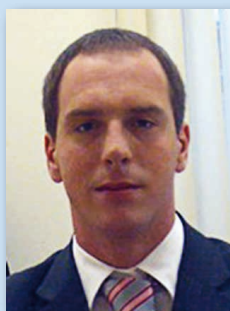


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NESTANDARDNE MERE MONETARNE POLITIKE

Rad je pripremljen u okviru projekta Ministarstva nauke i prosvete Republike Srbije (47004): "Unapređenje javnih politika u Srbiji u funkciji poboljšanja socijalne sigurnosti građana i održivog privrednog rasta".

Rezime

U radu se analiziraju novi mehanizmi vođenja monetarne politike koje centralne banke primenjuju u uslovima globalne finansijske i ekonomske krize. Objašnjavaju se kvantitativne olakšice i ostali slični mehanizmi koji su u upotrebi kod najvažnijih centralnih banaka sveta. Takođe, u radu se objašnjava razlika između klasičnih i nekonvencionalnih mera koje one imaju na raspolaganju. Kroz komparativnu analizu, dolazi se do zaključka da centralne banke primenjuju nestandardne mere kako bi uticale na ekspanzivnost monetarne politike i stimulisanje ekonomskog rasta.

Ključne reči: monetarna politika, centralna banka, kvantitativne olakšice, finansijska aktiva

JEL: E52, E58, E60

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NON-STANDARD MEASURES OF MONETARY POLICY

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Summary

The paper analyzes new mechanisms of carrying out a monetary policy, which the central banks have been implementing in times of the global financial and economic crisis. The paper elaborates on quantitative easing and other similar mechanisms used by the most important central banks in the world. In addition, the paper explains the difference between the classic and unconventional measures at their disposal. By means of a comparative analysis, the paper reaches a conclusion that central banks have been implementing non-standard measures in order to facilitate the expansionary monetary policy and stimulate the economic growth.

Key words: monetary policy, central bank, quantitative easing, financial assets

JEL: E52, E58, E60

Uvod

Nakon pojavljivanja prvih naznaka globalne finansijske krize 2007. godine i njenog intenziviranja godinu dana kasnije (propast jedne od najvećih investicionih banaka - *Lehman Brothers*), stvaraju se nove okolnosti koje pretpostavljaju uvođenje nestandardnih i nekonvencionalnih mera monetarne politike najznačajnijih centralnih banaka sveta. Rešavanje pitanja nedovoljne međunarodne likvidnosti i podsticanje slabe agregatne tražnje podrazumevalo je uspostavljanje novih mehanizama koje bi centralne banke imale na raspolaganju u okviru svojih instrumenata. Nakon septembra 2008. godine i pomenutog bankrotstva, dolazi do značajnog povećanja nesigurnosti i panike na finansijskim tržištima, naročito na tržištima novca. Spređovi kamatnih stopa na evropskom, američkom i britanskom tržištu dostigli su nezabeležene razmere dok je, s druge strane, obim transakcija drastično opao (posebno poslovi sa terminskim transakcijama). Efektivnost transmisionih mehanizama monetarne politike dovedena je u pitanje s obzirom da su akteri na finansijskim tržištima dovedeni u poziciju „zamke likvidnosti“ (*liquidity trap*)¹.

Navedene okolnosti zahtevale su brzu i odlučnu reakciju monetarnih vlasti. Pored vođenja ekspanzivne monetarne politike tradicionalnim instrumentima (kao što je npr. smanjivanje referentnih kamatnih stopa), centralne banke su predstavile set tzv. nestandardnih mera kako bi se adekvatno prilagodile aktuelnim dešavanjima. Mehanizam i forme ovih mera se donekle razlikuju među centralnim bankama ali, uprkos tome, sve teže istovetnim ciljevima - podršci finansijskim tržištima i sprečavanju urušavanja finansijskog sistema koji bi srednjoročno zapretilo makroekonomskoj i cenovnoj stabilnosti. Različitost u „dizajnu“ mera centralnih banaka, koje su prvenstveno bile aktuelne krajem 2008. i početkom 2009. godine zavisila je od nekoliko faktora: same strukture dotadašnjih

standardnih mera monetarne politike, veličine bilansa centralnih banaka i strukture finansijskog sistema regiona u kojem se nalazi određena zemlja.

Odvojenost standardnih od nestandardnih mera monetarne politike eksplicitno je prikazana kroz njihovo delovanje na finansijskim tržištima, naročito ukoliko se uporedo prate dešavanja pre i za vreme globalne finansijske tj. ekonomske krize. Mehanizam standardnih mera operacija na otvorenom tržištu prilično je poznat i brojna naučna literatura analizira njihov uticaj na realnu ekonomiju i nivo cena. Kada je reč o nestandardnim merama, situacija je malo drugačija. One se, po svojoj prirodi, nalaze izvan regularnog opusa monetarnih delovanja i kao takve nameću potrebu njihovog daljeg analiziranja i potrebne naučne zasnovanosti. Mnoge od nestandardnih mera koje su primenjene 2007. i 2008. godine predstavljaju modifikaciju postojećih instrumenata i procedura korišćenih u monetarnoj politici. Te modifikacije su implicirale promene u ulozi samih centralnih banaka: od posrednika na međubankarskom tržištu novca preko držalaca i portfolio menadžera pa sve do zajmodavca u krajnjoj instanci.

Kvantitativne olakšice

Najzastupljenije i najčešće korišćene nestandardne mere monetarne politike svakako predstavljaju tzv. kvantitativne olakšice (*quantitative easing*). U situacijama kada tradicionalni instrumenti nemaju više uticaja na makroekonomske agregate jer je referentna kamatna stopa dostigla najniži mogući nivo a istovremeno nema daljeg ekonomskog stimulansa, centralne banke preuzimaju drugačije mere. Naime, one kupuju različite oblike finansijske aktive od komercijalnih banaka i drugih (ne)finansijskih institucija kreiranjem dodatne novčane mase kako bi ubrizgale „svež“ novac u finansijske tokove. Ovakva mera se razlikuje od uobičajne kupoprodaje državnih hartija od vrednosti kako

¹ „Zamka likvidnosti“ je situacija opisana u Kejnzijanskoj ekonomiji koja se javlja u slučaju kada ekspanzivna monetarna politika (povećanje novčane mase u bankarskom sektoru) nema efekata na smanjenje kamatnih stopa i konsekvantno na stimulisavanje ekonomskog rasta. Njena karakteristika su veoma niske kamatne stope (blizu nule) i fluktuacije u monetarnoj bazi koje se ne „preslikavaju“ na opšti nivo cena.

Introduction

After the first indications of the global financial crisis in 2007 and its intensification one year later (the bankruptcy of one of the largest investment banks - *Lehman Brothers*), new circumstances were generated, which called for the implementation of non-standard and unconventional measures of monetary policy by the most significant central banks in the world. Addressing the issue of insufficient international liquidity and boosting the weak aggregate demand implied the establishment of new mechanisms that would be at the central banks' disposal within the scope of their instruments. After September 2008, in the aftermath of the mentioned bankruptcy, the financial market, in particular, money markets have been hit by a considerable increase in insecurity and panic. Interest rate spreads at the European, US and UK markets reached the unprecedented levels, whereas, on the other hand, the volume of transactions drastically fell (especially when it comes to forward transactions). Effectiveness of transmission mechanisms of monetary policy was brought into question given that the financial market players ended up in the position of a "liquidity trap"¹.

Such circumstances called for a swift and decisive reaction of monetary authorities. In addition to carrying out expansionary monetary policy by means of traditional instruments (including, for instance, reduction of reference interest rates), the central banks presented a set of the so-called non-standard measures in order to adequately adjust to the current developments. The mechanism and forms of these measures somewhat differ among the central banks involved, but, despite this, they all strive towards the same objectives - support to the financial markets and prevention of the financial system's disruption, which would in the mid term threaten the macroeconomic and price-related stability. The differences in the "design" of the central banks' measures,

which were mostly topical in late 2008 and early 2009, depended on several factors: structure itself of the present standard monetary policy measures, balance sheet size of the concerned central banks, and structure of the financial system of the region in which a certain country was located.

The separateness of standard and non-standard measures of monetary policy has been explicitly demonstrated through their effects on the financial markets, especially if one follows in parallel the development before and during the global financial, i.e. economic crisis. The mechanism of standard measures of open market operations is rather familiar and many scientific reference books analyze their impact on real economy and the price level. When it comes to non-standard measures, however, the situation is somewhat different. By their nature, they are located outside the regular scope of monetary actions and, as such, impose the need for their further analysis and required scientific justifiability. Many non-standard measures implemented in 2007 and 2008 represent a modification of the existing instruments and procedures used in monetary policy. These modifications implied the changes in the role of the central banks themselves: ranging from mediators at the interbank money market through holders and portfolio managers to lenders of the last resort.

Quantitative Easing

The most widespread and most frequently used non-standard measure of monetary policy is by all means the so-called *quantitative easing*. In situations when traditional instruments no longer have impact on macroeconomic aggregates because the reference interest rate reached its lowest possible level, and at the same time there is no other economic stimulus, central banks undertake a different set of measures. Namely, they purchase various forms of financial assets from commercial banks and other (non)financial institutions,

¹ "Liquidity trap" is a situation described in Keynesian economics, occurring when expansionary monetary policy (increase in money supply in the banking sector) has no effect on the reduction of interest rates and, consequently, on the stimulation of economic growth. Its characteristics are extremely low interest rates (approaching zero) and fluctuations in the monetary base which are not "mirrored" in the general level of prices.

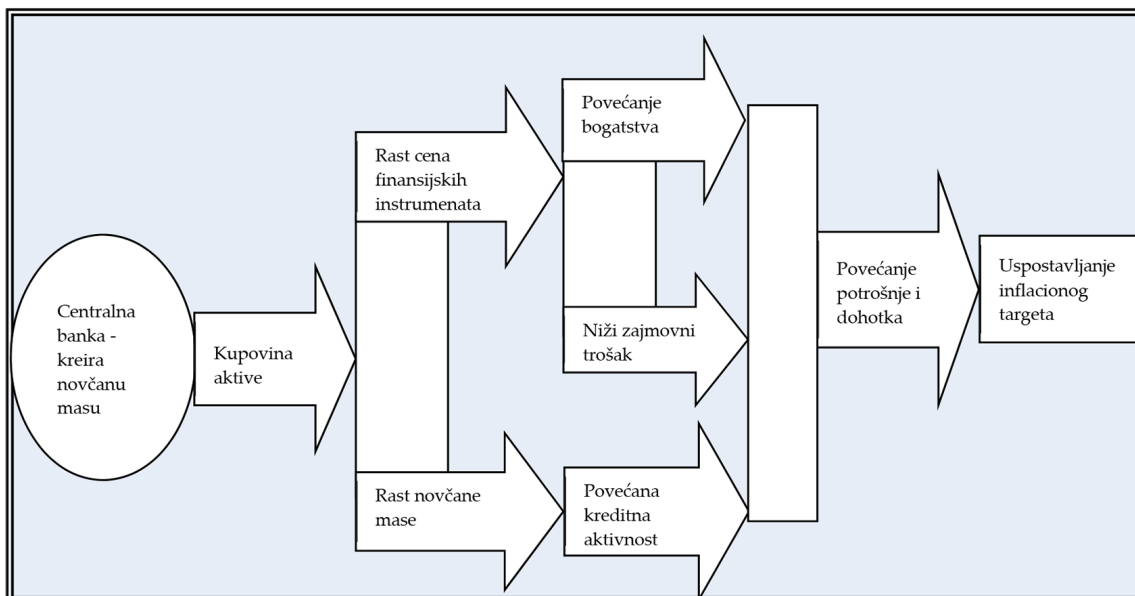
bi se uticalo na visinu referentne kamatne stope. Kvantitativne olakšice povećavaju višak rezervi banaka i utiču na povećanje cena finansijske aktive, smanjujući istovremeno njihov prinos (Elliot, 2009).

Za razliku od operacija na otvorenom tržištu gde se akcenat stavlja na kratkoročne državne zapise, centralne banke prilikom primene kvantitativnih olakšica kupuju dugoročnije državne obveznice kako bi uticale dalje na obaranje dugoročnih kamatnih stopa na prinosnoj krivi (u pomenutim situacijama kada su kratkoročne kamatne stope blizu nule ili na nuli, klasična monetarna politika ne može ih dalje obarati na duži rok). Na koji način funkcioniše proces primene kvantitativnih olakšica?

Direktno ubrizgavanje novca od strane centralne banke u finansijski sistem, kupujući prvenstveno državne hartije, može imati različite efekte (Šema 1). Prodavci finansijske aktive dolaze do viška novčanih sredstava koje, sledstveno, mogu trošiti i time pokretati dalju ekonomsku aktivnost. Alternativno, oni mogu kupovati drugu finansijsku aktivu, kao što su

akcije ili korporativne hartije. Na taj način utiče se na povećanje cena finansijskih instrumenata i njihovi vlasnici postaju bogatiji. Vlasništvo može biti direktno ili posredno, preko udela u određenim intermedijarnim finansijskim institucijama kao što su npr. privatni penzioni i investicioni fondovi. Povećanje cene finansijskih instrumenata istovremeno znači i manji prinos što utiče na niži zajmovni trošak za privredu i stanovništvo. Time se daje dalji podstrek povećanju potrošnje. S druge strane, banke se nalaze u poziciji viška rezervi koje u većoj meri mogu plasirati svojim komitentima i na taj način povećati svoju kreditnu aktivnost. Međutim, postavlja se pitanje da li će poslovne banke adekvatno reagovati ili će nerado davati kreditne zajmove i time zadržavati višak novca u svojim rezervama. Upravo iz tih razloga, centralne banke mogu obavljati proces kvantitativnih olakšica i sa drugim finansijskim institucijama u koji uključuje kupovinu različitih korporativnih hartija, o čemu će biti reči u sledećim poglavljima.

Šema 1: Proces primene kvantitativnih olakšica



Izvor: Rad autora

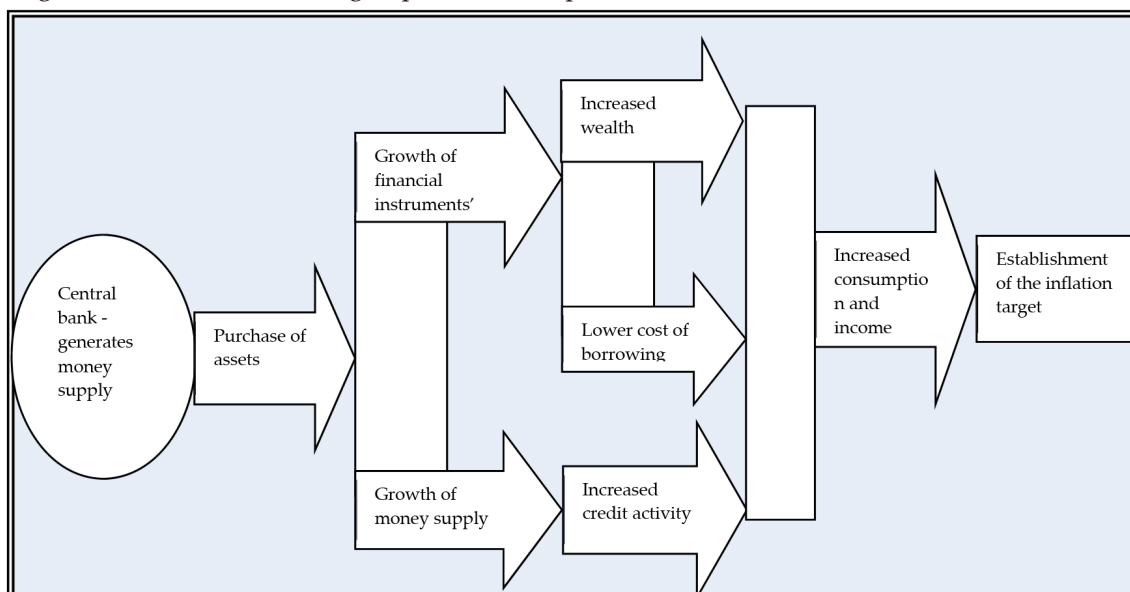
thus generating additional money supply in order to inject “fresh” capital into the financial flows. This measure differs from the typical buying and selling of government securities with a view to impacting the reference interest rate. Quantitative easing increases the surplus of banks’ reserves and causes an increase in financial assets prices, at the same time reducing their returns (Elliot, 2009).

As opposed to open market operations where the focus is on short-term T-bills, when implementing quantitative easing central banks purchase long-term government bonds in order to impact additional reduction of long-term interest rates on the revenue curve (in the mentioned situations when short-term interest rates are close to zero or zero, the classic monetary policy can no longer reduce them in the long run). How does the process of quantitative easing implementation actually work?

Direct injection of capital into the financial system by the central bank, through purchasing mostly government securities, may have various effects (Diagram 1). The sellers of financial assets acquire a surplus of cash which, consequently, they may spend, thus triggering further

economic activity. Alternatively, they may purchase other financial assets, such as shares or corporate securities. This results in a growth of prices of financial instruments, increasing the wealth of their owners. Ownership may be direct or indirect, through a share in certain intermediary financial institutions, such as, for instance, private pension and investment funds. Growth of financial instruments’ prices also implies lower revenues, which in turn leads to the lower borrowing costs for the corporate and retail sectors. This additionally boosts the consumption. On the other hand, the banks are in the position to hold a surplus of reserves, which to a large extent they can extend to their clients, thus enhancing their lending activity. However, the question is whether commercial banks would react adequately or whether they would be unwilling to extend loans, thus keeping the surplus of money as part of their reserves. This is exactly why central banks may conduct the process of quantitative easing with other financial institutions as well, which would then involve the purchase of various corporate securities. More details on this can be found in the following chapters.

Diagram 1: Quantitative easing implementation process



Source: Author

Oblici i terminologija nestandardnih mera

Kada se govori o nestandardnim merama, javlja se problem u različitoj nomenklaturi i nekonzistentnoj terminologiji s obzirom da je reč o višestrukim modalitetima njihove primene. Nedoumice prvenstveno postoje između pojmova „kvantitativnih olakšica“ i „kreditnih olakšica“. Međutim, ne postoji opšte prihvaćena definicija ova dva pojma. U prilog tome stoji činjenica da se upravo ti različiti modaliteti ne mogu svesti na samo dva pojma.

Centralna banka Japana (*Bank of Japan - BoJ*) je između 2001. i 2006. godine koristila različite nestandardne mere naslovljene kao kvantitativne olakšice². Ključna osobenost ovog pristupa bila je u stvaranju viška rezervi komercijalnih banaka, kupujući prvenstveno državne obveznice. S druge strane, predsednik Federalnih Rezervi (*Federal Reserve System - FED*) Ben Bernanke je okarakterisao program koji treba da odgovori na aktuelnu finansijsku krizu 2008-2009. godine kao paket mera kreditnih olakšica. Po njemu, i jedna i druga mera imaju zajedničku karakteristiku povećanja bilansa banaka. Ono što ih razlikuje jeste stanovište da se kod kvantitativnih olakšica fokus stavlja na veličinu rezervi banaka, koje predstavljaju pasivu za centralnu banku dok je, s druge strane, struktura zajmova i hartija na strani aktive nebitna. Primenjujući politiku kreditnih olakšica, struktura aktive FED-a dalje utiče na kreditne uslove za stanovništvo i privredni sektor (Bernanke, 2009). Vremenom se ustalilo stanovište po kojem se ova dva oblika nestandardnih mera međusobno razlikuju u

zavisnosti od tipa finansijske aktive koja se koristi u samom procesu. Tako kreditne olakšice ne podrazumevaju povećanje novčane mase po osnovu kupovine državnih obveznica, već se odnose na aktivu privatnog sektora, kao što su korporativne obveznice i različite hipotekarne hartije od vrednosti. To je naročito došlo do izražaja u jeku finansijske krize i to prvenstveno delujući na hipotekarna tržišta. Tako je FED 2010. godine otkupio 1,5 hiljada milijardi dolara vredne hipotekarne založnice (*MBS - mortgage-backed securities*), čime je povećao novčanu masu na sličan način kao sa državnim obveznicama (Thornton, 2010). Evropska centralna banka (*European Central Bank - ECB*) izbegava upotrebu ova dva pojma, već se koristi tzv. pojačanom kreditnom podrškom (*enhanced credit support*) koja objašnjava povećanje njenog bilansa i viška rezervi u bankarskom sektoru evrozone.

Pored kvantitativnih i kreditnih olakšica, vremenom su se uspostavile i kvalitativne olakšice. Kod kvantitativnih olakšica, akcent se stavlja na znatno uvećanje bilansa centralnih banaka prvenstveno kroz povećanje viška rezervi komercijalnih banaka, gde je struktura portfolija sa stanovišta rizika i likvidnosti nepromenjena. Centralne banke raspolažu konvencionalnom aktivom u koju uglavnom spadaju državne obveznice različitih rokova dospeća. Kod kvalitativnih olakšica ne dolazi do promene u veličini bilansa, ali se njegova struktura menja u pravcu manje likvidnih i rizičnijih finansijskih instrumenata (Slika 1). U pitanju su različiti oblici finansijske aktive privatnog sektora koji utiču na pojavu kreditnog rizika sa kojim se suočavaju centralne banke.

² Treba imati u vidu da se u početku takve mere nigde nisu zvanično predstavljale kao kvantitativne olakšice, već su ih uglavnom koristili kritičari Centralne banke Japana i njene monetarne politike

Forms and Terminology of Non-standard Measures

When discussing the non-standard measures, the problem occurs concerning the different nomenclature and inconsistent terminology, given that there are multiple modalities of their usage. The dilemmas are particularly present when it comes to the terms “quantitative easing” and “lending facilities”. However, there have been no generally accepted definitions of these two terms. In favour of this is the fact that these different modalities cannot be reduced to just two terms.

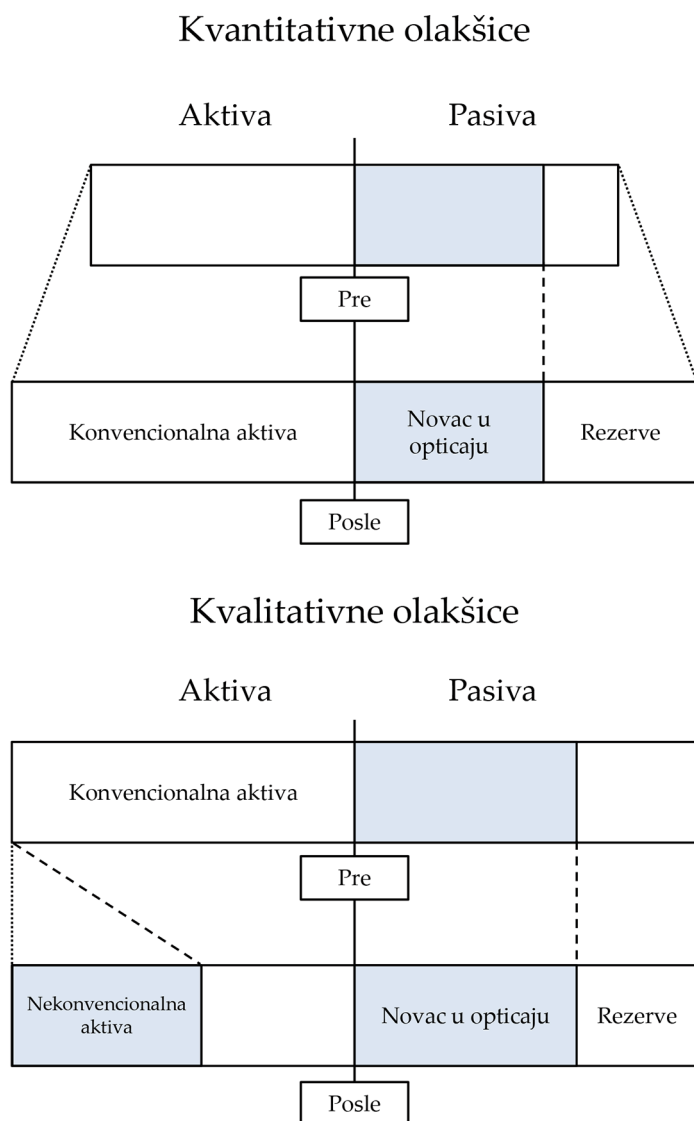
Between 2001 and 2006, the Bank of Japan (BoJ) used various non-standard measures under the heading of quantitative easing facilities². The key feature of this approach was the generation of excess reserves of commercial banks, by means of government bonds purchase. On the other hand, Ben Bernanke, Chairman of the Federal Reserves (FED), referred to the program which should respond to the current 2008-2009 financial crisis as the package of lending facilities measures. According to him, both measures share a common characteristic of increasing the banks’ balance sheet. What sets them apart is the position that quantitative easing focuses on the size of the banks’ reserves, representing the liabilities for the central bank, whereas, on the other hand, the structure of loans and securities on the asset side remains irrelevant. Through the implementation of lending facilities policy, the structure of the FED’s assets further influences the terms and conditions for extending loans to the retail and corporate sectors (Bernanke, 2009). Over time the position was established according

to which these two forms of non-standard measures mutually differ depending on the type of the underlying financial assets used in the process itself. Thus, lending facilities do not imply the increase of money supply based on the purchase of government bonds, but instead relate to the assets of the private sector, such as corporate bonds and various mortgage-backed securities. This was especially prominent in the heat of the financial crisis, with particular effect on mortgage markets. Thus in 2010 the FED purchased mortgage-backed securities worth USD 1.5 thousand billion, whereby it increased the money supply in the similar fashion as with government bonds (Thornton, 2010). The European Central Bank (ECB) avoids using these two terms, and instead uses the so-called *enhanced credit support*, which explains the increase of its balance sheet and the surplus of reserves of the banking sector in the Euro area.

In addition to quantitative easing and lending facilities, qualitative easing has also been introduced over time. In quantitative easing, the focus is put on considerable enlargement of the central banks’ balance sheets, mostly through the increase of excess reserves of commercial banks, with the structure of portfolio remaining unchanged in terms of risk and liquidity. Central banks hold conventional assets which predominantly include government bonds with various maturities. In qualitative easing, there are no changes in the balance sheet size, but its structure gets altered towards less liquid and more risky financial instruments (Figure 1). This refers to various forms of financial assets of the private sector, which trigger the occurrence of credit risk the central banks have to face.

² One should bear in mind that at the beginning these measures were nowhere officially presented as quantitative easing, but were mostly used by the critics of the Bank of Japan and its monetary policy.

Slika 1: Struktura bilansa kod kvantitativnih i kvalitativnih olakšica



Izvor: Lenza, Pill and Reichlin (2010), str. 10.

Inicijalna primena nestandardnih mera

Prvobitnu implementaciju nestandardnih mera monetarne politike nalazimo u Japanu krajem '90-ih i početkom 21. veka. Naime, upotreba originalnog japanskog termina za kvantitativne olakšice (*ryoteki kinyu kanwa*) pojavljuje se u publikacijama Centralne banke Japana (*BOJ - Bank of Japan*) 19. marta 2001. godine gde se ukazuje na novu monetarnu politiku (Shirakwa, 2002). Iskustvo Japana između 1999. i 2006. godine predstavlja pravi primer upotrebe nestandardnih mera.

Uzimajući u obzir deflatorne pritiske, BOJ je na početku 1999. godine predstavila politiku „nulte kamatne stope“, obavezujući se da će međubankarsku prekoćnu kamatnu stopu držati na nuli sve dok postoji zabrinutost oko deflatornog delovanja. Nakon kratkog oporavka ekonomije koji se manifestovao u porastu opšteg nivoa cena iznad nule (u trajanju od samo mesec dana), BOJ je u avgustu 2000. godine prestala sa primenom ovakve politike.

Usled usporavanja svetske ekonomije i velikih berzanskih špekulacija i krahova (kao što je bio "Dotcom" mehur sa IT kompanijama), javila se opasnost od globalne recesije. Kako je prekoćna kamatna stopa i dalje bila blizu nule, uprkos odustajanju od takve politike, BOJ je morala da preduzme nekonvencionalne mere. Na pomenuti datum (19.3.2001.) Banka je predstavila politiku kvantitativnih olakšica, obavezujući se istovremeno da će kamatnu stopu držati na nuli sve dok se nivo cena ne stabilizuje ili ne zabeleži određeni porast. Na početku primene utvrđen je iznos od 5 triliona jena koji će kao višak rezervi biti ubačen u

finansijski sistem. Pored toga, BOJ je objavila da će povećati kupovinu dugoročnih državnih obveznica. Do samog završetka primene kvantitativnih olakšica 2006. godine, iznos je povećan na 30-35 triliona jena gde se pored finansijskog sektora pomoglo i korporativnom sektoru kako bi se olakšala i njegova kreditna aktivnost (Klyuev, De Imus, Srinivasan, 2009).

Kod stručne javnosti ne postoji jedinstven stav o ispravnosti nestandardnih mera monetarne politike i njihovog uticaja na poboljšanje ekonomskih performansi u Japanu. U prilog tome je činjenica nedovoljne adekvatnosti kapitala u bankarskom sektoru,

čime je onemogućen pravi efekat mera monetarne politike u pravcu stimulisanja ekonomskog rasta, s obzirom da poslovne banke nisu značajnije povećavale svoju kreditnu aktivnost. S druge strane, nestandardne mere su uticale na povoljnija očekivanja budućih kamatnih stopa i smanjene prinose krive. Japansko iskustvo je značajno i sa stanovišta izlaska iz primene nestandardnih mera. Nakon zvaničnog okončanja, BOJ je jako brzo mogla da smanji veličinu svog bilansa i viška rezervi ali ne do nivoa koji je bio krajem '90-ih godina. Došlo je do postepenog smanjenja aktive u pogledu državnih obveznica i korporativnih hartija od vrednosti, ali je taj proces prekinut pojavom globalne finansijske krize. Referentna kamatna stopa je neznatno povećana, za 0,5% u godini nakon završetka primene kvantitativnih olakšica.

Nestandardne mere i globalna finansijska kriza

Od samog početka globalne finansijske krize, najznačajnije centralne banke³ preuzele su odlučne korake u poboljšanju likvidnosti finansijskog sistema. Njihova prvobitna reakcija bila je da značajno povećaju veličinu monetarnih operacija. Kako bi uticale na rešavanje problema u pojedinim segmentima tržišta, pored intenziviranja u primeni postojećih instrumenata, morale su da primene i nove instrumente. Priroda njihovih aktivnosti može se podeliti u dva značajna vremenska perioda koje razdvaja propadanje investicione banke *Lehman Brothers* septembra 2008. godine. Do tog događaja, nestandardne mere odnosile su

se na kvalitativne olakšice, koje pretpostavljaju promenu strukture, ali ne i veličine bilansa centralnih banaka. Nakon bankrota *Lehman Brothers*-a došlo je do naglog povećanja bilansa, uz istovremenu promenu njihovih struktura, čime je došlo do kombinacije kvantitativnih i kvalitativnih olakšica (Slika 2).

Može se reći da se mehanizam primene nestandardnih mera razlikovao među najznačajnijim centralnim bankama, iako je cilj za koji su se zalagale bio istovetan. Čini se da je u pravcu stepena ekspanzivnosti najdalje otišao FED koji je primenjivao (i dalje primenjuje) raznovrsne mere velikog obima. On je kupovao državne obveznice i hipotekarne hartije od vrednosti raznih državnih agencija kako bi smanjio prinose i podstakao investitore na poslovanje sa rizičnijom aktivom. Krajnji cilj je bio da se smanji dugoročno zaduživanje, naročito po osnovu hipotekarnih zajmova, kao i da se povećaju bankarske likvidnosne rezerve. FED je takođe uspostavio programe otkupa komercijalnih zapisa direktno od emitenata ili preko investicionih fondova na tržištu novca. U cilju olakšavanja procesa sekjuritizacije, kreiran je TALF program (*Term Asset Backed Securities Lending Facility*) u vrednosti 200 milijardi dolara kako bi se vlasnici hartija od vrednosti sa zalogom aktive⁴ podstakli na intenzivniju sekundarnu trgovinu i poboljšanje likvidnosti tog segmenta tržišta (Klyuev et al, 2009). Kroz svoje različite mehanizme, FED nije samo obezbeđivao značajne rezerve likvidnosti za banke, već ih je u određenim slučajevima zaobilazio i na taj način se direktno obraćao zajmotražiocima i investitorima.

³ Ovde se, pre svega, misli na Federalne rezerve, Evropsku centralnu banku i Centralnu banku Engleske.

⁴ ABS (*asset-backed securities*) su sekjuritizovane hartije od vrednosti čija je emisija direktno povezana sa različitim oblicima potraživanja koja se nalaze u njihovoj „podlozi“. To mogu biti potraživanja po osnovu kreditnih kartica, studentskih kredita, auto zajmova itd.

adequacy in the banking sector, which made it impossible for the true effect of monetary policy measures to spread, stimulating economic growth, given that commercial banks did not considerably intensified their credit activity. On the other hand, non-standard measures caused some more favourable expectations in terms of future interest rates, and the reduction in the revenue curve. The Japanese experience is also important from the perspective of exiting the implementation of non-standard measures. Upon the official ending, BoJ was very soon able to reduce the size of its balance sheet and the surplus of its reserves, but not to the level from the late 1990s. There was a gradual reduction of assets in terms of government bonds and corporate securities, but this process was terminated due to the outbreak of the global financial crisis. The reference interest rate was slightly increased, by 0.5% in the year after the quantitative easing implementation ended.

Non-standard Measures and Global Financial Crisis

From the very beginning of the global financial crisis, the most significant central banks³ undertook some decisive steps in order to boost the liquidity of the financial system. Their initial reaction was to considerably increase the volume of monetary operations. In order to address the problems in certain market segments, apart from intensifying the implementation of the existing instruments, they had to implement some new instruments as well. The nature of their activities may be divided into two significant periods, separated by the bankruptcy of the investment bank *Lehman Brothers* in September 2008. Until

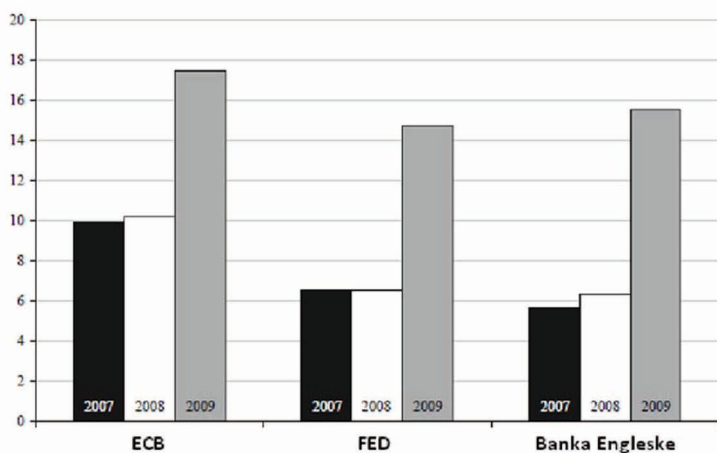
this event non-standard measures referred to qualitative easing, which entailed a change in the structure, but not in the size of the central banks' balance sheets. After *Lehman Brothers* went bankrupt, there was a sudden increase in balance sheets, accompanied by the changes in their structure, which led to a combination of quantitative and qualitative easing (Figure 2).

One may say that the mechanism of non-standard measures implementation differed among the most significant central banks, although the objective they strove towards was the same. It seems that, when it comes to the level of expansibility, the FED went the furthest way, which implemented (and still implements) various measures of a large scope. It purchased government bonds and mortgage-backed securities from different state agencies in order to reduce the revenues and encourage the investors to handle more risky assets. The ultimate goal was to decrease long-term borrowing, especially in respect of mortgage loans, and to increase banks' liquidity reserves. The FED also established the programmes for purchasing commercial papers directly from the issuers or through investment funds at the money market. With a view to facilitating the securitization process, the Term Asset-Backed Securities Lending Facility (TALF) programme was launched, worth 200 billion dollars, in order to encourage the holders of asset-backed securities⁴ to conduct the more intensive secondary trading, and to boost the liquidity of this market segment (Klyuev et al, 2009). Through its various mechanisms, the FED not only provided considerable liquidity reserves for the banks, but also in certain cases bypassed them, thus directly approaching borrowers and investors.

³ This, first and foremost, refers to the Federal Reserves, the European Central Bank and the Bank of England.

⁴ *Asset-backed securities (ABS)* are securitized securities whose issuance is directly related to various forms of underlying liabilities to be found in their "base". Those can be liabilities in respect of credit cards, student loans, car loans, etc.

Slika 2: Bilansi centralnih banaka u odnosu na BDP (u %)



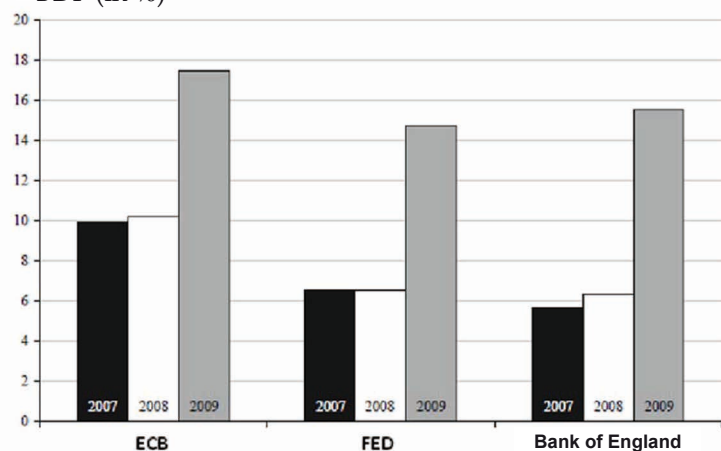
Izvor: Lenza, Pill and Reichlin (2010), str. 19.

Pre nastupanja recesije, FED je u svom bilansu držao trezorske zapise u visini od 800 milijardi dolara. Krajem novembra 2008. godine, počeo je da otkupljuje 600 milijardi dolara hipotekarnih hartija. Do marta 2009, u svom bilansu je posedovao aktivu vrednu 1,75 hiljada milijardi dolara, sačinjenu uglavnom od bankarskih dugova, hipotekarnih založnica i trezorskih zapisa. U junu 2010, proces kvantitativnih olakšica dostigao je svoj vrhunac s obzirom da je aktiva iznosila impozantnih 2,1 hiljade milijardi dolara, što je oko 15% BDP-a SAD-a. Nakon rezultata o oporavku ekonomije, dalja kupovina je zaustavljena ali se ubrzo, u avgustu, nastavila kada se ispostavilo da prognoze nisu obećavajuće. Kako bi se ostvarili postavljeni ciljevi, ustanovljen je iznos aktive u visini od dve hiljade milijardi dolara koji će se održavati u bilansu FED-a. U tom kontekstu, FED je mesečno kupovao 30 milijardi dolara trezorskih zapisa roka dospeća dve do deset godina. U novembru 2010, FED je objavio drugu rundu kvantitativnih olakšica (QE2) u kojoj je sukcesivno, do kraja prve polovine 2011. godine, kupovao 600 milijardi dolara vredne trezorske hartije od vrednosti (Annalyn, 2010). U septembru 2012. godine, FED je doneo odluku

o pokretanju tzv. treće runde kvantitativnih olakšica (QE3) koja će se fokusirati prvenstveno na hipotekarna tržišta. Prema izveštaju FED-a, u cilju podrške jačem privrednom oživljavanju i postizanja optimalnog nivoa inflacije, mesečno će se kupovati 40 milijardi dolara hipotekarnih založnica. FED je saopštio, takođe, da produžava važenje svog obećanja da će držati sadašnje, veoma niske kamatne stope (0%-0,25%), na nivou blizu nule, bar do kraja prve polovine 2015. godine (prvobitno je bilo obećano do kraja 2014).

BoE je primenjivala sličan koncept povećanja svog bilansa kao što je FED radio. Međutim, sam pristup i struktura bilansa su se znatno razlikovali. Najveći deo proširenja kako bi se stimulisala ekonomska aktivnost odnosio se na kupovinu državnih obveznica. Manji procenat kupovine odnosio se na korporativne hartije od vrednosti od privatnog sektora, čime se pravi značajna razlika u odnosu na američki način vođenja monetarne politike (Slika 3). Stimulisanje ekonomske aktivnosti eksplicitno je manifestovano u cilju centralne banke koji targetira inflaciju do 2%. Nakon nekoliko proširenja, BoE je do oktobra 2010. godine kupila 175 milijardi funti vrednu aktivu. U novembru 2010. Monetarni odbor BoE doneo je odluku da se iznos aktive poveća na 200 milijardi funti. U narednom periodu sukcesivno se kupovala dodatna količina hartija od vrednosti da bi, zaključno sa julom 2012. taj iznos porastao na 375 milijardi funti. BoE je objavila da će kupovati maksimalno 70% emisije državnih hartija od vrednosti što znači da će ostalih 30% državnog duga morati da otkupe druge (ne)finansijske institucije.

Figure 2: Balance Sheets of Central Banks in Respect to BDP (in %)



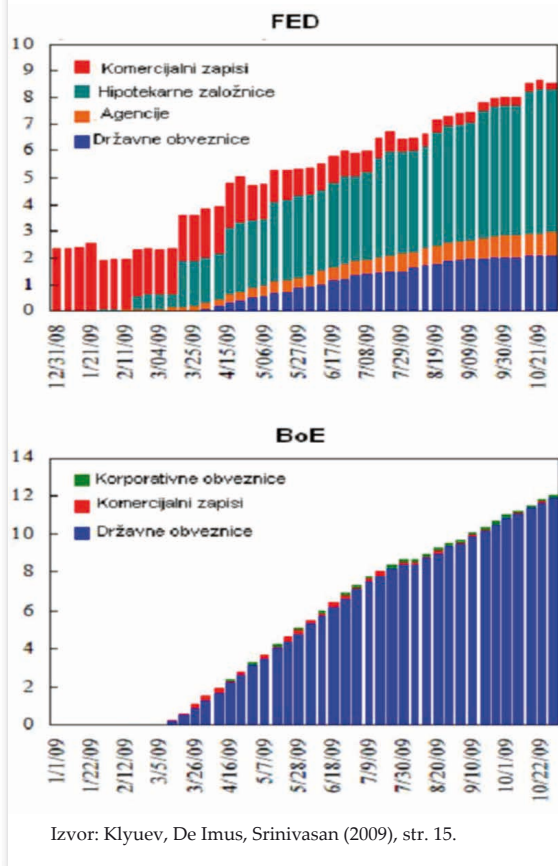
Source: Lenza, Pill and Reichlin (2010), p. 19.

Before the recession, the FED held T-bills in the amount of 800 billion dollars in its balance sheet. Towards the end of November 2008, it started to purchase mortgage-related securities, worth 600 billion dollars in total. By March 2009, in its balance sheet the FED owned the assets worth 1.75 thousand billion dollars, mostly composed of bank debts, mortgage-backed securities and T-bills. In June 2010, the process of quantitative easing reached its peak, given that the assets amounted to the remarkable 2.1 thousand billion dollars, which is about 15% of the USA GDP. Following the indications about the economy's recovery, further purchase was stopped, but soon enough, in August, it was continued when it turned out that the forecasts were not that promising. In order to achieve the set goals, the amount of two thousand billion dollars of assets was established, to be reflected in the FED's balance sheet. In this context, each month the FED purchased T-bills in the amount of 30 billion dollars, whose maturities ranged from two to ten years. In November 2010, the FED announced the second round of quantitative easing (QE2), within which, successively, by the end of the first half of 2011, it purchased 600 billion dollars worth T-bills (Annalyn, 2010). In September 2012, the FED passed the decision on launching the so-called third round

of quantitative easing (QE3), which would primarily focus on mortgage markets. According to the FED's report, in order to support the stronger economic revival and achievement of the optimal inflation level, each month it would purchase 40 billion dollars worth mortgage-backed securities. The FED also announced that it had extended the deadline for its promise to keep the present, extremely low interest rates (0%-0.25%) close to zero, at least by the end of the first half of 2015 (initially it was promised by the end of 2014).

The Bank of England (BoE) applied the concept of increasing its balance sheet, similar to the one implemented by the FED. However, the approach itself and the balance sheet structure considerably differed. The largest part of this increase, aimed at stimulating economic activity, concerned the purchase of government bonds. A smaller percentage of the purchase related to corporate securities from the private sector, which made the significant difference in comparison to the American way of conducting monetary policy (Figure 3). Stimulating economic activity was explicitly manifested in the central bank's objective, which targeted 2% inflation. After several expansions, by October 2010 BoE purchased the assets in the amount of 175 billion pounds. In November 2010, the BoE Monetary Board passed the decision for the overall amount of assets to be increased to 200 billion pounds. In the forthcoming period BoE successively purchased additional volumes of securities, only for the overall amount, as of July 2012, to reach 375 billion pounds. BoE announced that it would purchase maximum 70% of the issued government securities, meaning that the remaining 30% of the public debt would have to be bought out by other (non)financial institutions.

Slika 3: Struktura hartija od vrednosti Federalnih rezervi i Centralne banke Engleske (u % u odnosu na BDP)



Izvor: Klyuev, De Imus, Srinivasan (2009), str. 15.

ECB je, kao što je već rečeno, primenjivala koncept pojačane kreditne podrške. Za razliku od FED-a i Centralne banke Engleske, ona je pažljivo povećavala svoj bilans i nije se u potpunosti obavezivala na kupovinu državnih hartija. Do nedavno, ECB nije direktno ubrizgavala „svež“ novac u finansijski sektor, već je olakšavala emisije hartija od vrednosti privatnog sektora. U cilju efektiviranja ekspanzivane monetarne politike, ECB je otišla najdalje kada su u pitanju hartije od vrednosti koje mogu služiti kao zalag u operacijama na otvorenom tržištu. Juna 2009. godine ECB je pozajmila poslovnim bankama 442 milijarde evra na period od godinu dana po kamatnoj stopi od 1% da bi nešto kasnije (u septembru) pozajmila dodatnih 75 milijardi evra. Kako bi pomogla tržištu nekretnina, ECB je otkupila 60 milijardi evra vredne obveznice sa zalogom. Najnoviji podaci govore o sledećoj rundi kvantitativnih olakšica u kojoj je ECB, u cilju pomoći posrnutim ekonomijama evrozone, spremna da pozajmi hiljadu milijardi evra

po kamatnoj stopi od 1%, ali na period od tri godine.

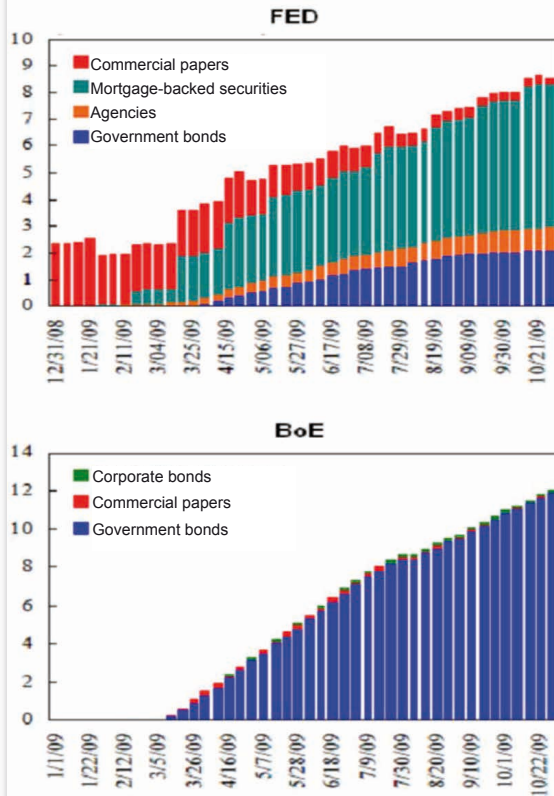
Zaključak

Aktuelna finansijska kriza, koja ulazi u svoju petu godinu trajanja, uspostavila je nove mehanizme koji treba da odgovore na različite ekonomske probleme. Kombinovano delovanje deflatornih šokova i turbulencija na finansijskom tržištu uticalo je na centralne banke da se intenzivnije uključe u rešavanje problema, pre svega preko implementacije nestandardnih, nekonvencionalnih mera monetarne politike. Globalna recesija primorala je monetarne regulatore da se striktno pridržavaju politike niskih kamatnih stopa. Pored referentne kamatne stope, koja treba da bude ključni parametar u transmisionom mehanizmu, karakterisitke ovih mera su, takođe, i ogromne likvidnosne rezerve usmerene prema bankarskom sektoru, kupovina dugoročnih hartija od vrednosti i direktne intervencije na određenim segmentima finansijskog tržišta.

Vanredne okolnosti zahtevaju i vanredne mere. Centralne banke najrazvijenijih država proširile su opus svog delovanja i direktnije se uključile u saniranje posledica globalne krize kako bi, zajedno sa merama fiskalne politike, vratile svoje privrede na put ekonomskog rasta i razvoja. Dijapazon nestandardnih mera bitno se razlikuje među najznačajnijim centralnim bankama. Većina njih se oslanjala na svoje likvidnosne operacije, u kojima je ECB prednjačila po pitanju veličine, roka dospeća i kvaliteta kolaterala. Masovna kupovina finansijske aktive najviše je povećala bilanse centralnih banaka u SAD-u i Velikoj Britaniji. Dok se kupovina kod Centralne banke Engleske (*Bank of England - BoE*) pretežno odnosila na državne obveznice, FED je kupovao različite oblike finansijske aktive. Tu se, pre svega, misli na raznovrsne hipotekarne hartije od vrednosti, s obzirom na posledice koje su pretrpela hipotekarna tržišta u SAD-u.

Čini se da su nestandardne mere monetarne politike dale izvesne pozitivne rezultate po pitanju stabilizacije finansijskog sistema na određeno vreme. Međutim, treba biti obazriv kada su u pitanju stvarni efekti s obzirom da je njihovo delovanje najviše pogodovalo

Figure 3: Structure of Securities of the Federal Reserves and Central Bank of England (in respect to BDP, in %)



Source: Klyuev, De Imus, Srinivasan (2009), p. 15.

As already said, the ECB applied the concept of enhanced credit support. As opposed to the FED and the Bank of England, the ECB has been cautiously increasing its balance sheet, without fully obliging to the purchase of government securities. Until recently, the ECB have not directly injected “fresh” capital into the financial sector, but instead facilitated the issuance of securities in the private sector. In order to effectuate the expansionary monetary policy, the ECB has gone the furthest way when it comes to securities that may be used as collateral in open market operations. In June 2009 the ECB lent 442 billion Euros to commercial banks, with one year maturity, at 1% interest rate, and somewhat later (in September), it lent them the additional 75 billion Euros. With a view to helping the real estate market, the ECB bought out 60 billion Euros worth bonds with a pledge. The latest data announce the next round of quantitative easing, within which, in order to assist the fragile economies in the Euro area, the ECB is ready to lent one thousand billion

Euros, at 1% interest rate, but this time with three-year maturity.

Conclusion

The current financial crisis, which has entered its fifth year of existence, has triggered some new mechanisms that should respond to the various economic problems. The combination of deflationary shocks and financial market turbulences has led the central banks to get more actively involved in addressing the problems, primarily by implementing non-standard, unconventional measures of monetary policy. The global recession forced monetary regulators to strictly abide by the policy of low interest rates. In addition to the reference interest rate, which should serve as the key parameter in the transmission mechanism, what also characterizes these measures are huge liquidity reserves channelled into the banking sector, purchase of long-term securities, and direct interventions in certain segments of the financial market.

Desperate times call for desperate measures. Central banks of the most developed countries have expanded the scope of their activities and got more directly involved in solving the consequences of the global crisis, so that they could, together with fiscal policy measures, bring their economies back to the path of economic growth and development. The array of non-standard measures considerably differs among the most significant central banks. Most of them relied on their liquidity operations, in which the ECB leads the way in terms of the size, maturity and quality of collateral. Mass purchases of financial assets have to the greatest extent increased the balance sheets of central banks in the USA and Great Britain. While the purchases of the Bank of England mostly related to government bonds, the FED purchased various forms of financial assets. This, first and foremost, refers to different mortgage-related securities, given the consequences that the mortgage markets in the USA have suffered.

It seems that non-standard measures of monetary policy have yielded some positive results when it comes to stabilizing the financial system for a certain period of time. However, one should be cautious when it comes to the real

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bankarskoj industriji. Kako bi se izbeglo njihovo propadanje, likvidnosna ubrizgavanja svežeg novca u banke privremeno su smanjila tenzije i očekivani rizik na finansijskim tržištima. Monetarna ekspanzivnost pretpostavila je poboljšanje ekonomskih performansi svih učesnika na finansijskim tržištima ali se, s druge strane, implicitno pomoglo samo finansijskim konglomeratima, dok se kreditna aktivnost prema privredi i stanovništvu zadržala na istom, ili neznatno manjem trošku zajmovnog kapitala. Bez obzira na efektivnost monetarne ekspanzije, već sada se postavlja pitanje kreiranja određenih izlaznih strategija. S obzirom na trenutne globalne ekonomske pokazatelje i postojeću upotrebu nestandardnih mera, akcentat se i dalje stavlja na saniranje posledica i obezbeđivanje preduslova za budući nesmetan ekonomski oporavak.



effects, bearing in mind that their activities have predominantly suited the banking industry. In order to avoid their failure, liquidity injections of fresh capital into banks temporarily alleviated the tensions and expected risks in the financial markets. Monetary expansion assumed the improvement of economic performance of all financial markets participants, but, on the other hand, only financial conglomerates have been implicitly helped, whereas credit activity towards the corporate and retail sectors has remained at the same, or slightly lower cost of borrowed capital. Regardless of the effectiveness

of monetary expansion, the question has already been raised as to the formation of certain exit strategies. Given the current global economic indicators and the existing implementation of non-standard measures, the focus is still being put on resolving the consequences and providing preconditions for the future unhindered economic recovery.

