavljaju izazov za cijelokupno čovječanstvo. Ovim se pokazuje važnost klimatskih rizika za poslovanje banaka, čime se oni stavljuju u fokus rizik menadžera i inkorporiraju u rizik arhitekturu. U narednom periodu neophodno je razviti metodologiju i instrumente za praćenje klimatskih rizika, utvrditi relevantne klimatske podatke i raditi na razvoju bankarskih stručnjaka u sferi klimatskih promjena. Anticipacijom i prilagođavanjem klimatskim promjenama, bankarske institucije, odnosno „rizik mašine“, bivaju osigurane od negativnog dejstva ovog fenomena i razvijaju otpornost, koja u krajnjem ojačava povjerenje i sigurnost u cijelokupni ekonomski i finansijski sistem.

#### **TRANSMISIONI KANALI IZMEĐU KLIME I BANKE**

Banke i finansijske institucije su ugrožene od strane klimatskih promjena, na bazi uticaja izvora klimatskih promjena, preko transmisionih kanala, i tradicionalnih bankarskih rizika na finansijski rezultat. Dejstvo izvora klimatskih rizika (fizičkih i tranzicionih rizika)

*„U narednom periodu neophodno je razviti metodologiju i instrumente za praćenje klimatskih rizika, utvrditi relevantne klimatske podatke i raditi na razvoju bankarskih stručnjaka u sferi klimatskih promjena“*

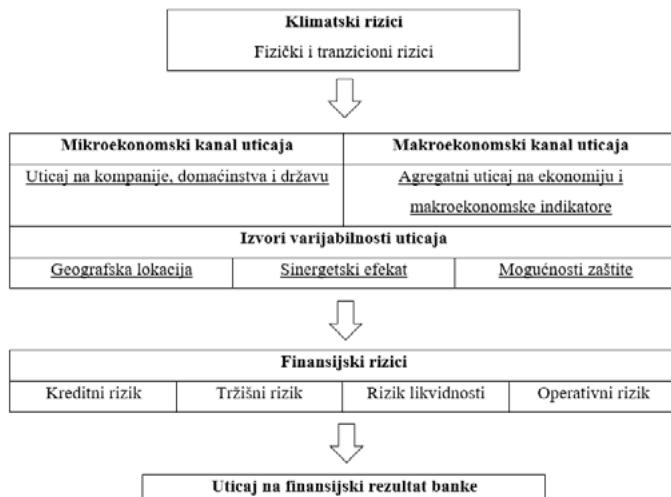


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nije konstantno, predvidivo i linearno, čime se analiza uticaja klimatskih promjena na bankarske institucije čini težom i kompleksnom. Tradicionalni set bankarskih rizika obično podrazumijeva kreditni rizik (sposobnost zajmotražilaca da u roku dospijeća isplaćuju finansijske obaveze prema banci), tržišni rizik (izloženost banke u odnosu na kamatni i devizni rizik), likvidnosni rizik (stabilnost depozitne strukture i mogućnost banke da redovno izmiruje svoje obaveze) i operativni rizik (set raznorodnih radnji koje ugrožavaju obavljanje poslovnih aktivnosti banke). Izvori klimatskog rizika utiču kroz mikroekonomski i makroekonomski kanal uticaja na aktivaciju „alarme“ kod tradicionalnih bankarskih rizika, koji ugrožavaju stabilnost banke i utiču na uspješnost njenog poslovanja.



Grafik II: Transmisioni mehanizmi – klima i banke  
Izvor: Prilagođeno prema izvještaju Banke za međunarodna poravnjana (BIS).

Zadatak banaka u domenu klimatskih promjena je integrisanje klimatskog rizika u cijelokupno i holističko upravljanje rizicima u bankama. Kao najvažniji element tog procesa je razumijevanje transmisionog uticaja klimatskih promjena na finansijski rezultat banke. Taj lanac počinje samim razumijevanjem prirode i uticaja izvora klimatskih rizika, odnosno karakteristika, snage i značaja ekstremnih vremenskih prilika ili tranzicionih rizika tj. primjene instrumenata i mjera ekonomске politike u kontekstu održivog razvoja na bankarske rizike, kroz promjene u prihodonosnim i troškovnim

strukturama klijenata banke, koji predstavljaju osnovu stabilnosti finansijskih institucija čija osnovna djelatnost je finansijska intermedijacija između strana kojima su potrebna finansijska sredstava i onih koji imaju višak finansijskih fondova.

S tim u vezi, moguće je uočiti dva transmisiona kanala finansijskog uticaja klimatskih promjena na banku, i to mikroekonomski i makroekonomski kanal. Njihovim skeniranjem i razumijevanjem, banka može adekvatno vršiti monitoring i kontrolu klimatskog rizika, kao i kreirati strategije i mjere za njegovo ublažavanje i minimiziranje. Mikroekonomski kanal uticaja podrazumijeva uticaj izvora klimatskih rizika na klijente banke (kompanije, domaćinstva i države) kroz negativne reperkusije na njihov kreditni potencijal i vrijednost finansijske imovine. Klimatski hazardi mogu uticati na finansijske tokove klijenata bankarskih institucija, čime može doći do kašnjenja u otplati kredita i povećanja nekvalitetnih kredita u bilansima banaka. Takođe, uslijed smanjene ekonomske aktivnosti uslijed ekstremnih klimatskih događaja, može doći do smanjenja potrošnje i posljedičnog smanjenja državnih prihoda od poreza, čime se utiče i na degradiranje kreditnog rejtinga države. Tržišni rizici banke mogu biti uvećani dejstvom klimatskih promjena jer u područjima pogodenim klimatskim promjenama može doći do povećanja volatilnosti vrijednosti finansijske imovine. Usljed dejstva razornih klimatskih događaja, može doći do povlačenja depozita od strane klijenata, čime se ugrožava likvidnosna pozicija banke. Takođe, finansijski efekat na bankarske institucije može biti značajan u domenu promjena koje donose trendovi u prelasku na niskokarbonsku i održivu ekonomiju, kroz mjere vladine politike, čime se mijenja struktura privrede i očekivanja klijenata.

Makroekonomski transmisioni kanal podrazumijeva indirektni uticaj klimatskih promjena na stanje bankarskih parametara kroz negativne reperkusije na makroekonomске indikatore. Klimatske promjene mogu izazvati brojne promjene u samim postavkama ekonomije. Na primjer, visoke temperature mogu dovesti do pada produktivnosti radne snage, dok ekstremni vremenski uslovi mogu dovesti i do gubitka ljudskih života. Pogodene oblasti često prati pogoršanje ekonomskih indikatora, što dovodi do

and intertwined in a world characterised by constant dynamics and an incredible degree of change. Therefore, risk managers of banking institutions must be aware of the importance of risks that are outside the traditional set of banking risks (credit, market, liquidity and operational risk), and observe the impact of growing risks (e.g. cyber security, climate change, digitalization, etc.) on traditional banking risks. Therefore, it can be said that it is necessary to change the paradigm and expand the scope of banking risks, which, in addition to the traditional ones, must take into account new growing risks, which are of crucial importance for the success of all organisations' operations in the future. Based on the regular annual survey on global business risks, which includes the views and attitudes of the main risk managers of banks, and is carried out by E&Y and the Institute of International Finance (IIF), cyber security was seen as the biggest risk for bank operations in 2022, while it is followed by credit risk and climate-related risk. This survey was obtained based on data obtained from 88 banks from over 30 countries. Also, it is important to mention the results of the 2021 survey, where 91% of bank chief risk managers cited climate change as the main challenge for their banks in the next five years, while also cyber security is the second main "issue" for most risk-oriented bankers (80%).

The report of the World Economic Forum related to risks (Global Risk Report 2023) stated that the world may enter a period of "crisis on multiple fronts" or "polycrisis", bearing in mind that in addition to the war in Ukraine and the great return of an "old acquaintance" inflation, one should also think about numerous growing challenges, which have stopped being taken into account. The report highlights the clear absence of a collective strategy to combat climate change, and inconsistent implementation of climate change adaptation and mitigation measures. In terms of the severity of the impact, 5 out of 10 most important risks are related to climate change, namely: natural disasters and extreme weather conditions, lack of implementation of measures to mitigate climate change, catastrophic consequences for nature and natural

*„Cyber security was seen as the biggest risk for bank operations in 2022, while it is followed by credit risk and climate-related risk*

ecosystems - environmental incidents, failure to adopt measures to adapt to climate change and the crisis in the management of natural resources. Climate-related risks only "heat up" an already heated set of global risks, which, with their complexity, represent a challenge for all of humanity. This shows the importance of climate risks for banks' operations, thus putting them in the focus of risk managers and incorporating them into the risk architecture. In the coming period, it is necessary to develop methodology and instruments for monitoring climate-related risks, determine relevant climate data and work on the development of banking experts in the sphere of climate change. By anticipating and adapting to climate changes, banking institutions, i.e. "risk machines", are insured against the negative effects of this phenomenon and develop resilience, which ultimately strengthens confidence and security in the entire economic and financial system.

#### **TRANSMISSION CHANNELS BETWEEN CLIMATE AND BANKS**

Banks and financial institutions are threatened by climate change, based on the impact of climate change sources, through transmission channels, and traditional banking risks on financial results. The effect of climate-related risk sources (physical and transition risks) is not constant, predictable and linear, which

*„In the coming period, it is necessary to develop methodology and instruments for monitoring climate-related risks, determine relevant climate data and work on the development of banking experts in the sphere of climate change*

*„Ukoliko je banka svjesna klimatskih rizika i na vrijeme preduzme aktivnosti na diverzifikaciji klimatskog rizika, efekat od razornih klimatskih događaja na njenu finansijsku strukturu može biti ublažen ili umanjen“*

otežane pozicije pri kreditiranju i finansiranju različitih aktivnosti, kao i rastu kreditnog rizika za banke.

Takođe, stepen uticaja klimatskog rizika kroz transmisione kanale na banke može biti pojačan ili oslabljen različitim uticajima. Jedan od najvažnijih je geografska lokacija u kojima posluju finansijske institucije ili zemlje u kojima su kompanije prema kojima je banka kreditno izložena. Samim tim, prilikom odobravanja kredita kompanijama u klimatsko-rizičnim zonama potrebno je pooštiti uslove kako bi se kompenzovao klimatski rizik za banku, koja takođe može smanjiti investiranja u ova područja ukoliko želi smanjiti klimatski rizik. Isto tako, kreditni uslovi bi trebali biti različiti u odnosu na održive i prljave industrije, imajući u vidu značaj tranzicionih rizika. Ukoliko se dogodi više povezanih klimatsko-negativnih i drugih događaja, sinergetski efekat može stupiti na snagu, pa djelovanje klimatskog rizika može biti uvećano. Kao primjer, može se navesti istovremeno uvođenje poreza na zagađenje (ugljenik), tehnološki pronalasci koji smanjuju zagađanje ili uspostavljanje transportnih barijera, koji u potpunosti mijenjaju „ekonomsku računicu i logiku“ određenih poslovnih djelatnosti. Takođe, ukoliko je banka svjesna klimatskih rizika i na vrijeme preduzme aktivnosti na diverzifikaciju klimatskog rizika, efekat od razornih klimatskih događaja na njenu finansijsku strukturu može biti ublažen ili umanjen.

Klimatski rizici trebaju biti integralni dio rizik menadžmenta banke, sa adekvatnim mjerama, monitoringom

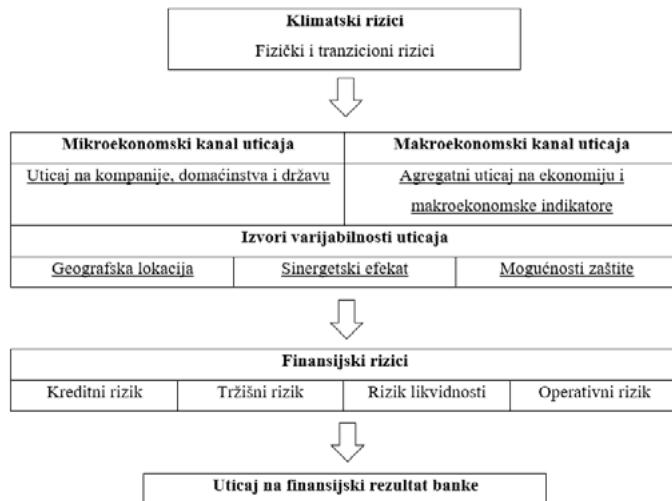
i praćenjem klimatske izloženosti i preuzimanjem korektivnih mjera u skladu sa jasnim strategijama u zaštiti uspješnosti bankarskog poslovanja u odnosu na klimatske promjene.

## ZAKLJUČAK

Klimatske promjene predstavljaju jedan od najznačajnijih rizika u dugoročnom poslovnom horizontu. Njihovo djelovanje je nepredvidivo, stoga je neophodno aktivno djelovanje na kreiranju mjera i instrumenata za praćenje i obradu klimatskih podataka, kao i sprovođenje različitih scenarija i stresnih testova za mjerjenje osjetljivosti bankarskog portfolija na klimatske promjene. Podizanjem svjesnosti o postojanju klimatskih promjena i uključivanjem klimatskog rizika u okviru strategije banke u domenu poslovnih aktivnosti, banka biva ojačana na njihovo negativno dejstvo i štiti svoju stabilnost, a time i povjerenje u cjelokupni ekonomski i finansijski sistem. Razmijevanje uticaja kroz transmisione kanale je ključno sa stanovišta planiranja i organizovanja bankarskih poslova u domenu klimatskih promjena, čime se utiče na umanjivanje i pokušaj kontrole njihovog uticaja na tradicionalne bankarske rizike i njenu finansijsku stabilnost.

(Stavovi i pogledi u ovom tekstu su isključivo mišljenja autora i nužno ne moraju odražavati poziciju Centralne banke Crne Gore)

makes the analysis of the impact of climate change on banking institutions more difficult and complex. The traditional set of banking risks usually includes credit risk (the ability of borrowers to pay on time their financial obligations to the bank), market risk (the bank's exposure to interest rate and foreign exchange risk), liquidity risk (the stability of the deposit structure and the ability of the bank to regularly meet its obligations) and operational risk (a set of diverse actions that threaten the performance of the bank's business activities). Sources of climate risk influence through the microeconomic and macroeconomic channel of influence the activation of the "alarm" in traditional banking risks, which threaten the stability of the bank and affect the successfulness of its operations.



Graph II: Transmission mechanisms – climate and banks  
Source: Adapted from a report by the Bank for International Settlements (BIS).

The task of banks in the field of climate change is to integrate climate-related risks into the overall and holistic risk management in banks. The most important element of that process is understanding the transmission impact of climate change on the bank's financial result. That chain begins with the very understanding of the nature and impact of climate risk sources, i.e. the characteristics, strength and significance of extreme weather conditions or transitional risks, i.e. the application of economic

policy instruments and measures in the context of sustainable development to banking risks, through changes in the income and cost structures of bank clients, which represent the basis of the stability of financial institutions whose main activity is financial intermediation between parties in need of financial resources and those who have surplus financial funds.

In this regard, it is possible to see two transmission channels of the financial impact of climate change on the bank, namely, microeconomic and macroeconomic channel. By scanning and understanding them, the bank can adequately monitor and control climate-related risk, as well as create strategies and measures for its mitigation and minimization. The microeconomic channel of influence implies the influence of climate risk sources on the bank's clients (companies, households and states) through negative repercussions on their credit potential and the value of financial assets. Climate hazards can affect the financial flows of clients of banking institutions, which can lead to delays in loan repayments and an increase in non-performing loans on banks' balance sheets. Also, due to reduced economic activity as a result of extreme climate events, there may be a reduction in consumption and a consequent reduction in government tax revenues, which also affects the downgrading of the country's credit rating. The bank's market risks may be increased by the effect of climate change, because in areas affected by climate change, there may be an increase in the volatility of the value of financial assets. Due to the impact of devastating climate events, there may be withdrawal of deposits by clients, thereby jeopardizing the bank's liquidity position. Also, the financial effect on banking institutions can be significant in the domain of changes brought by trends in the transition to a low-carbon and sustainable economy, through government policy measures, which changes the structure of the economy and client expectations.

The macroeconomic transmission channel implies the indirect impact of climate change on the banking indicators through negative repercussions on macroeconomic indicators. Climate change can cause numerous changes in the very settings of the economy. For example, high



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temperatures can lead to a drop in labour productivity, while extreme weather conditions can also lead to loss of human life. The affected areas are often accompanied by a worsening of economic indicators, which leads to a difficult position in lending and financing various activities, as well as an increase in credit risk for banks.

Also, the degree of influence of climate-related risk through transmission channels on banks can be strengthened or weakened by different influences. One of the most important is the geographical location where the financial institutions operate or the countries where the companies to which the bank has credit exposure are located. Therefore, when approving loans to companies in climate-related risk zones, it is necessary to tighten the conditions in order to compensate for climate risk for the bank, which can also reduce investments in these areas if it wants to reduce climate risk. Likewise, credit conditions should be different in relation to sustainable and dirty industries, bearing in mind the importance of transition risks. If several climate-related negative and other events occur, the synergistic effect can come into force, so the effect of the climate risk can be increased. An example can be the simultaneous introduction of taxes on pollution (carbon), technological inventions that reduce pollution or the establishment of transport barriers, which completely change the "economic calculation and logic" of certain business activities. Also, if the bank is aware of climate-related risks and undertakes timely activities to diversify climate risks, the effect of devastating climate events on its financial structure can be mitigated or reduced.

Climate-related risks should be an integral part of the bank's risk management, accompanied by the introduction of adequate measures, monitoring and follow-up of climate exposure and taking corrective measures in accordance with clear strategies to safeguard the successfulness of banking operations in relation to climate change.

## CONCLUSION

Climate change represents one of the most significant risks in the long-term business horizon. Their actions are unpredictable; therefore, it is necessary to actively work on the creation of measures and instruments for monitoring and processing climate data, as well as the implementation of various scenarios and stress tests to measure the sensitivity of the banking portfolio to climate change. By raising awareness of the existence of climate change and including climate risk within the bank's strategy in the field of business activities, the bank is strengthened against their negative effects and protects its stability, and thus the confidence in the entire economic and financial system. It is crucial to understand the impact through transmission channels from the point of view of planning and organising the banking operations in the field of climate change, which affects the reduction and attempt to control their impact on traditional banking risks and its financial stability.

(Attitudes and views in this text are solely the opinions of the author and do not necessarily reflect the position of the Central Bank of Montenegro)

*„If the bank is aware of climate-related risks and undertakes timely activities to diversify climate risks, the effect of devastating climate events on its financial structure can be mitigated or reduced*



Momirović Dragan  
Visoka škola za poslovnu  
ekonomiju i preduzetništvo  
Beograd

# Uticaj rata u Ukrajini na inflaciju u EU

Nakon završetka Pandemije Kovid-19, i optimističkih očekivanja budućih nastojanja za brzi oporavak ekonomije, Evropsku Uniju (EU) je zadesila nova nevolja, rat u Ukrajini. Specijalna operacija Rusije u Ukrajini je donela nove ekonomski i finansijske probleme EU. Političke elite EU su podržale Ukrajinu, uvodeći rigorozne sankcije Rusiji. Politički pristup EU je izazvao prekid u snabdevanju, privrede EU

naftnim derivatima, gasom i drugim strateškim sirovinama i gotovim proizvoda. U tom trenutku, EU je zavisila 40% od uvoza energenata iz Rusije. Pad uvoza energenata iz Rusije i spora supstitucija iz drugih izvora je neposredno dovela do jačanja inflatornih tendencija koje su kulminirale tokom 2022 god i u prvom kvartalu 2023 god. Posebno snažan uticaj na porast ukupne inflacije je imalo značajno povećanje cena energije i hrane. Mada ne treba izgubiti iz vida, da su cene energije i hrane, i pre početka, značajno porasle, verovatno iz spekulativnih razloga, ali i zbog ponovnog otvaranja privrede nakon pandemije Kovid-19.

Inflacija u EU, i pre ruske intervencije, već bila u zamahu. Na to su uticali, i određeni, faktori u okviru same EU koji su doprineli nastanku i rasplamsavanju inflatornih prisilaka. Tu se pre svega misli, na efekte ponovnog otvaranja privrede

nakon Kovid-19, prekinute lance u globalnom snabdevanju koji izazivaju uska grla u ponudi, pojавu viška tražnje, skok cena energenata od leta 2021 god i poljuljano povjerenje potrošača i proizvođača. Pandemija je stvorila postepeni niz neusklađenosti između ponude i tražnje. Pojačani rast inflatornih tendencija su doveli do uzlazne spirale inflatornog trenda, koji je naglo porastao od sredine 2021 god.

Ukinuta ograničenja, vezana za pandemiju, nakon otvaranja privrede, su uticala na oporavak tražnje, posebno u sektoru usluga, što je neposredno doprinelo visokoj stopi inflacije. Uska grla za snabdevanje delovala su na pojavu nestašice određenih inputa za industrijsku proizvodnju, uključujući i delimični nedostatak potrebne radne snage koji su zajedno sa skokom cena energenata i hrane izazvali nagli skok inflacije. Obim i širina delovanja ovih šokova su izazvali

*„Teško je razlučiti pojedinačne efekte, uticaja rata u Ukrajini i internih faktora EU na rast inflacije, ali svakako nije rat jedini i isključivi uzrok negativnog trenda inflacije“*

# The Impact of the War in Ukraine on Inflation in the EU

Momirović Dragan  
Faculty of Business  
Economics and  
Entrepreneurship, Belgrade

After the end of the COVID-19 pandemic, and optimistic expectations of future efforts for a quick recovery of the economy, the European Union (EU) was hit by a new problem, the war in Ukraine. Russia's special operation in Ukraine has brought new economic and financial problems to the EU. The political elites of the EU supported Ukraine, introducing rigorous sanctions against Russia. The political approach of the EU caused an interruption in the supply of oil derivatives, gas and other strategic raw materials and finished products to the EU economy. At that moment, the EU was 40% dependent on imports of energy products from Russia. The decline in imports energy products from Russia and slow substitution from other sources directly led to the strengthening of inflationary tendencies that culminated in 2022 and in the first quarter of 2023. A significant increase in energy and food prices had a particularly strong impact on the increase in headline

inflation. Although, it should be borne in mind the fact that the prices of energy and food increased significantly, even before the beginning of the conflict, probably for speculative reasons, but also due to the reopening of the economy after the COVID-19 pandemic.

Inflation in the EU, even before the Russian intervention, was already in full swing. This was influenced by certain factors within the EU that contributed to the emergence and flare-up of inflationary pressures. This primarily refers to the effects of the reopening of the economy after the COVID-19 pandemic, interrupted global supply chains that cause supply bottlenecks, the appearance of excess demand, a spike in prices of energy products since the summer of 2021, and the shaken consumer and producer confidence. The pandemic has created a gradual series of mismatches between supply and demand. The increased growth of inflationary tendencies led to an upward spiral of the inflationary trend, which

increased sharply from the middle of 2021.

The lifted restrictions related to the pandemic, after the opening of the economy, affected the recovery of demand, especially in the service sector, which directly contributed to the high rate of inflation. Supply bottlenecks caused a shortage of certain inputs for industrial production, including a partial lack of the necessary workforce, which, together with the increase in energy

*„It is difficult to distinguish individual effects, the impact of the war in Ukraine and internal EU factors on the growth of inflation, but the war is certainly not the only and exclusive cause of the negative inflation trend*

## <sup>64</sup> „Porast zarada dvostruko deluje na rast inflacije, prvo kroz povećanje cene rada i drugo kroz povećanje cene hrane

značajne promene u sektorskim relativnim cenama.

### UTICAJ RATA U UKRAJINI

Pored izrazite unutrašnje faktore inflatornog pritiska, rat u Ukrajini je dodatno zakomplikovao i izazvao tri kategorije ekonomskih efekata: prvi efekat je šok na strani ponude koji je pogurao inflaciju naviše koja je dovela do smanjenja privrednog rasta, drugi efekat je doveo do izvesnog pada tražnje i treći efekat se odrazio na nacionalne budžete.

Rast tražnje za energijom je uticao na povećanje njihovih cena ali i smanjenje isporuke nafte i gasa, koje nisu garantovane dugoročnim ugovorima od strane Rusije, septembra 2021 god. Početak rata je, februara 2022 god je doveo do obustave ovih umanjenih isporuka. Embargo na uvoz ruske nafte i gasa i prekid isporuke su dodatno uticali na rast cena.

Na tržištu energije, neizvesnost je bila više vezana za tržište gasa nego za tržište nafte. Tržište gasa je bilo akutno, iz razloga, što je EU, u velikoj meri bila vezana i zavisna od ruskog gasa koji je činio 45% ukupnih potreba ili uvoza u 2021 god. Pored toga, uvođenje embarga na uvoz energije iz Rusije, je uticao na nepotpuno korišćenje postojeće, izgrađene, infrastrukture za transport gasa. To je izazvalo dodatne neizvesnosti, i u velikoj meri otežalo supstituciju ruskog gasa

drugim dobavljačima, i dovelo do objektivnih teškoća preusmeravanja tokova transportnih infrastrukturnih u kratkom roku. Neizvesnost i strah od nestašice ruskog gasa, i nemogućnost da se u kratkom roku zameni uvoz iz Rusije su izazvali pesimistička očekivanja i neviđeni šok cena gasa na tržištu Evrope.

Strah da se rat u Ukrajini ne prelije na tlu Evrope je izazvao veliku zabrinutost kod potrošača EU. Zabrinuti potrošači su promenili strukturu potrošnje orijentujući se na kupovinu nužnih dobara a izbegavajući kupovinu trajnih potrošnih roba. Pad ili nestabilnost potrošnje je delovalo na preduzeća da smanjuju investiciona ulaganja u nabavku novih tehnologija. Očekivanja su bila da će smanjena tražnja odnosno potrošnja uticati na postepen pad inflacije.

I pored očiglednog uticaja rata u Ukrajini na rast inflacije, ipak je teško izvesti prave procene njegovog uticaja na inflaciju. I dalje ostaje nejasno, da li su ova povećanja uzrok nekih nepredviđenih situacija ili događaja ili svesno ponašanje pojedinih učesnika na tržištu pre rata. Ipak teško je razlučiti pojedinačne efekte, uticaja rata u Ukrajini i internih faktora EU na rast inflacije, ali svakako nije rat jedini i isključivi uzrok negativnog trenda inflacije. Bez obzira na sve, novonastala situacija, je u evrozonu, dovela do naglog pogoršanja finansijskih uslova, naglog pada

privrednog rasta, porast inflacije i pojavu napada finansijskog stresa. Kako monetarna politika deluje većinom preko kanala tražnje i sa zakašnjenjem teško je dati objektivnu procenu uticaja faktora ponude i tražnje na kretanje ukupne inflacije.

### EFEKTI INFLACIJE U EU

Šokovi na strani ponude, posebno uska grla u snabdevanju nastala pandemijom, ruska invazija na Ukrajinu i energetska kriza koja je usledila, podigli su ulazne troškove preduzećima. Istovremeno, ukidanje ograničenja i postepeno otvaranje privrede EU je uticalo na povećanje potrošnje što je omogućilo preduzećima da prenesu ove troškove na cene mnogo brže i snažnije nego u prošlosti. Šokovi na strani ponude i donekle na strani tražnje su neprekidno pothranjivali inflatorne pritiske i neposredno u kratkom roku doprineli njenoj eksploziji.

Početkom 2022 god ukupna inflacija, merena Harmonizovanim indeksom potrošačkih cena (HIPC), u evrozoni, je porasla i bila je veća od ciljane inflacije od 2%. Iste godine, u januaru, među-godišnji rast cena, odnosno inflacija je dostigao nivo od 5,1%. Od januara, rast cena se udvostručio da bi oktobra 2022 god inflacija dostigla vrhunac od 10,6% da bi nakon toga počela da opada, ali i dalje je ostala na visokom nivou, da bi u februaru 2023 god iznosila 8,5%. U maju 2023 god inflacija je pala u odnosu na februar i iznosila je 6,1% da bi u septembru dostigla 4,3% na godišnjem nivo i bila najniža od oktobra 2021 god. Na pad inflacije je uticala dinamika sporijeg rasta cena u septembru u sektor u sluga, (4,7% u poređenju sa 5,5% u avgustu) kod neenergetskih industrijskih dobara

and food prices, caused a sharp jump in inflation. The scope and breadth of action of these shocks caused significant changes in sectoral relative prices.

## THE IMPACT OF THE WAR IN UKRAINE

In addition to the distinct internal factor of inflationary pressure, the war in Ukraine further complicated and caused three categories of economic effects: the first effect is a shock on the supply side that pushed inflation upwards, which led to a reduction in economic growth, the second effect led to a certain drop in demand, while the third effect reflected on national budgets.

The growth in demand for energy has influenced the increase in their prices, but also the reduction in the supply of oil and gas, which are not guaranteed by long-term contracts by Russia, in September 2021. The beginning of the war, in February 2022, led to the suspension of these reduced deliveries. The embargo on the import of Russian oil and gas and the interruption of deliveries had an additional effect on the price increase.

In the energy market, uncertainty was more related to the gas market than to the oil market. The gas market was important, due to the fact that the EU was largely bound and dependent on Russian gas, which accounted for 45% of total needs or imports in 2021. In addition, the introduction of an embargo on the import of energy from Russia had an impact on the incomplete use of the existing, built infrastructure for gas transport. This caused additional uncertainties, and to a large extent made it difficult to substitute Russian

gas with other suppliers, and led to objective difficulties in redirecting the flows of transport infrastructures in the short term. Uncertainty and fear of a shortage of Russian gas, and the inability to replace imports from Russia in the short term have caused pessimistic expectations and an unprecedented gas price shock on the European market.

The fear that the war in Ukraine will spill over into Europe has caused great concern among EU consumers. Concerned consumers have changed the structure of consumption, focusing on the purchase of necessary goods and avoiding the purchase of durable consumer goods. The decline or instability of consumption has caused companies to reduce investments in the acquisition of new technologies. Expectations were that the reduced demand and consumption would affect the gradual decline in inflation.

Despite the obvious impact of the war in Ukraine on the growth of inflation, it is still difficult to make true estimates of its impact on inflation. It still remains unclear whether these increases are the cause of some unforeseen situations or events or the conscious behaviour of certain market participants before the war. However, it is difficult to distinguish individual effects, the impact of the war in Ukraine and internal EU factors on the growth of inflation, but the war is certainly not the only

and exclusive cause of the negative inflation trend. Regardless of everything, the newly created situation in the euro area has led to a sudden deterioration of financial conditions, a sudden drop in economic growth, an increase in inflation and the appearance of financial stress attacks. As monetary policy mostly acts through the demand channel and with a delay, it is difficult to give an objective assessment of the influence of supply and demand factors on the movement of headline inflation.

### Effects of inflation in the EU

Supply-side shocks, particularly supply bottlenecks caused by the pandemic, the Russian invasion of Ukraine and the ensuing energy crisis, have raised input costs for businesses. At the same time, the lifting of restrictions and the gradual opening of the EU economy have influenced an increase in consumption, which has enabled companies to pass these costs on to prices much faster and more strongly than in the past. Shocks on the supply side and to some extent on the demand side continuously fuelled inflationary pressures and immediately contributed to its explosion in the short term.

At the beginning of 2022, headline inflation, measured by the Harmonized Index of Consumer Prices (HIPC), in the euro area, increased and was higher than the target inflation of 2%. In the same

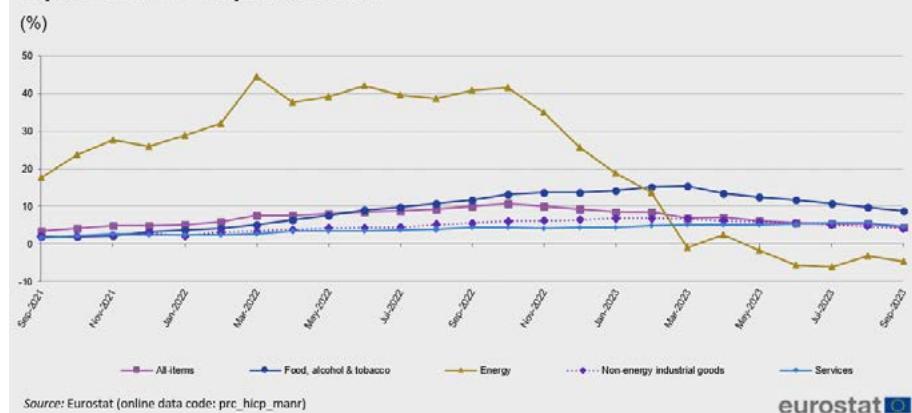
*„The increase in wages has a double effect on the growth of inflation, firstly through an increase in the price of labour, and secondly through an increase in the price of food“*

(4,1% u odnosu na avgust 4,7%) i hrane, alkohola i duvana (8,8% u poređenju sa 9,7% u avgustu). U međuvremenu troškovi energije su dodatno opali (sa -4,6% na -3,3%). Bazna inflacija (osnovna) koja meri nestabilne cene hrane i energije je iznosila 4,5% u septembru što je najniža od avgusta 2022 god kada je iznosila 5,3%.

mesec iznosila je 2,7% na godišnjem nivou drugi mesec zaredom, (nezaokruženo na 2,66% bio je samo neznatno veći u odnosu na raniji 2,65%, kada je bio najniži od septembra 2021) u poređenju sa devet meseci uzastopnog usporavanja. Ovo je u poređenju sa dostignutim vrhuncem od 6,6%. PCCI za energiju i hrana je usporila na 2,2% na go-

ECB monetarnom analizom, posebno prati dinamiku bazne inflacije kao pokazatelja sigurnije putanje inflacije koja može da se sagleda u realnom vremenu. Međutim bazna inflacija nije dobar pokazatelj glavnih inflatornih pritisaka iz razloga što se oni mogu proširiti izvan energetskog i prehrambenog sektora. Energija i hrana mogu imati uticaj na baznu inflaciju kroz trade of input-output jer obe se koriste za proizvodnju raznih proizvoda i usluga. Rast inflacije, pod uticajem cene energije i hrane, je domino efektom dovodi do povećanja ostalih cena, kroz input-output strukture, automatske indeksacije mnogih proizvoda i usluga i automatske indeksacije plata. Energija, a pre svega, prirodni gas je input u skoro svim privrednim sektorima i koristi se kao hemijska sirovina i kao izvor energije. Povećane cene prirodnog gasa deluju na povećanje troškova proizvodnje i cene usluga. Ukoliko su preduzeća u stanju da uvećane troškove proizvodnje prenose na druga preduzeća ili krajnje potrošače to dovodi do rasta cena i povećanja inflatornih pritisaka. Pored toga,

**Euro area annual inflation and its main components, September 2021 - September 2023**

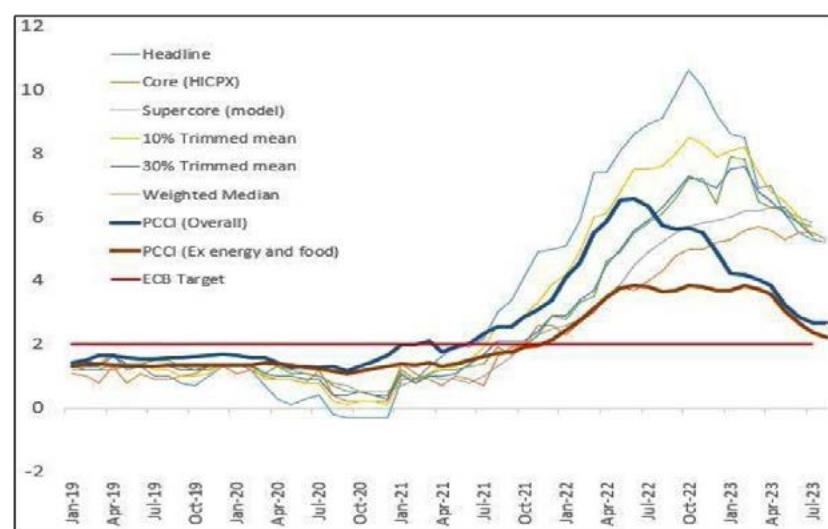


Grafikon 1. Godišnja stopa inflacije i njene glavne komponente, septembar 2021-septembar 2023  
Izvor: ec.europa.eu/eurostat, October 2023

Svaka od glavnih komponenti doprinosi u različitom stepenu ukušnoj inflaciji u evrozoni. U smislu (HICP sa 100% u 2023) usluge su najveća komponenta, koja čini oko 43,5% izdataka za krajnju novčanu potrošnju domaćinstava u evrozoni. Slede neenergetska industrijska dobra sa oko 26,3 %. Hrana, alkohol i duvan i energija čine oko 20,0 % i 10,2 %, respektivno. Zajedno, oni čine manje od jedne trećine rashoda evrozone, ali mogu imati značajan uticaj na ukupnu inflaciju pošto njihove cene imaju tendenciju da osciliraju znatno više od ostalih komponenti.

Procena ECB, vezana za Postojanu i Zajedničku Komponentu Inflacije (PCCI-Persistent and Common Component of Inflation) za avgust

dišnjem nivou sa 2,4% što je najniže od decembra 2021 (2,9%). Dok su mere PCCI ublažene poslednjih meseci, većina drugih indikatora, takođe, pokazuju znake preokreta.

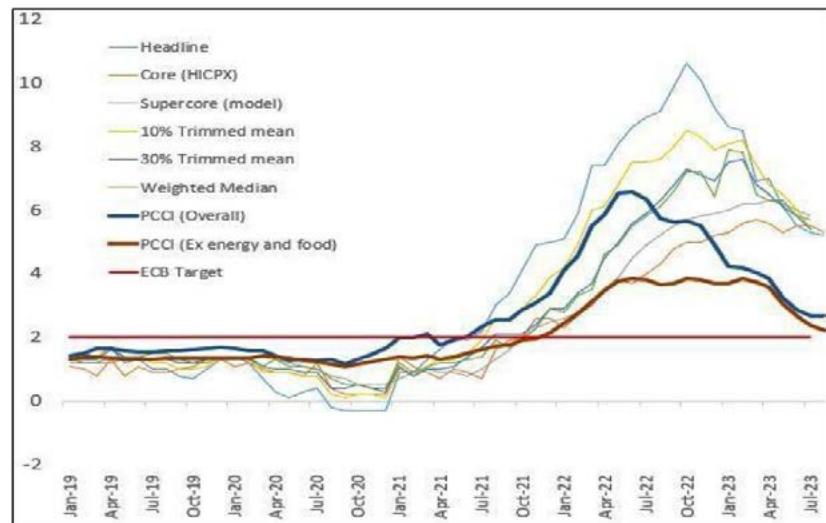


Grafikon 2. Medugodišnje mere osnovne inflacije u evrozonu  
Izvor: Coper, T., Lundh, E., Market Analyses, September 2023

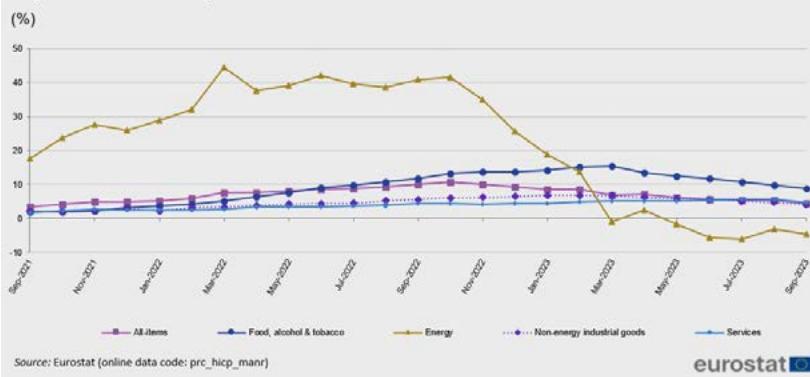
year, in January, the year-on-year increase in prices, or inflation, reached a level of 5.1%. Since January, price growth has doubled to reach a peak of 10.6% in October 2022, after which it began to decline, but still remained at a high level, reaching 8.5% in February 2023. In May 2023, inflation fell compared to February and amounted to 6.1%, and in September it reached 4.3% at the annual level and was the lowest since October 2021. The drop in inflation was influenced by the dynamics of slower price growth in September in the services sector (4.7% compared to 5.5% in August), non-energy industrial goods (4.1% compared to August 4.7%) and food, alcohol and tobacco (8.8% compared to 9.7% in August). Meanwhile, energy costs further decreased (from -4.6% to -3.3%). Core inflation, which measures volatile food and energy prices, was 4.5% in September, which is the lowest since August 2022, when it was 5.3%.

for about 43.5% of the expenditure for final monetary consumption of households in the euro area. Non-energy industrial goods followed with around 26.3%. Food, alcohol and tobacco and energy account for about 20.0% and 10.2%, respectively. Together, they accounted for less than one-third of euro area expenditure, but could have a significant impact on headline inflation as their prices tend to fluctuate significantly more than other components.

was only slightly higher in comparison to an earlier 2.65%, when it was the lowest since September 2021) compared to nine consecutive months of deceleration. This compares to a peak of 6.6%. The PCCI for energy and food slowed to 2.2% y/y from 2.4%, the lowest since December 2021 (2.9%). While PCCI measures have eased in recent months, most other indicators are also showing signs of turning around.



**Euro area annual inflation and its main components, September 2021 - September 2023**



**Chart 1. Annual inflation rate and its main components, September 2021-September 2023**  
Source ec.europa.eu/eurostat, October 2023

Each of the main components contributes to a different degree to headline inflation in the euro area. In that regard (HICP with 100% in 2023), services were the largest component, which accounts

The ECB estimate related to the Persistent and Common Component of Inflation (PCCI) for the month of August was 2.7% on an annual basis for the second month in a row, (unrounded at 2.66%, it

**Chart 2. Interannual measures of core inflation in the euro area**  
Source: Coper, T., Lundh, E., Market Analyses, September 2023

ECB monetary analysis, in particular, monitors the dynamics of core inflation as an indicator of a safer path of inflation that can be seen in real time. However, core inflation is not a good indicator of the main inflationary pressures because they may extend beyond the energy and food sectors. Energy and food can have an impact on core inflation through the trade of input-output because both are used to produce various products and services. The growth of inflation, under the influence of energy and food prices, has a domino effect leading to an increase in other

*„Smanjenje obima kreditiranja prati i stopa rasta novčane mase M3 koja je u julu bila negativna, prvi put nakon 2010 god sa tendencijom daljeg pada u budućem periodu“*

direktna indeksacija plata, koja postoji u mnogim zemljama EU, uslovjava rast zarada što deluje, takođe, na inflatorne pritiske. To, rastući pritisci na zarade sve više deluju kao značajan faktor povećanja inflacije. U ovom periodu, radnici su ostvarili ozbiljne gubitke na zarade usled manjih ukupnih prihoda koji su posledica energetske krize. Njihove zarade su bile 4% niže nego u vremenu pandemije. Tržišta rada, u evrozoni, su međusobno usko povezana i imaju snažnu pregovaračku moć koju radnici već koriste kako bi kompenzovali gubitke u zaradama. Pored toga nedostatak kvalifikovane radne snage deluje na sklapanje novih ugovora o radu sa višim zaradama u mnogim delatnostima. Porast zarada dvostruko deluje na rast inflacije, prvo kroz povećanje cene rada i drugo kroz povećanje cene hrane. Uprkos tome, ne mora da znači da će u periodu kompenzacije zarada usled gubitka doći do neopravdanog rasta uporne inflacije. Do ovoga ne bi trebalo da dođe, ako se troškovi energetskog šoka na kraju podele na uravnotežen način između preduzeća i radnika. Znači i da i bazna inflacija nije imuna od promenljivih cena energija.

#### ODGOVOR ECB

ECB, svesna da će ostvareni oporavak nakon pandemije, biti ugrožen i da

će rat u Ukrajini, značajno delovati na pad ekonomije i da javne politike nisu u stanju da učine mnogo, sa izvesnim zakašnjenjem preduzela je odgovarajuće mere. Posvećena očuvanju stabilnosti cena, a da bi podržala privredu i stanovništvo i ublažila rizike u evrozoni, ECB je preduzela korake u normalizaciji monetarne politike. Ti koraci se odnose, pre svega na, uspostavljanje prilagodljivog, odnosno, odgovarajućeg stava monetarne politike u novonastalim uslovima.

U skladu sa usvojenim redosledom mera ECB 1. jula, 2022. god prekinula neto kupovine u okviru PEPP-(PEPP-Pandemic Emergency Purchase Programme). Portfolio programa kupovine imovine (APP-Asset Purchase Programme) opada izmerenim i predvidljivim tempom, pošto Eurositem ne reinvestira sve otplate glavnica iz HoV koje dospevaju. ECB je odlučila da nastavi sa reinvestiranjem, i isplatom glavnica iz dospelih HoV kupljenih u okviru, APP i nakon povećanja ključne kamatne stope, koliko je to potrebno kako bi održala uslove likvidnosti.

Nakon najave ECB, juna 2022. god, da će uskoro krenuti sa povećanja kamatnih stopa, iznenadni šok inflacije u SAD je izazvao neočekivana, snažna i neopravdana gibanja na tržištu državnih obveznica, što je dovelo do zabrinutosti usled

pojačanih tendencija koje mogu da ugroze i dovedu do disfunkcije, odnosno fragmentacije tržišta. Da bi se sprečila fragmentacija tržišta i obezbedio prenos prilagodljivog stava monetarne politike, formiran je novi program Instrument za zaštitu transmisije (TPI-Transmission Protection Instrument). Pri tom, ozbiljno se obraćala pažnja da se ne remeti prilagodljiv stav monetarne politike. TPI je omogućio kupovinu HoV javnog sektora, u jurisdikcijama koje su ispunile uslove podobnosti za prodaju ovih sredstava. Program TPI se pokazao kao snažan alat koji je pomogao da se zaustavi i smanji neopravdani rast suverenih spredova. On je pomogao, da se osigura nesmetan prenos prilagodljivog stava monetarne politike u evrozoni. Od objavljuvanja TPI-a suvereni spredovi su bili ograničeni na raspon i prilično neosetljivi na promene u očekivanjima kamatnih stopa, uprkos ponovljenim okovima zaostrevanja tokom proteklete godine kako bi se nastavio ciklus oštrog povećanja kamatnih stopa bez presedana. Prema tome TPI je bio važan alat u nesmetanom prenosu monetarne politike i značajno doprineo rešavanje inflatornih pritisaka.

Istovremeno, neviđeni i nagli skok inflacije, je primorao ECB da posegne za snažnim i oštrim merama monetarne politike. Uvidevši jasne, buduće izglede za inflaciju ona je brzo i u potpunosti promenila kurs monetarne politike uvođenjem restriktivnih mera ili politiku skupog novca. (Tabela 1) Prvo povećanje kamatne stope je usledilo, nakon ozbiljnog povećanja stope inflacije,

prices, through the input-output structure, the automatic indexation of many products and services, and the automatic indexation of salaries. Energy, and above all, natural gas, is an input in almost all economic sectors and is used as a chemical raw material and as a source of energy. Increased natural gas prices increase production costs and service prices. If companies are able to pass on the increased production costs to other companies or end consumers, this leads to rising prices and increasing inflationary pressures. In addition, the direct indexation of wages, which exists in many EU countries, causes the growth of wages, which also affects inflationary pressures. Therefore, rising wage pressures are increasingly acting as a significant factor in increasing inflation. During this period, workers experienced serious wage losses due to lower total incomes as a result of the energy crisis. Their earnings were 4% lower than during the pandemic. Labour markets in the euro area are closely interconnected and have strong bargaining power that workers are already using to compensate for wage losses. In addition, the lack of qualified labour affects the conclusion of new labour contracts with higher wages in many industries. The increase in wages has a double effect on the growth of inflation, firstly through an increase in the price of labour, and secondly through an increase in the price of food. Despite this, it does not necessarily mean that there will be an unjustified increase in persistent inflation during the compensation period due to the loss of wages. This should not happen, if the costs of the energy shock are eventually shared in a balanced way

between companies and workers. It also means that base inflation is not immune from fluctuating energy prices.

### ECB RESPONSE

The ECB, aware that the recovery achieved after the pandemic will be threatened, the war in Ukraine will significantly affect the decline of the economy, and the public policies are not able to do much, took appropriate measures with a certain delay. Committed to preserving price stability, and aimed at supporting the economy and the population and mitigating risks in the euro area, the ECB has taken steps to normalize monetary policy. These steps relate, first of all, to the establishment of an adaptive or an appropriate monetary policy stance in the newly created conditions.

In accordance with the adopted sequence of measures, the ECB stopped net purchases within the Pandemic Emergency Purchase Programme (PEPP) on 1 July 2022. The asset purchase programme (APP) portfolio is declining at a measured and predictable pace, as Eurosystem does not reinvest all of the principal repayments from maturing securities. The ECB has decided to continue reinvesting, and paying principals from maturing securities purchased under the APP even after the key interest rate hike, as necessary to

maintain liquidity conditions.

After the announcement by the ECB, in June 2022, that it will soon start raising interest rates, the sudden shock of inflation in the USA caused unexpected, strong and unjustified movements in the government bonds market, which led to concerns due to increased tendencies that could threaten and lead to market dysfunction, i.e., fragmentation. In order to prevent market fragmentation and ensure the transmission of an adaptive monetary policy stance, a new Transmission Protection Instrument (TPI) programme was created. At the same time, serious attention was paid not to disturb the adaptive stance of monetary policy. TPI has enabled the purchase of public sector securities in jurisdictions that have met the eligibility requirements for the sale of these assets. The TPI programme has proven to be a powerful tool that has helped to stem and reduce undue growth in sovereign spreads. It helped ensure a smooth transfer of the accommodative stance of monetary policy in the euro area. Since the TPI launch, sovereign spreads have been range-bound and fairly insensitive to changes in interest rate expectations, despite repeated tightening over the past year to continue a cycle of unprecedented sharp rate hikes. Therefore, the TPI was an important tool in the smooth transmission of monetary policy

*,The decrease in the lending volume is also accompanied by the growth rate of the money supply M3, which was negative in July, for the first time since 2010, with a trend of further decline in the future*

u juli 2022 god i od tada kamatna stopa je povećana za 450 baznih poena za godinu i mesec dana sa -0,50 na 4,0 septembra 2023 god.

bilansa stanja ECB za 1,6 bilion evra i 109 milijardi evra respektivno. Pooštravanju uslova finansiranja su doprineli i povećanje oročenih

kreditnih uslova. Realni sektor, je zbog toga, prinuđen da svoje planove proizvodnje, investicije, štednje i potrošnje prilagođavaju promenama finansijskih uslova. Prenos monetarne politike na realni sektor se odvija sporije, mada procene zasnovane na modelima, ukazuju da zbog poznatih zaostajanja u monetarnoj transmisiji najveći efekat pooštravanja se očekuje da će se ispoljiti tokom ove i sledeće godine. Očekuje se da će pooštravanje monetarne politike nastaviti da deluje i u narednim mesecima, pošto rokovi dospeća kredita sa fiksnom kamatnom stopom ističu a banke se susreću sa povećanim troškovima kreditiranja, iz razloga što sve više štediša ulaže u oročene depozite i obveznica banaka sa visokim prinosima. Kod zajmodavca postoji bojan za da će kamatne stope na neizmirene dugove nastaviti da rastu kako se kreditni uslovi progresivno menjaju. Smanjenje obima kreditiranja prati i stopa rasta novčane mase M3 koja je u julu bila negativna, prvi put nakon 2010 god sa tendencijom daljeg pada u budućem periodu.

Povećanje ključnih kamatnih stopa je usledilo nakon tri reakcione funkcije, i to: prva budući izgledi inflacije na nakon sagledavanja dostupnih finansijskih i ekonomskih podataka, drugi, dinamika i trend osnovne inflacije i treće jačina transmisione politike. ECB smatra da su poslednja povećanja ključnih kamatnih stopa, dostigle nivo koji je dovoljan da do prinesu pravovremenom postizanju ciljane inflacije od 2% pod uslovom da opstanu dugo koliko je potrebno. U tom smislu, ECB je opredeljena da, u okviru funkcije reagovanja, kao okvirom za buduće odluke, nastavi da sledi pristup koji je zasnovana da podacima u sprovođenju restriktivne monetarne politike sve do ostvarenje simetričnog cilja inflacije.

Pored toga, naknade za treću seriju Dugoročnih ciljanih operacija refinansiranja (TLTRO III) i usporavanje i naknadni prekid reinvestiranja u okviru kupovine programa APP su dovele do smanjenja

premija i odlivanje likvidnosti iz bankarskog sektora bez obzira što je povećanje referentnih kamatnih stopa ključno sredstvo za prilagođavanje stava monetarne politike. Uz to, dodatno pooštravanje globalne monetarne politike, takođe je delovalo na smanjenje inflatornih pritisaka kroz međunarodnih finansijskih i ekonomskih odnosa.

Posebno, ECB u svetu nastalih obaveza, je usredsređena na kontinuiranu procenu transmisije monetarne politike na uslove finansiranja realne ekonomije i naravno na inflaciju. U trenutnom ciklusu, uticaj transmisije monetarne politike na uslove finansiranja je bio veoma snažan. Kamatne stope na kredite, posebno za nove poslove su brzo porasle što je uticalo na znatni pad obima kredita sa tendencijom daljeg smanjenja. To je uticalo na priličan pad kreditiranja privrede i stanovništva kao posledica većih troškova finansiranja banaka i pooštravanje

## OSTVARENI EFEKTI I OPTIMISTIČKA OČEKIVANJA I RIZICI

Ostvareni pozitivni efekti monetarne politike, u suzbijanju inflatornih pritisaka je posejao oprezno-optimistička očekivanja u budućem periodu. Povoljan zaokret inflatorne putanje, naniže, usled pada cene energije i delimično prehrambenih proizvoda su proizvela pozitivna buduća očekivanja, pre svega u značajnom snižavanju glavne inflacije. Očekuje se da bi ukupna inflacija, mogla u narednim mesecima, da ostvari silaznu putanje

	Referentna kamatna stopa	Glavne stope refinansiranja (MRO)	Olakšice marginalnog kreditiranja
18. Septmber 2019	-0,50	0,00	0,25
27. Jul 2022	0,00	0,50	0,75
14. September, 2022	0,75	1,25	1,50
2. November 2022	1,50	2,00	2,25
21. December 2022	2,00	2,50	2,75
8. February 2023	2,50	3,00	3,25
22. Mart 2023	3,00	3,50	3,75
10. Maj 2023	3,25	3,75	4,00
21. Jun 2023	3,50	4,00	4,25
2. Avgust	3,75	4,25	4,50
20. Septembar	4,00	4,50	4,75

Tabela 1: Kretanje ključnih kamatnih stopa ECB

Izvor: ecb.europa.eu/stats/polici 2023

and significantly contributed to the resolution of inflationary pressures.

At the same time, the unprecedented and sudden jump in inflation forced the ECB to resort to strong and harsh monetary policy measures. Seeing clear, future prospects for inflation, the ECB quickly and completely changed the course of monetary policy by introducing restrictive measures or a policy of expensive money (Table 1). The first increase in the interest rate followed, after a serious increase in the inflation rate in July 2022, and since then the interest rate has increased by 450 basis points for a year and a month from -0.50 to 4.0 in September 2023. The increase in key interest rates followed three reaction functions, namely: first, the future prospects of inflation after considering the avail-

of 2%, provided that they persist for as long as necessary. In this sense, the ECB is determined to continue to follow a data-based approach in the implementation of restrictive monetary policy until the symmetric inflation goal is achieved, within the framework of the reaction function, as a framework for future decisions.

In addition, charges for the third series of Targeted Long-Term Refinancing Operations (TLTRO III) and the slowdown and subsequent cessation of reinvestment under the APP purchase programme reduced the ECB's balance sheet by €1.6 trillion and €109 billion respectively. The increase in term premiums and the outflow of liquidity from the banking sector also contributed to the tightening of financing conditions, regardless of the fact that the

In particular, the ECB, in the light of the resulting obligations, is focused on the continuous assessment of the transmission of monetary policy to the financing conditions of the real economy and, of course, to inflation. In the current cycle, the impact of monetary policy transmission on financing conditions has been very strong. Interest rates on loans, especially for new businesses, rose rapidly, which had an impact on a significant drop in the volume of loans with a tendency to further decrease. This had an impact on a significant decline in lending to the economy and the population as a result of higher bank financing costs and tightening of lending conditions. As a result, the real sector is forced to adapt its production, investment, savings and consumption plans to changes in financial conditions. The transmission of monetary policy to the real sector is taking place more slowly, although estimates based on models indicate that due to known lags in monetary transmission, the greatest effect of the tightening is expected during this and next year. It is expected that the tightening of monetary policy will continue in the coming months, as fixed-rate loan maturities expire and banks face increased lending costs, as more and more depositors invest in term deposits and high-yield bank bonds. Lenders fear that interest rates on outstanding debts will continue to rise as lending conditions progressively change. The decrease in the lending volume is also accompanied by the growth rate of the money supply M3, which was negative in July, for the first time since 2010, with a trend of further decline in the future.

	Reference interest rate	main Refinancing Rates (MROs)	Marginal lending facilities
18 September 2019	-0.50	0.00	0.25
27 July 2022	0.00	0.50	0.75
14 September 2022	0.75	1.25	1.50
2 November 2022	1.50	2.00	2.25
21 December 2022	2.00	2.50	2.75
8 February 2023	2.50	3.00	3.25
22 March 2023	3.00	3.50	3.75
10 May 2023	3.25	3.75	4.00
21 June 2023	3.50	4.00	4.25
2 August	3.75	4.25	4.50
20 September	4.00	4.50	4.75

Table 1: Key ECB interest rates  
Source: [ecb.europa.eu/stats/policy](http://ecb.europa.eu/stats/policy) 2023

able financial and economic data, second, the dynamics and trend of core inflation, and third, the strength of the transmission policy. The ECB believes that the latest increases in key interest rates have reached a level sufficient to contribute to the timely achievement of the inflation target

increase in reference interest rates is a key tool for adjusting the stance of monetary policy. In addition, the additional tightening of global monetary policy also affected the reduction of inflationary pressures through international financial and economic relations.

*„Očekivanja su da će inflacija u evrozoni nastaviti da se smanjuje usled ublažavanju pritisaka na troškove kao i delovanjem stroge monetarne politike“*

koja bi konvergirala na nivo nešto iznad ciljane stope od 2%.

Od oktobra prošle godine ukupna inflacija se smanjila više od polovine. Smanjenje inflacije je rezultat promene u glavnim komponentama inflacije i odražava pad cene energenata, ublažavanje uskih grla snabdevanja i uticaj strože monetarne politike. Ipak bazna inflacija i dalje tvrdoglavostaje na višem nivou kao posledica slabljenja uticaja prošlogodišnjeg rasta troškova inputa koji se uravnotežuje sa rastućim troškovima rada. Takođe zahtev zaposlenih da nadoknade gubitke u platama u uslovima zategnutosti tržišta rada su doveli do visokog rasta plata. Očekivanja su da će inflacija u evrozoni nastaviti da se smanjuje usled ublažavanju pritisaka na troškove kao i delovanjem stroge monetarne politike. Očekuje se da će troškovi rada, odnosno plate postepeno da počnu da opadaju, bez obzira na trenutne visoke vremenske projekcije, podstaknute rastom minimalnih cena rada i kompenzacije usled inflacije u okviru zategnutih tržišta rada. Takođe, očekivanja su i da će profitne marže, koje su se povećale prošle godine, obezbediti neku vrstu prelaska (tampona) troškove rada na krajnje iznose u srednjem roku.

Međutim izgledi inflacije i dalje su u značajnoj meri neizvesni. Rizici

rasta inflacije i dalje su prisutni na moguće potencijalno obnavljanje pritisaka na rast cena odnosno troškova energije i hrane. Posebno se to odnosi na troškove hrane, usled nepovoljnih vremenskih prilika i širenja klimatskih nevolja, koje bi mogle da izazovu porast cene hrane iznad očekivanog. Takođe, efekti povećanje plata i profita iznad očekivanog nivoa mogu da podstaknu porast inflacije čak i u srednjem roku. Pored toga, čini se da je prilično podcenjen štetan uticaj krize pandemije i energetske krize na proizvodne kapacitete EU koji dodatno deluju na inflatorne rizike. Dodatno, situaciju može da zamrsi najnoviji sukob na Bliskom istoku, bez obzira što je za sada ekonomski uticaj rata između Izraela i Hamasa relativno ograničen. Ipak postoji bojan da bi produženje rata sa potencijalnim proširenjem eskalacije na Bliskom istoku, mogao da preokrene teško ostvarene pozitivne efekte inflacije i rasta.

S druge strane, zbog zaoštrevanja transmisije monetarne politike ili pogoršanje međunarodne situacije (rat Bliski Istok) može doći do usporavanja i slabljenja agregatne tražnje što bi se povoljno odrazilo na smanjenje pritisaka na cene posebno na srednji rok. Zbog, toga, ali drugih uticaja, ECB treba da sprovodi restriktivnu monetarnu

politiku, sve do momenta dok bazna inflacija ne dostigne ciljni nivo. Možda će za ostvarenje tog cilja, biti potrebno pooštavanje mera u nekim članicama, gde su realne kamatne stope niske, tržišta rada prepregnuta a glavna inflacija lepljiva. Zbog potencijalnih pretnji i rizika, po izgledima za buduće kretanje inflacije, preduzete oštре mere monetarne politike, zbog poznatog kašnjenja, tek treba u budućem periodu da pokažu svoje efekte

ECB je, usvojenim merama, uverena da će restriktivnom politikom, povećanjem ključnih kamatnih stopa i smanjenjem agregatne tražnje uspeti da smanji inflaciju i takođe, da zaštititi ekonomiju od neizvesnosti i rizika usled stalnih inflatornih pritisaka. Restriktivna monetarna politika, ne bi bila neophodna da bi ostvarila svoje ciljeve u slučaju pooštavanja finansijskih uslova koji deluju na finansijsku stabilnost. Povećanje ključnih kamatnih stopa predstavljaju rizike i izazivaju zabrinutost za finansijsku stabilnost, ali zbog toga, bi verovatno pogrešno bilo preduzeti mere popuštanja u monetarnoj politici. Da bi se održala finansijska stabilnost, neophodno je sprovoditi redovne nadzor bankarskog i nebanskarskog sektora, kontrolisati njihove planove i korektivne mere u slučaju pojave finansijskih nevolja.

## REALISED EFFECTS AND OPTIMISTIC EXPECTATIONS AND RISKS

The achieved positive effects of monetary policy in suppressing inflationary pressures, sowed cautiously optimistic expectations in the future. The favourable turn of the inflationary path, downwards, due to the drop in the price of energy and partly of food products, produced positive future expectations, primarily in a significant lowering of the headline inflation. It is expected that headline inflation could, in the coming months, achieve a downward trajectory that would converge to a level slightly above the target rate of 2%.

Since October last year, headline inflation has decreased by more than half. The decrease in inflation is the result of a change in the main components of inflation and reflects the decline in energy prices, the easing of supply bottlenecks and the impact of tighter monetary policy. However, core inflation still stubbornly remains at a higher level as a result of the weakening impact of last year's increase in input costs, which is balanced by rising labour costs. Also, the demand of employees to compensate for wage losses in conditions of tight labour market led to high wage growth. Inflation in the euro area is expected to further decline due to the easing of pressures on costs as well as the actions of strict monetary policy. It is expected that labour costs, i.e., wages, will gradually begin to decline, regardless of the current high time projections, fuelled by the increase in minimum labour prices and compensation due to inflation within the framework of tight labour markets. It is also expected that profit margins, which increased last year, will provide a kind

of transfer (buffer) of labour costs to final amounts in the medium term.

However, the outlook for inflation is still largely uncertain. The risks of inflation growth are still present due to the possible renewal of pressures on price growth, i.e., energy and food costs. This especially applies to food costs, due to unfavourable weather conditions and the spread of climate problems, which could cause the price of food to rise above the expectations. Also, the effects of the increase in wages and profits above the expected level can encourage an increase in inflation even in the medium term. In addition, it seems that the harmful impact of the pandemic crisis and the energy crisis on the EU production capacities, which additionally affect inflationary risks, is rather underestimated. Additionally, the situation may be complicated by the latest conflict in the Middle East, regardless of the fact that for now the economic impact of the war between Israel and Hamas is relatively limited. However, there is a fear that the prolongation of the war with the potential extension of the escalation in the Middle East could reverse the difficult-to-achieve positive effects of inflation and growth.

On the other hand, due to the tightening of the transmission of monetary policy or the deterioration of the international situation (war in the Middle East), there may be a slowdown and weakening of the aggregate demand, which would have

a favourable effect on the reduction of price pressures, especially in the medium term. Due to this and other influences, the ECB should implement a restrictive monetary policy until the core inflation reaches the target level. Perhaps, in order to achieve that goal, it will be necessary to tighten measures in some Member States, where real interest rates are low, labour markets are overstrained and headline inflation is sticky. Due to potential threats and risks, according to the prospects for the future trend of inflation, the harsh monetary policy measures taken, due to the known delay, have yet to show their effects in the future period.

The ECB is convinced that, with the adopted measures, a restrictive policy, an increase in key interest rates and a reduction in aggregate demand, it will succeed in reducing inflation and also in protecting the economy from uncertainty and risks due to constant inflationary pressures. A restrictive monetary policy would not be necessary to achieve its goals in the event of a tightening of financial conditions affecting financial stability. Increases in key interest rates pose risks and raise concerns for financial stability, but because of this, it would probably be wrong to take quantitative easing in monetary policy. In order to maintain financial stability, it is necessary to carry out regular supervision of the banking and non-banking sectors, to control their plans and corrective measures in the event of financial problems.

*„Inflation in the euro area is expected to further decline due to the easing of pressures on costs as well as the actions of strict monetary policy*

# Sa učenicima o važnosti štednje

Povodom Svjetskog dana štednje, 31. oktobra, UBCG, u saradnji sa poslovnim bankama članicama Udruženja banaka Crne Gore, organizuje akciju „Nedjelja štednje“. Svjetski dan štednje je dan kada se podsjećamo koliko je važno imati finansijsku sigurnost u vidu ušteđevine i koliko je važno štedjeti za postavljene ciljeve. Svjetski dan štednje ustanovljen je 31. oktobra 1924. godine u Milanu, na prvom Međunarodnom kongresu štedionica. Banke širom svijeta i skoro cijeli vijek kasnije, na ovaj dan nagrađuju svoje najvernije štediše i podsećaju koliko je finansijska sigurnost bitna. Oni su istakli važnost štednje za pojedinca ali i za razvoj čovečanstva, važnost borbe protiv svakog oblika rasipništva, kao i koliko je bitna finansijska edukacija u školama.

U skladu sa prethodnim, tokom ove akcije organizuju se i brojne edukativne aktivnosti koje imaju za cilj širenje finansijske pismenosti i ekonomskih znanja i vještina među djecom i omladinom. Ovim povodom, predstavnici Udruženja su već posjetili OŠ Sutjeska u Podgorici, a zatim predavanje o značaju štednje, raspolažanju novcem, kao i značaju finansijske inkluzije, istorijatu novca i banaka – održano je u Budvi u OŠ Stefan Mitrov Ljubiša. Planiraju se predavanja srednjoškolcima, kao i studentskoj, ali i starijoj populaciji. Udruženje kroz predavanje želi približiti šta je to banka, koje su funkcije, kako se štedi i koje su

koristi finansijske pismenosti, gdje su banke obezbijedile i prigodne poklonje za sve učenike koji prisustvuju predavanjima.

Program i godišnji aktioni planovi pripremaju se sa ciljem podsticanja svih učesnika finansijske edukacije na zajedničko djelovanje u pravcu ostvarenja opšteg cilja Programa - povećanja nivoa finansijske pismenosti građana Crne Gore, gdje nijesu samo u fokusu štednja i bankarski proizvodi, već i kako se zaštiti od prevarnih radnji u dobu digitalizacije koje živimo. Osnovna poruka je da nikad ne dijelite svoje lične podatke, lozinke, ili PIN ni telefonom, niti mail-om, niti nepoznatim ljudima

koji se mogu predstaviti na vratima stana kao da su iz banke, jer to banke nikad ne rade već u samoj banci.

*„Udruženje kroz predavanje želi približiti šta je to banka, koje su funkcije, kako se štedi i koje su koristi finansijske pismenosti*

# With Students About the Importance of Savings

**O**n the occasion of the World Savings Day, 31 October, the Association of Montenegrin Banks, in cooperation with commercial banks that are members of the Association, organizes the "Savings Week". The World Savings Day is a day when we are reminded how important it is to have financial security in the form of savings and how important is to save for set goals. The World Savings Day was established on 31 October 1924 in Milan, at the first International Congress of Savings Banks. On this day, almost a century later, the banks around the world reward their most loyal depositors and remind them how important the financial security is. They emphasised the importance of savings for the individual but also for the development of humanity, the importance of fighting against all forms of wastefulness, as well as the importance of financial education in schools.

In that regard, numerous educational activities are organised with the aim of spreading financial literacy and economic knowledge and skills among children and the youth. On this occasion, the representatives of the Association have already visited the elementary school "Sutjeska" in Podgorica. In addition the lecture on the importance of savings, managing money, as well as the importance of financial inclusion, the history of money and banks was held in elementary school "Stefan Mitrov Ljubiša" in Budva. Lectures are planned for high school students, as well as students and the elderly population. Organising lectures, the

Association wants to bring closer what a bank is, what are its functions, how to save money, and what are the benefits of financial literacy. The banks also provided appropriate gifts for all students who attend the lectures.

The programme and annual action plans are prepared with the aim of encouraging all participants in financial education to work together to achieve the general goal of the programme - to increase the level of financial literacy of the citizens of Montenegro. The focus is not only on savings and banking products, but also on how to protect yourself from fraudulent activities in the digitalisation era in

which we live. The basic message is that you should never share your personal data, passwords, or PIN by phone, email, or to unknown people who may present themselves at the door of the apartment as if they are from the bank, because the banks never do that, but in the bank itself.

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Vaša

Zapad Banka



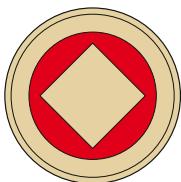
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