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# NESTANDARDNA MONETARNA POLITIKA ECB - MAKROEKONOMSKI EFEKTI I IZLAZNA STRATEGIJA

## Rezime

U prvim fazama globalne ekonomske i finansijske krize ECB je reagovala smanjenjem kamatnih stopa, na istorijski, najnižem nivou. Nakon kraha Leman i jačanja finansijskih tenzija u EU i kasnije državnog duga u evrozoni, ECB, je bila prinuđena da potegne za nestandardnom monetarnom politikom. Nestandardnom monetarnom politikom ECB je promenila strukturu i veličinu bilansa stanja i akcijama i preduzetim merama, u krizi koja još traje, teži da vodi politiku očekivane dugoročne kamatne stope. U radu se daje pregled primenjenih nestandardnih politika ECB i način na koji se monetarna politika prenosi na bankarski i realni sektor i efekti proširenog bilansa stanja na efekte pojedinih makro-ekonomskih varijabla. VAR model pokazuje da efekti ekspanzije bilansa ECB imaju povoljan uticaj na efekte makroekonomije, odnosno na dve varijabile, autput i cene kao i na privredni rast. Dugoročni efekti primene nestandardne monetarne politike su neizvesni i nose rizik vaskrsenja neželjenih finansijskih šokova. Način, da ECB izbegne neizvesnost ovih politika, u dugom roku, je da počne postepeno da „sužava nestandardnu politiku“, odnosno, stvori preduslove za izlaznu strategiju.

**Ključne reči:** finansijske tenzije, ECB, nestandardne politike, ekspanzija bilansa, VAR model, makroekonomski efekti, izlazna strategija

**JEL:** E40, E50, E60

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# NON-STANDARD MONETARY POLICY OF THE ECB - MACROECONOMIC EFFECTS AND EXIT STRATEGY

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## Summary

In the initial phases of the global economic and financial crisis ECB reacted by lowering interest rates to a historic minimum. After the crash of Lehman Brothers and strengthening of financial tensions in the EU and later on the sovereign debt crisis in the euro zone, ECB was forced to search for resource in the non-standard monetary policy measures. The ECB non-standard monetary policy changed the structure and the balance sheet size, and through actions and undertaken measures in the crisis which is still ongoing, strives to conduct the policy of the anticipated long-term interest rate. This paper offers a review of the ECB non-standard policy measures applied and the manner in which monetary policy is spilling over on to the banking and the real sector, but also the effects of the balance sheet expansion on the effects of certain macroeconomic variables. VAR model shows that the effects of the ECB balance sheet expansion are having a positive impact on the macroeconomy effects, i.e. on the two variables, output and prices, and the economic growth. The long-term effects of the non-standard monetary policy implementation remain uncertain and bear the risk of resurrection of undesired financial shocks. The manner in which ECB can avoid the uncertainty of these policies, over a long-term, is to start with gradual "narrowing down of the non-standard policy", i.e. to create prerequisite for an exit strategy.

**Key words:** financial tension, ECB, non-standard policies, balance sheet expansion, VAR model, macroeconomic effects, exit strategy

**JEL:** E40, E50, E60

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## Uvod

Nalet finansijske krize nakon 2007. godine i drugog talasa državne dužničke krize posle 2010. godine predstavljale su značajan izazov za monetarnu politiku Evropske centralne banke (ECB-European Central Bank). ECB je odgovorila na početku finansijske krize 2007. godine primenom standardnih mera, značajnim smanjenjem svoje ključne kamatne stope na istorijski najnižem nivou. Smanjenje kamatne stope je imalo za cilj da obezbedi nesmetano funkcionisanje transmisionog mehanizma i obezbedi bankarskom sektoru dovoljno likvidnost ali i podrži agregatnu tražnju.

Ograničene kamatne stope blizu donje granice nule, nakon kraha Leman 2008. godine, su onemogućile ECB da dalje podstiče agregatnu tražnju. Posledice toga su prestanak funkcionisanja transmisionog mehanizma i nedostatak likvidnosti. Da bi uspostavila nesmetano funkcionisanje transmisionog mehanizma monetarne politike, obezbedila likvidnost bankarskom sektoru i zaštitila realni sektor, ECB, je bila primorana, da napusti sprovođenje standardne monetarne politike i uvede nestandardnu monetarnu politiku.

Primenu nestandardne monetarne politike, ECB, treba razumeti u dva konteksta. Prvi, kada je globalna finansijska kriza eskalirala, nakon sloma Lemana 2008. godine i drugi, kada je početkom 2010. godine eksplodirala kriza državnog duga u Grčkoj i prelila se na još neke zemlje evrozone, a koja još traje. U obe krize ECB je delovala kreativno, uspostavljanjem određenih objekata za snabdevanje likvidnosti.

Nestandardnu monetarnu politiku, treba razumeti u širem političkom kontekstu ECB, s obzirom na institucionalno ustrojstvo i finansijsku strukturu. Njihova primena ima zadatak da ozbiljno poboljša kreditnu podršku i obezbedi potrebnu likvidnost.

Izvori motiva uvođenja nestandardne monetarne politike, nalaze se, u gotovo alarmantnom zahtevu za hitno i efikasno osposobljavanje nastavka funkcionisanja transmisionog mehanizma monetarne politike, u poboljšanju tržišnih uslova u održanju, u negativnom finansijskom okruženju, stabilnost cena i u usidrenju inflacije u srednjem roku.

Primenu nestandardne monetarne politike,

ECB, treba posmatrati u širem kontekstu, kao dopunu a ne kao zamenu za standardnu monetarnu politiku. Ciljevi obe politike su identični i njihov zadatak je da sinergetski efikasnom, međusobnom, kombinacijom ublaže, ograniče i eliminišu finansijske tenzije i fiskalne distorzije.

Nestandardna monetarna politika je uticala na prošireni obim posredovanja ECB u evrozoni. Ona, ustvari predstavlja zamenu za međubankarske transakcije koje više nisu bile održive u situaciji prestanka funkcionisanja tržišta novca. U tom kontekstu, ponašanje ECB treba sagledati u njenoj ključnoj funkciji, zbog čega je i uspostavljena, kao „zajmodavac u krajnjoj istanci“.

Nestandardna monetarna politika je uticala na proširenje i promenu sastava ravnotežnog bilansa stanja ECB. Ekspanzija bilansa i komunikacione politike su zamenile politiku kamatne stope. Efekti standardne monetarne politike su poznati, poznati su i efekti nestandardne monetarne politike ali nedovoljno su poznati uticaji nestandardne monetarne politike na makroekonomiju.

Nestandardna monetarna politika ima uticaj i na pojedine makroekonomske efekte. VAR model pokazuje da ekspanzija bilansa ECB ima povoljan uticaj na autput i cene i na relativni privredni rast. I pored vidljivih efekata, primena nestandardne monetarne politike, posebno na dugi rok, nosi veliku neizvesnost, u pogledu obezbeđenja makroekonomske stabilnosti, ali i mogućnost ponovnog vaskrsenja rizika i finansijskih nevolja. Da bi izbegla, eventualno moguću dugoročni negativni scenario, ECB, treba postepeno, u skladu sa finansijskom realnošću, da počne, da „sužava nestandardne mere“ pažljivim odabirom „izlazne strategije“. Ali to nije lako.

Cilj ovog rada je da na osnovu primenjenih nestandardnih mera monetarne politike, ECB, prikaže transmisiju monetarne politike na realni sektor i efekte ekspanzije njenog bilansa stanja na makroekonomiju i privredni rast i izlaznu strategiju iz ovih mera. Rad se sastoji iz 7 delova. U prvom delu daje se prikaz institucionalnog uređenja i finansijske strukture kako bi se bolje razumela sva složenost i kompleksnost funkcionisanja ECB, u drugi i treći deo se daje pregled primenjenih važnih nestandardnih monetarnih politika i njihova efikasnost u ublažavanju i ograničavanju

## Introduction

The surge of financial crisis after 2007 and the second wave of sovereign debt crisis after 2010 presented a significant challenge for the monetary policy of the European Central Bank - ECB. ECB responded at the start of financial crisis in 2007 by applying standard measures, substantial lowering of its key interest rate to a historical minimum level. Lowering of the interest rate was aimed at securing free functioning of the transmission mechanism and providing for the banking sector sufficient liquidity, but also at supporting aggregate demand.

Limited interest rates close to the lowest zero ground, after the crash of Lehman Brothers in 2008 prevented ECB to continue the support of the aggregate demand. Consequences that ensued are suspended functioning of the transmission mechanism and the shortage of liquidity. In order to set in place smooth functioning of the monetary policy transmission mechanism, provide for the banking sector liquidity and protect the real sector, ECB was forced to abandon implementation of the standard monetary policy and introduce non-standard monetary policy measures.

Implementation of the non-standard monetary policy by ECB should be perceived in two contexts. The first one, when the global financial crisis escalated after the fall of the Lehman Brothers in 2008, and the second one when early in 2010 the sovereign debt crisis exploded in Greece spilling over on to some other countries of the euro zone, and is still ongoing. In both of these crisis ECB acted creatively by setting up certain vehicles for liquidity supply.

Non-standard monetary policy measures should be understood in a broader political context of the ECB, in view of its institutional set up and the financial structure. Their implementation has a task to seriously improve crediting support and provide for the necessary liquidity.

Sources for the motive of introduction of the non-standards monetary policy are to be found in an almost alarming demand for an urgent and efficient putting in order of the continuous functioning of the monetary policy transmission mechanism, for improvement

of market conditions in an adverse financial environment, in price stability and anchoring inflation on a medium term basis.

Implementation of the ECB non-standard monetary policy should be assessed within a broader context as a supplement to and not as a substitute for the standard monetary policy. The objectives of both of these policies are identical and their task is to mitigate, limit and eliminate financial tensions and fiscal distortions through a synergy efficient, mutual combination.

Non-standard monetary policy had an impact on a broader scope of ECB mediation in the euro zone. It presented in fact a substitute for the Inter-bank transactions that were no longer sustainable in the situation where the money market functioning was suspended. In this context, the behaviour of the ECB should be viewed in its key function, the reason for which it was actually established, to serve as a "lender of last resort".

Non-standard monetary policy had an impact on the expansion and change in the composition of the balancing balance sheet of the ECB. Balance sheet expansion and communication policies replaced the interest rate policy. The effects of standard monetary policy are well known, as are the effects of the non-standard monetary policy, but what is insufficiently known are the impacts that the non-standard monetary policy has on the macroeconomy.

Non-standard monetary policy also has an impact on certain macroeconomic effects. VAR model shows that the ECB balance sheet expansion has a positive effect on the output and prices and a relative economic growth. In spite of visible effects implementation of the non-standard monetary policy, especially over a long-term, brings a great uncertainty regarding the provision of macroeconomic stability, but also the possibility for new resurrection of risks and financial distress. In order to avoid an eventually possible long-term negative scenario, ECB should gradually, concordant with the financial reality, start with "narrowing down non-standard measures" through careful selection of the "exit strategy". But that is not an easy task to undertake.

The objective of this work is, on the basis of the ECB non-standard monetary policy measures implemented, to present the monetary policy

finansijskih i tenzija državnog duga, u četvrtom se razmatraju ključna obeležja nestandardne monetarne politike u evrozoni, u petom su dati rezultati VAR modela o efektima ekspanzije bilansa stanja ECB na makroekonomiju i u šestom se objašnjava izlazna strategija ECB iz nestandardne monetarne politike.

## Institucionalno uređenje i finansijska struktura

Odgovor ECB na globalnu finansijsku i suverenu dužničku krizu u pojedinim zemljama evrozone treba sagledati kroz samu specifičnu strukturu institucionalnog uređenja ekonomske i monetarne unije i finansijsku strukturu. Evropska unija nije federalna unija. Ugovorom o funkcionisanju Evropske unije, su jasno i nedvosmisleno definisane odredbe koje uređuju način funkcionisanja ECB.

Odredba Ugovora o zabrani monetarnog finansiranja zapravo sprečava, ECB, da kupuje vladine obveznice na primarnom finansijskom tržištu i ograničava njene intervencije na sekundarnom finansijskom tržištu. Svrha ove odredbe je da monetarna politika služi specifičnim ciljevima koji su u skladu sa glavnim ciljem održanja stabilnosti cena. Međutim, ograničene intervencije na sekundarna tržišta vladinih dužničkih HoV ne mogu da se koriste za izbegavanje zabrana intervencija na primarnom tržištu. (Momirović, 2013, str. 122)

Ugovor eksplicitno predviđa da ECB, ne dovodeći nijednog trenutka u pitanje glavni cilj stabilnost cena, „treba da doprinese stabilnosti finansijskog sistema“ (član 175). Pored toga, ECB je obavezna da analizira i izveštava o finansijskoj stabilnosti. U nekim slučajevima, proceduralno je bilo predviđeno da ECB, potvrdi intervencije Evropskog sistema finansijske stabilnosti (EFSF - European Financial Stability Facility), da će on očuvati finansijsku stabilnost u evrozoni. (Momirović, 2013, str. 122)

Ugovor, ne sadrži odredbe koje bi obezbedile zajedničku akciju u borbi protiv rizika finansijske stabilnosti u prekograničnoj saradnji i u evrozoni. Koncept koji garantuje

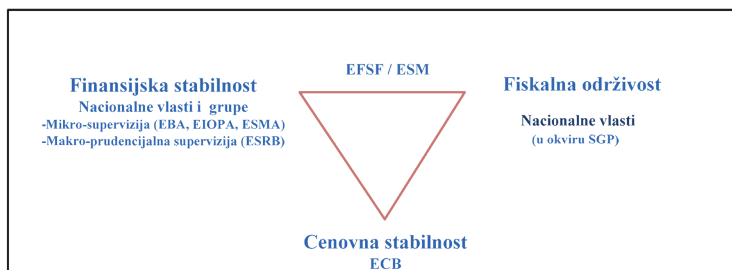
finansijsku stabilnosti na nivou evrozone, je donešen pod pritiskom finansijske krize. Ovaj koncept je prvi put spomenut februara 2010. godine a postao je operativan, programom za pomoć Grčke i uspostavljanjem EFSF 2010. godine.

Veća saradnja za finansijski nadzor je uspostavljena nakon preporuka De Larisove komisije. Uspostavljen je Evropski sistem finansijskih supervizora (ESFS - European System of Financial Supervisors) - novi institucionalni koncept za poboljšanje koordinacije mikroprudencijalnog nadzora finansijskih institucija, kao i za uspostavljanje mikroprudencijalnih tela u svim zemalja članicama EU, sa nadležnostima da postave okvir za procenu finansijskih rizika. ESFS se sastoji od tri mikro-prudencijalna autoriteta za superviziju finansijskih institucija (ESA) i mreže nacionalnih finansijskih supervizora. Evropske supervizorske vlasti (ESA - European Supervisory Authorities), čine:

- Evropska bankarska agencija (EBA - European Banking Authority);
- Evropska komisija za tržište i hartije od vrednosti (ESMA - European Securities and Markets Authority);
- Evropska agencija za osiguranje i penzije (EIOPA - European Insurance and Occupational Pensions Authority).

Uspostavljen je Evropski odbor za sistemski rizik (ESRB - European Systemic Risk Board) - nova koordinirajuća organizacija EU koja pratiti i procenjuje sistemske rizike i ranjivosti evropskog finansijskog sistema i daje preporuke i upozorenja za njihovo ograničavanje i ublažavanje.

Slika 1. Monetarne, fiskalne i finansijske interakcije u EMU



Izvor: Cour-Thimann, P., Winkler B., The ECB's non-standard monetary policy measures: the role of institutional factors and financial structure



transmission on to the real sector and effects of its balance sheet expansion on the macroeconomy and the economic growth, and the exit strategy from these measures. The paper consists of 7 parts. Part one gives a survey of the institutional set up and financial structure for purpose of better understanding of all the intricacies and complexities in functioning of the ECB, while part two and part three are offering a survey of significant non-standard monetary policy measures applied and their efficacy in mitigating and limiting financial tensions and those of the sovereign debt crisis. Part four examines key features of the non-standard monetary policy in the euro zone, and part five presents results of the VAR model on effects of the ECB balance sheet expansion on the macroeconomy, while part six explains the ECB exit strategy from the non-standard monetary policy.

### **Institutional set up and financial structure**

The response of the ECB to the global financial and sovereign debt crisis in some countries of the euro area should be assessed through the specific structure itself of the institutional set up of the economic and monetary union and financial structure. European Union is not a federal union. The treaty on functioning of the European Union clearly and unambiguously defines provisions which are regulating the manner in which the ECB functions.

The Treaty provision prohibiting monetary financing actually is preventing the ECB from buying sovereign bonds on the primary financial market and is limiting its intervention on the secondary financial market. The aim of these provisions is for the monetary policy to serve specific targets which are concordant with its main objective and that is to maintain price stability. However, limited interventions on the secondary market of the sovereign debt securities can not be used for avoiding prohibition to intervene on the primary market (Momirovic, 2013, p. 122).

Treaty explicitly prescribes that the ECB,

without placing under a question mark even for a moment its main objective of price stability, "should contribute towards stability of the financial system" (Article 175). In addition, ECB is held liable to analyze and report on financial stability. In some cases it was procedurally prescribed that the ECB shall confirm intervention of the European Financial Stability Facility - EFSF that will safeguard financial stability in the euro zone (Momirovic, 2013, p. 122).

The Treaty does not contain provisions envisaging joint action in the fight against financial stability risk in the cross-border cooperation and in the euro zone. The concept guaranteeing financial stability on the euro zone level was passed under the pressure of financial crisis. This concept was mentioned for the first time in February 2010 and became operative under the assistance to Greece programme and the establishment of the EFSE in 2010.

Broader cooperation for purpose of financial supervision was set up after the recommendations of the De Larosiere Commission. European System of Financial Supervisors - ESFS was established - a new institutional concept for enhancing coordination of the micro-prudential supervision of financial institutions, but also for setting up micro-prudential bodies in all EU member countries, with the mandate to draft framework for the financial risk assessment. ESFS consists of three micro-prudential authorities for financial institutions supervision (ESA), and the network of national financial supervisors. European Supervisory Authorities - ESA consist of the following:

- European Banking Authority - EBA;
- European Securities and Markets Authority - ESMA;
- European Insurance and Occupational Pensions Authority - EIOPA.

European Systemic Risk Board - ESRB was established as a new coordinating EU organisation that will monitor and assess systemic risks and vulnerability of the European financial system and give recommendations and warnings for their limitation and mitigation.

Slika 1 ilustruje institucionalnu strukturu koja sada preovladava u evrozoni. Za stabilnost cena je odgovorna ECB. Odgovornost za fiskalnu održivost je dodeljena vladama, svake pojedinačne zemlje, koje su pod zajedničkim nadzorom. Takođe, za finansijsku stabilnost su zadužene pojedinačno i zajednički vlade u okviru predviđenih odgovornosti.

Finansijska struktura evro zone se znatno razlikuje od ostalih razvijenih tržišnih ekonomija u svetu. Finansijski posrednici, posebno banke, su ključni igrači na finansijskom tržištu. Banke su primarni izvor finansiranja potreba ekonomije. Učešće bankarskog sektora u finansiranje privrede daleko je najviše i iznosi oko 70 % dok ostatak potrebnih finansijskih sredstava potiče od finansijskih tržišta. Finansijska struktura je bazirana, u velikoj meri, na finansiranje privrede od strane banaka. To implicira i način vođenja monetarne politike. Ključne odluke se donose centralizovano, na nivou Upravnog saveta ECB, dok je sprovođenje donetih odluka decentralizovano i sprovode ih centralne banke članice zemalja, poznat kao Eurosistem. Eurosistem čine 17 nacionalnih centralnih banaka koje su uvele zajedničku valutu evro i čine valutnu uniju. ECB uglavnom sprovodi operacije refinansiranja pri čemu je odobren pristup velikom broju komitenata. Na taj način ECB obezbeđuje jedinstvenu monetarnu politiku u svim zemljama evrozone. Postoje oko 6.300 kreditnih institucija osnovanih u evrozoni od kojih oko 2.200 ispunjavaju operativne kriterijume za učešće u Eurosistem operacijama na otvorenom tržištu. (Thiman and et. 2013, str. 6)

## Odgovor ECB na krizu

Na ekonomsko-finansijsku krizu ECB je odgovorila korišćenjem standardne monetarne politike relaksacijom (olakšanjem) politike kamatnih stopa sa ciljem sprečavanja deflatornih pritisaka i nestandardnom monetarnom politikom, kao produžene ruke monetarne politike, sa ciljem vraćanja efikasnog funkcionisanja transmisionih kanala.

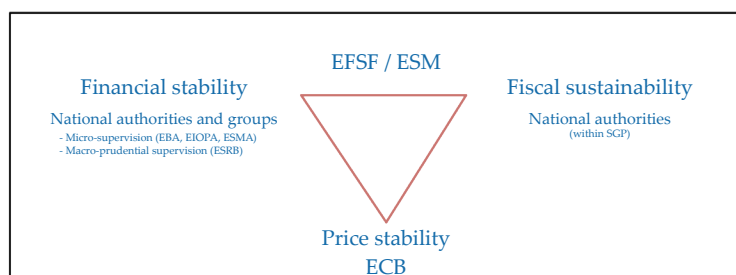
Odgovor ECB na finansijsku krizu može se posmatrati kroz četiri faze: (Knot, 2011, str. 1-2)

1. Između jula 2007. i jeseni 2008. godine. ECB je odgovorila na poremećena međubankarska tržišta širenjem njihove likvidnosti obezbeđenjem komercijalnih banaka;
2. Između jeseni 2008. i krajem 2009. godine. Kako je finansijska kriza eskalirala i pretvorila krizu likvidnosti u krizu solventnosti, ECB je snizila referentnu kamatnu stopu brzim koracima na jednom neviđenom niskom nivou. Pored toga, koristila je niz nestandardnih alata - kao što su potpuna podela na nedeljnim tenderima i dugoročne operacije refinansiranja;
3. Treća faza se proteže od kraja 2009. do sredine 2011. godine. Kako se makroekonomija oporavljala i finansijski uslovi na tržištu poboljšali, krajem 2009. godine, ECB je počela postepeno da izlazi iz svojih nestandardnih mera;
4. Kada je kriza javnog duga pogodila evro zonu, tržište obveznica u prvim mesecima 2010. godine. ECB je odgovorila na disfunkcionalni monetarni transmisioni mehanizam aktiviranjem Specijalnog tržišnog programa (SMP - Specijal Market Program).

## Odgovor na finansijsku krizu

U periodu finansijskih tenzija, u leto 2007. godine, ECB je preduzela mere obezbeđenja pune likvidnosti bankama u evrozoni na bazi kolaterala glavne stope refinansiranja. ECB je koristila dodatne operacije refinansiranja ročnosti na tri i šest meseci. Ove mere su delovale ohrabrujuće, u smislu likvidnosti i spremnost banaka da nastave finansiranje privrede. Primenjene su operacije finog podešavanja sa ciljem održavanja kratkoročnih kamatnih stopa, približno, na nivou glavne stope refinansiranja. Istovremeno, ECB je primenila meru obezbeđenja likvidnosti u US dolarima uz evro denominovane kolaterale.

Figure 1 - The EMU monetary, fiscal and financial interactions



Source: Cour-Thimann, P., Winkler B., The ECB's non-standard monetary policy measures: the role of institutional factors and financial structure

Figure 1 illustrates institutional structure that now prevails in the euro zone. ECB is responsible for price stability. Responsibility for fiscal sustainability is awarded to governments of each particular country which are under the joint supervision. In addition, for financial stability, both individually and jointly, in charge are the governments within the framework of prescribed responsibility.

The euro zone financial structure differs substantially from other developed market economies of the world. Financial intermediaries, especially banks, are the key players on the financial market. Banks are the primary source of financing the needs of economy. The share of the banking sector in financial economy is by far the highest and amounts to some 70%, while the rest of the necessary financial resources are coming from the financial markets. Financial structure is based, to a great extent, on the banks financing the economy. This implies also the manner in which monetary policy is conducted. Key decisions are being passed on a centralised level, on the level of the European Counselling Board - ECB, while the implementation of the decisions made is decentralised and is conducted by the member-countries central banks, known as the Eurosystem. Eurosystem consists of 17 national central banks which have introduced the single currency - euro, and are members of the currency union. ECB mainly implements refinancing operations where a large number of clients are allowed free access. In this manner ECB is providing for a single monetary policy in all countries of the euro zone. There are some 6,300 lending institutions established in the euro zone, some 2,200 of which are complying with the operational criteria for participation in the Eurosystem open market operations. (Thiman and et. 2013, p. 6).

## ECB response to crisis

ECB responded to the economic and financial crisis by using standard monetary policy through relaxation (easing) of the interest rate policy with the aim of preventing deflationary pressures, and by using non-standard monetary policy as an extended hand of monetary policy intended to reinstate efficient

functioning of the transmission channels.

The response of the ECB to the financial crisis may be observed through four phases (Knot, 2011, p. 1-2):

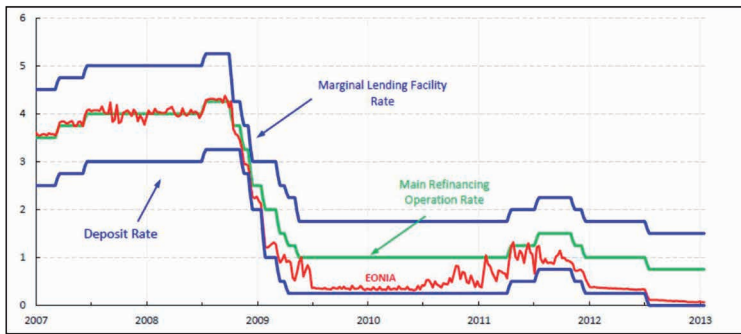
1. Between July 2007 and autumn of 2008 - ECB responded to the disturbed Interbank markets by expanding their liquidity through securing commercial banks;
2. Between autumn of 2008 and the end of 2009 - As the financial crisis escalated and turned into liquidity and solvency crisis, ECB lowered the reference interest rate in prompt moves down to an unprecedented low level. In addition, it applied a series of non-standard tools such as the full allocation at weekly tenders and long-term refinancing operations;
3. The third phase lasts from the end of 2009 to the middle of 2011 - As the macroeconomy was recovering and financial conditions on the market improved, by the end of 2009 ECB started gradually to exit from its non-standard measures;
4. When the public debt crisis hit the euro zone, bonds market in the first month of 2010, ECB responded to the dysfunctional monetary transmission mechanism by activating Special Market Program - SMP.

## Response to the financial crisis

In the period of financial tensions, in the summer of 2007, ECB undertook measures to secure full liquidity of banks in the euro zone on the basis of collateral of the main refinancing rate. ECB was using additional refinancing operations with three and six month maturity. These measures yielded encouraging results in the sense of liquidity and readiness of banks to continue with financing economy. Fine-tuning



Grafikon 1. Ključne ECB kamatne stope i prekonoćne stope



Izvor: Diaz-Antonio, J., Understanding the ECB, s monetary policy Notes, 2013

Posle kolapsa „Lehman Brothers“-a, septembra 2008. godine tenzije finansijske krize su se naglo intenzivirale. Povećana nesigurnost poslovanja vodećih svetskih banka dovelo je do kraha aktivnosti u mnogim segmentima finansijskih tržišta. U evrozoni tržište novca, 30. septembra 2008. godine je doživelo slom. To je prouzrokovalo porast spreda kratkoročnih kamatnih stopa na nenormalno visoke nivoe.

Grafikon 2. EURIBOR I LIBOR tromesečni swop spred



Izvor: www.Globicus.com

ECB je oktobra 2008. godine odgovorila znatnim smanjenjem ključnih kamatnih stopa. Ključna kamatna stopa na glavne operacije refinansiranja je smanjena za 50 baznih poena u odnosu na kamatne stope drugih velikih banaka. Do 2009. godine kamatna stopa na operacije refinansiranja je postepeno smanjena sa 4,25% na istorijski, rekordno, niski nivo od 1%.

Pogoršanje finansijskih uslova, posebno kolaps tržišta novca, je ozbiljno pretilo da ugrozi normalan prenos transmisije monetarne politike. Tržište HOV je „gotovo“ presušilo, premije na rizik su izuzetno porasle, rizik kreditiranja se povećao a kamatne stope na kredite stanovništvu i privredi su otišle

gore. Pogoršanje tržišnih i finansijskih uslova je primoralo ECB da potegne za alatima nestandardne monetarne politike. Nestandardna monetarna politika je preduzeta kao dopuna standardnoj monetarnoj politici, sa ciljem, da oporavi funkcionisanje transmisionog mehanizma, poboljša finansijske i tržišne uslove i osigura nesmetano snabdevanje realnog sektora likvidnošću.

ECB je reagovala poboljšanjem kreditnih uslova, programom Pojačane kreditne podrške. Programom, ECB, je obezbedila:

- Široki dopunski obim podrške likvidnosti- produžavanjem privremene ročnosti dugoročnog refinansiranja LTRO (LTRO - Long term refinancing operation) na 12 meseci (pre kolapsa Lehman ročnosti refinansiranja je

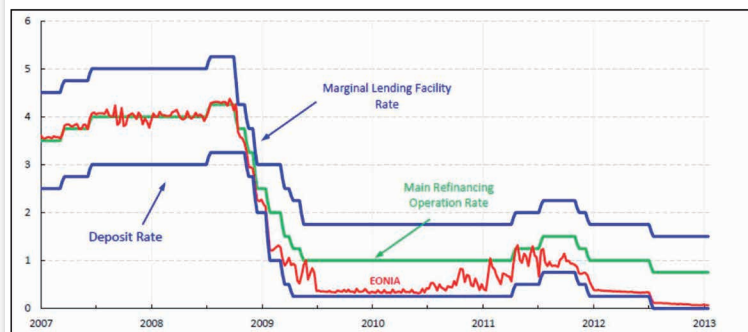
povećana sa tri na šest meseci) sa ciljem da podstakne banke da nastave da kreditiraju privredu i domaćinstva;

- Potpunu raspodelu - sprovođenjem svojih operacija „refinansiranja kroz fiksne stope pune raspodele tenderskim postupkom“, (Stolz., Wedow 2010, str. 12) putem tenderske procedure, čime se bankarskom sektoru, omogućava neograničen pristup likvidnim sredstvima po glavnoj stopi refinansiranja uz odgovarajuće kolaterale;

- Valutne svop ugovore - uz privremene uzajamne aranžmane za obezbeđenje likvidnosti u stranim valutama uz kvalifikovane kolaterale Eurosistema sa fiksnim kamatnim stopama i raznim rokovima uz potpunu raspodelu,
- Prošireni zahtevi kolaterala-uz mogućnost refinansiranja nelikvidnih sredstava;
- Program kupovine pokrivenih obveznica (CBPP - Covered Bond Purchase Programme) - koji je obuhvatio mogućnost intervencije na tržištu javnih i privatnih dužničkih HoV Evrozone, sa ciljem uspostavljanja pravilnog funkcionisanja transmisionog mehanizma monetarne politike. U toku perioda maja

operations were applied with the aim to maintain short-term interest rates, approximately, on the level of the main refinancing operation rate. At the same time, ECB applied the liquidity securing measure in the US dollars with euro denominated collaterals.

Graph 1 - The ECB key interest rates and overnight rates



Source: Diaz-Antonio, J., Understanding the ECB, s monetary policy Notes, 2013

After the collapse of Lehman Brothers in September 2008, financial crisis tensions sharply intensified. There was a heightened business insecurity of the leading world banks which brought about the crash of activities in many segments of the financial markets. In the euro zone, money market, on 30 September 2008, suffered a collapse. This in turn caused the growth in spread of the short-term interest rates to extraordinary high levels.

Graph 2 - EURIBOR and LIBOR three-month swap spread



Source: www.Globicus.com

In October 2008, ECB responded by substantial lowering of the key interest rates. Key interest rate on main refinancing operations was reduced for 50 basis points in respect to the interest rates of other major banks. Up to 2009, the interest rate on refinancing operations was gradually lowered from 4.25% to a historic and

record low level of 1%.

Deterioration of financial conditions and especially the money market collapse, were seriously threatening to jeopardize normal transfer of the monetary policy transmission. Securities market “almost” dried out, risk

premiums grew enormously, risk crediting increased and interest rates on retail loans and corporate grew upwards. Deterioration of market and financial conditions forced the ECB to take recourse in the tools of non-standard monetary policy. Non-standard monetary policy was undertaken as the supplement to the standard monetary policy, with the aim to revitalise functioning of the transmission mechanism, improve

financial and market conditions and insure smooth supply of liquidity for the real sector.

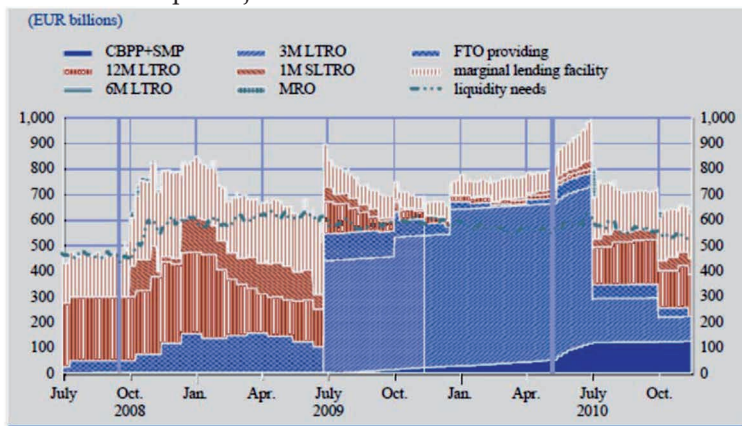
ECB reacted by improving lending conditions through the Program of Intensified Crediting Support. Through this program, ECB provided for the following:

- A broad additional scope of liquidity support through the extension of interim maturity for long-term refinancing operations (Long-term Refinancing Operation - LTRO) on 12 months (prior to collapse of Lehman Brothers refinancing maturity was extended from three to six months) with the aim of instigating banks to continue with crediting economy and households;
- Full allotment - through conducting its operation of “refinancing through fixed interest rates of full allocation by tender procedure” (Stolz, Wedow, 2010, p. 12) by applying the tendering procedure where banking sector was allowed an unlimited access to liquid funds at the main refinancing rate with corresponding collaterals;
- Currency swap contracts - with interim mutual arrangements for securing liquidity in foreign currency with qualified collaterals of the Eurosystem with fixed interest rates and different dates for full allotment;

2009. do juna 2010. godine, ECB je kupila evro denominovane pokrivene obveznice, emitovane u Evrozoni, u iznosu od 60 milijardi evra. Tržište pokrivenih obveznica je skoro presušilo u pogledu likvidnosti, a time i dalje emisije, ali je bilo važno kao značajan primarni izvor finansiranja banaka.

Primenjene navedene mere nestandardne monetarne politike imale su za cilj da ublaže, ograniče i spreče nagomilavanje finansijskih nevolja i nisu bili namenjene za „fino podešavanje“ transmisionog mehanizama.

Slika 2. ECB operacije likvidnosti



Izvor: Comment by Lorenzo B. S., Member of the Executive Board of the ECB

Dejstvo preduzetih mera se tokom 2009. godine osetilo u izvesnim pozitivnim signalima oporavka, koji su se, između ostalih, ogledali u uspostavljanju normalnog funkcionisanja transmisionog mehanizma monetarne politike i poboljšanjem uslova na finansijskom tržištu. Kroz kombinaciju efekata standardnih i nestandardnih mera monetarne politike, spred kamatnih stopa između neosiguranih i obezbeđenih segmenata tržišta novca je značajno smanjen. (Drudi, Dure, Mongeli, 2012, str. 9) Tržišta akcija i obveznica su relativno oporavljena, kamatne stope na bankarske kredite su smanjene na nivo tržišnih stopa i povećano kreditiranje realnog sektora.

Pozitivni znaci su uticali da ECB krajem 2009. godine postepeno ukine pojedine nestandardne mere. ECB je postepeno ukinula dugoročne operacije refinansiranja (LTRO) povraćajem na

tromesečne dugoročne operacije refinansiranja sa promenljivim stopama i meru obezbeđenja likvidnosti u stranoj valuti.

## Odgovor ECB na krizu javnog duga

Dužnička kriza je dovela do fragmentacije finansijskog tržišta što je rezultiralo u značajnim razlikama u kreditnim uslovima širom evro zone. (Szczerbowicz, 2014, str. 2) Situacija je posebno pogoršana negativnim kretanjem u dva suprotna smeru, prvi je bio nelikvidnost

bankarskog sektora i drugi, pogoršanje fiskalnih distorzija. Bankarski sektor je u velikoj meri bio izložen javnom dugu. Zbog poremećenih tržišnih uslova ECB je ponovo bila prinuđena da aktivira pojedine nestandardne mere monetarne politike koje je ukinula, i uspostavi nove, kako bi postigla i ostvarila svoje ciljeve.

Nagomilane tenzije državnog duga i pretnje fiskalne eskalacije su primorale ECB da odgovori intervencijama na tržištu obveznica, problematičnih članica, uspostavljanjem

Programa tržišta hartija od vrednosti (SMP - The Securities Markets Programme), maja 2010. godine. Cilj programa je rešavanje nagomilanih tenzija u određenim tržišnim segmentima (potpuno presušivanje sekundarnih tržišta državnih obveznica pojedinih zemalja, velika ponuda državnih obveznica koje gotovo da nemaju kupce, prinosi su dostigli nivoe koji su brzo postali neodrživi) koji su ozbiljno preteli da ugroze transmisioni mehanizama monetarne politike.

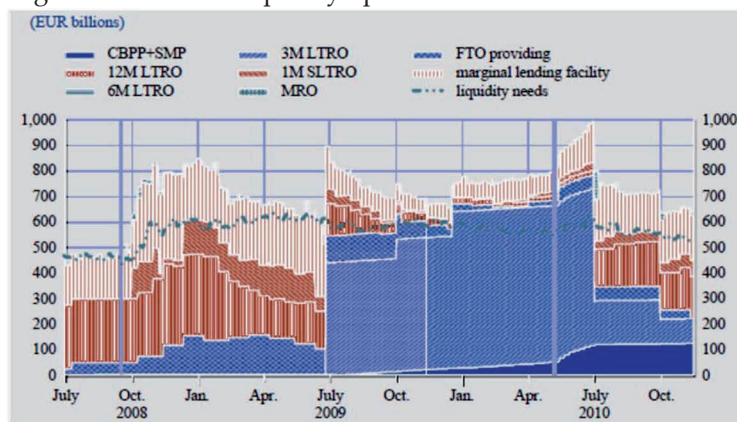
Program SMP je ograničen samo na evrozonu i obuhvata neutralne intervencije ECB dužničkim HOV privatnog i javnog sektora kako bi obezbedio likvidnost u disfunkcionalnim tržišnim segmentima i osigurao pravilno funkcionisanje transmisionog mehanizam monetarne politike.



- Extended collateral requirements - with the option of refinancing non-liquid funds;
- Cover Bond Purchase Program - CBPP, which covered option of intervention on the market of public and private debt securities of the euro zone, with the aim of establishing proper functioning of the monetary policy transmission mechanism. During the period May 2009 to June 2010 ECB bought euro denominated covered bonds issued in the euro zone, in the amount of 60 billion euro. Covered bond market almost dried out in view of liquidity and thus any further issuance, but it was important as the primary source of bank financing.

The above listed measures applied in the frame of the non-standard monetary policy had the objective to mitigate, limit and prevent pilling up of financial distress and were not aimed at "fine-tuning" of the transmission mechanism.

Figure 2 - The ECB liquidity operations



Source: Comment by Lorenzo B. S., Member of the Executive Board of the ECB

The effect of measures undertaken during 2009 was felt in certain positive recovery signals, which were, among other, reflected in the establishment of a normal functioning of the monetary policy transmission mechanism and improvement of conditions on the financial market. Through the combination of effects of standard and non-standard monetary policy measures spread of interest rates between unsecured and secured money market segments was substantially reduced (Drudi, Dure, Mongeli, 2012, p. 9). Stocks and bonds markets were relatively recovered, interest rates on banking loans were reduced to the level of the market rates and lending to the real sector was increased.

Positive signs motivated ECB, by the end of 2009, to gradually suspend some of the non-standard measures. ECB gradually suspended long-term refinancing operations - LTRO, by going back to the three-month long-term refinancing operations with the floating interest rates and the liquidity security measure in foreign currency.

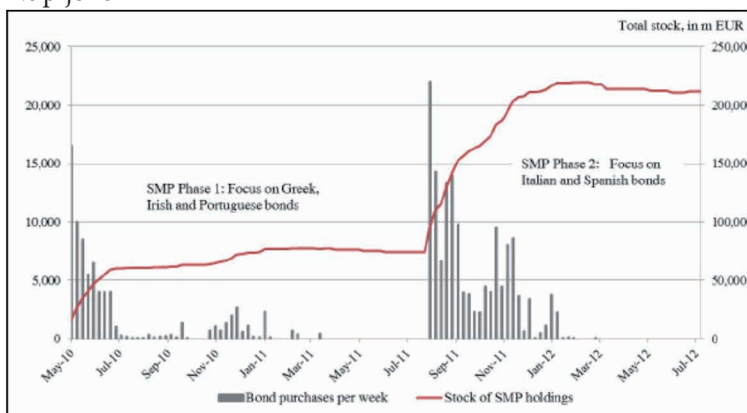
### ECB response to the public debt crisis

Debt crisis brought about fragmentation of the financial market which in turn resulted in significant differences in the borrowing terms throughout the euro zone (Szczerbowicz, 2014, p. 2). Situation especially deteriorated by negative trends in two opposite directions, the first one being illiquidity of the banking sector, and the second one worsening of fiscal distortions. Banking sector was exposed to a great extent to the public debt. Due to the market condition distortions, ECB again was forced to activate some of the non-standard monetary policy measures, which it had suspended, and to set in place the new ones in order to achieve its targets.

The accumulated sovereign debt tensions and threats of fiscal escalation forced the ECB to respond by intervention on the bonds market of the problematic member-countries, by establishing The Securities Markets Program - SMP, in May 2010. The aim of this program was to resolve the piled-up tensions in certain market segments (full exhaustion of the secondary markets in sovereign bonds of certain countries, high supply of sovereign bonds for which it was almost impossible to find the buyers, yield reaching levels that soon became unsustainable) that were seriously threatening to jeopardize monetary policy transmission mechanism.

The SMP program is limited to the euro zone only and covers neutral ECB interventions with debt securities of the private and public sector in order to provide for liquidity in a dysfunctional market segments and insure proper functioning of the monetary policy transmission mechanism.

Grafikon 3. Program tržišta hartija od vrednosti: ukupno kupljeno

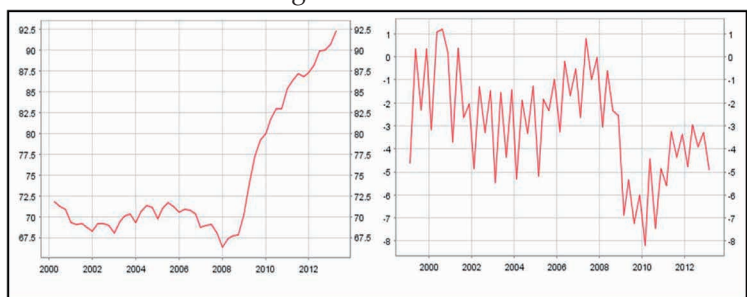


Izvor: Trebesch, C., Zettelmeyer., ECB intereptions in distressed sovereign debt markets: The case of Greek bonds, 2013, <http://ssrn.com>

SMP je doveo do izvesne stabilizacije tržišta i značajno uticao na pad prinosa na državne dužničke obveznice. Pomogao je da se neko vreme izbegne nekontrolisano povećanje prinosa od javnih dužničkih obveznica i opštih troškova privrede. Ograničavao je širenje talasa dužničke zaraze na ostale zemlje evrozone i doprineo održanju funkcionisanja transmisionog mehanizma i otklanjanju negativnih uticaja na stabilnost cena. Ipak, nije uspeo da na održiv način stabilizuje finansijske nevolje i istovremeno je proizveo određene neželjene efekte. Program se „nije bavio podsticanjem vlada da se uključe u neophodne reforme i rebalans svojih finansija.“ (Asmusse, 2012, str. 4) Poslednja kupovina SMP je obavljena u februaru 2012. godine a program je ukinut septembra iste godine.

U decembru 2011. godine ECB je uspostavila novi-stari program Dugoročne operacije refinansiranja, (LTRO), u iznosu od 1.000 milijardi evra sa ciljem podsticaja oporavka finansijskih tržišta problematičnih članica državnog duga. Ove intervencije su preduzete iz straha, od mogućnosti, preliivanja državne krize na celo međubankarsko tržište evro-zone.

Grafikon 4. Suvereni dug i vladini defцитi u evrozoni



Izvor: European System of Central Bank (ESCB) Eurostat

U dve operacije LTRO održane februara 2012. godine dodeljen je oko 1 trilion evra. Na njima su učestvovalе i male banke, što je bio pozitivan znak, imajući u vidu, da su one glavni finansijeri malih i srednjih preduzeća. LTRO je omogućio bankama da obezbede dovoljnu likvidnost na srednji rok, što im je dobro došlo da izbegnu smanjenje kreditnih linija usled dospelih obveznica. Novine ovih mera su se sastojale iz dve mogućnosti: prva, vreme trajanja dodatno osiguranih reprograma

po postojećoj fiksnoj stopi kroz proceduru pune raspodele i druga, opcija između ugovornih strana, da se pozajmljeni iznos može vratiti u bilo koje vreme posle isteka godine.

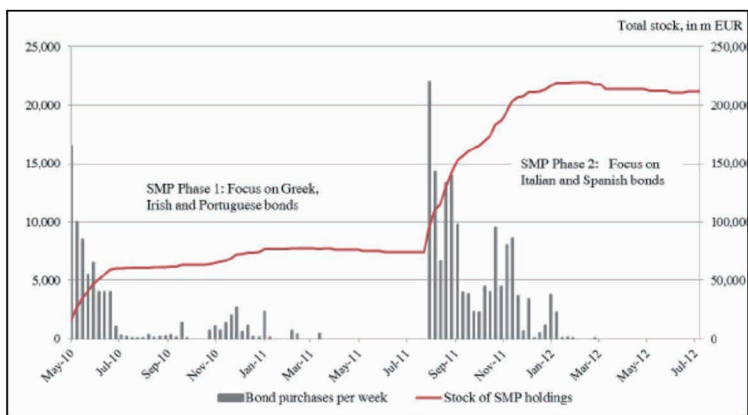
Zatim, merom umanjenja stope obavezne rezerve, sa 2 na 1%, dodatno je obezbeđeno još 100 milijardi evra likvidnosti bankama. Pored toga, u okviru dodatnih kreditnih potraživanja ubrizgano je još 113 milijardi evra. Gledano zajedno, preduzete mere nestandardne monetarne politike od strane ECB su omogućile unapređenje kreditne podrške i poboljšanje snabdevanja banaka kvalitetnim likvidnim sredstvima.

Avgusta 2012 god ECB je uspostavila novo telo Trajnih novčanih transakcija OMT (OMT - Outright monetary transactions) sa ciljem da sačuva i održi odgovarajuću monetarnu politiku i obezbedi nesmetano funkcionisanje transmisionog mehanizama. Zadatak OMT je da kupuje državne obveznice pojedinih zemalja evrozone na sekundarnom finansijskom tržištu, sa preostalim rokom dospeća do tri godine, bez ex ante ograničenja. OMT (nazvan „teška bazuka“) zahteva i nameće snažna i efikasna uslovljavanja vladama zemalja evrozone, da prihvate programe koji uključuju mehanizme za podršku stabilnosti evrozone.

OMT ima kapacitet da rešava i rep rizike, koji su počeli da se ispoljavaju sve više, vršeci, pri tom, opasne pritiske na prinose javnih dužničkih obveznica, što otežava pristup bankarskom sektoru sekundarnom



Graph 3 - Securities market program: total bought

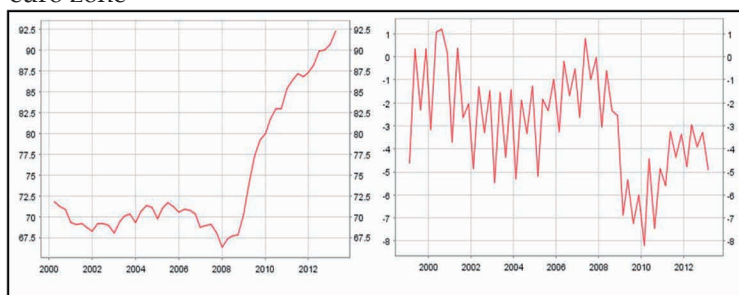


Source: Trebesch, C., Zettelmeyer., ECB intereptions in distressed sovereign debt markets: The case of Greek bonds, 2013, <http://ssrn.com>

SMP brought about certain market stabilisation and had a significant impact on the fall in yield on sovereign debt bonds. It helped to avoid, for a time, uncontrolled growth of yield in public debt bonds and general costs of economy. It also limited spilling over of the debt pollution on to the other countries of the euro zone and helped in maintaining functioning of the transmission mechanism and elimination of negative effects on the price stability. Nevertheless it did not succeed in stabilizing in a sustainable way financial distress and at the same time produced certain undesired effects. The program “did not engage in instigating governments to join necessary reforms and rebalancing of their finance” (Asmusse, 2012, p. 4). The last purchase of the SMP took place in February 2012 and the program was suspended that same year.

In December 2011, ECB established a new-old program of Long-term Refinancing Operations - LTRO, in the amount of 1,000 billion euro with the aim of boosting recovery of financial markets of the member countries’ problematic sovereign debt. These interventions were undertaken out of fear that there was a possibility for the sovereign debt crisis to spill over on to the entire interbank market of the euro zone.

Graph 4 - Sovereign debt and the government deficit in the euro zone



Source: European System of Central Bank (ESCB) Eurostat

In two LTRO operations, performed in February 2012, some 1 trillion euro was allocated. They were attended also by the smaller banks, which was a positive sign, bearing in mind that they were the main financiers of the small and medium-sized enterprises. LTRO allowed the banks to secure sufficient liquidity on medium term, which was very much welcomed and allowed them to avoid reduction of the credit lines due to bonds maturity. Novel aspect of these measure were two

options: the first one was the time of duration of the additionally insured reprograms at the current fixed rate through the full allotment procedure, and the second option was the one between counterparties, allowing for the amount borrowed to be repaid at any time after the expiry of the year.

Furthermore, the measure of lowering required reserves rate, from 2% to 1% additionally secured another 100 billion euro in banks liquidity. In addition, within the additional credit claims another 113 billion euro was injected. When observed in their entirety, non-standard monetary policy measures undertaken by the ECB allowed a promotion of the crediting support and improvement of supply in good quality liquid funds that banks received.

In August 2012, ECB established a new body, The Outright Monetary Transactions - OMT, with the aim of preserving and maintaining an adequate monetary policy and securing smooth functioning of the transmission mechanism. The task of the OMT is to buy sovereign bonds of certain countries in the euro zone on the secondary financial market, with the remaining maturity of up to three years, without ex ante limitation. OMT (also called “the big bazooka”)

requires and imposes powerful and efficient conditions on the governments of the euro zone countries inciting them to accept programs which include mechanisms for the euro zone stability support.

OMT has the capacity to resolve also repo risks, which

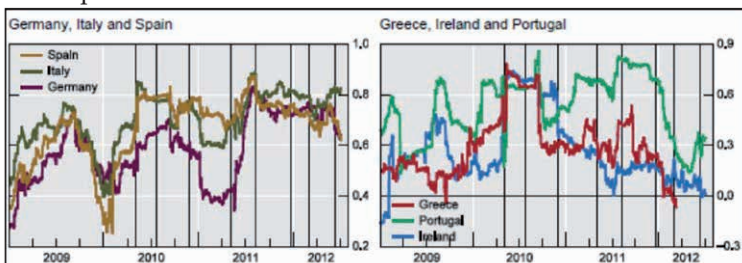
finansijskom tržištu javnih dužničkih obveznica. Od OMT, se očekuje da poboljša usklađivanje finansijskih uslova, realnom sektoru, sa boljom kamatnom politikom na celoj teritoriji evrozone.

Za godinu dana od primene OMTs rezultati su vidljivi: (Coure, 2013, str 6)

- Distorzija na tržišta državnog duga su se povukle, KDS spred (Credit Default Swaps - CDS) su otišli na dole u svim zemljama;
- Uslovi pozajmljivanja bankama i firmama su olabavljeni;
- Banke su u stanju da ponovo pristupe tržištu za finansiranje i povećanje kapitala. Jaka divergencija u troškovima finansiranja širom zemalja je opala.

Nestandardna monetarna politika ECB ima svrhu ozbiljnog rešavanja vidljivih poremećaja na tržištu javnih dužničkih obveznica koje su proizašle iz straha investitora zbog ireverzibilnosti evra.

Grafikon 5. Odnos između državnog duga i bankarskog CDS spred



Izvor: Caruana, J., Rixtel A., International financial markets and bank funding in the euro area: dynamics and participations, BIS, 2012

Međutim, samo mere ECB ne mogu efikasno da poprave transmisioni mehanizam u uslovima visokog državnog duga. Potrebna je dosledna i čvrsta podrška vlada evrozone. Zbog toga, neophodan uslov za stabilizaciju tržišta javnih dužničkih obveznica su stroga i efikasna uslovljavanja vezana za Evropski sistem finansijskih supervizora (EFSF - European Financial Stability Facility i Evropskog stabilizacionog mehanizama (ESM - European Mechanism Stability). Primena ovih programa zahteva mogućnost kupovine na primarnom finansijskom tržištu. Zajednička primena ovih programa je bila, predviđeno, privremeno do konačnog preuzimanja poslova EFSF od strane ESM.

Od 1. jula 2013. godine EFSF je prestao njegov prvobitni mandat i on neće više finansirati nove programe, s tim, što će ostati aktivan na finansiranju tekućih programa Portugalije

Italije i Grčke. Ovo je u skladu sa Ugovorom o osnivanju EFSF. Pored toga, ESM zamenjuje i Evropski mehanizam finansijske stabilizacije (EFSM - European Facility Stability Mechanism).

Od tog datuma, ESM je jedini i stalni mehanizama za reagovanje na nove zahteve članice zemalja za finansijsku pomoć. Finansijski kapacitet ESM je 700 milijardi. Maksimalni kapacitet kreditiranja iznosi 500 milijardi evra. Finansijske injekcije ESM, Irskoj, a posebno Španiji i Portugaliji, su pomogle da se na izvestan način ponovo vrate na tržište, jer su one ponovo u stanju da izdaju dugoročne obveznice.

### Nestandardna monetarna politika ECB - konceptualna obeležja

Pristup ECB u primeni nestandardnih mera u suzbijanju finansijskih nevolja mogu se identifikovati u tri konceptualna elementa: (Thiman and et. 2013, str. 19)

1. Eksplicitni okvir nestandardnih mera politike u skladu sa strategijom monetarne politike ECB;
2. Njihova karakterizacija kao dopuna odluka o kamatnim stopama;
3. Fokus na transmisioni mehanizam.

Ključni cilj strategije monetarne politike ECB je očuvanje stabilnosti cena. Eksplicitni okvir primene nestandardne monetarne politike u ublažavanju i otklanjanju finansijskih nevolja je usidren u skladu sa ključnim i ostalim ciljevima strategije monetarne politike. Strategija monetarne politike obuhvata kvantitativno definisanje stabilnosti cena i dva stuba pristupa važnih analiza rizika za stabilnost cena. ECB stabilnost cena definiše kao povećanje harmonizovanog indeksa potrošačkih cena u evro zoni ispod 2% u odnosu na prethodnu godinu. (ecb.europa.eu) Pristup ECB za procenu rizika za stabilnost cena se zasniva na dve analitičke perspektive, ekonomsku analizu i monetarnu analizu. (ecb.europa.eu) Ekonomska analiza je usredsređena na nemonetarnu analizu rizika za stabilnost cena u kratkom i srednjem roku a monetarna analiza je fokusirana na vezu između novca i inflacije u dugoročnijem vremenskom intervalu.

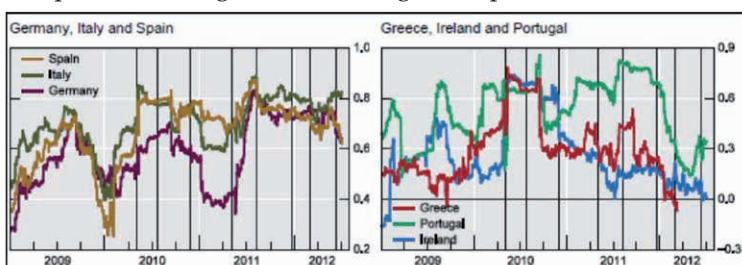
have started increasingly to surface, making at the same time dangerous pressures on the yields of sovereign bonds, which is making difficult for the banking sector to gain access to the secondary financial market of sovereign debt bonds. It is expected of the OMT to improve harmonisation of the financial conditions for the real sector with better interest rate policy in the entire territory of the euro zone.

During one year of the OMT implementation, the results became visible (Coure, 2013, p. 6):

- Distortions on the sovereign debt markets have withdrawn, Credit Default Swaps - CDSs have come down in all the countries;
- Borrowing terms in banks and firms were relaxed;
- Banks are able again to access market for financing and boost in capital. Strong divergence in financing costs throughout the countries has fallen.

The ECB non-standard monetary policy has the aim of serious resolution of visible disturbances on the sovereign debt bonds market which have resulted from the fear of investors due to the euro irreversibility.

Graph 5 - Sovereign debt/Banking CDS spread ratio



Source: Caruana, J., Rixtel A., International financial markets and bank funding in the euro area: dynamics and participations, BIS, 2012

However, the ECB measures alone can not bring about an efficacious rebound to the transmission mechanism in an environment where the high sovereign debt prevails. What is needed is a consistent and firm support of the euro zone governments. Therefore, the necessary condition for stabilisation of the sovereign debt bonds market is a strict and efficient conditioning connected with the European system of financial supervisors (European Financial Stability Facility - EFSF, and the European Stability Mechanism - ESM). The implementation of these programs requires the option of purchase on the primary financial market. Joint implementation of these programs

was envisaged for an interim period, up to the final taking over of the EFSF job by the ESM.

From 1 July 2013, EFSF had its initial mandate expire and it shall no longer finance new programs, yet it shall remain active in financing current programs of Portugal, Italy, and Greece. This is concordant with the Agreement on establishment of the EFSF. In addition, ESM shall also replace the European Facility Stability Mechanism - EFSM.

From that date onwards, ESM remains the sole and only permanent mechanism for reaction to new requests from the member countries for financial assistance. The ESM financial capacity is 700 billion euro. Maximum lending capacity is 500 billion euro. The ESM financial injections given to Ireland and especially those given to Spain and Portugal have helped them return in a certain manner again to the market, as they are now capable again of issuing long-term bonds.

### ECB non-standard monetary policy - conceptual features

The ECB approach to the implementation of the non-standard measures in suppression of financial distress may be identified in three conceptual elements (Thiman and et, 2013, p. 19).

1. An explicit framework of the policy non-standard measures in accordance with the ECB monetary policy strategy;

2. Their characterisation as a supplement to the interest rates decisions;

3. Focus on transmission mechanism.

The key ECB monetary policy strategy target is preservation of the price stability. The explicit framework for the implementation of the non-standard monetary policy in mitigation and elimination of financial distress is anchored in accordance with the key and other monetary policy strategy targets. Monetary policy strategy covers quantitative definition of price stability and two pillars of approach to the important risk analysis those pertaining to the price stability. ECB defines price stability as an increase in the harmonised index of consumer prices in the



Kvantitativna definicija cilja stabilnosti cena i kredibilitet ECB, su bez sumnje, tokom krize doprineli ublažavanju i ograničavanju pretećih finansijskih zaraza na realnu ekonomiju. Takođe, precizna kvantitativna definicija cilja stabilnosti cena je bila od ključnog značaja za usidrenje dugoročnih inflacionih očekivanja. (Trichet, 2013, str. 6) Rezultat je očigledan jer je ECB i tokom najvećih finansijskih šokova održala inflaciju u očekivanim okvirima i time praktično izbegla negativne posledice rizika koje ona nosi. Istovremeno, kvantitativna definicija je uticala na sprečavanje materijalizacije rizika od deflacije.

Po stepenu obuhvatnosti, kvantitativna definicija cilja stabilnosti cena ECB, je veoma malo usredsređena na odgovornosti monetarne politike za funkcionisanje finansijskog tržišta. Mereno, u smislu indeksa potrošačkih cena, gde cene aktive igraju indirektnu ulogu, cilj stabilnosti cena prilično daje obrazloženje za preduzete mere monetarne politike usmerene na povećanje kreditnih tokova i uslova cena - za firme -koje postavljaju takve potrošačke cene - i domaćinstva - samih potrošača. (Thiman, Winkler, 2013, str. 19) Srednjoročna orijentacija na ostvarenje glavnog cilja stabilnosti cena je doprinela usidrenju inflatornih očekivanja, bez obzira na udar finansijske krize. ECB je u srednjoročnom vremenskom horizontu uspela da održi glavni cilj svoje strategije monetarne politike. To joj je omogućilo, kada je bilo potrebno, da uvede nestandardnu monetarnu politiku. Nestandardna monetarna politika ECB je konzistentna sa utvrđenim ciljevima monetarne politike.

Primenom nestandardne monetarne politike, nakon prevelike eskalacije finansijske krize, neki ocenjuju kao „dvojni“ ciljni mandat ECB. Prvi, ciljni mandat je obezbeđenje stabilnosti cena i drugi, ciljni mandat je primena nestandardne monetarne politike za slamanje krize. Svakako je opravdano, da ECB, u uslovima kolapsa finansijskog sistema ima obavezu da hitno i efikasno reaguje. Te reakcije podrazumevaju preduzimanje i korišćenje svih raspoloživih mera i alata kako bi se ekspanzija finansijskih zaraza predupredila, ublažila i na kraju ugušila. Sa tog stanovišta, prevelika upotreba nestandardne monetarne politike tokom eskalacije krize je opravdana. Međutim, ECB je svesna da je preduzimanje nestandardne

monetarne politike privremena i iznuđena delovanjem složenih vanrednih okolnosti. Nestandardna monetarna politika izlaže ECB tržišnom i kreditnom riziku. Njena dugoročnija primena može da ima obrnute efekte. Ona može da dovede do poremećaja u tržišnim uslovima i da podstakne negativne interne eksternalije, koje, zajedno, nose potencijal povećanja finansijskog rizika i cenovne nestabilnosti. U slučaju pretnji cenovnoj nestabilnosti, ECB raspoložuje mehanizmom, koji može u srednjem roku da apsorbuje preteranu likvidnost.

Monetarnu analizu ECB koristi za detaljne analize novca i kreditnih kretanja. Ove analize su korisne i efikasne za sagledavanje budućih implikacija na inflaciju i ekonomski rast. Monetarna analiza je usredsređena na identifikovanje uzroka i dinamike rizika u monetarnim i kreditnim kretanjima koji, neposredno, mogu da ugroze transmisioni mehanizam monetarne politike. Monetarnom analizom, ECB dolazi do potrebnih i relevantnih podataka koji joj služe za koncipiranje i primenu odgovarajuće monetarne politike.

Izbegavanje i nepoštovanje primene kriterijuma konvergencije, Pakta za stabilnost i rasta, od strane zemalja članica EU, su proizvele makroekonomske neravnoteže koje su uticale na pojavu drugog talasa krize, poznate kao kriza državnog duga. Kriza državnog duga je ozbiljno ugrozila i dovela u pitanje funkcionisanje transmisionog mehanizma.

Nestandardne mere predstavljaju alternativne perspektive i produženu ruku monetarne politike. Primenu nestandardne monetarne politike treba, prevashodno, posmatrati u kontekstu dopune standardne monetarne politike, a ne kao zamenu, kao što mnogi misle. Njihovu primenu u jeku najteže ekspanzije finansijske i krize državnog duga, treba prihvatiti kao iznuđenu obavezu ECB sa privremenim boravištem. Privremene, u smislu trajanja, do neutralisanja ili eliminisanja uzroka koji su ih izazvali, jednostavno, do potpunog izlaska iz obe krize.

Zbog karaktera privremenosti „Upravni savet je odlučio da na nivou odgovarajuće kamatne stope ispuni svoj mandat stabilnosti cena, a potom sprovede niz nestandardnih mera sa ciljem da osigura ovaj politički stav i uspešno transformiše na privredu u celini“. (Gianone, Lenza, Pill,

euro zone below 2% in respect to the previous year (ecb.europa.eu). The ECB approach to the price stability risk assessment is based on two analytic perspectives, economic analysis and monetary analysis (ecb.europa.eu). Economic analysis is focused on the non-monetary price stability risk analysis over a short and medium term, while the monetary analysis is focused on the link between money and inflation over a long-term time interval.

Quantitative definition of the price stability target and the ECB credibility beyond any doubt, have contributed during the crisis to the mitigation and limitation of the threatening financial pollution of the real economy. In addition, precise quantitative definition of the price stability target is of crucial importance for anchoring long-term inflationary expectations (Trichet, 2013, p. 6). The result is obvious as the ECB during even the highest financial shocks kept the inflation within expected scope and thus practically avoided negative consequences of the risk that it entails. At the same time, quantitative definition impacted the prevention of the deflation risk materialisation.

In the comprehensive degree that it embraced, quantitative definition of the ECB price stability target was very slightly focused on the accountability of the monetary policy for the functioning of financial market. Measured in the sense of consumer price index where the asset prices are playing an indirect role, price stability target rather offers an explanation for the monetary policy measures aimed at boosting of lending flows and price conditioning, for the firms - which are imposing such consumer prices - and the households- consumers themselves (Thiman, Winkler, 2013, p. 19). The medium-term orientation on the achievement of the main price stability target helped in anchoring of the inflationary expectations, regardless of the financial crisis impact. The ECB succeeded, over a medium-term horizon, in maintaining the main target of its monetary policy target. This enabled ECB, whenever necessary, to introduce non-standard monetary policy. The ECB non-standard monetary policy is consistent with the set monetary policy targets.

Implementation of the non-standard monetary policy, after an excessive escalation of financial crisis, some are qualifying as a

“dual” ECB mandate target. The first one, the target mandate was to secure price stability, and the second target mandate was the implementation of the non-standard monetary policy for crushing down the crisis. It is certainly justified to say that the ECB, in the circumstances of the financial system collapse, had the duty to urgently and efficiently react. Such reaction comprises undertaking and usage of all measures and tools available in order to prevent expansion of financial pollution, in order to have it mitigated and finally eradicated. From that point of view, an excessive use of non-standard monetary policy measures during the escalation of the crisis was justified. However, ECB is well aware that undertaking non-standard monetary policy is an interim and coerced measure by the action of complex extraordinary circumstances. Non-standard monetary policy is exposing ECB to the market and credit risk. Its long-term implementation may have opposite effects. It may even bring about disturbances in market conditions and may instigate negative internal externals which put together carry a potential for a growth of financial risk and price instability. In case price instability is to threaten, ECB has available the mechanism which may over a medium-term absorb an excess of liquidity.

The ECB is using monetary analysis for detailed analyses of money and lending trends. These analyses are both useful and efficient for the assessment of future implications on the inflation and economic growth. Monetary analysis is focused on identifying causes and dynamic of risk in monetary and lending trends which, directly, may jeopardize the monetary policy transmission mechanism. Through the monetary analysis, ECB is coming to the necessary and relevant data which serve for conceiving and implementation of the adequate monetary policy.

The avoidance and disrespect for the convergence criterion application of the Pact for Stability and Growth by the EU countries have produced macro-economic imbalance which impacted the emergence of the second wave of crisis, known as the sovereign debt crisis. The sovereign debt crisis seriously endangered and brought into question functioning of the transmission mechanism.



Reichlin, 2011, str. 2) Uključivanjem nestandardnih mera i alata, ECB je ojačala svoj odbrambeni kapacitet u borbi protiv razvoja finansijske zaraze i potencijalnih pretnji od deflacije.

I pored primene nestandardne monetarne politike, ključni parametar u konkretizaciji monetarne politike, pre i tokom krize, je politika kamatnih stopa. Svaka promena kamatnih stopa na finansijskim tržištima je dovoljan i efikasan signal da ECB reaguje na odgovarajući način, u ovoj situaciji nestandardnom monetarnom politikom. Nestandardne mere monetarne politike nisu instrumenti za signaliziranje promena uslova u finansijskom sistemu. Njihov zadatak je da kao dopunske mere obezbede i osiguraju nesmetano funkcionisanje transmisionog mehanizma. Time, monetarna politika ECB može da se podesi da se suprotstavlja rizicima na stabilnost cena na srednji rok odvrćajući preostala oštećenja transmisionog mehanizma pomoću nestandardnih mera. (ECB, CB, Monthly Bulletin, July, 2011, str. 55)

Sve nestandardne mere koje je ECB dizajnirala su komplementarne sa standardnim odlukama o kamatnim stopama. Nestandardne mere se mogu promeniti nezavisno od nivoa vladajućih kamatnih stopa ali i kamatne stope mogu da se prilagođavaju nestandardnim merama. Ilustracija ove komplementarnosti je „indeksacija kamatne stope LTROs na buduću glavnu stopu refinansiranja tokom životnog veka operacije. Ova indeksacija, znači, da povećanje u politici kamatnih stopa odmah dovodi do povećanja troškova u deo preostalih operacija“. (Thiman i saradnici, 2013, str. 21) Operacije LTROs, i bez ove indeksacije, bi svakako uticale na signale kamatnih stopa o načinu vođenja monetarne politike. Funkcija indeksacije je uvedena 2009. godine i zadržana za sve LTROs operacije preko tri meseca.

Implikacije globalne finansijske i državne krize, su uticale na ECB, da se nestandardnom monetarnom politikom fokusira na obezbeđenje podrške funkcionisanju transmisionog mehanizma i prenosu signala politike kamatnih stopa. Glavni kanal ciljanih akcija ECB sa nestandardnim merama su bankarski krediti. (Thiman i saradnici, 2013, str. 22)

ECB funkcioniše u okruženju više zemlja sa jednom monetarnom politikom i 17 zemalja

koje čine valutnu uniju. Svaka od ovih država ima različite specifičnosti rizika i likvidnosti. U vreme finansijske krize heterogenost okruženja je dovela do fragmentacije bankarskog sektora i finansijskih tržišta. Preko 70% finansiranja realnog sektora dolazi iz bankarskog sektora. Iz tih razloga delovanje monetarne politike ECB je asimetrično u odnosu na zemlje, članice monetarne unije. Asimetričan pristup je u skladu sa ciljem ECB koji teži da „podrži efikasan prenos transmisione politike kamatnih stopa širom evrozone“. (Thiman i saradnici, 2013, str. 22)

## Makroekonomski efekti na bilans stanja

O makroekonomskim efektima nestandardnih mera monetarne politike centralne banke se malo zna. Istraživanja, rađena tradicionalnim modelom, koji je pogodan za ekonometrijske analize u uslovima finansijskih distorzija, VAR model, nudi dokaze da postoji veza između efekata proširenog stanja bilansa ECB i efekata pojedinih varijabla makroekonomije. U nastavku, daćemo rezultate ekonometrijskog VAR modela. Pomoću njega, empirijski su utvrđene određene veze između makroekonomije i ekspanzije bilansa stanja centralnih banaka vodećih zemalja, uključujući i ECB.

Nestandardne mere monetarne politike bile su efikasne u podržavanju makro-ekonomije preko rasta dve varijabile, autputa i potrošačkih cena. Uvećani bilansi stanja su značajno doveli do povećanja rasta obe makroekonomske varijabile. Pronađeno je da nestandardna monetarna politika, preko uticaja na promene autputa i cena, ima efekte na makroekonomiju. Dokazano je, VAR modelom, da autput raste sa maksimalnim efektom nakon 6 meseci i postepeno se vraća na početnu vrednost posle 18 meseci. U poređenju sa postojećim dokazima na konvencionalnu transmisijsku šokova monetarne politike koje su povezane sa promenom kratkoročne kamatne stope, obrazac odgovora na autput je kvalitativno veoma sličan. (Gambacorta, L., Hofmann., B., Peersman, G., 2012, str. 12) Uticaj cena je drugačiji. Konkretno, maksimalni efekat povećanja bilansa stanja na potrošačke cene se poklapa sa autput odgovorom, dok uticaj šokova kamatnih stopa na nivo cena se obično utvrđuje veoma sporo sa maksimumom

Non-standard measures are alternative perspectives and an extended hand of the monetary policy. Implementation of non-standard monetary policy should primarily be viewed in the context of a supplement to the standard monetary policy, but not as a substitute for the same, as many might think. Their implementation in the midst of the harshest expansion of financial and the sovereign debt crisis should be accepted as a coerced obligation of the ECB with a brief sojourn. These measures were temporary in the sense of their brief sojourn, aimed to last until the neutralisation or elimination of the causes that have given them rise, or simply until complete exit from both of these crises.

Due to their interim character "Consulting Board decided, on the level of an adequate interest rate, to fulfil its price stability mandate and thereupon implement a series of non-standard measures with the aim to ensure this political stance and successfully transform it on to the economy in general" (Gianone, Lenza, Pill, Reichlin, 2011, p. 2). With the inclusion of non-standard measures and tools ECB strengthened its defence capacity in the struggle against the spreading of financial contagion and potential threat of deflation.

In spite of implementation of non-standard monetary policy measures, the key parameter in concretisation of the monetary policy, both prior and during the crisis, is the interest rate policy. Every change in the interest rates on the financial markets is a sufficient and efficient signal that the ECB is reacting in an adequate manner, in this particular situation through the non-standard monetary policy. Non-standard monetary policy measures are not instruments for signalization of the changes in conditions that prevail in the financial system. Their task is, being supplementary measures, to provide for and secure free and smooth functioning of the transmission mechanism. Thus the monetary policy of the ECB can be adjusted so that it confronts medium-term price stability risks, by diverting the remaining damages of the transmission mechanism by means of non-standard measures (ECB, CB, Monthly Bulletin, July 2011, p. 55).

All the non-standard measures designed by the ECB are complementary with the standard

decisions on the interest rates. Non-standard measures can be changed irrespective of the level of the prevailing interest rates, but interest rates can also be adjusted to the non-standard measures. An illustration of this complementary element is the "LTRO interest rate indexation on the future main rate for refinancing during the life span of the operation. This indexation means that the increase in the interest rate policy immediately produces increased costs in the part of remaining operations" (Thiman and associates, 2013, p. 21). LTRO operations even without this indexation would certainly have an impact on the signals of the interest rates on the manner of conducting monetary policy. Function of indexation was introduced in 2009 and remained applied in all the LTRO operations for over three months.

Global financial and sovereign debt crisis implications motivates ECB to focus through the non-standard monetary policy on securing support for the transmission mechanism functioning and the transmission of the interest rates policy signals. The main channel of the ECB targeted actions with non-standard measures are the bank loans (Thiman and associates, 2013, p. 22).

ECB functions in an environment comprising a number of countries with a single monetary policy and 17 countries members of the currency union. Each one of these countries has different specificities of risk and liquidity. At the time of financial crisis, heterogeneous environment brought about fragmentation of the banking sector and financial markets. Over 70% of the real sector financing is coming from the banking sector. For this reason the action of the ECB monetary policy is asymmetric in respect to the countries members of the monetary union. Asymmetric approach is concordant with the aim that the ECB wishes to achieve and that is "to support efficient transfer of the interest rates transmission policy throughout the euro zone" (Thiman and associates, 2013, p. 22).

### **Macroeconomic effects on the balance sheet**

Little is known of the effects of non-standard monetary policy measures of the central bank. Research made through the traditional model

tek posle dve godine. (Peersman, 2013, str. 15) Upoređivanjem efekata nestandardne sa standardnom monetarnom politikom izgleda da nestandardne politike imaju relativno veći output i niže cene. Efekat nestandardnih mera monetarne politike je procenjen da ima trostruko veći efekat na output nego na efekte cena. Ekonometrijskim istraživanjem je utvrđeno da inovacije kamatnih stopa, uopšteno, imaju veći efekat na output nego na efekat cena.

Osim toga, rezultati pokazuju da dvostruko povećanje bilansa stanja ECB ima oko 2% uticaja na rast outputa, što je „ekvivalentno sa 300 poena smanjenja politike kamata“. (Peersman, 2013, str. 15) Nesumnjivo je, da navedeni dokazi VAR modela, ukazuju da su nestandardne mere monetarne politike u kriznom periodu imale uticaj na makroekonomiju. One su pomogle da se ublaže pojedini makroekonomski efekti krize. Istovremeno, ne treba shvatiti da će svako povećanje bilansa stanja ECB imati povoljne makroekonomske efekte. To važi samo u kriznim situacijama, kada standardna monetarna politika više ne može da obezbedi adekvatno sprovođenje funkcionisanja kanala transmisionog mehanizma te je neophodna primena, kao dopuna, nestandardna monetarna politika koja sa inovativnim finansijskim objektima likvidnosti može da ublaži i ograniči anomalije finansijskog sistema.

Takođe, model VAR, ukazuje da egzogeni porast u bilansu stanja centralnih banaka na donjoj granici nula ima pozitivne efekte na privredni rast i nivo cene. Studija pokazuje da su, nestandardne mere, usvojene u periodu eskalacije krize, pomogle da se obezbedi privremena podrška privredi.

Odgovori dobijeni VAR modelom pokazuju da se šok odlikuje povećanjem bilansa stanja centralne banke za oko 3% koji nestaje posle šest meseci. Nestabilnost berzi pada pod uticajem ekspanzije bilansa za oko 1% ali odgovor je negativan za skoro jednu godinu.

Tradicionalna VAR analiza ukazuje i na neke nedostatke. Pristup analize je na identifikovanju ukupnog efekta akcije bilansa stanja centralne banke na makroekonomiju. Zatim, analiza nije eksplicitno procenila različite vrste nestandardne monetarne politike i nije obuhvatila samo efekte nestandardne monetarne politike.

## **Izlazna strategija ili „sužavanje“ nestandardnih mera**

Bez obzira što postoje dokazi da je nestandardna monetarna politika bila efikasna u podsticaju ekonomskog rasta, činjenica je da postoji i dalje velika neizvesnost njenog uticaja na dugi rok. Posledice ove politike na dugi rok su zamagljene i nejasne s obzirom na jedinstveno korišćenje nekih mera. Uglavnom, dugoročno gledano, nestandardna monetarna politika, može da izazove rizike na finansijskim tržištima, usled potrage investitora za većim prinosima u uslovima niskih kamatnih stopa. Zatim, monetarne i ekonomske analize ne mogu da identifikuju negativne efekte dugoročnog popuštanja ili ublažavanja monetarne politike u situacijama povećanja bilansa centralne banke zbog niskih kamatnih stopa. Proširenje bilansa stanja centralne banke odlaže poboljšanje bilansa privatnog i javnog sektora ekonomija pogođenih krizom i nosi dugoročne rizike za autonomiju i održanje kredibiliteta centralne banke.

Opasnosti postoje od ekspanzije proširenog bilansa ECB koje mogu da izazovu inflatorne pritiske. ECB je do sada uspevala da, posrednim putem, primenom nestandardnih mera održava inflaciju, shodno kvantitativnoj definiciji, a inflatorna očekivanja čvrsto usidri. Na kratak i srednji rok, ne bi trebalo da dođe do inflatornih pritisaka. Razlog ovakvog uverenja, baziran je na premisi, da se veća količina ubrizgane likvidnosti u finansijski sistem nalazi kao višak rezervi u ECB. ECB nije značajno povećavala novčane agregate, tokom krize, i s obzirom na tržišne uslove privređivanja nema realnih opasnosti od povećanja cena. Do skoka cena u EU može doći samo ako tražnja ojača i proizvodni troškovi porastu. Međutim, sve dok je privreda ispod ravnotežnog nivoa opasnost od inflatornih povećanja ne postoji.

Međutim, očekuje se da se privreda EU oporavi i približi ravnotežnom nivou. Oporavak privrede će neposredno uticati na ekspanziju bankarskih kredita koji će se finansirati iz rezervi banaka, stacionarnih kod ECB. Ekspanzija bankarskih kredita, iz proširenog bilansa ECB, može dovesti do bržeg rasta novčanih agregata i olakša kreditne uslove zaduživanja. Takvo kreditiranje može prouzrokovati rast cena i inflaciju. Jedini način da ECB izbegne

appropriate for econometric analysis in the conditions of financial distortions, the VAR model, offers proof that there is a connection between the effects of the ECB expanded balance sheet and the effects of particular macroeconomic variables. Further in this paper we shall give results of the econometric VAR model. By means of this model, certain connections between macroeconomy and the central banks balance sheet expansion of the leading countries were determined in an empirical fashion, including the ECB.

Non-standard monetary policy measures were efficacious in supporting macroeconomy through the growth of two variables, output and consumer prices. The expanded balance sheets have substantially contributed to the growth of both of these macroeconomic variables. It was found that the non-standard monetary policy, through the impact on change in output and prices, had the effects on macroeconomy. It was proved, through the VAR model that output grows with the maximum effect after 6 months and gradually returns to its starting value after 18 months. In comparison with the existing evidence of conventional monetary policy shocks transmission which is connected with the change of the short-term interest rate, the format of response to the output is qualitatively very similar (Gambacorta, L., Hofmann, B., Peersman, G., 2012, p. 12). The impact of prices is different. In concrete terms, the maximum balance sheet expansion effect on consumer prices coincides with the output response, while the shock effect of the interest rates on the price level usually is determined very slowly, with a maximum of only after two years (Peersman, 2013, p. 15). When comparing effects of the non-standard with the standard monetary policy, it appears that the non-standard policies are having a relatively higher output and lower prices. The effect of non-standard monetary policy measures is estimated as having a three-fold higher effect on the output than on the price effect. Econometric research determined that the interest rates innovations, generally speaking, are having a higher effect on the output than on the price effect.

In addition, the results show that two-fold ECB balance sheet expansion has some 2% impact on the growth of output, which

is "equivalent to 300 points in reduction of the interest policy" (Peersman, 2013, p. 15). Undoubtedly, the said proofs obtained from the VAR model indicate that the monetary policy non-standard measures during the times of crisis had an impact on the macroeconomy. They helped to mitigate certain macroeconomic effects of the crisis. At the same time, it should not be perceived that every ECB balance sheet expansion shall have favourable macroeconomic effects. This is valid only in the times of crisis, when standard monetary policy can no longer provide for an adequate implementation of the functioning of the transmission mechanism channel so that the application is necessary, as a supplement, of the non-standard monetary policy which through some innovative financial liquidity vehicles can mitigate and limit anomalies of the financial system.

In addition, the VAR model points out at the fact that the exogenous growth in the central banks balance sheet, when on the lower limit of zero, has positive effects on the economic growth and the prices level. The study shows that the non-standard measures, adopted in the period of crisis escalation, have helped provide a temporary support to the economy.

The answers obtained through the VAR model show that the shock is characterized by the central bank balance sheet expansion of some 3% which disappears after six months. Instability of the stock markets falls under the influence of the balance sheet expansion for some 1% but the response is negative for almost entire year.

Traditional VAR analysis points out also at some of the shortcomings. The analysis approach is to identify total effects of the central bank balance sheet action on the macroeconomy. Thereupon, the analysis did not explicitly estimate different types of non-standard monetary policies and had neither covered only the effects of the non-standard monetary policy.

### **Exit strategy of "narrowing down" of the non-standard measures**

Regardless of the evidence showing that the non-standard monetary policy was efficient in enhancing economic growth, the fact remains



ovakva moguća kretanja, je da usvoji tzv. mere kompenzacione politike, eliminisanjem velikih rezervi u svom bilansu stanja ili da neutrališe negativne i neželjene efekte kreditiranja iz proširenog bilansa na privredu. Ovo se često naziva „izlazna strategija“ ili „sužavanje nestandardnih mera“.

Veliki broj ovih mera je obustavljen i ne koriste se više. To je primer, sa programom nestandardnih mera SMP i CBPP. Problem je sa merama koje je neophodno još primenjivati. Izlazna strategija iz nestandardne monetarne politike i povratak u normalu ECB zahteva određene mere. Te mere se mogu elaborirati: (Peersman, 2013, str. 16)

- Broj raspoloživih nekonvencionalnih politika su privremenog karaktera i imaju ugrađene samokorektivne mehanizme;
- ECB „može da poveća obaveznu rezervu“;
- ECB „može da podigne kamatne stope, posebno stope plaćanja na bankarske viškove rezervi kod ECB“.

Poboljšanje finansijskih uslova će neminovno dovesti do slabljenja krize što će prouzrokovati smanjenje kreditnih olakšica i automatski uticati na smanjenje tražnje za likvidnost.

ECB može da nametne bankarskom sektoru višu stopu obavezne rezerve na depozite. Ona će to učiniti, ako bude potrebno, da onemogućiti banke da se zadužuju na tržištu novca i na taj način preseku mogućí kanal kreiranja novčane mase. Ovaj deo kreiranja novca neće dovesti do inflacije. (Peersman, 2013, str. 16)

ECB u svakom trenutku može da podigne ključne kamatne stope, posebno kamatnu stopu plaćanja na višak rezervi banaka deponovanih na njene račune iznad tržišne kamatne stope po kojoj banke plasiraju svoja sredstva. Viša stopa plaćanja na rezerve od preovladajuće tržišne kamatne stope će svakako podstaći banke da smanjuju svoje kreditne aktivnosti. Motive takvog ponašanja banaka, treba tražiti u kontekstu izbegavanja rizičnih plasmana na disfunkcionalna tržišta, odnosno u ostvarenju većeg profita od stope plaćanja na višak rezervi. Shodno tome, novac sa finansijskih tržišta će se preusmeravati u višak rezervi i neće uticati na inflatorne pritiske.

Arbitražom bankarskog sektora na tržištu novca, ustanovljeno je da, ubuduće, kamatna stopa na višak rezervi bude ispod vrednosti

tržišnih kratkoročnih kamatnih stopa i prekonocne kamatne stope. Vremenom, postoji realna mogućnost da kamatna stopa na višak rezervi umesto EONIA postane najvažniji indikator za tržišne uslove novca i vodič monetarne politike. (Peersman, 2013, str. 17)

ECB može, „da suzi nestandardne mere“ nametanjem, što bi bilo suprotno delovanju slobodnog tržišta, ili ponudom bankama evrozone oročavanje depozita, slično oročavanju depozita njihovih klijenata. Oročavanjem depozita banaka kod ECB, sklanja se jedan deo likvidnosti sa tržišta novca, koji ne može da se pozajmljuje. ECB, takođe, može da obrnutim repo operacijama da apsorbuje višak likvidnosti, velikom prodajom HOV na finansijskom tržištu sa obavezanim kasnijim re-otkupom.

Na kraju ECB može da preokrene sredstva kupovanjem programa od prodaje dela svoje imovine na otvorenom tržištu u zamenu za likvidnost. (Peersman, 2013, str. 16)

Svaka od ovih politika ECB treba da ima za cilj ograničavanje prekomernog rasta novca i kredita i stvaranje povoljnih uslova za vođenje restriktivnije monetarne politike i korišćenje standardnih mera kamatnih stopa. Zbog toga, centralne banke moraju što hitnije da normalizuju svoje poslovanje vraćanjem u zakonski definisane okvire i ostvarivanju svojih glavnih ciljeva. (Momirović, 2014, str. 1)

## Zaključak

Finansijska i kriza državnog duga generalisale su velike pritiske na troškove finansiranja i predstavljale glavne izazove monetarne politike ECB. Smanjenjem ključnih kamatnih stopa i usvajanjem nekoliko izuzetnih nestandardnih monetarnih mera ECB je uspela da ublaži i smanji finansijske i tenzije državnog duga i obezbedi nesmetano funkcionisanje transmisionog mehanizma monetarne politike. Transmisija monetarne politika ECB je bila ključna da se održi finansiranje bankarskog sektora i ne ugrozi realni sektor.

Efekti primene standardne i nestandardne monetarne politike u svim fazama eskalacije finansijske i krize državnog duga su vidljivi i poznati. Ali o efektima nestandardne monetarne politike, posebno efekata proširenog bilansa stanja ECB na makroekonomiju se malo govori.



that there is still great uncertainty regarding its long-term impact. Consequences of this policy over a long-term remain ambiguous and unclear given the unique use of certain measures. In general, in the long-term perspective, non-standard monetary policy may cause risk on financial markets due to the quest of investors for higher return in the climate of low interest rates. In addition, monetary and economic analyses cannot identify negative effects of a long-term relaxation or mitigation of the monetary policy in the situation of an expanded central bank balance sheet due to low interest rates. Central bank balance sheet expansion postpones improvement of the balance sheet of both the private and the public sectors of the economies inflicted with the crisis, and brings about long-term risks for the autonomy and sustainability of the central bank credibility.

There are dangers of the ECB expanded balance sheet extension that may cause inflationary pressures. ECB has so far succeeded, in an indirect way and by applying non-standard measures, to keep in line the inflation, concordant with the quantitative definition, and to anchor firmly inflationary expectations. Over a short and medium-term, there should not be inflationary pressures. The reason for this belief is based on the premise that the higher quantity of injected liquidity in the financial system is present there as a surplus of reserves at the ECB. ECB did not increase substantially monetary aggregates during the crisis, and in view of the market conditions for business activities there are no real dangers of the price increase. Jump in prices in the EU may be expected only if the demand is to strengthen and production costs to go up. However, for as long as the economy remains below the balanced level there is no danger of inflationary highs.

What is expected however is for the EU economy to recover and get closer to the balanced level. Economic recovery will have a direct impact on the expansion of banking loans which shall be financed from the bank reserves, stationed with the ECB. Banking loans expansion, from the ECB expanded balance sheet, may cause a faster growth of monetary aggregates and alleviate borrowing conditions. Such crediting may cause price growth and inflation. The only way for the ECB

to avoid such possible movements is to adopt the so-called compensation policy measures by eliminating large reserves in its balance sheet or by neutralising negative and undesirable lending effects from the expanded balance sheet on the economy. This is often called the "exit strategy", or "narrowing down of the non-standard measures". A large number of these measures has been suspended and is no longer in operation. This is the case with the non-standard measures program - SMP and the CBPP. The problem is with measures that still have to be applied. The exit strategy from the non-standard monetary policy and the return into normal demands certain measures to be undertaken by the ECB. These measures may be elaborated as follows (Peersman, 2013, p. 16):

- A number of available non-conventional policies are of an interim character and have embedded self-corrective mechanisms;
- ECB "may increase required reserves";
- ECB "may raise interest rates, especially payment rates on banking surplus reserves with the ECB".

The improvement of financial conditions will inevitably lead to the weakening of crisis which in turn will cause the fall in lending easing and automatically impact lower liquidity demand.

ECB may impose on the banking sector a higher rate of required reserves on deposits. It will do so, if necessary, in order to prevent banks from borrowing on the money market and in this way cut the possible channel for creating money mass. This part of money creation will not lead to inflation (Peersman, 2013, p. 16).

ECB at any moment may raise the key interest rates, and especially the interest rate for payment on banking surplus reserves deposited in its accounts, above the market interest rate at which the banks and placing their funds. Higher rate of payment on reserves than the prevailing market interest rate will certainly instigate banks to reduce their lending activities. The motive for such behaviour of banks is to be looked for in the context of avoidance of the risky placement on dysfunctional markets, i.e. in the making of a higher profit than the payment rate for reserves surplus. Hence the money from the financial markets will be

VAR model, dokazuje da ekspanzija bilansa ECB pokazuje pozitivan uticaj na dve makro-varijabile, autput i cene. Dokazi VAR modela, o efektima ekspanzije bilansa stanja na efekte dve makroekonomske varijabile i na relativni privredni rast su validni i važe samo u uslovima velikih finansijskih tenzija, kada standardna politika nije više u stanju da obezbedi transmisiju monetarne politike i kada aktivna upotreba nestandardne monetarne politike postane dominantna.

I pored ostvarene efikasnosti, dugoročna primena nestandardne politike u evrozoni nosi opasnost efekta bumeranga i rizika vaskrsa finansijskih tenzija i zaraza. Zbog toga, ECB, će vremenom biti prinuđena, da bi održala svoj

kredibilitet i nezavisnost, da postepeno izade i napusti primenu nestandardne monetarne politike. Neophodna je „izlazna strategija“ iz nestandardne politike ili „sužavanje nestandardne politike“. Čini se da je monetarna politika „sužavanja nestandardne politike“ prihvatljivija. Razlog je istorijski. Jer, posle svake finansijske krize centralne banke su doživljavale promene. Sve je izglednije da ECB neće izbeći ovu pošast. Pitanje je da li će ECB, u buduću, izlaznom strategijom moći da ukine primenu nestandardne monetarne politike ili sa nekim uspostavljenim objektom, nastaviti sprovođenje monetarne politike, ali ne kao dopunu, već kao sastavni deo standardne monetarne politike.

redirected into the reserves surplus and will not impact inflationary pressures.

Through arbitration of the banking sector on the money market it was established that, in future, the interest rate on the reserves surplus shall be below the value of the market short-term interest rates and the overnight interest rate. In time, there is a realistic possibility that the interest rate on reserves surplus, instead of EONIA, shall become the most important indicator of the money market conditions and the guide to the monetary policy (Peersman, 2013, p. 17).

ECB may “narrow down non-standard measures” by imposing them, which would be opposed to the operation of the free market, or by offering the banks of the euro zone time depositing, similar to time depositing of their clients. Time depositing by banks with the ECB removes one part of liquidity from the money market, which can not longer be borrowed. ECB also may absorb, through reverse repo operations, liquidity surplus, through large sales of securities on the financial market with mandatory later re-purchase.

Finally, ECB may turn over the funds “by buying programs from the sale of part of its assets on the open market in exchange for liquidity” (Peersman, 2013, p. 16). Every one of these ECB policies should have the aim to limit an excessive growth of money and lending, and to create more favourable conditions for conducting restrictive monetary policy and implementation of standard measures of the interest rates. To that end, central banks must urgently normalize their operations by returning back to the legally defined framework and the achievement of their main objectives (Momirovic, 2014, p. 1).

## Conclusion

Financial crisis and the sovereign debt crisis generated great pressures on the costs of financing and were the main challenges for the ECB monetary policy. With the lowering of the key interest rates and adoption of several outstanding non-standard monetary measures ECB succeeded in mitigating and lowering financial tensions of the sovereign debt and in securing smooth and free functioning of

the monetary policy transmission system. The ECB monetary policy transmission was crucial for maintaining financing of the banking sector without jeopardizing the real sector.

The effects of implementation of both standard and non-standard monetary policy in all phases of escalation of the financial crisis and the sovereign debt crisis are visible and known. But the effects of the non-standard monetary policy and especially the effects of the ECB expanded balance sheet on the macroeconomy are not widely discussed.

The VAR model proves that the ECB balance sheet expansion has shown positive effects on two macro-variables, the output and prices. The proof offered by the VAR model on the effects of the balance sheet expansion on the effects of two macroeconomic variables and the relative economic growth are valid and hold only in the situations of great financial tensions when the standard policy is no longer able to secure monetary policy transmission, and when the active use of non-standard monetary policy becomes predominant.

In spite of achieved efficacy, long-term implementation of the non-standard policy in the euro zone brings about the danger of a boomerang effect and the risk of resurrection of the financial tensions and contagion. Therefore the ECB will be forced in time, in order to maintain its credibility and independence, to gradually exit and abandon implementation of the non-standard monetary policy measures. What is necessary to have is the “exit strategy” from the non-standard policy, or “narrowing down of the non-standard policy”. It seems that the monetary policy of “narrowing down the non-standard policy” is more acceptable. The reason is a historical one. And that reason is that after every financial crisis central banks were experiencing changes. It is becoming more and more evident that the ECB will not be able to avoid this plague. The question remains whether the ECB will in future be able, through the exit strategy, to suspend the implementation of the non-standard monetary policy, or through some other established vehicle to continue with the application of the monetary policy, yet not as a supplement, but as a component part of its standard monetary policy.

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