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KARAKTERISTIKE I SAVREMENI IZAZOVI MEĐUNARODNOG MONETARNOG I FINANSIJSKOG SISTEMA

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Rezime

Funkcionalan međunarodni monetarni sistem (MMS) treba da obezbedi zadovoljavajuću međunarodnu likvidnost i omogućiti nesmetane tokove novca i kapitala u svetskoj privredi. U uslovima krize od njega se očekuje da olakša protok kapitala radi eliminisanja neravnoteža koje vode krizi. Osnovna poluga MMS-a u posleratnom periodu bila je konvertibilnost dolara u zlato, što je omogućilo da američka valuta postane svetska rezervna valuta. Monetarna politika SAD je u ovom monetarnom sistemu preuzela ulogu kreatora međunarodne likvidnosti. Kad je 1971. godine američki predsednik Nikson ukinuo zlatno pokriće dolara, to je dovelo do raspada Bretonvudskog sistema, dolar je otpočeo slobodno plivanje, ali je do danas zadržao poziciju ključne svetske rezervne valute. Svetska finansijska kriza iz 2008. godine podsetila je na manjkavosti sadašnjeg MMS-a, jer je kolebljiva vrednost dolara nametnula rizik držanja ove valute u deviznim rezervama centralnih banaka. Obnovljeni su prigovori zemalja sa najvećim deviznim rezervama na svetu o "neodmerenoj privilegiji" SAD u MMS-u, kako je to svojevremeno nazvao Šarl de Gol. Impulsi monetarne politike zemalja čije valute spadaju u klub vodećih svetskih valuta (pre svega SAD, evrozone i Japana) prenose se van granica ovih zemalja i utiču na ostale zemlje u globalizovanoj svetskoj privredi. Ovaj rad ima za cilj da ukaže na posledice sadašnje strukture MMS-a, koju karakteriše dominantna uloga dolara i evra u međunarodnim trgovinskim i finansijskim tokovima. Ispituju se kanali kroz koje se režimi monetarne politike SAD i evrozone prelivaju na međunarodno okruženje i posledice za ostale zemlje. **Ključne reči:** Međunarodni monetarni sistem, dolar, evro, obveznice, krediti, devizne rezerve, kamratne stope, likvidnost, monetarna politika, devizni kurs **JEL:** G15, G18, G23, G28, G38

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CHARACTERISTICS AND CONTEMPORARY CHALLENGES OF THE INTERNATIONAL MONETARY AND FINANCIAL SYSTEM

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Summary

A well-functioning international monetary system (IMS) should provide a satisfactory international liquidity and facilitate money and capital flows in the world economy. In a crisis, the IMS is expected to facilitate capital flows in order to eliminate imbalances leading to the crisis. The main leverage of the IMS in the postwar period was the dollar convertibility into gold, which enabled the US currency to become a global reserve currency. US monetary policy in this monetary system has a basic mission to generate international liquidity. When President Nixon suspended convertibility of the dollar to gold in 1971, this situation led to the collapse of the Bretton Woods system, the dollar began to float freely, but remained the key global reserve currency until today. The 2008 global financial crisis reminded us about the weakness of the current IMS, because the unstable value of the dollar created the risk of US dollar-denominated reserve assets. The current crisis has renewed the objections by the countries with the largest foreign exchange reserves in the world about "exorbitant *privilege*" of the U.S. dollar in the IMS, as Charles De Gaulle once called it. The monetary policy impulses in the countries whose currencies belong to the club of leading world currencies (primarily the US, Eurozone and Japan) are transferred outside the borders of these countries and affect other countries in the globalized world economy. This paper deals with the consequences of the present IMS structure, which is characterized by the dominant role of the dollar and the euro in international trade and financial flows. The paper studies the channels of US and Eurozone monetary spillovers into the international environment, and their consequences for other countries.

Key words: international monetary system, dollar, euro, bonds, loans, foreign exchange reserves, interest rates, liquidity, monetary policy, exchange rate

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Uvod

Današnji MMS čine nacionalno usmerene monetarne politike u okruženju koje karakteriše postojanje globalnih kompanija, ključnih valuta i globalnih tokova kapitala. Postavlja se pitanje da li lokalno definisani ciljevi u sprovođenju monetarne politike odgovaraju globalnom sistemu? Opravdanost ovog pitanja posebno se odnosi na područje kreiranja likvidnosti, gde se tokovi likvidnosti jedne privrede prepliću sa ostatkom sveta, i mogu pojačati neravnoteže u datoj privredi. Današnji MMS ne poseduje mehanizme kojima bi sprečio formiranje finansijskih neravnoteža, niti signalne mreže kojima bi nagovestio njihov dolazak. Regulatorne mere koje se preduzimaju u cilju otklanjanja ovih slabosti i jačanja otpornosti finansijskog sistema nisu dovoljne. Za razliku od Bretonvudskog sistema koji je imao američki dolar kao nominalno sidro, današnji MMS nema više jednu valutu kao monetarno sidro, pa se nameće potreba jačanja međunarodne saradnje kako bi se ustanovila jedinstvena pravila, koja bi važila za sve učesnike. Danas većina centralnih banaka u svetu targetira domaću inflaciju uz plivajući devizni kurs nacionalne valute. Alternativno, sprovodi se politika kontrolisane fleksibilnosti, koja je u skladu sa nacionalnim ciljevima. Još uvek se traga za okvirom koji bi objedinio finansijsku stabilnost i monetarnu politiku. To je ujedno jedan od najvećih izazova za centralne banke u narednim godinama. Mada je Međunarodni monetarni fond (MMF) od 1945. do danas najvažnija institucija za brze kreditne intervencije u slučajevima kriza, u ovom radu nećemo se baviti kontroverzama u pogledu njegove današnje uloge u MMS-u. Težište istraživanja u ovom radu je na savremenim karakteristikama MMS-a i njegovim izazovima.

Slabosti međunarodnog monetarnog sistema

Zamenljivost dolara za zlato (35\$ za uncu zlata) u Bretonvudskom sistemu delovala je umirujuće na centralne banke u svetu, koje su u posleratnom periodu akumulirale dolarsku aktivu. Sve dok su zamene dolara za zlato bile povremene i u manjim iznosima, ovaj model međunarodne likvidnosti nije ograničavao

američku monetarnu politiku. Zbog poverenja u spremnost SAD da konvertuje dolare u zlato, centralne banke su bile voljne da povećavaju udeo dolara u svojim deviznim rezervama. Česta potreba za intervencijama na deviznom tržištu nosila je obavezu svake centralne banke da u svojim deviznim rezervama drži poveću količinu dolara, kako bi uvek mogla da blagovremeno interveniše na deviznom tržištu. U režimu fiksnih deviznih kurseva, dolar se izdvojio kao svetska rezervna valuta. Međutim, početkom 1960-ih poznati ekonomista Robert Triffin (Robert Triffin, 1960) sa Univerziteta Jejl je skrenuo pažnju na problem poverenja kao dugoročni problem Bretonvudskog sistema. On je zapravo otkrio da je porast dolarske aktive kod centralnih banaka u svetu doveo do toga da je iznos dolarskih rezervi premašio američke zalihe zlata. To je značilo da američka centralna banka - Fed (*Federal Reserve System - Fed*) više nije bio u stanju da otkupi sve dolare ako bi strane centralne banke pozelele da svoje dolarske rezerve razmene za zlato. Triffin je zaključio da bi naglo poraslo nepoverenje centralnih banaka ako bi sve one zajedno odlučile da razmene svoje dolarske rezerve za zlato. To je bio veliki rizik za tadašnji MMS, što je dovelo do postepenog slabljenja sistema fiksnih deviznih kurseva i konačanog sloma Bretonvudskog sistema početkom 1970-ih. Dakle, sve do 1973. godine, američki dolar je bio vodeća rezervna valuta u svetu, jer je velika većina zemalja vezivala svoju valutu za američki dolar i održavala fiksni devizni kurs prema dolaru. U ovom sistemu SAD je posedovala autonomiju monetarne politike, koju je mogla da koristi za sopstvenu makroekonomsku stabilizaciju. Međutim, autonomija monetarne politike je značila da SAD, kao zemlja svetske rezervne valute, može da utiče kako na sopstvenu tako i na inostrane privrede. Očigledno je da su SAD u Bretonvudskom sistemu imale moć da "izvoze" svoju monetarnu politiku, dok su ostale centralne banke morale da se odreknu autonomije sopstvene monetarne politike, "uvozeći" američku monetarnu politiku, neretko sa obeležjima inflacije. Zbog ove "preterane" moći SAD, u tadašnjem MMS-u su se javili sporovi, koji su doprineli propasti Bretonvudskog sistema.

Kada je u avgustu 1971. američki predsednik

Introduction

Today's IMS consists of nationally oriented monetary policy in an environment that is characterized by the existence of global companies, key currencies and global capital flows. The question is whether locally defined objectives in the implementation of monetary policy correspond to the global system? The importance of this issue specifically relates to the field of liquidity creation, with liquidity flows of an economy being intertwined with the rest of the world, and potentially increasing the imbalance in a given economy. Today's IMS has no mechanisms that would prevent the accumulation of financial imbalances or signaling networks that would indicate their arrival. Regulatory measures accepted for the purpose of overcoming these weaknesses and strengthening the resilience of the financial system are not enough. Unlike the Bretton Woods system that had the US dollar as a nominal anchor, today's IMS no longer has a single currency as a monetary anchor, which is why there is a need to strengthen international cooperation in order to establish uniform rules that would apply to all participants.

Today, most central banks in the world have accepted inflation-targeting policy with a floating exchange rate of the national currency. Alternatively, the policy of controlled flexibility, in line with the national objectives, is being implementing. It is still being searched for a framework which could include financial stability and monetary policy. It is also one of the greatest challenges for central banks in the coming years. Although the International Monetary Fund (IMF) has been the most important institution for rapid intervention in cases of credit crisis since 1945 until today, this paper will not address the controversies regarding its role in the contemporary IMS. Instead, this paper focuses on the current characteristics of the IMS and its challenges.

The Weaknesses of International Monetary System (IMS)

Convertibility of the US dollar to gold (\$ 35 per ounce of gold) was a reason for banking confidence in that system, particularly by

banks that have accumulated dollar assets in the postwar period. This model of international liquidity has not limited the US monetary policy while the exchange of dollars for gold was occasional and in small amounts. Because of their confidence in the US obligation to convert dollars into gold, central banks have been reluctant to increase the share of dollars in their foreign exchange reserves. The needs to intervene in the foreign exchange market have encouraged banks to hold a sizable amount of dollars in their foreign exchange reserves. Under the fixed exchange rates regime, the dollar received the world's reserve currency status. In the early 1960s, however, the known economist Robert Triffin (Robert Triffin, 1960) from Yale University drew attention to the problem of trust as a long-term problem of the Bretton Woods system. He actually found that the increase in dollar assets by central banks in the world exceeded US gold reserves. This meant that the US central bank - the Fed (Federal Reserve System) was no longer able to redeem all the dollars if other central banks wished to exchange their dollar reserves for gold. Triffin concluded that the central banks' confidence in the dollar would suddenly decrease if everybody decided to exchange their dollar reserves for gold. It was a great risk for the former IMS, which led to a gradual weakening of the system of fixed exchange rates and the final collapse of the Bretton Woods system in the early 1970s. So, until 1973, the US dollar was the leading reserve currency in the world because the vast majority of countries pegged their currency to the US dollar and maintained a fixed exchange rate against the dollar. In this system the US possessed monetary policy autonomy, which implied the possibility of pursuing their own macroeconomic stabilization. However, the autonomy of monetary policy also meant that the United States, the country of the world's reserve currency, could influence both its own and foreign economies. It is obvious that the United States in the Bretton Woods system had the power to "export" their monetary policy, while other central banks had to give up the autonomy of their monetary policy, "importing" US monetary policy, often with inflation. Because of this "excessive" power of the United States, in the former IMS many disputes arose,

Nikson prekinuo dotadašnju zamenljivost dolara za zlato, bio je to nagoveštaj da je došao kraj sistemu fiksnog deviznog kursa dolara. Međutim, i posle prelaska na sistem plivajućih deviznih kurseva, dolar je i dalje zadržao dominantnu ulogu u valutnoj strukturi svetskih deviznih rezervi (Frankel, 1995, str. 9-16). Uvođenjem evra ova valuta je postala njegov glavni suparnik u toj ulozi. Tražnja za deviznim rezervama u svetu je u porastu posle izbijanja svetske finansijske krize 2008. godine. Mada su SAD bile snažno pogođene krizom, očekivanja da će to dovesti do slabljenja međunarodne pozicije dolara nisu se ostvarila. Slabost američke privrede bila je praćena jačim prisustvom dolara na međunarodnoj sceni. Zemlje sa tržištem u nastajanju (*emerging countries*) su povećale svoje devizne rezerve, uglavnom u dolarskim hartijama od vrednosti. Dolar se opet pokazao kao sigurna luka u mutnim vremenima, bez obzira na to što je takvo vreme došlo iz SAD. Labavljenje monetarnih stega u SAD, kako bi se privreda izvukla iz recesije, takođe je doprinelo porastu međunarodnih rezervi u dolarima, jer zemlje sa tržištem u nastajanju otkupljuju dolare kako bi sprečile da njihove valute ojačaju spram dolara. Time štite konkurentnost svog izvoza. Ovakvo ponašanje inostranih centralnih banaka olakšava međunarodnu dominaciju dolara. Banke i multinacionalne kompanije u svetu pozajmljuju kapital emitujući obveznice koje glase na dolare. Zbog ove uloge kao valute finansiranja, dolar jača i u vreme krize. Dolar je u vreme krize privlačna valuta za mnoge zemlje jer dolarska aktiva uvek zadržava vrednost naspram dolarskog duga. Za zemlje koje povećavaju devizne rezerve izuzetno je značajno da aktiva u kojoj ih drže bude što sigurnija, jer ih one koriste za održavanje likvidnosti ((Fahri, Gourinchas and Rey (2011); Landau (2013)). Pojačana tražnja za deviznim rezervama u vreme krize oživljava staru Trifinovu dilemu. Naime, da bi se zadovoljila tražnja za rezervama, razvijene zemlje, pre svega SAD, povećavaju javni dug. S obzirom na dostignutu zaduženost, rast javnog duga može potkopati kredibilitet države da na vreme obavlja službu duga. To može povećati tražnju za sigurnim aktivama u vidu opreznosne štednje. Pojačana (prekomerna) tražnja za hartijama od vrednosti (HoV) američkog Trezora obara riziko premiju

i realnu kamatnu stopu na američke državne HoV, što, zatim, podstiče inovacije i porast leveridža u bankama. To, naposljetku, povećava osetljivost američkog finansijskog sistema.

Posebno je pitanje upravljanja deviznim rezervama. Jedan fenomen izuzetno je važan za zemlje sa tržištem u nastajanju. Naime, centralne banke ovih zemalja uspešno recikliraju svoje devizne rezerve na tržište SAD kao globalnog finansijskog posrednika. Zatim se ta sredstva preko američkih banaka i korporacija vraćaju u ove zemlje. Ovakvi tokovi kapitala ne samo da su skupi za ove zemlje, već nose i moguće destabilizujuće impulse. Uprkos tome, od rezervi se očekuje da olakšaju međunarodne transakcije, posebno u vreme neočekivanog pada izvoznih prihoda. Lokalni šokovi, kao uobičajen dekor u današnjem svetu, podstakli su kontinuiran rast deviznih rezervi, posebno kod siromašnijih zemalja. S obzirom na visoke troškove kriza, ove zemlje su snažno motivisane da povećavaju devizne rezerve. Centralne banke svoje devizne rezerve uglavnom plasiraju u američke državne HoV, sa niskim prinosima i velikom sigurnošću da se uvek mogu pretvoriti u likvidna sredstva. Otuda velika tražnja za dolarskim HoV.

Vreme dolara kao stabilnog nominalnog sidra i njegove zamenjivosti za zlato u Bretonvudskom sistemu je prošlo. Međutim, stanje u MMS-u potvrđuje da je dolar do današnjih dana zadržao status svetske rezervne valute. Zbog toga se uticaj monetarne politike Fed-a i danas prostire daleko van granica SAD. Međunarodnu transmisiju impulsa monetarne politike zemalja, čije valute čine mrežu glavnih međunarodnih valuta, danas potpomaže velika mobilnost finansijskog kapitala. Nacionalni režimi monetarne politike, uglavnom usmereni na stabilnost cena, utiču na okruženje i zbog visoke integrisanosti nacionalnih finansijskih tržišta. Jedino veće ograničenje međunarodnog kretanja kapitala su međunarodni standardi (posebno Bazel II i Bazel III), kojima se nadgledaju međunarodne finansijske transakcije i kreditna aktivnost banaka. Za razliku od Bretonvudskog sistema, koji nije bio izložen značajnijim finansijskim poremećajima, današnji monetarni režimi su uspešniji u postizanju cenovne stabilnosti, ali su ranjiviji na području finansijske stabilnosti

which contributed to the collapse of the Bretton Woods system.

On August of 1971, US President Richard Nixon announced the decision to suspend convertibility of the dollar into gold, and it was a hint that the system of fixed exchange rates had come to an end. However, even after transition to the system of floating exchange rates, the dollar continued to maintain a dominant role in the currency structure of world currency reserves (Frankel, 1995, pp. 9-16). After the introduction of the euro currency, it has become his main rival in this role. The world demand for foreign exchange reserves has been increasing after the outbreak of the global financial crisis in 2008. Although the United States were strongly affected by the crisis, the expectations that it would weaken the international position of the dollar have not materialized. The weakness of the US economy was accompanied by the presence of a stronger dollar in the international arena. Emerging countries have increased their foreign currency reserves, mostly in dollar securities. The dollar is again shown to be a safe haven in troubled times, regardless of the fact that problems came from the United States. Loosening of monetary discipline in the United States aimed at pulling the economy out of the recession, also contributed to the growth of international reserves in dollars, because the emerging countries are purchasing dollars to prevent their currencies to strengthen against the dollar. Thus, they protect the competitiveness of their exports. Such behavior of foreign central banks facilitates the dollar's international dominance. Banks and multinational companies can borrow capital by selling bonds denominated in US dollars. Because of its role as a funding currency, the dollar tends to strengthen in times of crisis. The dollar is an attractive currency for many countries also in times of crisis because the dollar assets still retain their value against the dollar debt. For countries that increase foreign exchange reserves, it is extremely important that the assets in which they are kept should be safe, because they are used to maintain liquidity (Fahri, Gourinchas and Rey (2011); Landau (2013)). The increased demand for foreign currency reserves during the crisis revives the old Triffin dilemma. Namely, in

order to meet the demand for reserves, the developed countries, primarily the United States, have increased their public debt. Given the reached level of indebtedness, the growth of public debt could undermine the credibility of the state to service its debts on time. This may increase the demand for safe assets in the form of prudential savings. Reinforced demand for the US Treasury securities reduces the risk premium and real interest rate on US government securities, which, in turn, encourages innovation and growth leverage in banks. This ultimately increases the sensitivity of the US financial system.

The management of foreign exchange reserves is an important issue. There is one phenomenon which is extremely important for the emerging countries. The central banks of these countries recycle their foreign exchange reserves successfully in the US market as the global financial intermediary. Then such funds return to those countries through US banks and corporations. Such capital flows are not only costly for these countries but also carry the possible destabilizing impulses. Nevertheless, the reserves should facilitate their international transactions, especially during an unexpected fall in the export revenue. Local shocks, as a common thing in today's world, have encouraged the continuous growth of foreign exchange reserves, particularly in poorer countries. Given the high cost of the crisis, these countries are strongly motivated to hold large foreign exchange reserves. Central Banks are converting their foreign currency reserves mostly into US government securities, with low yields and great certainty that they can be converted into liquid assets. This is what boosts the demand for dollar securities.

The period during which the US dollar represented a stable nominal anchor and the period of its convertibility to gold in the Bretton Woods system has passed. However, the situation in the IMS confirms that the dollar has preserved its reserve currency status. Therefore, the Fed's monetary policy influence now extends far beyond the borders of the United States. The high financial capital mobility now supports the international transmission of monetary policy impulses of those countries whose currencies constitute the network of

(Borio, James and Shin, 2014). Snažna međunarodna mobilnost kapitala pruža pogodan okvir za međunarodnu transmisiju slabosti i manjkavosti domaćih monetarnih politika zemalja vodećih valuta u svetu.

Međunarodno preplitanje režima monetarne politike

Liberalizacija međunarodnog kretanja kapitala omogućila je širenje uticaja monetarne politike Fed-a i evro zone na ostale zemlje. Mada američki dolar odavno nema zlatno pokriće, ova valuta i dalje igra ključnu ulogu u svetskoj privredi, pre svega u međunarodnoj trgovini i međunarodnim finansijama. Zastupljenost dolara u deviznim transakcijama u svetu od 87% u aprilu 2013. svojevrsna je potvrda međunarodnog statusa ove valute (tabela 1). Valutna struktura deviznih rezervi u svetu takođe potvrđuje dominaciju dolara, a ista valuta je najzastupljenija i u fakturisanju i obračunu međunarodne trgovine (više od polovine vrednosti svetske trgovine).

Uvođenje evra nije bitnije uticalo na međunarodnu poziciju dolara. Mada je dolar tokom 1970-ih značajnije depresirao, gubitak vrednosti nije umanjio njegovu ulogu kao sredstva očuvanja vrednosti. To potvrđuje učešće dolara u svetskim deviznim rezervama od preko 60% u 2014. godini (grafikon 1), što je skoro tri puta više od učešća evra (grafikon 2). Prema podacima SWIFT-a, američki dolar je bio najzastupljenija valuta u međunarodnim plaćanjima sa učešćem od 43% u svim transakcijama. Početkom 2014. dolar je pretekao evro, koji je treću godinu uzastopno zabeležio pad u ovoj ulozi. Ova tendencija delimično se duguje neusklađenom privrednom ciklusu između SAD i evrozone, a takođe je pod uticajem depresijacije evra prema dolaru (ECB, 2015, str. 33).

Tabela 1. - Izabrani pokazatelji internacionalizacije vodećih svetskih valuta
U procentima od svetskog iznosa

	SAD dolar	Evro	Funta sterlinga	Jen	Renminbi	Ukupno (bilioni dolara)
Dnevni promet na deviznom tržištu ¹ , april 2013. godine	87,0	33,4	11,8	23,0	2,2	5,3
Devizne rezerve ² , Q4 2014.	62,9	22,2	3,8	4,0	1 ³	11,6
Međunarodni bankarski depoziti kod nebankarskih institucija ⁴ , Q4 2014.	57,3	22,7	5,2	2,9	1,9 ⁵	9,8
Emitovane međunarodne dužničke hartije od vrednosti (HoV) ⁴ 2014.	40,4	40,9	9,6	2,0	0,6	21,9
Fakturisanje/obračun međunarodne trgovine 2010-2012. godine	50,3	37,3	-	-	1,4	-

Napomene:
¹ Pojedinačni udeli čine sumu od 200%, jer svaka transakcija obuhvata dve valute.
² Udeli su izračunati prema podacima IMF iz baze podataka COFER.
³ Sirove ocene BIS-a, prema podacima Narodne banke Kine iz publikacije *Report on renminbi internationalization*, jun 2015.
⁴ Širi obuhvat, uključujući intra evrozonu.
⁵ Minimalni udeo zasnovan na međunarodnim bankarskim depozitima denominiranim u renminbiju.
Primarni izvori: Ito, H. and M. Chinn (2014). "The rise of the 'redback' and the People's Republic of China's capital account liberalization: an empirical analysis of the determinants of invoicing currencies". *ADBI Working Paper*, no 473; IMF; BIS international banking statistics and international debt securities statistics; BIS calculations.
Sekundarni izvor: BIS (2015). *85th Annual Report, 1 April 2014-31 March 2015.*, str. 85, tabela V. 2.

key international currencies. National regimes of monetary policy, mainly focused on price stability, also affect the environment due to the high integration of national financial markets. The only major limitation of international capital movements are international standards (particularly Basel II and Basel III), which are used to monitor financial transactions and lending activities of banks. Unlike Bretton Woods system, which was not exposed to significant financial distress, today's monetary regimes are more successful in achieving price stability, but they are more vulnerable to financial crises (Borio, James and Shin, 2014). Large international capital mobility provides the appropriate framework for international monetary spillovers, particularly from the developed to other countries.

International interaction of monetary policy regimes

The liberalization of international capital movements has enabled the impact of the Fed's and Eurozone's monetary policy to spill over from the developed economies to the rest of the world. Although the US dollar has had no gold coverage for a long time, this currency continues to play a key role in the world economy, especially in international trade and international finance. The dollar accounted for about 87% of foreign exchange market transactions in April 2013, which confirms its international dominance (table 1). The currency structure of foreign exchange reserves in the world also confirms the dominance of the US dollar, and the same currency is dominant in international trade invoicing and settlement (more than half of the world trade).

Table 1. - Selected indicators of the internationalization of key currencies
In percentage of the world total

	US dollar	Euro	Pound sterling	Yen	Renminbi	Total (USD trn)
Forex market turnover, daily ¹ , April 2013	87.0	33.4	11.8	23.0	2.2	5.3
Foreign exchange reserves ² , Q4 2014	62.9	22.2	3.8	4.0	1 ³	11.6
International bank deposits by non-banks ⁴ , Q4 2014	57.3	22.7	5.2	2.9	1.9 ⁵	9.8
Outstanding international debt securities ⁴ 2014	40.4	40.9	9.6	2.0	0.6	21.9
International trade invoicing/settlement, 2010-2012	50.3	37.3	-	-	1.4	-

Notes:
¹ The summed up shares amount to 200% because each transaction involves two currencies.
² Shares are calculated according to the data from the IMF COFER database.
³ Rough BIS estimate based in part on People' Bank of China, *Report on renminbi internationalization*, June 2015.
⁴ Broader scope, including intra-euro area.
⁵ Minimum share based on international bank deposits denominated in the renminbi.
Primary source: Ito, H. and M. Chinn (2014). "The rise of the 'redback' and the People's Republic of China's capital account liberalization: an empirical analysis of the determinants of invoicing currencies". *ADBI Working Paper*, no 473; IMF; BIS international banking statistics and international debt securities statistics; BIS calculations.
Secondary source: BIS (2015). *85th Annual Report, 1 April 2014–31 March 2015*, p. 85, table V.2.

Grafikon 1. - Međunarodna uloga dolara

Napomene:

¹ Zbir udela svih valuta u prometu na deviznom tržištu je 200% zbog toga što svaka transakcija podrazumeva dve valute; Devizni promet u 2014. je procenjen.

² Međunarodna aktiva obuhvata i depozite nebankarskih institucija, kao i dužničke HoV.

³ Udeo zone u svetskom bruto domaćem proizvodu - BDP (*Gross Domestic Product - GDP*) obračunatom po paritetu kupovnih snaga (*Purchasing Power Parity - PPP GDP*).

Izvor: BIS (2015). *85th Annual Report, 1 April 2014-31 March 2015*, str. 86, podaci za grafikon V.1.

Grafikon 2. - Međunarodna uloga evra

Napomene:

¹ Zbir udela svih valuta u prometu na deviznom tržištu je 200% zbog toga što svaka transakcija podrazumeva dve valute; Devizni promet u 2014. je procenjen.

² Međunarodna aktiva obuhvata i depozite nebankarskih institucija, kao i dužničke HoV.

³ Udeo zone u svetskom BDP obračunatom po paritetu kupovnih snaga (PPP GDP).

Izvor: BIS (2015). *85th Annual Report, 1 April 2014-31 March 2015*, str. 86, podaci za grafikon V.1.

Glavna karakteristika rezervne aktive, sa stanovišta centralne banke koja povećava devizne rezerve, je da je ona likvidna i da ima predvidivu vrednost. Mada je kretanje deviznog kursa teško pouzdano predvideti, kad zemlja zapadne u krizu po pravilu nacionalna valuta depresira u odnosu na dolar. U slučaju globalnih kriza, dolar se uglavnom pojavljivao kao sigurno utočište za investitore u ovu valutu, pa je to razlog njegove privlačnosti kao rezervne aktive. Ovaj poriv još uvek nadvladava mogući rizik gubitka vrednosti usled depresijacije dolara.

Evropska centralna banka (ECB) zauzima neutralan stav u pogledu međunarodne uloge dolara, koja je, kako se ističe, tržišni fenomen. Međutim, naglašava se da ECB, starajući se

o cenovnoj i finansijskoj stabilnosti evrozone, indirektno doprinosi povećanju međunarodne uloge evra (ECB, 2015, str. 10).

Međunarodna uloga kineskog juana (renminbi) još uvek je ograničena u poređenju sa dolarom i evrom. Dalja internacionalizacija juana zavisice od toga da li će Kina uspeti da preusmeri privredu od investicija prema potrošnji, kako bi izbegla zamku srednjeg dohotka (*middle-income trap*) (Eichengreen, Park and Shin, 2013). Još uvek prisutna ograničenja u računu kapitala takođe umanjuju privlačnost juana za inostrane investitore (Eichengreen, 2013).

Ako se svetska privreda podeli u tri valutne zone (zona dolara, evra i japanskog jena, shodno usklađenosti kretanja nacionalnih valuta sa ove tri referentne valute), dolazi se do zaključka da je dolarska zona 2014. činila

60% svetskog BDP-a, što je znatno više od udela SAD u svetskom BDP, koji se kreće oko 25% (BIS, 2015, str. 87). Ovaj indikator ubedljivo pokazuje da je uticaj američke monetarne politike snažan i izvan područja SAD. On se ogleda u dejstvu na kamatne stope i na aktivu i pasivu nerezidenata denominiranu u dolarima. Slično deluje i monetarna politika ECB-a.

Međunarodno kreditiranje kao kanal monetarne politike

Kreditni u dolarima koji su odobreni nebankarskom sektoru izvan SAD iznosili su 9,5 biliona dolara krajem 2014. (grafikon 3), dok su krediti domaćim rezidentima,

The introduction of the euro did not significantly affect the dollar's position as a key currency. Although the dollar depreciated significantly in the 1970s, the loss of value did not diminish its role as a store of value. This is confirmed by the dollar's participation in the global foreign exchange reserves of over 60% in 2014 (Graph 1), which is almost three times the share of the euro (Graph 2). According to SWIFT, the US dollar was the most represented currency in international payments with a share of 43% in all transactions. In early 2014, the dollar outdid the euro, which recorded a decline in this role for the third consecutive year. This trend is partly owed to the unmatched business cycle between the US and the Eurozone, and is also influenced by the depreciation of the euro against the dollar (ECB, 2015, p. 33).

The main characteristic of reserve assets, from the standpoint of the central bank which increases foreign exchange reserves, is that they are liquid and have a predictive value. Although it is difficult to reliably predict the exchange rate movement when a country falls into crisis, the national currency depreciated against the dollar, as a rule. In the case of global crisis, the dollar mainly appeared as a safe haven for investors, and this is the reason for its attractiveness as a reserve asset. This reason still prevails against the possible risk of loss of value due to the dollar depreciation.

The European Central Bank (ECB) takes a neutral view with regard to the international role of the dollar, which is, as pointed out, a market-based phenomenon. However, it is stressed that the ECB, by ensuring the price stability

and financial stability in the Eurozone, indirectly contributes to increasing the international role of the euro (ECB, 2015, p. 10).

The international role of the Chinese yuan (renminbi) is still limited compared with the dollar and the euro. Further internationalization of the yuan will depend on whether China will be able to redirect the economy from investment towards consumption, in order to avoid the middle-income trap (Eichengreen, Park and Shin, 2013). Still present restrictions in the capital account also diminish the attractiveness of the yuan for foreign investors (Eichengreen, 2013).

If the world economy is divided into three currency zone (the dollar, the euro and the Japanese yen, according to the synchronization of national currencies with the three reference currencies), we come to

Graph 1 - The international role of the US dollar

Notes:

¹ The summed up shares amount to 200% because each transaction involves two currencies; 2014 is estimated.

² International assets include deposits of non-banking institutions, as well as debt securities.

³ The zone's share in the world's PPP GDP.

Source: BIS (2015). *85th Annual Report, 1 April 2014-31 March 2015*, p. 86, data for graph V.1.

Graph 2 - The international role of the euro

Notes:

¹ The summed up shares amount to 200% because each transaction involves two currencies; 2014 is estimated.

² International assets include deposits of non-banking institutions, as well as debt securities.

³ The zone's share in the world's PPP GDP.

Source: BIS (2015). *85th Annual Report, 1 April 2014-31 March 2015*, p. 86, data for graph V.1.

uključujući državu, iznosili 41 bilion dolara. Preko 80% ukupnog nefinansijskog dolarskog duga krajem 2014. odnosilo se na američke rezidente. Preostali deo od oko 20% su krediti odobreni nebankarskom sektoru van SAD. Upravo su korisnici ovih kredita izloženi delovanju američke monetarne politike, odnosno posredstvom ovog kanala američka monetarna politika direktno utiče na finansijske uslove u ostatku sveta. Intenzitet uticaja zavisi od vrste finansijskih instrumenta i fleksibilnosti kamatnih stopa. U slučaju bankarskih zajmova čija se cena vezuje za kretanje Libora ili Euribora, promene kratkoročnih kamatnih stopa vrlo brzo (u roku od nekoliko nedelja) se prenosi na korisnike ovih zajmova (BIS, 2015, str. 85; McCauley, McGuire and Sushko, 2015). Međunarodni (cross-border) bankarski krediti tokom finansijske krize iz 2007. godine podigli su udeo kredita u BDP-u brojnih zemalja (Lane and McQuade, 2014). Uprkos dinamičnom rastu ovih kredita, niske kamatne stope su u većini zemalja koeficijent servisiranja duga zadržale na dugoročnom trendnom nivou.

Kreditu u evrima koji su odobreni nebankarskom sektoru izvan evrozone iznosili su 2,3 biliona evra (oko 2,7 biliona dolara) krajem 2014. (grafikon 4), dok su krediti domaćim rezidentima, uključujući državu, iznosili 32 biliona dolara. Preko 92% ukupnog nefinansijskog duga u evrima krajem 2014. odnosilo se na rezidente evrozone. Preostali deo od oko 8% su krediti odobreni nebankarskom sektoru van evrozone. U poređenju sa pozajmicama u dolarima, veći je relativni deo ukupnih kredita u evrima odobren korisnicima u okviru evrozone.

Grafikon 4. - Evro krediti

U bilionima dolara (po konstantnom deviznom kursu sa kraja 2014. godine)

Napomene:

¹ Krediti odobreni rezidentima su krediti odobreni nefinansijskom sektoru u evrozoni, izuzimajući kredite koji nisu odobreni u evrima.

² U dužničke HoV spadaju HoV koje su izdale nebankarske institucije izvan evrozone.

³ Bankarski zajmovi su krosborder krediti odobreni nebankarskim institucijama van evrozone.

Izvor: BIS (2015). *85th Annual Report*, 1 April 2014-31 March 2015, str. 89, podaci za grafikon V.B.

Grafikon 3. - Dolarski krediti

U bilionima dolara

Napomene:

¹ Krediti odobreni rezidentima su krediti odobreni nefinansijskom sektoru u SAD, izuzimajući kredite koji nisu odobreni u dolarima.

² U dužničke HoV spadaju HoV koje su izdale nebankarske institucije izvan SAD.

³ Bankarski zajmovi su krosborder krediti odobreni nebankarskim institucijama van SAD.

Izvor: BIS (2015). *85th Annual Report*, 1 April 2014-31 March 2015, str. 89, podaci za grafikon V.B.

Značajan iznos kredita koji su odobreni u dolarima i evrima omogućava direktnu transmisiju monetarne politike Fed-a i ECB-a na zajmoprimce, i utiče na monetarnu i finansijsku stabilnost (Hills and Hoggarth, 2013). Kreditu u stranim valutama i krosborder kreditu mogu podstaći kreditnu ekspanziju i time dovesti do krize (Avdjiev, McCauley and McGuire, 2012).

Međunarodni krediti pokazuju priličnu nestabilnost i podložni su velikim cikličnim oscilacijama. Na

the conclusion that the dollar zone accounts for 60% of the world GDP, which is significantly higher than the US share in the world GDP, i.e. between 20 and 25% (BIS, 2015, p. 87). This indicator shows convincingly that the US monetary policy impact is also strong outside the USA. It is reflected on interest rates and the assets and liabilities of non-residents denominated in dollars.

The international lending as a channel of monetary policy

Loans in dollars granted to the non-banking sector outside the US amounted to 9.5 trillion dollars at the end of 2014 (graph 3), while loans to domestic residents, including the government, amounted to 41 trillion dollars. Over 80% of the total non-financial dollar debt at the end of 2014 referred to the US residents. The remaining section of about 20% was accounted for by loans granted to the non-banking sector outside the US. The users of these loans were the ones to be exposed to the influence of the US monetary policy. In other words, it is through this channel that the US monetary policy directly influences the financial conditions in the rest of the world.

The intensity of the impact depends on the type of financial instrument and the flexibility of interest rates. In the case of bank loans whose price is linked to the movement of Libor or Euribor, the changes in short-term interest rates very quickly (within a few weeks) get transferred to the beneficiaries of these loans (BIS, 2015, p. 85; McCauley, McGuire and Sushko, 2015). Cross-border bank loans during the financial crisis of 2007 raised the share of loans in GDP in many countries (Lane and McQuade, 2014). Despite the dynamic growth of these loans, low interest rates in most countries contributed to the debt servicing ratio remaining at a long-term trend level.

The loans in euros granted to the non-banking sector outside the euro area amounted to 2.3 trillion euros (about 2.7 trillion US dollars) at the end of 2014 (graph 4), while loans to domestic residents, including the government, amounted to 32 trillion dollars. Over 92% of the total euro non-financial debt at the end of 2014 was related to the residents of the euro area. The remaining share of around 8% is accounted for by loans granted to the non-banking sector outside the euro area. Compared with loans in dollars, the relative share of total loans in euros

authorized users within the euro area. Compared with loans in dollars, the relative share of total loans in euros, extended to users within the euro area, is higher.

Graph 3 - Dollar loans, in trillion of US dollars

Notes:

¹ Credit granted to residents are loans granted to the non-financial sector in the US, excluding loans which are not approved in dollars.

² The debt securities include securities issued outside the US by non-bank issuers.

³ Bank loans are cross-border loans granted to non-banks institutions outside the United States.

Source: BIS (2015). *85th Annual Report*, 1 April 2014-31 March 2015, p. 89, data for graph V.B.

ovaj zaključak navodi njihov dinamičniji rast u odnosu na domaće kredite (kako u dolarima tako i u evrima) u godinama pre izbijanja velike finansijske krize 2008. godine, i njihova kontrakcija posle izbijanja krize. Tržište obveznica je delimično kompenziralo zastoje koji su nastali u odobravanju bankarskih zajmova posle izbijanja krize, poboljšavajući profil globalne likvidnosti.

Monetarna politika i tržište obveznica

Impulsi monetarne politike sporije se prenose posredstvom tržišta obveznica. Politika niskih kamatnih stopa u SAD posle finansijske krize iz 2008. podstakla je investitore širom sveta da veće prinose potraže u manje kvalitetnim obveznicama. Emitenti dolarskih obveznica izvan SAD pojačali su pozajmice kapitala zbog niskih kamatnih stopa. Dinamičan postkrizni rast ofšor dolarskih kredita duguje se tome što su oni bili jeftiniji u odnosu na lokalno finansiranje. Ovo je istaknuta odlika tržišta u nastajanju (videti McCauley, McGuire and Sushko, 2015., navedeno prema BIS, 2015, str. 86). Mnoge od ovih zemalja pokušavaju na različite načine da poskupe dolarske pozajmice na svom tržištu, ali to ne pogađa multinacionalne kompanije koje mogu pozajmiti dolarska sredstva na ofšor tržištu po povoljnijim uslovima od onih koji vladaju na tržištima u nastajanju. Zbog toga su mnoge zemlje preduzele mere sa ciljem povećanja likvidnosti, što povoljno deluje na kretanja na finansijskim tržištima u svetu. Centralne banke ovih zemalja budno posmatraju šta preduzimaju Fed i ECB. To je posebno značajno zbog efekata na promene deviznog kursa nacionalne valute. Apresijacija nacionalne valute dovodi do povoljnijeg gledanja na zaduženost zemlje u stranoj valuti, mada precenjena nacionalna valuta može narušiti izvoznu konkurentnost zemlje. Depresijacija, na drugoj strani, može dovesti do finansijskih teškoća kod onih preduzeća koja su zadužena u stranoj valuti (Bruno and Shin, 2015). Mnoge zemlje su bile prisiljene da smanjuju kamatne stope zbog njihovog pada u SAD. To je neretko značilo, posle 2000. godine, da su kamatne stope bile niže u odnosu na nivo koji sugerise Tejlorovo pravilo. Brojne razvijene

zemlje su i posle ublažavanja krize zadržale niske kamatne stope, a takvo ponašanje su nastavile i tokom blagog oporavka. Mnoge centralne banke u svetu i danas nastavljaju da sprovode ekspanzivnu monetarnu politiku, vodeći računa o spoljnim uslovima, ujedno nastojeći da održe izvoznu tražnju za njihovim razmenljivim proizvodima. Usklađeno kretanje kamatnih stopa brojnih zemalja poslednjih godina sa kamatnim stopama u SAD ukazuje na postojanje efekta preliivanja kamatnih stopa iz SAD na ostatak sveta, mada delom to može biti i posledica delovanja istih makroekonomskih faktora iz okruženja.

Integrirano finansijsko tržište je omogućilo formiranje usklađenih prinosa na tržištu obveznica. Kretanje prinosa uglavnom sledi trend prinosa na američkom tržištu obveznica (videti Chen, Filardo and Zhu, 2015). Tržište obveznica evrozone menja se u skladu sa promenama na američkom tržištu obveznica.

Usklađenost kretanja kamatnih stopa u svetu

U jednom istraživanju koje je sprovedeno na uzorku od 30 zemalja sa tržištem u nastajanju i razvijenih zemalja za period 2000-2014. godine, utvrđeno je postojanje visoke korelacije između promena vodećih kamatnih stopa ovih zemalja i promena američkih kamatnih stopa. Nalazi na području kratkoročnih kamatnih stopa pokazuju da je promena kamatnih stopa u SAD za 100 baznih poena povezana sa promenom kamatnih stopa od 34 bazna poena u proseku kod zemalja sa tržištem u nastajanju i manjih razvijenih zemalja (BIS, 2015, str. 91, tabela V.C). Prema istom izvoru, efekat preliivanja kod dugoročnih kamatnih stopa (prinosi na desetogodišnje obveznice) je još izraženiji: promena prinosa na obveznice u SAD za 100 baznih poena povezana je sa prosečnom promenom prinosa u ovim zemljama za 59 baznih poena. Obstfeld (2015) smatra da je jedan od najjačih kanala za međunarodnu monetarnu i finansijsku transmisiju putem dugoročnih kamatnih stopa.

Uticaaj američke monetarne politike na ostale zemlje od početka 2000-ih može se prepoznati i po tome što su kamatne stope u brojnim zemljama niže od odgovarajućih kamatnih

Graph 4 - Euro credit, in trillions of US dollar (at constant end - Q4 2014 exchange rates)

Notes:

¹ Credit granted to residents are loans granted to the non-financial sector in the euro area, excluding loans which are not approved in euros.

² The debt securities include securities issued outside the euro area by non-bank issuers.

³ Bank loans are cross-border loans granted to non-banks institutions outside the euro area.

Source: BIS (2015). *85th Annual Report, 1 April 2014-31 March 2015*, p. 89, data for graph V.B.

A significant amount of loans approved in dollars and euros allows a direct transmission of the Fed's and ECB's monetary policy to borrowers, and affects the monetary and financial stability (Hills and Hoggarth, 2013). Loans in foreign currencies and cross-border loans can encourage credit expansion and thus might lead to crisis (Avdjiev, McCauley and McGuire, 2012).

International loans show substantial instability and are subject to large cyclical fluctuations. It can be concluded by their dynamic growth compared to domestic loans (both in dollars and in euros) in the years before the outbreak of the great financial crisis in 2008, and their contraction after the outbreak of the crisis. The slowdown in bank lending occurring after the outbreak of the crisis was partly compensated by the bond market, which improved the global liquidity performance.

Monetary policy and the bond market

The monetary policy impulses are transmitted through the bond market more slowly. The US policy of low interest rates after the financial crisis of 2008 has prompted investors around the world to seek higher yields in lower quality bonds. The dollar bonds issuers outside the US have reinforced loan

capital due to low interest rates. The dynamic post-crisis growth in offshore dollar loans is owed to the fact that they were cheaper compared to local financing. This is a prominent feature of emerging markets (see McCauley, McGuire and Sushko, 2015, according to BIS, 2015, p. 86). Many of these countries are trying to increase the cost of dollar loans in their market in different ways, but it does not affect multinational companies which can borrow dollar funds in offshore markets

on more favorable terms than those prevailing in the emerging markets. Therefore, many countries have taken several measures in order to increase liquidity, with beneficial effects for the financial markets in the world. The central banks in these countries are required to be vigilantly and cautiously watching what measures are undertaken by the Fed and ECB. This is particularly significant because of the effects on the changes in the exchange rate of the national currency. The appreciation of the national currency leads to more favorable views on foreign currency indebtedness of the country, although an overvalued national currency may undermine its export competitiveness. Depreciation, on the other hand, can lead to financial difficulties for those companies which borrowed in foreign currency (Bruno and Shin, 2015). Many countries were forced to cut interest rates due to the decline in the US interest rates. This often meant, after 2000, that interest rates were lower than the level suggested by the Taylor rule. Many developed countries maintained low interest rates even after the mitigation of the crisis, and this behavior continued during the mild recovery. The central banks in many countries continue to pursue expansionary monetary policy, taking into account external conditions, trying, at the same time, to maintain export demand for their tradable goods. Over the

stopa za te zemlje izračunatih prema Tejlorovom pravilu. Proračuni BIS-a (2015, str. 91) pokazuju da smanjivanje kamatne stope na "federalne fondove" u SAD za 100 baznih poena dovodi do smanjivanja kamatnih stopa u zemljama sa tržištem u nastajanju i ostalim razvijenim zemljama za 43 bazna poena u odnosu na nivo koji proističe iz Tejlorovog pravila. Ova odstupanja su prikazana u grafikonu 5. Raskorak između ostvarenih kamatnih stopa u praksi i onih na koje ukazuje Tejlorovo pravilo pokazuje da je dejstvo američke monetarne politike na ostale zemlje veoma izraženo. To zapravo znači da je ispoljen snažan uticaj američkih kamatnih stopa na nivo kamatnih stopa kako zemlja sa tržištem u nastajanju tako i ostalih razvijenih zemalja. Tokom 1990-ih politika kamatnih stopa u znatnoj meri je bila usklađena sa Tejlorovim pravilom.

izazvati finansijsku neravnotežu, što na duži rok vodi kreditnoj kontrakciji. Ekspanzivna monetarna politika ECB može produžiti globalnu finansijsku ekspanziju. Međutim, rast dolara prema evru od kraja 2014. godine skreće pažnju da se ne sme zanemariti rizik njegove apresijacije. Ovom riziku posebno su izloženi veliki dolarski dužnici. Čak i kod zemalja koje imaju veću dolarsku aktivu od dolarske pasive, što je povoljna pozicija kod dolar apresira, značajno se razlikuje valutna pozicija između privrednih sektora. U mnogim zemljama u razvoju i zemljama sa tržištem u nastajanju državni sektor ima dugu dolarsku poziciju (veću dolarsku aktivu od dolarske pasive), dok je stanje kod korporativnog sektora obrnuto. Ako u slučaju apresijacije dolara država ne pruži pomoć korporativnom sektoru, jačanje dolara može naneti štete ovim zemljama.

Grafikon 5. - Stvarne globalne kamatne stope i kamatne stope prema Tejlorovom pravilu

Napomene:

¹ Kamatne stope prema Tejlorovom pravilu su izračunate kao: $i = r^* + \pi^* + 1,5(\pi - \pi^*) + 0,5y$, gde je π pokazatelj inflacije, y je mera proizvodnog jaza (output gap), π^* je inflacioni target, a r^* je dugoročna realna kamatna stopa, koja je u ovom obračunu zamenjena trendom realnog rasta outputa. Detaljnije o Tejlorovom pravilu videti kod Hofmann and Bogdanova (2012).

² U analizi su obuhvaćene izabrane zemlje sa tržištem u nastajanju i razvijene zemlje. Razvijene zemlje: Australija, Kanada, Danska, evrozona, Japan, Novi Zeland, Norveška, Švedska, Švajcarska, Velika Britanija i SAD. Zemlje sa tržištem u nastajanju: Argentina, Brazil, Čile, Kina, Kineski Taipei, Kolumbija, Češka Republika, Hong Kong, Mađarska, Indija, Indonezija, Izrael, Koreja, Malezija, Meksiko, Peru, Filipini, Poljska, Singapur, Južna Afrika i Tajland.

Izvor: BIS (2015, str. 92, podaci za grafikon V.3).

Jačanje dolara u 2014. i prvoj polovini 2015. godine praćeno je umerenim rastom kamatnih stopa u SAD. Tržišni učesnici očekuju da će Fed, u kontekstu normalizacije monetarne politike, nastaviti da povećava kamatnu stopu na federalne fondove (Carpenter et al., 2015., str. 238). Nasuprot tome, ECB odobrava dodatne monetarne stimulanse, koji smanjuju termske devizne kurseve evra. ECB je 22. januara 2015. objavila prošireni program kupovine aktiva u iznosu od 1,1 bilion evra, koji pokriva aktuelni program

Monetarna politika i međunarodna likvidnost

Popuštanje monetarnih okvira u SAD, zemlji svetske rezervne valute, i evrozoni omogućilo je porast međunarodne likvidnosti. Međutim, to može da se negativno odrazi na makroekonomsku i finansijsku stabilnost. Kreditna ekspanzija u zemljama sa tržištem u nastajanju i nekim razvijenim zemljama može

otkupa hartija od vrednosti sa kolateralom i pokrivenih obveznica, ali i otkup obveznica koje izdaju centralne banke evrozona, agencije i evropske institucije. Mesečni iznos otkupa iznosi 60 milijardi evra i otpočet je 9. marta 2015. godine. Planirano je da se otkup završi u septembru 2016. godine, ali se može i nastaviti sve dok je inflacija u skladu sa srednjoročnim targetom od 2% (BIS, 2015a, str. 7). Novi program kupovina obveznica u evrozoni obara

recent years, the adjusted movement of interest rates in many countries with the US interest rates, indicates the existence of interest rates spillovers from the US to the rest of the world, although this correlation could reflect the same macroeconomic factors from the environment. The integrated financial market has allowed the creation of harmonized bond yields. The movements in the yield curves usually follow the trend of US bond market yields (see Chen, Filardo and Zhu, 2015). The bond market in the euro area is changed in accordance with the changes in the US bond market.

The international interest rates correlation

The survey conducted on a sample of 30 emerging markets and developed countries for the period 2000-2014 demonstrated the existence of a high correlation between the changes of the leading interest rate in these countries, and the changes in US interest rates. The findings regarding the short-term interest rates show that a 100 basis point change in US interest rates is associated with an average 34 basis points change in interest rates in the emerging countries and smaller developed countries (BIS, 2015, p. 91, Table V.C). According to the same source, the spillover effect in long-term interest rates (the yield on ten-year bonds) is even more pronounced: changes in bond yields in the United States by 100 basis points are associated with an average 59 basis points change in the yields of these countries. Obstfeld (2015) considers long-term interest rates as the strongest channel for international monetary and financial transmission.

The impact of the US monetary policy in other countries since the early 2000s can be

identified by the fact that interest rates in many countries are lower than the corresponding interest rates for these countries calculated according to the Taylor's rule. BIS calculations (2015, p. 91) show that a reduction in the US federal funds rate by 100 basis points leads to a reduction in interest rates in the emerging markets and other developing countries by 43 basis points relative to the levels implied by the Taylor rule. These deviations are shown in the graph 5. The gap between actual interest rates and those indicated by the Taylor rule shows that the effects of US monetary policy in other countries are very strong. This means that there is a strong influence of US interest rates on the level of interest rates in the emerging markets and other developed countries. During the 1990s, interest rate policy was substantially harmonized with the Taylor rule.

Graph 5 - Global policy interest rates and interest rates according to the Taylor rule, per cent

Notes:

¹ The Taylor interest rates are calculated as: $i = r^* + \pi^* + 1,5(\pi - \pi^*) + 0,5y$, where π is an inflation indicator, y is a measure of the output gap, π^* is the inflation target and r^* is the long-run real interest rate, here replaced by the real trend of the output growth. For more details about the Taylor's rule see Hofmann and Bogdanova (2012).
² The analysis covers the selected emerging markets and developed countries. Developed countries: Australia, Canada, Denmark, the euro area, Japan, New Zealand, Norway, Sweden, Switzerland, the United Kingdom and the United States. Emerging countries: Argentina, Brazil, Chile, China, Chinese Taipei, Colombia, the Czech Republic, Hong Kong SAR, Hungary, India, Indonesia, Israel, Korea, Malaysia, Mexico, Peru, the Philippines, Poland, Singapore, South Africa and Thailand.
Source: BIS (2015, p. 92, data for graph V.3).

Monetary policy and international liquidity

The easing of the monetary framework in the US, the country of the world's reserve currency, and the euro area has enabled the growth of international liquidity. However, this may have a negative impact on the macroeconomic and financial stability. Credit expansion in emerging

prinose ne samo na evropske obveznice već i na američke, uprkos postepenom zaoštavanju monetarne politike Fed-a. Tokom 2014. godine razvijene zemlje su vodile politiku niskih kamatnih stopa i primenjivale nekonvencionalne mere monetarne politike. Takav pristup je, uprkos aktiviranom programu smanjivanja kvantitativnih olakšica Fed-a ("quantitative easing" - QE), doprineo zadržavanju prinosa na državne HoV razvijenih zemalja na niskom nivou. To je još jedan dokaz da u sadašnjim tokovima globalne likvidnosti tržište obveznica ima važnu ulogu u međunarodnoj transmisiji finansijskih uslova.

Za razliku od ostatka sveta, SAD imaju kratku dolarsku poziciju (dolarska pasiva je veća od dolarske aktive). Ovakav bilans u slučaju apresijacije dolara dalje pogoršava međunarodnu investicionu poziciju SAD. Saldo dolarske aktive i pasive SAD iznosi oko 39% BDP-a (BIS, 2015, str. 96). Rezultat apresijacije dolara u 2014. je pogoršanje međunarodne investicione pozicije od 5,5 biliona dolara na 7,0 biliona dolara (grafikon 6). Od ovog iznosa, 1,2 biliona dolara direktno se duguje apresijaciji dolara tokom 2014. godine (<http://www.bea.gov>). Razlika od 1,5 biliona dolara je više od tri puta veća od deficita tekućeg računa, koji je 2014. iznosio 390 milijardi dolara.

Oba deficita se finansiraju zaduživanjem u inostranstvu. U literaturi nailazimo na mišljenje po kome SAD, kao glavni emitent međunarodne valute, pod uticajem stimulisanja domaće tražnje, akumulira deficit tekućeg računa (Dorrucci and McKay, 2011, str. 12). Tome doprinose i pritisci globalnih investitora koji, u nedostatku kredibilnih alternativa, žele da investiraju u sigurne američke državne HoV. Strani investitori time postaju finansijeri SAD, kao što je SAD bila bankar ostatka sveta u Bretonvudskom periodu. Klasična *Trifinova dilema* tvrdi da se globalni rast deviznih rezervi zasniva na rastu budžetskog deficita zemlje emitenta svetske rezervne valute. Sada se postavlja pitanje kako omogućiti rast globalnih deviznih rezervi kad razvijene zemlje teže svođenju javnog duga na održiv nivo? Mada je deficit tekućeg računa u kontinuitetu od 2000. godine doprinosa zadovoljavanju inostrane tražnje za dolarima kao rezervnom aktivom, takođe se postavlja pitanje da li je ovakva situacija održiva na duži rok? Problem će nastupiti ako se ispostavi da ona iz bilo kog razloga nije održiva. Povećanje neto međunarodne investicione pozicije SAD sa negativnim predznakom, naročito od 2007. godine, pod uticajem je i budžetskog deficita koji se finansira zaduživanjem u inostranstvu. U slučaju budžetskog deficita, rast fiskalne

potrošnje, koji se duguje povećanju vojne potrošnje, može dovesti do jačanja ovog sektora. Ako se pak beleži rast privatne potrošnje, to je onda znak da je privatna štednja manja od privatnih investicija. Ukoliko se deficit tekućeg računa ne uvećava, fiskalna politika SAD mora biti ekspanzivnija, da bi se podstakao privredni rast. Dakle, tražnja za međunarodnim rezervama pokreće dva američka deficita, odnosno ova dva

Grafikon 6. - Neto međunarodna investiciona pozicija SAD

Izvor: <http://www.bea.gov/iTable>. Pristupljeno 04.08.2015. godine.

Grafikon 6. pokazuje da se inostrani dug SAD naglo uvećao posle 2007. godine, i da su SAD veliki neto dužnik prema inostranstvu. Tome svakako doprinosi kontinuirani deficit tekućih transakcija, ali i rastući budžetski deficit.

deficita predstavljaju dominantne izvore rasta dolarskih rezervi u svetu.

Mada se kvantitativne olakšice u sprovođenju monetarne politike SAD zvanično smanjuju, današnje stanje novčane mase (M1)

markets and some developed countries may result in financial imbalances, which in the long run may lead to a credit contraction. Expansionary monetary policy of the ECB may extend the global financial expansion. However, the rise of the dollar against the euro by the end of 2014 draws attention to the fact that we must not ignore the risk of its appreciation. Large dollar *debtors* are particularly exposed to this risk. Even in the countries that have higher dollar assets than dollar liabilities, which is a favorable position when the dollar appreciates, currency positions significantly differ among the economic sectors. In many developing countries and emerging markets, the government sector has a long dollar position (higher dollar assets than dollar liabilities), while the situation of the corporate sector is the opposite. If the government does not provide assistance to the corporate sector in case of the dollar appreciation, the strengthening of the dollar could be damaging for those countries.

The dollar strengthening in 2014 and the first half of 2015 is followed by a moderate increase in the US interest rates. Market participants expect that the Fed, in the context of the monetary policy normalization, will continue to increase the interest rate on federal funds (Carpenter et al., 2015., p. 238). By contrast, the ECB approves additional monetary incentives, which reduce the euro forward exchange rates. On 22 January 2015 the ECB announced an expanded program of buying assets in the amount of 1.1 trillion euros, which is covered by the current program of repurchasing securities with collateral and covered bonds, and redemption of bonds issued by the central banks of the Eurozone members, agencies and European institutions. The monthly purchase will amount to 60 billion euros and commenced on March 9, 2015. The purchase is planned to be completed in September 2016, but may continue until inflation is consistent with the medium-term target of 2% (BIS, 2015a, p. 7). The new program of buying

bonds in the euro zone reduces yields not only on European bonds, but also in the US, despite the gradual tightening of the Fed’s monetary policy. In 2014, the developed countries pursued a policy of low interest rates and applied unconventional monetary policy measures. Such an approach, despite the activated quantitative easing program of the Federal Reserve, contributed to keeping the yields on government securities in the developed countries at a low level. This is another piece of evidence that in the today’s global liquidity flows the bond market plays an important role in the international transmission of financial conditions.

Unlike the rest of the world, the United States have a short dollar position (dollar-denominated liabilities are higher than the dollar assets). In case of dollar depreciation such a balance sheet will continue to aggravate the US international investment position. US dollar assets and liabilities account for about 39% of GDP (BIS, 2015, p. 96). The deterioration of the international investment position from 5.5 trillion dollars to 7.0 trillion dollars is a result of the US dollar appreciation in 2014 (graph 6). Of this amount, \$1.2 trillion is directly owed to dollar appreciation during 2014 (<http://www.bea.gov>). The difference of \$1.5 trillion is more than three times higher than the current account deficit, which in 2014 amounted to 390 billion dollars.

Graph 6 - The US international net investment position

Source: <http://www.bea.gov/iTable>. Accessed on 04.08.2015

Graph 6 shows that the US foreign debt increased sharply after 2007, and that the US is a large net debtor to foreign countries. This occurs due to the continuous current account deficits, as well as the growing budget deficit.

u SAD je duplirano u odnosu na stanje sa kraja 2008. godine, kad je ova zemlja zapala u finansijsku krizu (grafikon 7).

likvidnosti, zahtevaju jačanje međunarodne saradnje, kao i povremene zajedničke akcije. Primer za to je bliska koordinacija

centralnih banaka u povećanju međusobnih dolarskih svopova tokom finansijske krize iz 2008. godine. Ukoliko se postigne napredak u izgradnji međunarodnih pravila, koja bi mogla da ograniče domaće politike, mogla bi se postići globalna efikasnost monetarne politike. U kriznim vremenima raste spremnost za razvijanje međunarodne saradnje, ali ona relativno brzo iščezne kada prođu prvi krizni udari. Čak i ako se

postigne određeni sporazum, to ne znači da bi time bili otklonjeni brojni problemi koji se vezuju za podelu međunarodnih rizika. Pravila koja bi važila za sve centralne banke umnogome bi doprinela disciplinovanju nacionalnih politika. Vodeće centralne banke u svetu imaju dodatnu odgovornost da sprovedu politiku koja podržava globalnu finansijsku stabilnost (Caruana, 2015, str. 4). Moraju se uzeti u obzir međunarodna preliivanja efekata monetarne politike, kao i međusobne interakcije monetarnih politika u svetu. Ovo navodi na zaključak da je potrebno unaprediti međunarodnu saradnju u sprovođenju monetarne politike. Time bi se postigla veća stabilnost MMS-a i povećala predvidivost efekata monetarne politike vodećih zemalja u svetskoj privredi. Ujedno bi se ublažile i kontroverze u pogledu uticaja ovih politika na međunarodnu likvidnost.

Grafikon 7. - Novčana masa (M1) SAD, 2000 (januar) -2015 (jun), po mesecima, desezonirano

U milijardama dolara

Izvor: <http://www.federalreserve.gov/releases>. Pristupljeno 08.08.2015.

Osetniji rast novčane mase u SAD (agregat M1) zapaža se od kraja 2008. godine. To se poklapa sa izbijanjem finansijske i ekonomske krize u SAD, i nastojanjem da se širenjem monetarnih okvira stimuliše tražnja na domaćem tržištu. Stanje novčane mase je poraslo od 1.600 milijardi dolara krajem 2008. na 3.007 milijardi dolara krajem juna 2015. godine. Ekspanzivna monetarna politike dala je značajan doprinos oživljavanju privredne aktivnosti u SAD, ali je stimulisanje tražnje olakšavalo kontinuitet u formiranju deficita tekućeg računa. Svet je zapljusnut dolarima i putem ovog kanala.

Zaključne napomene

Snažna preliivanja efekata monetarne politike između zemalja, u današnjem svetu globalne

Both deficits are financed by borrowing abroad. In the relevant literature we find the opinion according to which the US, as the major issuer of the international currency, under the influence of stimulating domestic demand, accumulates the current account deficit (Dorrucci and McKay, 2011, p. 12). This is facilitated by the pressures of global investors who, in the absence of a credible alternative, want to invest in safe US Treasury securities. Foreign investors, thus, fund the United States, just like when the United States operated as the banker for the rest of the world in the Bretton Woods period. The classic Triffin dilemma asserts that the global growth in foreign exchange reserves is based on the growth of budget deficit in the countries issuing the world's reserve currency. That raises the question how to enable the growth of global foreign exchange reserves when developed countries tend to reduce public debt to a sustainable level? Although the current account deficit has since 2000 continuously contributed to satisfying the foreign demand for dollars as reserve assets, it also raises the question whether such a situation is sustainable in the long term? The problem will appear if it turns out that, for any reason, it is not sustainable. The negative increase of the net international investment position of the United States, particularly since 2007, has been affected by the budget deficit, which is financed by borrowings from abroad. In case of a budget deficit, the growth of fiscal spending, due to the increase in military spending, can lead to the strengthening of this sector. If, however, a rise in private consumption is recorded, then it is a sign that private savings are less than private investments. If the current account deficit does not increase, the US fiscal policy must be more expansionary, to encourage economic growth. Thus, the demand for international reserves launches two US deficits, and the two deficits are the dominant sources of growth in dollar reserves in the world. Although the

US quantitative easing in the implementation of monetary policy is officially reduced, the present level of US money supply (M1) has doubled in comparison to the end of 2008, when the country fell into a financial crisis (graph 7).

Graph 7 - US M1 Money Stock, Seasonally Adjusted, 2000 (Jan) - 2015 (June), by month

Source: <http://www.federalreserve.gov/releases>. Accessed 08.08.2015

Significant growth of the US money supply (aggregate M1) can be seen from the end of 2008. This coincides with the outbreak of the financial and economic crisis in the US, and the efforts to stimulate demand in the domestic market by expanding the monetary framework. Money supply stock has increased from 1600 billion at the end of 2008 to 3007 billion dollars at the end of June 2015. Expansionary monetary policy has made significant contribution to the revival of economic activity in the United States, but the implementation of policies aimed at stimulating domestic demand may facilitate creation of the current account deficit. The world is overwhelmed by dollars through this channel, too.

Concluding remarks

Strong spillover effects of monetary policy between countries, in the today's world of global liquidity, will require the strengthening of international cooperation, as well as occasional joint actions. The close coordination of central banks aimed at increasing mutual dollar swaps during the financial crisis in 2008, is a good example of such coordination. If some progress in defining the international rules, which may restrict domestic policy, could be reached, it could improve global effectiveness of monetary policy. In times of crisis, readiness to develop

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international cooperation is growing, but it disappears quickly as soon as the initial shocks of the crisis are surpassed. Even if certain agreement is achieved, it does not mean that numerous problems related to the division of international risks would be resolved. Rules applying to all central banks *would significantly contribute* to the discipline of national policies. Leading central banks in the world have the additional responsibility to implement policies that support global financial stability (Caruana, 2015, p. 4). International spillover of monetary

policy, as well as the interactions of monetary policy in the world, should be taken into account. This leads to the conclusion that it is necessary to promote international cooperation in the implementation of monetary policy. It would contribute to the greater stability of the IMS and increase the predictability of effects of the leading countries' monetary policy on the world economy. This would, in turn, reduce the controversy regarding the impact of these policies on international liquidity.