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DOLARIZACIJA I MOGUĆNOSTI DEDOLARIZACIJE FINANSIJSKOG SISTEMA

Rezime

U ovom radu predstavljeni su osnovni problemi finansijskih sistema koje karakteriše visok stepen dolarizacije, objašnjeni su najčešći razlozi zbog kojih se strana valuta radije koristi od lokalne, i ukazano je na mogućnosti postepene dedolarizacije finansijskog sistema. Dat je i pregled različitih oblikadolarizacije, ali i set najčešće korišćenih tržišnih i administrativnih mera koje mogu predstavljati okosnicu u „borbi“ za veću upotrebu lokalne valute. Istovremeno, prikazani su i različiti praktični primeri uspešno sprovedenih dedolarizacija.

Posebna pažnja je posvećena razlozima dominacije evra u srpskom finansijskom sistemu. U radu su analizirane mogućnosti deevroizacije srpskog finansijskog sistema, ali je ukazano i na izazove sa kojima će se suočavati država i monetarne vlasti u Srbiji prilikom sprovođenja tog procesa. Dat je i kratak osvrt na strategiju deevroizacije u Srbiji koju čine tri stuba: a) makroekonomska stabilnost; b) razvoj tržišta dinarskih hartija, c) razvoj instrumenata zaštite od deviznog rizika. Ukazano je i na neophodnost privlačenja dugoročnije dinarske štednje koja bi mogla da bude baza, tj. generator rasta dinarskih kredita.

Ključne reči: dolarizacija, dedolarizacija, lokalna valuta, strana valuta, devizni hedžing, dinarska štednja, dinarski krediti.

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Summary

This paper presents the main problems of financial systems characterized by a high degree of dollarization; explains the most typical reasons for preferring a foreign currency to the local one, and indicates the possibilities for gradual de-dollarization of the financial system. The paper also presents a review of various types of dollarization, along with a set of most frequently used market and administrative measures that may serve as a stronghold in the “struggle” for wider utilization of local currencies. At the same time, the paper features various practical examples of successfully implemented de-dollarization processes.

Special attention is dedicated to the reasons behind the domination of Euro in the Serbian financial system. The paper analyzes the possibility of de-euroization of the Serbian financial system, yet highlights the challenges that the Government and the monetary authorities in Serbia will have to face when implementing this process. What the paper also offers is a brief review of the de-euroization strategy in Serbia, being based on three pillars: a) macroeconomic stability; b) development of dinar securities market; c) development of FX risk protection instruments. We have also emphasized the necessity of attracting long-term dinar savings which may serve as a basis, i.e. a generator of dinar loans growth.

Key words: dollarization, de-dollarization, local currency, foreign currency, FX hedging, dinar savings, dinar loans.

DOLLARIZATION AND POSSIBILITIES FOR FINANCIAL SYSTEM DE- DOLLARIZATION

Liberalizacija finansijskih sistema bez uspostavljene makroekonomske stabilnosti i neophodnih institucionalnih i strukturnih promena tokom 90-ih, učinila je ekonomije u razvoju ranjivim na eksterne šokove. Zbog toga dolarizacija i njene konsekvence dobijaju na značaju devedesetih godina, tokom finansijskih kriza u Latinskoj Americi i istočnoj Aziji.

Dolarizacija se najjednostavnije može definisati kao upotreba strane valute u domaćoj ekonomiji. Glavni pokretač dolarizacije u zemljama u razvoju je veće poverenje u stranu u odnosu na domaću valutu, a usled dugog perioda makroekonomske nestabilnosti. Nerazvijene i ekonomije u tranziciji koje su se suočavale sa periodima visoke i volatilne inflacije i izuzetno volatilnog deviznog kursa, ne retko su se opredeljivale za potpunu dolarizaciju finansijskog sistema. Ovo je podrazumevalo korišćenje strane valute kao zakonitog sredstva plaćanja. Osnovni motiv za ovakvu odluku je smanjenje rizika zemlje kroz stvaranje stabilnije i sigurnije ekonomske i investicione klime. Sa druge strane, osnovni nedostatak potpune tj. zvanične dolarizacije je to što se ekonomija odriče prava na svoju monetarnu politiku. Zbog toga se na kraju 2009. kod svega deset zemalja beleži potpuna dolarizacija finansijskog sistema. Istovremeno, broj zemalja sa različitim oblicima nezvanične dolarizacije, a pre svega finansijskom, znatno je povećan. Tako je, prema podacima Međunarodnog monetarnog fonda (International monetary Fund: IMF), broj zemalja u kojima je učešće depozita u stranoj valuti u ukupnim depozitima prešlo kritičan nivo od 30% (Baliño, Bennett, Borensztein, 1999) povećan sa 7 koliko ih je bilo 1990. na čak 47 koliko ih je bilo 2009.

Insprisan poslednjom finansijskom krizom, dedolarizacija je ponovo postala jedan od prioriteta u mnogim zemljama u razvoju. Za razliku od 90-ih, njene aktuelne „žrtve“ su evropske zemlje u razvoju te se u stručnoj javnosti sve češće pominje izraz „evro ide na istok“. Eskalacija krize u ovim zemljama krajem 2008. praćena je snažnom deprecijacijom i izraženom volatilnošću deviznog kursa (u zemljama sa režimom fleksibilnog kursa), smanjenim pristupom stranim izvorima sredstava, rastom učešća

problematičnih zajmova, i smanjenjem efikasnosti mera monetarne politike. U ovim zemljama kriza je jednostavno došla kao poziv za buđenje i neophodno prilagođavanje, a kreatorima makroekonomske politike je samo apostrofirana činjenica da se još više moraju fokusirati na smanjenje dolarizacije finansijskog sistema.

Oblici dolarizacije i njeno merenje

Premda se dolarizacija najjednostavnije može definisati kao upotreba strane valute u domaćoj ekonomiji za razne svrhe, identifikovanje njenog stvarnog nivoa nije jednostavno. Zbog toga se u savremenoj stručnoj literaturi susrećemo sa različitim oblicima i indeksima (pokazateljima) dolarizacije. Stepem dolarizacije za potrebe međunarodnog poređenja najčešće se meri: učešćem deviznih depozita u ukupnim depozitima, odnosno njihovim učešćem u M3; učešćem deviznih i indeksiranih kredita u ukupnim kreditima; učešćem javnog duga u deviznom znaku u ukupnom javnom dugu; i sl. Koji indeks će zemlja koristiti opredeljeno je ne samo karakteristikama ekonomije, već i raspoloživošću relevantnih podataka i mogućnostima merenja pojedinih oblika dolarizacije.

Mera dolarizacije koju je IMF koristio dugi niz godina je učešće deviznih depozita u M3 (*asset dollarization*). Nivo ovog indeksa koji se smatra „kritičnim“ je 30%, tj. procena je da učešće deviznih depozita u M3 koje je ispod nivoa od 30% ne narušava funkcionisanje transmissionog mehanizma monetarne politike (Baliño et al, 1999). Sve iznad tog nivoa smatra se izuzetno nepovoljnim sa aspekta sprovođenja monetarne politike jer slabi kanal kamatnih stopa, obzirom da su kamatne stope u takvim uslovima više osetljivije na kretanja na tržištima repernih valuta nego na domaće kamatne stope. Ipak, dugogodišnja praksa ukazala je na praktične nedostatke ovako obračunatog indeksa dolarizacije obzirom da on ne daje potpunu sliku o nivou dolarizacije u jednoj ekonomiji. Ovo iz razloga što se u zemljama u tranziciji, a posebno onim koje su imale dugu istoriju makroekonomske nestabilnosti, značajan deo transakcija obavlja izvan bankarskih kanala a upotreba gotovine je rasprostranjena. Kako

Financial systems liberalization, without previously established macroeconomic stability and necessary institutional and structural changes in the 1990s, rendered emerging economies more vulnerable to external shocks. Therefore, dollarization and its consequences became increasingly important in the 1990s, during the financial crises in Latin America and Eastern Asia.

The simplest way to define dollarization is as use of a foreign currency in domestic economy. The main driver of dollarization in developing countries is higher confidence in a foreign currency than in the domestic currency, due to a long period of macroeconomic instability. Emerging and transitional economies that had faced the periods of high and volatile inflation and extremely volatile FX rates frequently opted for a full dollarization of the financial system. This implied the utilization of a foreign currency as a legal tender. The major motive for such a decision is the reduction of country risk through the achievement of a more stable and safer economic and investment climate. On the other hand, the main drawback of the full, i.e. official dollarization is the fact that the economy renounces the right to lead its own monetary policy. Therefore, at the end of 2009, only ten countries recorded full dollarization of their financial systems. At the same time, the number of countries with various forms of unofficial dollarization, predominantly financial, increased considerably. Thus, according to the data of the International Monetary Fund - IMF, the number of countries in which the share of foreign currency deposits in total deposits exceeded the critical level of 30% (Baliño, Bennett, Borensztein, 1999) increased from 7 in 1990 to 47 in 2009.

Inspired by the last financial crisis, de-dollarization has once again become one of the priorities in many developing countries. As opposed to 1990s, its present "victims" are European developing countries; hence the professional public more and more often states that "the Euro goes East". The escalation of crisis in these countries towards the end of 2008 was followed by a large depreciation and prominent volatility of FX rates (in the countries with flexible FX rate regimes), reduced access to foreign resources, growth of share of NPLs, and

reduced efficiency of monetary policy measures. For these countries the crisis was a wake-up call, indicating the necessary adjustments, and underlining the fact that the macroeconomic policy makers must focus even harder on the reduction of financial system dollarization.

Forms of Dollarization and Dollarization Measurement

Although dollarization can simply be defined as use of a foreign currency in domestic economy for various purposes, identification of its actual degree is not that simple. Therefore in expert reference-books we find various forms and indices (indicators) of dollarization. For the purpose of international comparison, the degree of dollarization is most frequently measured by means of: the share of FX deposits in total deposits, i.e. their share in M3; share of FX and indexed loans in total loans; share of FX public debt in total public debt, etc. The index that a country will get is defined not only on the basis of its economy's characteristics, but also on the basis of availability of relevant data and possibilities of measuring certain forms of dollarization.

A dollarization measure used by IMF for many years is the share of FX deposits in M3 (*asset dollarization*). The level of this index is considered to be "critical" at 30%, i.e. it is assessed that the share of FX deposits in M3 below the level of 30% does not jeopardize the functioning of the monetary policy transmission mechanism (Baliño *et al*, 1999). Everything above this level is considered highly unfavourable from the perspective of monetary policy, since the interest rate channel is weakened, given that in such conditions interest rates become more sensitive to trends at benchmark currency markets than to domestic interest rates. Still, the long-standing practice has revealed the practical drawbacks of thus calculated dollarization index given that it does not provide a full picture of the dollarization degree in a certain economy. This is because in transitional countries, in particular those that have had a long history of macroeconomic instability, a considerable part of transactions are conducted outside the banking channels, the cash being widely used. Since the data on

su podaci o gotovini u cirkulaciji, a posebno onoj koja se drži u stranoj valuti uglavnom nedostupni ili pak izuzetno nepouzdana, procena dolarizacije aktive je neprecizna i komplikovana. Drugim rečima, zbog nepoverenja nerezidenata u domaći bankarski sektor, značajan iznos devizne aktive (pre svega štednje) još uvek se ne nalazi u bankarskim tokovima, što dovodi u pitanje reprezentativnost pokazatelja dolarizacije. Istovremeno, nije moguće precezino aproksimirati ni doznake koje ulaze u zemlju putem nebankarskih kanala. Iz tog razloga, kao sve češća mera dolarizacija koristi se učešće deviznih depozita u ukupnim depozitima, ili u M2. Uz ove indekse, koriste se i njihove modifikacije ili kombinacije. Tako su npr. *Reinhart, Rogoff i Savastano* (2003) izračunali kompozitni indeks dolarizacije kombinujući učešće deviznih depozita u M2, učešće ukupnog spoljnog duga u BDP-u, i učešće domaćeg javnog duga denominovanog ili indeksiranog u stranoj valuti u ukupnom javnom dugu.

Uz dolarizaciju aktive, kao mera dolarizacije sve češće se koristi i dolarizacija obaveza (*liability dollarization*). Najjednostavnije, ona se računa kao učešće obaveza u stranoj valuti i obaveza indeksiranih u stranoj valuti u ukupnim obavezama. Upravo ovaj oblik dolarizacije postao je aktuelan tokom poslednje finansijske krize obzirom da su obaveze privatnog i državnog sektora u zemaljama u razvoju u velikom obimu denominirane u stranoj valuti. Obzirom da se od oktobra 2008. beležila snažnija deprecijacija njihovih valuta, jasno je da je to delovalo izuzetno nepovoljno na nominalni rast njihovih obaveza. Ovo posebno kod zajmoprimaca kod kojih ne postoji valutna usklađenost prihoda i rashoda, tj. kod kojih se prihodi ostvaruju u lokalnoj valuti dok su rashodi vezani za stranu valutu.

Generalno, dolarizacija nastaje u uslovima kada lokalna valuta neke ili sve svoje funkcije (sredstvo plaćanja, obračunsko sredstvo, sredstvo razmene, čuvar vrednosti) obavlja lošije u poređenju sa drugim valutama. Zbog toga ne treba zanemariti ni transakcionu ni realnu dolarizaciju. Transakciona dolarizacija podrazumeva da se strana valuta koristi kao sredstvo plaćanja i kao obračunsko sredstvo. Ova forma dolarizacije obično nastaje i širi se u uslovima visoke inflacije ili pak hiperinflacije

koja znatno otežava poslovanje transaktora. Kada troškovi po osnovu korišćenja domaće valute za različite transakcije postanu izuzetno visoki, tržišni transaktori će u transakcionoj dolarizaciji videti alternativne načine za zaštitu (*Armas, Ize, Levy-Yeyati*, 2006). Kada upotreba strane valute za različite vrste transakcija postane rasprostranjena, njeno napuštanje nije lak i jednostavan proces. Takođe, ne retko se ne pravi jasna granica između transakcione i dolarizacije aktive. Zbog toga je možde uputno naglasiti da se glavna razlika između ova dva oblika dolarizacije nalazi u motivima za držanje dela aktive u stranoj valuti. Naime, dok transakciona dolarizacija nastaje uglavnom u uslovima kada se lokalna valuta više ne može efikasno koristiti kao sredstvo plaćanja ili obračuna, dolarizacija aktive nastaje kao rezultat dugih perioda ukupne makroekonomske nestabilnosti kada su rizici po pitanju profitabilnosti plasmana dosta izraženi (lokalna valuta gubi značaj čuvara vrednosti). U tom slučaju, ne retko se beleži rast dolarizacije aktive. Ne treba zaboraviti ni realnu dolarizaciju (*real dollarization*) koja podrazumeva da su cene najvažnijih dobara i plate vezane za stranu valutu, ali se plaćanje i svakodnevne transakcije vrše u lokalnoj valuti. Sa druge strane cene nekretnina i automobila se najčešće izražavaju u stranoj valuti i plaćanje se vrši u stranoj valuti. Dakle, izražena nestabilnost realnog deviznog kursa lokalne valute, ne retko će motivisati rezidente da izražavaju cene u stranoj valuti, i da istu koriste i za razne ugovorne odnose (*Ize, Levy-Yeyati*, 2005).

Ipak, za analitičke svrhe kao i za potrebe međunarodne komparacije, finansijska dolarizacija merena kroz učešće strane valute u ukupno odobrenim kreditama i ukupnim depozitima, jedan je od najčešće korišćenih indikatora dolarizacije jedne ekonomije. Finansijsku dolarizaciju čine obe strane bilansa stanja ekonomskih agenata, pa je s toga širi koncept od dolarizacije koja uključuje samo pasivu ili samo aktivu. Takođe, ne treba zaboraviti ni činjenicu da se u jednoj ekonomiji ne retko susrećemo sa paralelnom egzistencijom nekoliko oblika dolarizacije. Iz tog razloga, mere usmerene na dedolarizaciju moraju biti usmerene upravo ka preovlađujućem i najdestimulativnijem obliku dolarizacije.

cash in circulation, particularly the cash held in foreign currency, are mostly unavailable or highly unreliable, the assessment of asset dollarization is inaccurate and complicated. In other words, due to the distrust of non-residents in the domestic banking sector, a considerable amount of FX assets (mostly savings) is still not to be found in the banking flows, which brings into question the representativeness of dollarization indicators. At the same time, it is impossible to precisely determine the amount of remittances inflowing into the country by means of non-banking channels. For this reason, the increasingly used measure of dollarization is the share of FX deposits in total deposits, or in M2. In addition to these indices, their modifications or combinations are also used. Thus, for instance, *Reinhart, Rogoff and Savastano* (2003) calculated the composite dollarization index by combining the share of FX deposits in M2, the share of total foreign debt in GDP, and share of domestic public debt denominated or indexed in foreign currencies in total public debt.

Along with asset dollarization, what is also being increasingly used as a dollarization measure is the *liability dollarization*. In the simplest terms, it is calculated as a share of FX denominated and FX indexed liabilities in total liabilities. It is exactly this form of dollarization that has become popular during the recent financial crisis given that the liabilities of the private and public sectors in developing countries are to a large extent denominated in foreign currency. Given that since October 2008 there has been a stronger depreciation of their currencies, it is clear that this had a highly unfavourable effect on the nominal growth of their liabilities. This especially applies to borrowers where there is a currency mismatch between revenues and expenditures, i.e. the revenues are in local currency, whereas the expenditures are indexed in a foreign currency.

Generally speaking, dollarization occurs in the conditions when the local currency performs some or all of its functions (legal tender, calculation instrument, medium of exchange, store of value) in a poorer way compared with other currencies. Therefore, one should also take into account both transaction

and real dollarization. Transaction dollarization implies that a foreign currency is used as a legal tender and as a calculation instrument. This form of dollarization typically occurs and spreads in the circumstances of high inflation or hyperinflation which makes transactors' operations considerably more difficult. When the costs of using domestic currency for various transactions become extremely high, market transactors will seek alternative means of protection in transaction dollarization (*Armas, Ize, Levy-Yeyati*, 2006). Once the usage of a foreign currency for various types of transactions becomes widespread, it is not an easy and simple process to abandon it. Moreover, there is often no clear-cut differentiating line between transaction and asset dollarization. Thus it may be useful to underline that the major difference between these two forms of dollarization rests in the motives for holding a part of assets in a foreign currency. Namely, whereas transaction dollarization mostly occurs in the circumstances when the local currency can no longer be efficiently used as a legal tender or a calculation instrument, asset dollarization occurs as a result of the long periods of total macroeconomic instability when the risks in respect of placements' profitability are rather prominent (local currency loses its significance as a store of value). In such cases, asset dollarization is often on the rise. What also needs to be taken into account is real dollarization which implies that the prices of most important goods, as well as the salaries, are indexed in a foreign currency, whereas the payments and everyday transactions are conducted in the local currency. On the other hand, real estate and car prices are mostly expressed in a foreign currency and respective payments are conducted in the foreign currency. Therefore, the prominent instability of real FX rate of the local currency will frequently motivate the residents to express the prices in the foreign currency and to use that foreign currency for various contractual relations (*Ize, Levy-Yeyati*, 2005).

Nevertheless, for analytical purposes, as well as for the purpose of international comparison, financial dollarization, measured by means of the FX share in total extended loans and total deposits, is one of the most frequently used indicators of a certain economy's dollarization.

Faktori dolarizacije

Glavni faktori dolarizacije koji su identifikovani tokom poslednje dve decenije su: a) makroekonomska neravnoteža, a pre svega visoka i volatilna inflacija, snažnija deprecijacija domaće valute i neodrživ privredni rast; b) nedovoljno razvijeno tržište kapitala; c) tržišne imperfektnosti; d) neadekvatna regulativa, tj. „*currency blind*“ regulatorni okvir. Svaki faktor pojedinačno, ali i njihova kombinacija svakako su razlog za slabljenje poverenja u domaću valutu i pojavu i širenje dolarizacije. Za kreatore makroekonomske politike izuzetno je bitno da determinišu ključne faktore dolarizacije u domaćoj ekonomiji, kako bi impementirali i adekvatne mere usmerene na njeno smanjenje.

Ne retko dolarizacija se definiše kao optimalan odgovor ekonomskih subjekata na neoptimalne makroekonomske uslove (Ize, 2003). U kontekstu makroekonomskih nestabilnosti i dolarizacije, svakako je najvažnije pitanje inflacije i deviznog kursa. U tom smislu, praksa je pokazala da je u zemljama koje imaju dugu istoriju visoke inflacije nivo dolarizacije veći od zemalja sa niskom i stabilnom inflacijom. Ono što je za dolarizaciju podjednako važno nije samo visina inflacije, već i njena volatilnost te se veći stepen dolarizacije primećuje u zemljama sa izraženijom volatilnošću inflacije jer ona znači i veći rizik poslovanja. Ukoliko je visoka inflacija praćena i značajnom volatilnošću kursa lokalne valute koji se više kreće u jednom smeru (deprecijacija), gubitak poverenja u domaću valutu će neminovno uslediti. U takvim uslovima tržišni transaktori svakako nastoje da se zaštite od potencijalnih gubitaka upotrebom strane valute.

Kada se govori o makroekonomskim neravnotežama čini se neizbežnim osvrtnje i na narastajuće fiskalne krize u pojedinim perifernim evropskim zemljama. Upravo njihov primer nedvosmisleno potvrđuje opšteprihvaćenu tvrdnju da nekonzistentna fiskalna politika i modeli rasta zasnovani na potrošnji, nisu dugoročno održivi. Ali, nije samo visina javnog duga i bužetskih deficita zemalja u razvoju često neodrživa, već je i njihova valutna struktura ne retko izuzetno nepovoljna. Ovo se posebno beleži u zemljama sa nedovoljno razvijenim finansijskim tržištem, u kojima je

država bila prinuđena da se zadužuje u stranoj valuti jer je zaduživanje u lokalnoj valuti na duže rokove bilo gotovo nemoguće. Specifičan naziv za ovu pojavu je „*original sin*“ koji su prvi upotrebili Eichengreen i Hausmann (1999), i ona podrazumeva da se države sa slabijim valutama ne mogu zaduživati u insotranstvu u lokalnoj valuti već su prinuđene da se zadužuju u stranoj valuti. Obzirom da se od oktobra 2008. beležila snažnija deprecijacija valuta zemalja u razvoju, jasno je da je to delovalo izuzetno nepovoljno po ukupan nivo javnog duga te da je dovelo u pitanje mogućnost njegovog servisiranja bez neophodnog bolnog prilagođavanja. Dakle, i politika javnog sektora može bitno podstaći dolarizaciju u nacionalnoj ekonomiji. Ne misli se samo na zaduživanje u stranoj valuti već sveukupno ponašanje javnog sektora. U tom smislu odobravanje subvencija za devizne kredite koje je često bilo zastupljeno u okviru različitih programa podrške (za građevinarstvo, pokretanje porodičnih firmi i sl), ili pak subvencionisanih kamata za devizne kredite i/ili depozite samo produbljuje stepen dolarizacije. Istovremeno, pojedine zemlje ne regulišu striktno poslovanje javnih kompanija kojima je dozvoljeno da imaju otvorene devizne pozicije koje nisu hedžovane, čime se može bitno umanjiti kako depozitna baza u lokalnoj valuti, tako i tražnja za dugoročnim instrumentima denominiranim u lokalnoj valuti.

Faktor koji takođe može opredeliti nivo dolarizacije u finansijskom sistemu svakako je i strah od fluktuiranja (*fear of floating*) centralne banke koji je posebno izražen u uslovima kada postoje valutne neusklađenosti u bilansima ekonomskih agenata. U takvim uslovima centralna banka je često u iskušenju da pažljivo prati kretanje deviznog kursa kako bi zaštitila ekonomiju od bilansnog efekta po osnovu značajnije deprecijacije, te se može reći da centralna banka postaje talac straha od fluktuiranja. U nastojanju da izmere osetljivost centralne banke na promene deviznog kursa Calvo i Reinhart (2002) su definisali indeks koji se računa kao odnos između standardne devijacije deviznog kursa i sume standardnih devijacija deviznih rezervi i lokalnih kamatnih stopa. Vrednost ovog indeksa je blizu nule u zemljama u kojima postoji izražen strah od fluktuiranja, pa centralna banka utiče na nivo

Financial dollarization includes both sides of the economic agents' balance sheet, hence it is a broader concept than dollarization which includes either liabilities or assets. Also, one should bear in mind the fact that in one economy rarely involves the parallel existence of several dollarization forms. For this reason, de-dollarization measures must be directed at the most dominant and most discouraging dollarization form.

Dollarization Factors

The main dollarization factors identified in the past two decades are: a) macroeconomic disequilibrium, above all high and volatile inflation, strong depreciation of the local currency and unsustainable economic growth; b) insufficiently developed capital market; c) market imperfections; d) inadequate regulations, i.e. "currency blind" regulative framework. Each of these factors, taken separately or jointly, is by all means a cause of the loss of trust in the domestic currency and the subsequent occurrence and spreading of dollarization. What is particularly important for macroeconomic policy makers is to determine key dollarization factors in the domestic economy, in order to implement adequate measures for its reduction.

Dollarization is often defined as an optimal response of economic entities to non-optimal macroeconomic conditions (Ize, 2003). Within the context of macroeconomic instability and dollarization, what is certainly most important is the issue of inflation and foreign exchange rate. In this respect, the practice has shown that the degree of dollarization is higher in the countries with the long history of high inflation than in the countries with low and stable inflation. What is equally important for dollarization is not just the level of inflation, but also its volatility, hence a higher degree of dollarization has been recorded in the countries with a more prominent inflation volatility, because it implies a higher business risk. If the high inflation is followed by a considerable volatility of local currency exchange rate moving in one direction (depreciation), the loss of trust in the domestic currency will inevitably ensue. In such circumstances, transactors

certainly strive to protect themselves from potential losses using a foreign currency.

When we speak of the macroeconomic disequilibrium, it seems inevitable to mention the growing fiscal crises in certain peripheral European countries. They stand as examples which unequivocally confirm the generally accepted claim that an inconsistent fiscal policy and consumption-based growth models are unsustainable in the long run. However, it is not just that the amount of public debt and budgetary deficits of developing countries are often unsustainable; it is also that their currency structure is often extremely unfavourable. This is especially the case in the countries with insufficiently developed financial market, where the state was forced to borrow in a foreign currency because long-term borrowing in their local currency was virtually impossible. The specific name for this phenomenon is "original sin", which was first used by *Eichengreen and Hausmann (1999)*, and it implies that countries with weaker currencies cannot get cross-border loans in their local currency, but are instead forced to borrow in the foreign currency. Given that, since October 2008, there has been a stronger depreciation of developing countries' currencies, it is obvious that this has had a highly adverse effect on the total amount of public debt, thus bringing into question the possibility of its servicing without the necessary, painful adjustments. So, the public sector policy can also significantly encourage dollarization in the national economy. This does not refer just to borrowing in a foreign currency, but to the overall behaviour of the public sector. In this sense, allowing subsidies for FX loans which was often present within various support programs (construction, start-up of family businesses, etc.), or subsidized interests on FX loans and/or deposits, deepens the degree of dollarization even further. At the same time, certain countries do not impose strict regulations concerning the operations of public companies which are allowed to have open, non-hedged FX positions, whereby a considerable reduction in the local currency deposit base may be effected, along with a reduction in demand for long-term, local currency denominated instruments.

Another factor that may affect the level

kursa sistemskim intervencijama na deviznom tržištu i/ili prilagođavanjem referentnih kamatnih stopa.

Nedovoljno poverenje u domaću valutu ne retko je praćeno i odsustvom ponude kvalitetnih investicionih mogućnosti u lokalnoj valuti, što najčešće rezultira izostankom ili niskom dugoročnom štednjom u lokalnoj valuti. Istovremeno, nerazvijeno ili nedovoljno razvijeno tržište u lokalnoj valuti kao i odsustvo tržišta derivatnih instrumenata u kombinaciji sa lakim pristupom stranim izvorima sredstava (od banki majki, doznake) mogu rezultirati značajnim kamatnim diferencijalima na kredite u domaćoj i stranoj valuti. Drugim rečima, zbog nedovoljnih izvora u domaćoj valuti koje banke ne retko nastoje da privuku višim kamatnim stopama, i krediti u lokalnoj valuti postaju znatno skuplji od deviznih kredita. U tom slučaju ekonomski agenti se uglavnom opredeljuju za kredite u stranoj valuti, pri čemu i same banke, u odsustvu dugoročnijih izvora u lokalnoj valuti, nude mahom devizne kredite. Na ovaj način otvara se jedan začarani krug, gde je uloga centralne banke i države neophodna kako bi se ceo proces isprva zaustavio, a potom i krenuo u suprotnom smeru (u pravcu dedolarizacije).

U cilju usidravanja inflacije i postizanja neophodne makroekonomske stabilnosti, pokretani su i stabilizacioni programi koji su ne retko napušteni, produbljujući nepoverenje u ekonomsku politiku i dalje podstičući dolarizaciju. Takođe, regulativa koja ne uvažava dovoljno problem dolarizacije (*currency-blind financial regulations*), destimulativna šema osiguranja depozita koja podjednako tretira depozite u domaćoj i stranoj valuti (Broda, Levy-Yeyati, 2003), nedovoljna pravna zaštita domaćih poverioca, svakako predstavljaju dodatne faktore dolarizacije. Sa druge strane, regulatorni okvir koji ne uvažava dovoljno devizni rizik ekonomskih agenata, ne uvažava ni implicitni (kreditni) rizik koji može nastati usled valutne neusklađenosti u uslovima kada lokalna valuta deprecira. U takvim uslovima stabilnost čitavog finansijskog sistema dovodi se u pitanje.

Konačno, dominantno učešće stranih banaka u domaćem bankarskom sistemu i oslanjanje na njihove inostrane izvore sredstava postalo je

bitan faktor evroizacije (Luca, Petrova, 2008) u evropskim zemljama u razvoju. Takođe, faktor evroizacije koji se odnosi samo na pojedine evropske zemlje u razvoju jeste očekivanje usvajanja evra čime je podstaknuta i njegoa veća upotreba.

Optimalan valutni portfolio

Premda je opšteprihvaćeno da je visoka inflacija jedan od ključnih faktora finansijske dolarizacije u uslovima kada indeksiranje za stopu inflacije nije prisutno, visoko učešće deviznih kredita i depozita kada inflacija zabeleži značajan pad još uvek je zagonetka. Upravo ovaj fenomen bio je predmet istraživanja. U tom cilju Ize i Levy-Yeyati (2003) razvili su model izbora optimalnog portfolia od strane zajmoprimaca i zajmodavaca koji nisu skloni riziku, u kome ravnotežni nivo deviznih depozita i kredita uglavnom zavisi od volatilnosti cena i realnog deviznog kursa. Konkretno, njihov MVP (*minimum variance portfolio*) model implicira da ukoliko je deprecijacija realnog deviznog kursa manje volatilna od inflacije, štediša će preferirati devizne depozite obzirom da su oni manje rizični. Za testiranje modela korišćeni su podaci 23 zemlje. Kasnije su MVP hipotezu potvrdili i De Nicolo et al. (2005), kao i Rennack i Nozaki (2006). Polazeći od ovog odela, dolarizacija u velikoj meri reflektuje valutne izbore od strane deponenata, zajmoprimaca i banaka.

Dakle, MVP model predstavlja simplifikirani numerički prikaz kako promena makroekonomskog okruženja utiče na promenu strukture optimalnog portfolia od starne ekonomskih agenata. Prema MVP formuli optimalni nivo dolarizacije proizilazi iz interakcije tri promenljive: a) korelacija između inflacije i stope nominalne deprecijacije lokalne valute b) standardna devijacija inflacije c) standardna devijacija stope deprecijacije. Visoka volatilnost inflacije, prema ovom modelu, uzrok je dolarizacije samo ukoliko je ona veća u odnosu na volatilnost nominalne deprecijacije. Istovremeno, sa povećanjem otvorenosti nacionalne ekonomije može se očekivati i veći nivo dolarizacije preko snažnijeg prenosnog (*pass-through*) efekta kursa. Dakle, mere centralne banke usmerene na smanjenje

of financial system dollarization is certainly the central bank's fear of floating, which is particularly prominent in the circumstances of currency mismatch in economic entities' balances. In such cases, the central bank is often tempted to carefully monitor the foreign exchange movements in order to protect the economy from the effect of high depreciation on the balances, so that, in a way, the central bank becomes a hostage of the fear of floating. Wishing to measure the sensitivity of the central bank to foreign exchange rate fluctuations, *Calvo and Reinhart* (2002) defined an index calculated as a ratio between standard deviation of the FX rate and the sum of standard deviations of FX reserves and local interest rates. The value of this index approaches zero in the countries in which there is an eminent fear of floating, forcing the central bank to influence the rate by means of systemic interventions at the FX market and/or by adjustment of benchmark interest rates.

Insufficient trust in the domestic currency is often accompanied by the absence of offer of high-quality investment opportunities in the local currency, which most often results in the lack of or the low long-term savings in the local currency. At the same time, undeveloped or insufficiently developed local currency market, along with the nonexistence of the derivative instruments market combined with an easy access to foreign sources of finance (parent banks, remittances), may result in considerable interest differentials for domestic and foreign currency denominated loans. In other words, due to the insufficient sources in domestic currency that the banks often tend to attract by higher interest rates, the local currency loans become much more expensive than FX loans. In such a case, economic entities mostly opt for FX loans, and the banks themselves, due to the lack of long-term resources in local currency, mostly offer FX loans as well. Thereby a vicious circle is created, in which the role of the central bank and the Government is crucial in order for the entire process to be stopped, and then reversed (towards de-dollarization).

With a view to anchoring inflation expectation and achieving necessary macroeconomic stability, various stabilization programs have been launched, and frequently

abandoned, thus deepening the distrust in economic policy and further encouraging dollarization. In addition, currency-blind financial regulations, discouraging deposit insurance scheme which treats domestic and foreign currency deposits equally (*Broda, Levy-Yeyati*, 2003), insufficient legal protection of domestic creditors - certainly present additional dollarization factors. On the other hand, regulatory framework which does not take into account the FX risk of economic entities, does not take the implicit (credit) risk either, which may occur due to currency mismatch in the circumstances of local currency depreciation. Under such conditions, stability of the entire financial system is being jeopardized.

Finally, the dominant share of foreign banks in domestic banking sectors and reliance on their foreign sources of finance has become an important euroization factor (*Luca, Petrova*, 2008) in the European developing countries. Also, another euroization factor present only in certain European developing countries is the expectation of adoption of Euro, whereby its increased usage gets boosted.

Optimal Currency Portfolio

Although it is generally accepted that high inflation is one of the key factors of financial dollarization in the circumstances when there is no inflation rate indexing, high share of FX loans and deposits when inflation considerably drops remains a mystery. This phenomenon has been the subject of many studies. To this end, *Ize and Levy-Yeyati* (2003) developed a model of optimum portfolio selection by the debtors and creditors with low risk appetite, in which the balanced level of FX deposits and loans mostly depends on the volatility of prices and the real foreign exchange rate. In particular, their minimum variance portfolio (MVP) model implies that if the depreciation of real FX rate is less volatile than inflation, depositors will prefer FX deposits given that they incur lower risk. To test the model, they used the data from 23 countries. Later on, the MVP hypothesis was confirmed by *De Nicolo et al.* (2005), as well as *Rennack and Nozaki* (2006). According to this model, dollarization largely reflects the choice of currency by depositors, debtors and banks.

inflacije mogu rezultirati rastom dolarizacije ukoliko se istovremeno smanji volatilnost nominalne deprecijacije.

Važno uporište portfolio pristupa predstavljaju i očekivanja ekonomskih agenata kao i kredibilnost institucija. U najjednostavnijem pristupu MVP kalkulacije rade nad istorijskim podacima reflektujući tako samo prethodne makroekonomske performanse nacionalne ekonomije. Ipak, ne retko, *ex post* vrednosti varijabli ne odražavaju nužno *ex ante* očekivanja ekonomskih agenata. Ovo je posebno izraženo u zemljama u razvoju u kojima su dostupne samo kratke serije podataka koje predstavljaju loše vodiče za očekivanja tržišnih učesnika. Iz tog razloga izmerene MVP vrednosti mogu znatno odstupati od pravih MVP vrednosti zasnovanih na očekivanjima volatilnosti pojedinih varijabli. Takođe, očekivanja ekonomskih agenata čak i u uslovima kada su sprovedene makroekonomske reforme mogu biti bazirana na prošlim vrednostima i ispoljenim kretanjima varijabli, ukoliko ne postoji poverenje u uspeh reformi - deficit kredibiliteta politike. Dakle, u uslovima kada se makroekonomska politika promenila ali su očekivanja ostala ista, učešće deviznih depozita i kredita može biti znatno veće od ravnotežnog nivoa koji sugeriše MVP formula. Alternativno, očekivanja ekonomskih agenata mogu biti više okrenuta ka budućnosti, u slučaju kada su institucionalne promene i stabilnije makroekonomsko okruženje doprineli rastu kredibiliteta politike. Na osnovu svega jasno je da ponekad i veći uspeh na polju uspostavljanja makroekonomske ravnoteže ne mora nužno rezultirati i smanjenjem dolarizacije, ukoliko transaktori ne veruju u dugoročniju održivost postignutih stabilnosti. Drugim rečima, dok su makroekonomska politika i institucije slabe dedolarizacija je retko uspešna.

Osnovni nedostaci dolarizacije, tj. razlozi za dedolarizaciju

Ključni nedostaci dolarizacije finansijskog sistema mogu se sublimirati kroz sledeće: a) čini ekonomiju osetljivijom na eksterne šokove; b) povećava bilanse rizike u ekonomijama u kojima postoji valutna neusklađenost prihoda i rashoda tržišnih učesnika; c) povećava

implicitni (kreditni) rizik banaka u uslovima izraženije deprecijacije lokalne valute; d) smanjuje efikasnost monetarne politike kroz slabljenje kanala kamatnih stopa i jačanje transmisionog efekta deviznog kursa; e) povećava volatilnost inflacije.

Svakako da je na prvom mestu veća osetljivost ekonomije na eksterne šokove usled valutne neusklađenosti prihoda i rashoda privatnog i javnog sektora. U dolarizovanim finansijskim sistemima bilansi sektora preduzeća i stanovništva izloženi su riziku solventnosti usled valutne neusklađenosti njihovih prihoda i rashoda. Dok se prihodi uglavnom ostvaruju u lokalnoj valuti, rashodi po osnovu kredita uglavnom su u stranoj valuti. I pored činjenice da su banke uglavnom pošteđene deviznog rizika jer su depoziti i krediti u visoko dolarizovanim zemljama mahom u deviznom znaku, banke su izložene implicitnom, tj. kreditnom riziku. U tom smislu može se reći da je nivo deviznog rizika banaka izuzetno nizak, ali *de-facto*, ukoliko klijenti banke nisu adekvatno hedžovani, banka je izložena drugoj vrsti rizika. Zbog toga grupa autora (*Ranciere, Tornell i Vamvakidis, 2010*) predlaže uvođenje *de-facto* indeksa finansijske dolarizacije koji bi uvažavao i ovaj implicitni rizik, a u zavisnosti od stepena u kome su klijenti banke hedžovani (usklađenost valutne strukture njihovih prihoda i rashoda). U Estoniji, Latviji i Bugarskoj ovaj korigovani, tj. *de-facto* indeks dolarizacije je znatno viši od običnog indeksa dolarizacije. U prilog ovoj konstataciji govore i poslednji podaci o rastu problematičnih kredita u gotovo svim istočno-evropskim zemljama. Tako je npr. procena MMF-a za Rumuniju da će nivo problematičnih kredita dostići kritične nivoe u 2010. od čak 20% ukupno odobrenih zajmova, odnosno 16% ukupne aktive bankarskog sektora Rumunije.

Sa aspekta javnog duga, dolarizacija ima izuzetan značaj obzirom da u uslovima izraženih deprecijacijskih pritisaka može bitno opredeliti održivost javnog duga koji karakteriše nepovoljna valutna struktura. Nesolventnost javnog sektora može se veoma brzo preliti na bankarski sistem, posebno u uslovima kada se značajan deo duga odnosi upravo na obaveze prema bankama na domaćem tržištu. Oštra deprecijacija može otvoriti i problem visokih

In other words, MVP model is a simplified numerical representation of the way a change in macroeconomic environment influences the change in optimum portfolio structure introduced by economic entities. According to MVP formula, the optimum dollarization degree comes as a result of the interaction among three variables: a) correlation between inflation and local currency nominal depreciation rate, b) standard deviation of inflation, and c) standard deviation of the depreciation rate. High volatility of inflation, according to this model, causes dollarization only if it is higher than the volatility of nominal depreciation. At the same time, with the increase of national economy's openness, one may expect a higher degree of dollarization by means of a stronger pass-through effect of FX rate. Thus, the central bank's measures targeted at inflation reduction may result in dollarization expansion if the volatility of nominal depreciation simultaneously gets reduced.

An important stronghold of portfolio approach lies with the expectations of economic agents, as well as the credibility of institutions. In the simplest MVP approach, calculations are performed on the historical data, thus reflecting only the previous macroeconomic performances of the national economy. Still, *ex post* values of the variables often do not necessarily reflect *ex ante* expectations of economic agents. This is particularly prominent in developing countries in which only short data series, which are bad indicators for market players' expectations, are available. Therefore, measured MVP values may considerably differ from the true MVP values based on the expectations of certain variables' volatility. Also, economic agents' expectations, even in the circumstances when macroeconomic reforms have been implemented, may be based on past values and expressed movements of variables, if there is no trust in the reforms' success - deficit of the policy's credibility. Thus, in the circumstances when macroeconomic policy has changed, but the expectations have remained the same, the share of FX deposits and loans may be considerably higher than in case of the balanced level suggested by MVP formula. Alternatively, the expectations of economic agents may be to a greater extent directed to the future, in cases

when institutional changes and a more stable macroeconomic environment contributed to the growth of the policy's credibility. Taking everything into account, it is clear that sometimes bigger success in the field of establishing macroeconomic equilibrium does not necessarily result in dollarization reduction, if the transactors do not believe in a long-term sustainability of the achieved stability. In other words, as long as macroeconomic policy and institutions are weak, de-dollarization is rarely successful.

Main Drawbacks of Dollarization, i.e. Reasons for De-dollarization

The key drawbacks of financial system dollarization can be summed up as follows: a) it makes the economy more sensitive to external shocks; b) increases the balances of risks in the economies in which there is a currency mismatch of revenues and expenditures of market participants; c) increases the implicit (credit) risk of banks in the conditions of higher local currency depreciation; d) reduces the efficiency of monetary policy by weakening the interest rates channels and strengthening the transmission effects of the FX rate; e) increases inflation volatility.

What certainly holds the first place is the increased sensitivity of economy to external shocks due to the currency mismatch of revenues and expenditures in the private and public sectors. In dollarized financial systems balance sheets of retail and corporate sectors are exposed to solvency risk due to the currency mismatch of their revenues and expenditures. While their revenues are mostly yielded in the local currency, their loans-related expenditures are mostly denominated in a foreign currency. Despite the fact that in most cases banks are spared the FX risk because deposits and loans in highly dollarized countries are predominantly FX-denominated, they are exposed to the implicit, i.e. credit risk. In this sense, we may say that the level of FX risk banks are exposed to is extremely low, but *de-facto*, if the banks' clients are not adequately hedged, the banks are exposed to another type of risk. Therefore, a group of authors (Ranciere, Tornell and Vamvakidis, 2010) proposes the introduction

i neodrživih fiskalnih bilansa. Dolarizacija javnog i privatnog sektora u uslovima oštrije deprecijacije koja nije praćena snažnim rastom izvoza, povećava i ranjivost realnog sektora. Bilansna detorijacija potom povećava negativnu selekciju i moralni hazard, što dalje vodi u narušavanje finansijske stabilnosti i oštar pad investicija i ekonomske aktivnosti (Mishkin, 2001; Calvo, Izquierdo i Mejía, 2004).

Dolarizacijom kao fenomenom posebno se bavi centralna banka, obzirom da dolarizacija može znatno umanjiti efikasnost monetarne politike (Ize, Levy-Yeyati, 2005). Kao što je već napomenuto, pojedini autori su mišljenja da učešće deviznih depozita u M3 iznad 30% narušava funkcionisanje transmisionog mehanizma monetarne politike (Baliño et al, 1999). Sve iznad tog nivoa slabi kanal kamatnih stopa, obzirom da su kamatne stope više osetljivije na kretanja na tržištima repernih valuta te centralna banka postaje osetljiva na kretanja na tim tržištima bez obzira na režim monetarne politike. Na ovaj način dolarizacija ograničava kapacitete centralne banke da sprovodi stabilizujuću moteranu politiku na kratak rok, podrivajući time mogućnost monetarnih vlasti da popravi kredibilitet politike na dugi rok.

Takođe, u zemljama sa visokim stepenom finansijske dolarizacije prenosni efekat deviznog kursa je visok, što je od posebne važnosti za centralnu banku čiji je osnovni cilj postizanje i održavanje stabilnosti cena. U takvim uslovima znatno su češće promene cena proizvoda, volatilnost tražnje za novcem je visoka, i u konačnom efektu - volatilnost inflacije je visoka. Zbog toga ne treba da čudi što kreatori makroekonomske politike u uslovima izuzetno visoke dolarizacije finansijskog sistema ponekad posežu za drastičnim oruđem kao što je prelazak na režim fiksnog ili pak čvrsto kontrolisanog kursa. Takođe, u uslovima kada je *de jure* režim kursa fleksibilan, visok prenosni efekat kursa na cene i inflaciju može podstaći strah od fluktuiranja te su monetarne vlasti jednostavno prinuđene da često intervenišu na deviznom tržištu prekomernom upotrebom deviznih rezervi. U takvim uslovima može se reći da su kreatori politike prinuđeni da prave svojevrstni trade off između nezavisne monetarne politike i

bilansnih valutnih neusklađenosti. Sa druge strane, ukoliko se deviznom politikom nastoji dati podrška izvoznom sektoru u smislu asimetričnih rekacija koje podrazumevaju intervencije u cilju sprečavanja nominalne aprecijacije valute dok u slučaju deprecijacije intervencije izostaju, može se očekivati rast dolarizacije jer će tržišni transaktori kroz veću upotrebu strane valute nastojati da sačuvaju vrednost svoje imovine (Rennhack, Nozaki, 2006). Zbog svega navednog smatra se da režim potpuno fluktuirajućeg kursa obezbeđuje veći manevarski prostor monetarnim vlastima kada je reč o reakcijama na eksterne šokove, te da ga treba primenjivati u svim slučajevima u kojima fundamentalni pokazatelji ekonomije govore u prilog ovog izbora. Nedavna israživanja rađena za zemlje u razvoju ukazuju da se zemlja lakše opredeljuje na režim slobodno fluktuirajućeg kursa ukoliko je tržište derivatnih instrumenata razvijeno, te se ranjivostima koje proizilaze iz valutne neusklađenosti privatnog i javnog sektora može lakše upravljati. U tom smislu, ne treba da čude sve češće preporuke da strategija dedolarizacije mora uključivati i neophodni razvoj hedžing instrumenata. Zbog toga je bitno i da sami ekonomski agenti razumeju devizni rizik i neophodnost zaštite od istog.

Konačno, dolarizacija povećava mogućnost pojave krize likvidnosti obzirom da se obezbeđenje likvidnosti od strane centralne banke kroz funkciju utočišta u krajnjoj instanci (*lender of the last resort*) obavlja u lokalnoj valuti, a ne u stranoj valuti. Ovo donekle može izazvati "paniku" na tržištu, osim ako centralna banka kroz razne forme deviznih operacija (intervencije na deviznom tržištu, devizne swap transakcije i sl) ne obezbedi neophodnu likvidnost u stranoj valuti.

Ipak, prilikom formulisanja strategije dedolarizacije treba imati u vidu i neke prednosti tj. pozitivne efekte koje ona donosi u određenom stadijumu razvoja jedne ekonomije. Prvo, dolarizacija svakako može biti znak veće integracije nacionalne ekonomije u svetsku ekonomiju. U tom smislu, dolarizacija aktive može biti upravo posledica veće otvorenosti nacionalne ekonomije i izvršene liberalizacije finansijskog sistema (Baliño, Bennett, i Borensztein, 1999). Veća otvorenost ekonomije te veća izloženost eksternim šokovima podstaći

of *de-facto* financial dollarization index which would take into consideration the implicit risk as well, depending on the level in which the banks' clients are hedged (matching of the currency structure of their revenues and expenditures). In Estonia, Latvia and Bulgaria, this adjusted, i.e. *de-facto* dollarization index is significantly higher than the regular dollarization index. What supports this statement are the latest data on the growth of NPLs in almost all Eastern European countries. Thus, for instance, the IMF assessed that in Romania the number of NPLs will reach the critical levels in 2010, amounting to as much as 20% of total extended loans, i.e. 16% of total assets of the banking sector of Romania.

From the perspective of public debt, dollarization is of utmost importance given that in times of prominent depreciatory pressures it may considerably influence the sustainability of public debt characterized by an unfavourable currency structure. Insolvency of the public sector may rapidly spill over to the banking sector, particularly when a considerable part of the debt refers to the liabilities towards banks in the domestic market. Harsh depreciation can cause the problem of high and unsustainable fiscal balance sheets. Dollarization of the public and private sectors in times of harsh depreciation not followed by a strong growth of export increases the real sector's vulnerability. Subsequently, balance sheet deterioration boosts negative selection and moral hazard, which, in turn, leads to the undermining of financial stability and a considerable slump in investments and economic activity (*Mishkin, 2001; Calvo, Izquierdo and Mejia, 2004*).

The phenomenon of dollarization is particularly dealt with by the central bank, given that dollarization may considerably reduce the efficiency of monetary policy (*Ize, Levy-Yeayati, 2005*). As we have already mentioned, certain authors are of the opinion that the share of FX deposits in M3 above 30% undermines the functioning of the monetary policy transmission mechanism (*Baliño et al., 1999*). Everything above that weakens the interest rates channel, given that interest rates are more sensitive to the trends in benchmark currencies' markets, and that the central bank becomes sensitive to the trends in these markets

regardless of the monetary policy regime. As a result, dollarization restricts the capacities of the central bank to lead a stabilizing monetary policy in the short term, thus undermining the possibility of monetary authorities to improve the policy's credibility in the long run.

Also, the countries with a high level of financial dollarization have a high transmission effect of the FX rate, which is of special importance for the central bank whose main goal is to achieve and maintain the stability of prices. In such conditions changes in products' prices are much more frequent, volatility of money demand is high, and, ultimately - inflation volatility is high. Therefore, one should not be surprised by the fact that macroeconomic policy makers in times of extremely high financial system dollarization occasionally resort to drastic instruments, such as the transfer to the regimes of fixed or firmly controlled FX rate. Likewise, in times when *de jure* exchange rate regime is flexible, the high transmission effect of the FX rate on prices and inflation may cause fear of floating, thus simply forcing the monetary authorities to often intervene at the FX market by resorting to excessive usage of foreign exchange reserves. In such circumstances one may say that policy makers are forced to resort to a trade-off of a kind, between independent monetary policy and balance sheet currency mismatch. On the other hand, if the foreign exchange policy is intended to support export in terms of asymmetrical reactions incurred by the interventions whose purpose is to prevent nominal currency appreciation, whereas in case of depreciation these interventions are absent, dollarization may be expected to grow since market transactors will tend to preserve the value of their assets by means of higher utilization of a foreign currency (*Rennhack, Nozaki, 2006*). In light of all above-mentioned, the regime of a fully floating FX rate is considered to provide monetary authorities with more space to manoeuvre when it comes to external shock responses, and that it should be applied in all cases in which fundamental economic indicators support this choice. Recent studies on developing countries indicate that a country finds it easier to opt for a free-floating exchange rate regime if the derivative

će, u određenoj fazi razvoja, i neophodan razvoj domaćeg finansijskog tržišta. Ovo kroz povećanje likvidnosti, smanjenje troškova, razvoj tržišta derivata i uvođenje novih finansijskih instrumenata. U početnim fazama razvoja tržišta dolarizacija može obezbediti i stabilnije, tj. izvesnije uslove poslovanja i time može doprineti privlačenju propulzivnih stranih investicija. U zemljama koje imaju teret prošlosti u smislu visoke inflacije, dozvola da se depoziti drže u stranoj valuti podstakla je značajan rast štednje (primer Turske). Da to nije bio slučaj, depozitni potencijal bi ostao na izuzetno niskom nivou. Takođe, devizni krediti bili su snažan generator potrošnje i investicija, i doprineli su ekonomskom rastu ali i smanjenju troškova zaduživanja. Istovremeno, istraživanja rađena kako za 10 evropskih zemalja u razvoju tako i za širu grupu koju čini 29 zemalja u razvoju, potvrdila su da je do eskalacije finansijske krize postojala pozitivna korelacija između stepena dolarizacije i stope privrednog rasta u ovim zemljama (*Ranciere, Tornell i Vamvakidis, 2010*). U periodu 2004 - 2007 rast učešća deviznih kredita u istočno-evropskim zemljama posebno je beležen kod malih firmi koje ne mogu lako da se zaduže u inostranstvu (*cross-border* kredit), ali su one imale i brži godišnji rast za oko 2,3% godišnje. Istovremeno, rezultati istraživanja su pokazali da su za te firme kamatne stope na devizne kredite za oko 2 p.p. bile niže u odnosu na kredite u lokalnoj valuti, dok je prosečna ročnost deviznog kredita za oko 10 meseci bila duža u odnosu na isti kredit u lokalnoj valuti. Prema istom istraživanju razlozi za zaduživanje u deviznom znaku svakako su niže kamatne stope što znači i nižu ratu kredita.

Iako je nesporno da su devizni krediti bili snažan podsticaj kreditnoj aktivnosti, te da je dolarizacija u tom smislu bila korisna, ostaje i druga strana medalje koja se ne sme zanemariti. Kada je sa eskalacijom krize pristup stranom kapitalu smanjen, kreditna aktivnost u ovim zemljama je smanjena ili je zabeležila usporavanje. Kako je rast kredita u pre-kriznom periodu u mnogim evropskim zemljama u razvoju omogućio stanovništvu i državi da znatno podignu potrošnju, jasno je da je takav model rasta postao ekonomski neodrživ jer je doveo do velikog deficita tekućeg bilansa.

Zbog toga su evropske zemlje u razvoju koje su u pre-kriznom periodu beležile brži privredni rast i brži rast dolarizacije, zabeležile i veći privredni pad tokom krize. Na osnovu svega može se zaključiti da optimalan nivo dolarizacije u jednoj ekonomiji svakako nije nula, niti da cilj kreatora makroekonomske politike treba da bude potpuna dedolarizacija finansijskog sistema. Koji je optimalan nivo dolarizacije, tj. nivo koji će podsticajno delovati na razvoj ekonomije, zavisice od njene veličine, otvorenosti, stepena finansijske integrisanosti, i razvijenosti pojedinih tržišnih segmenata.

Mere za dedolarizaciju

Ne postoji jedinstveno rešenje za uspešnu dedolarizaciju koje bi se moglo primeniti u svim zemljama, niti su za jednu zemlju u različitim fazama ekonomskog razvoja iste mere podjednako efikasne. Zbog toga, prilikom determinisanja mera usmerenih na dedolarizaciju treba imati u vidu oblike i faktore dolarizacije u konkretnoj ekonomiji. Takođe, politika dedolarizacije će zavisiti i od režima deviznog kursa, pri čemu napominjemo da su brojna istraživanja pokazala da je režim inflatornog targetiranja praćen režimom fleksibilnog deviznog kursa povoljniji ambijent za sprovođenje strategije dedolarizacije (*Mishkin, 2004; Lahura, 2005; Armas i Grippa, 2005; Felices i Tuesta 2004*).

Praksa i stručna literatura ukazuju da se mere dedolarizacije mogu podeliti u tri velike grupe koje se mogu implementirati pojedinačno ili pak u kombinaciji: a) mere usmerene na uspostavljanje i održavanje makroekonomske stabilnosti; b) regulatorne, tj. administrativne mere i mere direktne podrške domaćoj valuti c) tržišne mere, tj. razvoj tržišta u lokalnoj valuti. Nesporno je da će smanjenje stepena dolarizacije biti olakšano ukoliko bude podržano pravim redosledom mera.

Obzirom da je dolarizacija u najvećem broju zemalja posledica dugogodišnje inflacije i nestabilnog makroekonomskog okruženja, jasno je da bi uspostavljanje i obezbeđenje makroekonomske stabilnosti i vraćanja poverenja u domaću valutu trebali da budu ključni dugoročni koraci na putu ka dedolarizaciji i ukupnom privrednom razvoju

instruments market is developed, because it makes it easier to manage the vulnerabilities arising from the currency mismatch between the private and public sectors. Bearing this in mind, one should not be surprised by the increasingly frequent recommendations stating that a de-dollarization strategy must involve a necessary development of hedging instruments. This is why it is important for the economic agents to understand themselves the foreign exchange risk and the necessity of protection against it.

Finally, dollarization increases the chances of liquidity crisis occurrence, given that the protection of liquidity by the central bank through its lender-of-the-last-resort function is conducted in the local, not in the foreign currency. This may, to a certain extent, cause “market panic”, unless the central bank, through various forms of FX operations (FX market interventions, FX swap transactions, etc.), provides the necessary liquidity in the foreign currency.

However, when formulating a de-dollarization strategy, one should also bear in mind some advantages, i.e. positive effects that it entails in a certain stage of an economy's development. First of all, dollarization may certainly be a sign of higher integration of the national economy into the global economy. In this sense, asset dollarization may be the result of the greater openness of the national economy and the implemented liberalization of the financial system (*Baliño, Bennett and Borensztein, 1999*). Greater openness of the economy, and thus higher exposure to external shocks will, in a certain stage of development, boost the necessary development of the domestic financial market. This is due to the increase in liquidity, cost reduction, development of the derivatives market, and introduction of new financial instruments. In the initial stages of market development, dollarization may provide the more stable, i.e. more reliable business conditions, thus facilitating the attraction of propulsive foreign investments. In the countries which carry the burden of the past in terms of high inflation, the permission to hold deposits in a foreign currency triggered considerable growth of savings (like, for instance, in Turkey). If it had not been so, deposit potential would

have remained extremely low. Also, FX loans served as a powerful generator of spending and investments, thus contributing to the economic growth, but also to the reduction of borrowing costs. At the same time, the studies conducted both for 10 European developing countries and for a wider group involving 29 developing countries worldwide, confirmed that up to the point the financial crisis escalated, in the concerned countries there had been a positive correlation between the degree of dollarization and rate of economic growth (*Ranciere, Tornell and Vamvakidis, 2010*). In the period 2004-2007, the growth of share of FX loans in Eastern European countries was particularly prominent in small enterprises that could not easily borrow abroad (cross-border loans), but they also recorded a swifter annual growth of about 2.3% per year. At the same time, the research results showed that for these enterprises interest rates on FX loans were by about 2 percentage points lower compared with the loans denominated in local currency, whereas the average maturity of FX loans was by about 10 months longer compared with the same loan denominated in local currency. According to the same research, the motives for borrowing in foreign exchange are undoubtedly lower interest rates, which imply lower loan repayment instalments.

Although there is no doubt that FX loans acted as a powerful boost for lending activities, thus making dollarization beneficial from this point of view, there still remains the other side of the medal that must not be disregarded. When the financial crisis escalation limited the access to foreign capital, credit activity in these countries was either reduced or slowed down. Since the growth of credits in the period before the crisis in many developing countries in Europe enabled the citizens and the state to considerably increase consumption, such a model of growth clearly became economically unsustainable because it had caused a large deficit in the current balance. Therefore, the developing countries in Europe, which in the period before the crisis recorded quicker economic growth and quicker dollarization expansion, also recorded a bigger economic slump in the times of crisis. Based on the above, it may be concluded that the optimum degree of dollarization in an economy certainly

zemlje. U tom cilju stabilizacione mere treba da budu usmerene na stvaranje okruženja sa niskom i stabilnom inflacijom, dvosmernu volatilnost deviznog kursa u zemljama sa režimom fleksibilnog kursa, strukturne reforme, fiskalnu konsolidaciju i restriktivnu monetarnu politiku. Fiskalna konsolidacija će značiti i manju potrebu države za zaduživanjem, dok će restriktivnija monetarna politika umanjiti kreditni rast. Obe politike će ograničiti agregatnu tražnju, što će rezultirati padom inflacije, i u konačnom efektu aprecijacijom realnog i/ili nominalnog kursa. Ipak, ono što treba imati u vidu je da čak i po uspostavljanju makroekonomske stabilnosti i obnavljanju kredibiliteta politika postoji mogućnost da dolarizacija ostane visoka i uporna. Jednom kada se dolarizacija ukoreni, ekonomski agenti se nerado i teško vraćaju na lokalnu valutu i zbog troškova povezanih sa prelaskom iz strane u lokalnu valutu. Ovo može potrajati sve dok se ne postigne konsenzus među tržišnim transaktorima u pogledu veće upotrebe domaće valute, tj. dok oni ne postanu svesni prednosti upotrebe lokalne valute (*Reinhart, Rogoff, i Savastano, 2003*). Obzirom da je za implementaciju opisanih mera potreban duži period, određene mere kojima bi se promovisala dobrovoljna dedolarizacija mogu se odmah usvojiti i one mogu ići paralelno sa stabilizacionim programima. Ipak, ne treba zaboraviti da su stabilizacione mere ne retko praćene odlivom kapitala, smanjenom kreditnom aktivnošću, nestabilnošću bankarskog sektora, inicijalnim usporavanjem privrednog rasta i sl. To je cena koja se svakako mora platiti za prethodne godine koje su proticale u uslovima neodrživog rasta zasnovanog na potrošnji. Kada efekti stabilizacionih mera postanu propulzivni, može se očekivati obnavljanje ovih pokazatelja.

Pored mera usmerenih na makroekonomsku stabilnost, kreatori ekonomske politike mogu pokpenuti smanjenje nivoa dolarizacije i prudencijalnim merama. U tom smislu, potrebno je izvršiti reviziju postojećih ili uvesti nova ograničenja koja će proizvede u lokalnoj valuti učiniti atraktivnijim. Za te potrebe mogu se primeniti:

- politika obavezne rezerve, tj. niže stope obaveznog izdvajanja na osnovicu u lokalnoj valuti. Paralelno, može se ukinuti

remuneracija na sredstva izdvojene devizne obavezne rezerve. Ipak, sa ovom merom treba biti donekle oprezan. Ovo posebno kada su izvori sredstava u lokalnoj valuti nedovoljni pa efekat ove mere bude smanjenje deviznih kredita, ali ne i rast kredita u lokalnoj valuti. U tom slučaju može uslediti smanjenje obima kredita ili usporavanje njihove stope rasta, što može rezultirati i padom proizvodnje, potrošnje i ukupnog blagostanja. Alternativno, kada rast stope na deviznu obaveznu rezervu značajno povećava troškove bankarskog posredovanja, može da usledi rast direktnog zaduživanja preduzeća u inostranstvu (*cross-border* krediti). Ovim postupkom ne retko se otvaraju i distributivni efekti obavezne rezerve, obzirom da direktan pristup stranom kapitalu imaju samo bolje firme, dok su firme manjih kapaciteta ostale usmerene na kredite od lokalnih banaka;

- diferencirane šema osiguranja depozita koja favorizuje štednju u lokalnoj valuti (Urugvaj je npr. ukinuo osiguranje za devizne depozite);
- diferencirani porezi na prihode od štednje, ili pak ukidanje poreza na štednju u lokalnoj valuti;
- propisivanje minimalnog perioda za držanje deviznih depozita (npr. 3 meseca);
- uvođenje obaveznog depozita samo za devizne kredite;
- limiti u pogledu dozvoljene izloženosti deviznom riziku za klijente banaka;
- uvođenje diferenciranih kvantitativnih limita kod pokazatelja mesečnih obaveza za hedžovane i nehedžovane klijente;
- ograničiti iznos deviznog kredita do nivoa do koga bi se mogao dobiti kredit u lokalnoj valuti na isti rok (obzirom da su devizni krediti inicijalno jeftiniji zbog niže kamate, i iznos kredita koji se može uzeti je veći od kredita u lokalnoj valuti).

Regulatorne mere mogu biti praćene i merama direktne podrške domaćoj valuti kroz programe subvencija isključivo za kredite u lokalnoj valuti (za građevinarstvo, pokretanje porodičnih firmi i sl), ili pak subvencionisanih kamata za kredite i/ili depozite u domaćoj valuti. I politika javnog duga mora biti takva da favorizuje upotrebu lokalne valute, čime će

does not equal zero, nor is the objective of macroeconomic policy-makers to implement full de-dollarization of a financial system. The optimum dollarization degree, i.e. the level that will act as an incentive for the development of an economy, depends on the concerned economy's size, openness, level of financial integration, and development of certain market segments.

De-dollarization Measures

There is no uniform solution for a successful de-dollarization, which could be implemented in all countries, nor are the same measures equally efficient for one country in different stages of its economic development. Therefore, when determining the measures directed at de-dollarization, one should bear in mind the forms and factors of dollarization in the concerned economy. Also, de-dollarization policy depends on the foreign exchange rate regime, and we hereby observe that numerous studies have shown that the inflation targeting regime accompanied by a flexible FX rate regime presents a more favourable environment for de-dollarization strategy implementation (*Mishkin, 2004; Lahura, 2005; Armas and Grippa, 2005; Felices and Tuesta, 2004*).

Practice and expert literature on the subject indicate that de-dollarization measures may be divided into three large groups, to be implemented individually or in combination, as follows: a) measures directed at the achievement and maintenance of macro-economic stability; b) regulatory, i.e. administrative measures and measures of direct support to domestic currency; c) market measures, i.e. development of the local currency market. Undoubtedly, the reduction of dollarization degree will be easier if supported by the implementation of measures in the right order.

Given that in most countries dollarization is a result of multi-year inflation and unstable macroeconomic environment, the establishment and achievement of macroeconomic stability and restoration of trust in domestic currency clearly need to be the key, long-term steps on the road to de-dollarization and overall economic development of a country. To this end, stabilization measures should be targeted

at the establishment of an environment with low and stable inflation, two-way volatility of FX rate in the countries with flexible rate regimes, structural reforms, fiscal consolidation and restrictive monetary policy. Fiscal consolidation would also imply less borrowing by the government, whereas the more restrictive monetary policy would reduce the credit growth. Both policies would limit aggregate demand, resulting in lower inflation, and, ultimately, the appreciation of the real and/or nominal FX rate. Still, what has to be taken into account is that, even after the establishment of macroeconomic stability and restoration of policies' credibility, there is a possibility for dollarization to remain high and persistent. Once dollarization becomes ingrained, economic agents reluctantly and unwillingly return to the local currency due to the costs related to the transfer from foreign to local currency. This may last until a consensus is reached among market transactors concerning the predominant usage of domestic currency, i.e. until they become aware of the advantage of using local currency (*Reinhart, Rogoff and Savastano, 2003*). Given that the implementation of the above-described measures requires a substantial period of time, certain measures to promote voluntary de-dollarization could be adopted immediately, and ran in parallel with the stabilization programmes. However, one should keep in mind that stabilization measures are often accompanied by capital outflows, reduced credit activity, instability of the banking sector, initial slowing down of the economic growth, etc. This is the price that everyone has to pay for the previous years of unsustainable growth based on consumption. Once the effects of stabilization measures become propulsive, one may expect the restoration of the above indicators.

In addition to the measures directed at macroeconomic stability, economic policy-makers may also initiate the reduction of dollarization degree by means of prudential measures. To this end, it is necessary to review the existing or introduce the new limits that will make the products in local currency more attractive. For such purposes, the following may be applied:

- Required reserves policy, i.e. lower rates

doprinesti poboljšanju valutne strukture duga i smanjenju deviznog rizika po tom osnovu. Istovremeno, potrebno je striktno regulisati poslovanje javnih kompanija u smislu veće, ako ne i potpune usmerenosti na lokalnu valutu. Jedna od mogućnosti su i emisije hartija u lokalnoj valuti od strane države ili centralne banke koje bi bile namenjene stanovništvu, a u cilju promocije domaće valute. Pravi primer široke palete instrumenata raspoloživih za investicije stanovništva u lokalnoj valuti predstavlja Poljska, a njihovoj promociji dosta je doprinela centralna banka.

Prilikom implementiranja ovih mera uvek treba imati u vidu da one budu dizajnirane tako da ne poskupljuju devizne proizvode, već da pojeftine proizvode u lokalnoj valuti. Ovo je posebno važno jer poskupljenje deviznih proizvoda, umesto da podstakne veću upotrebu lokalne valute, može jednostavno rezultirati padom ukupne intermedijacije ukoliko ne postoje alternativni proizvodi u domaćoj valuti. Tako npr. uvođenje ograničenja za devizno zaduživanje nehedžovanih klijenata može dati brze rezultate na planu dedolarizacije, ali može umanjiti ukupnu kreditnu aktivnost i usporiti rast. Iz tog razloga destimulisanje upotrebe deviznih instrumenata treba da bude praćeno, tj. kompenzovano uvođenjem alternativnih domaćih instrumenata. To znači da je potrebno kreirati instrumente u domaćoj valuti koji bi bili adekvatni supstituti za aktivu u stranoj valuti. Paralelno sa njihovim uvođenjem, treba stvoriti uslove za razvoj tržišta u lokalnoj valuti. U tom smislu, inicijalni akcenat treba da bude na tržištu obveznica u lokalnoj valuti, a posebno državnih hartija koje mogu imati ulogu svojevrsnog benchmark-a i podstaći razvoj krive prinosa za instrumente u domaćoj valuti. Kada se kriva prinosa uspostavi, otvara se prostor i za razvoj tržišta municipalnih i korporativnih obveznica u lokalnoj valuti. Kako bi se obezbedila veća likvidnost ovog tržišta, tj. dovoljna tražnja za dugovnim instrumentima u lokalnoj valuti, može se npr. propisati obaveza penzionih fondova i osiguravajućih društava da određeni procenat svoje imovine plasiraju u instrumente u lokalnoj valuti (u Kazahstanu postoji obaveza penzionih fondova da 30% portfolija drže u dugoročnim državnim obveznicama denominiranim u lokalnoj valuti). Pomoć

može biti dobrodošla i od strane renomiranih međunarodnih finansijskih institucije (*International Financial Institutions* - IFIs) koje imaju dugoogodišnju praksu emitovanja hartija u lokalnoj valuti. Dolazak ovih institucija mora biti i regulatorno podržan jer one mogu biti pravi katalizator razvoja tržišta u lokalnoj valuti, kroz pomoć u formiranju krive prinosa, formiranju reprezentativnih indeksa na tržištu, povećanje likvidnosti tržišta, ali i rast poverenja i jačanje kredibiliteta kreatora makroekonomske politike. Uz sve nevedeno, mogu se ponuditi i alternativni indeksirani instrumenti u lokalnoj valuti, pri čemu bi se indeksacija vršila stopom inflacije. Ipak, od izuzetne je važnosti da se ovim instrumentom ne stvori inflaciona inercija. Zbog toga se upotreba instrumenata indeksiranih inflacijom preporučuje samo u okruženju koje karakteriše stabilna infacija, uz dobro razvijeno sekundarno tržište. Upotreba indeksa potrošačkih cena (*consumer price index* - CPI) za potrebe indeksacije bila je karakteristična za zemlje Latinske Amerike, a kao najuspešniji primer navodi se Čile. Veruje se da je ključni razlog koji je opredelio čileansku strategiju indeksiranja upravo to što je sa rastom kredibilitnosti monetarne politike rasla i kredibilitnost indeksa, tako da je ceo proces bio i podržan pozitivnim sentimentom tržišnih transakatora.

I razvoj tržišta derivata može biti ne samo od koristi već i neophodan za dedolarizaciju, kao i za uspostavljanje i održavanje finansijske stabilnosti (*Turkish Derivatives Exchange Market*, februar 2005). Od izuzetne je važnosti da ovi instrumenti budu adekvatno uvedeni - uz maksimalnu moguću primenu međunarodne prakse i da budu dostupni po pristupačnim cenama. Istovremeno, neophodno je raditi na promociji ovog tržišta, tj. na edukaciji sektora privrede i stanovništva o neophodnosti zaštite od deviznog i rizika kamatne stope. Kada se tržište instrumenata u domaćoj valuti razvije, potreba za derivatnim instrumentima će se smanjiti.

Konačno, ne treba zanemariti ni snagu promotivnih aktivnosti. U tom smislu, svi glavni akteri na finansijskom tržištu treba da daju svoj doprinos većoj upotrebi lokalne valute. Banke, pre svih, bi mogle da rade na edukaciji klijenata. U tom smislu, one treba

of mandatory provisioning in respect of the principal in local currency. In parallel, remuneration may be abolished for the funds of allocated FX required reserves. Still, when it comes to this measure, one needs to be somewhat cautious. Particularly when the sources of funds in local currency are insufficient, in which case the effect of this measure would be the reduction in FX loans, but not necessarily the growth of loans denominated in local currency. In this case, the volume of loans may also be reduced, or the loans' growth rate slowed down, which may, in turn, result in the fall of production, consumption and general welfare. Alternatively, when the growth of FX required reserves rate considerably increases the costs of banking intermediation, growth of direct borrowing of companies abroad (cross-border loans) may also ensue. This process frequently releases the distributional effects of required reserves, given that direct access to foreign capital is available only to better-ranked companies, whereas the companies of lower capacities remain directed to loans extended by local banks;

- Differentiated deposit insurance scheme which favours savings in local currency (for instance, Uruguay suspended insurance on FX deposits);
 - Differentiated taxes on incomes from savings, or abolition of taxes on savings in local currency;
 - Prescribing the minimum period for holding FX deposits (e.g. 3 months);
 - Introduction of mandatory deposit for FX loans only;
 - Limits in terms of allowed exposure to foreign exchange risk for banks' clients;
 - Introduction of differentiated quantitative limits for indicators of monthly liabilities for hedged and non-hedged clients;
 - Limit the amount of FX loans to the level at which a loan in the local currency may be obtained with the same maturity (given that FX loans are initially cheaper due to lower interest, and the amount of an FX loan that may be obtained is higher than the available loans denominated in the local currency).
- Regulatory measures may also be

accompanied by measures providing direct support to the domestic currency by means of subsidy programmes, exclusively for loans denominated in local currency (for construction, start-up of family companies, etc.), or by means of subsidized interest for loans and/or deposits in the domestic currency. Public spending policy also must favour the usage of the local currency, whereby the currency structure of debt will be improved, and FX risk in this respect reduced. At the same time, it is necessary to strictly regulate the operations of public companies in terms of higher, if not complete directedness towards the local currency. One of the options is to issue securities in the local currency by the state or the central bank, which would be intended for the citizens, with a view to promoting the domestic currency. A true example of a country with the wide array of instruments available for citizens to invest in local currency is Poland, whose central bank has largely contributed to the promotion of these instruments.

When implementing these measures, one should always bear in mind that they should be designed in such a manner as not to increase the prices of FX products, but to decrease the prices of products in the local currency. This is particularly important because the increase in prices of FX products, instead of boosting the usage of local currency, may simply result in a fall in total intermediation if there are no alternative products in local currency. So, for instance, the introduction of limits for FX borrowing of non-hedged clients may yield swift results concerning de-dollarization, but may also reduce total credit activity and decelerate the growth. Therefore, discouraging of the usage of FX instruments should be accompanied, i.e. compensated by the introduction of alternative, domestic instruments. This implies the need to create instruments denominated in domestic currency, which would serve as adequate substitutes for assets in foreign currencies. In parallel with the implementation of these instruments, the conditions need to be generated for the local currency market to develop. To this end, the initial focus needs to be placed upon the market of bonds denominated in local currency, in particular, gilt-edged securities that may play

da ukažu klijentima da prilikom donošenja kreditne odluke nije bitna samo nominalna već i realna kamatna stopa, tj. da treba da kalkulišu i sa eventualnom deprecijacijom valute koja bi mogla da poskupi devizni kredit. Dakle, iako naizgled jeftiniji, devizni krediti mogu biti znatno skuplji od kredita u lokalnoj valuti u uslovima snažnije deprecijacije. Vrlo često je opredeljenje za devizni kredit determinisano i činjenicom da banke ne nude adekvatne ili uopšte ne nude proizvode u lokalnoj valuti, pa se izbor klijenata jednostavno svodi na stranu valutu. To je razlog zbog koga su neke centralne banke (primer Poljske juna 2006) savetovale bankama da svojim klijentima ponude prvo kredite u lokalnoj valuti. Ukoliko klijent i dalje želi devizni kredit, banka treba da ga informiše o potencijalnom deviznom riziku i da simulira plan otplate kredita u slučaju snažnije deprecijacije domaće valute u periodu trajanja kredita (pr. deprecijacija od 20%).

Dedolarizacija u izabranim zemljama

Od evropskih zemalja u razvoju veliki napredak na planu dedolarizacije u poslednjoj dekadi zabeležen je u Turskoj koja je smanjila učešće deviznih depozita sa 60% na 30%, a deviznih kredita sa 40% na 10%. Dolarizacija u Turskoj bila je posledica kako makroekonomske nestabilnosti, tako i odsustva neophodnih institucionalnih i strukturnih reformi. U periodu od 1983. kada je rezidentima u Turskoj dozvoljeno da drže depozite u stranoj valuti usledio je apsolutni i relativni rast deviznih depozita. U istom periodu bleži se i rast javnog duga u stranoj valuti. Monetarna politika je bila neefikasna a centralna banka nije bila nezavisna. Usledio je period visoke inflacije, a programi ekonomske stabilizacije su bili neuspešni. Period tokom devedesetih i početkom dvehiljadite u Turskoj obeležen je krizama, viskom inflacijom, rastom javnog duga i rastom finansijske dolarizacije. Usled neodrživosti ovakvog stanja, a nakon krize iz 2001, usledio je period strukturnih reformi, monetarna i fiaskalna politika su bile znatno efikasnije i konzistentnije, te su inflacija i učešće javnog duga u BDP-u počeli da beleže pad. Usledio je i neophodan razvoj finansijskog tržišta ali i reforma bankarskog

sektora. Smatra se da je prelazak na režim inflatornog targetiranja u kombinaciji sa fleksibilnim deviznim kursom koji je ukazao na neophodnost zaštite od deviznog rizika upotrebom derivatnih instrumenata, doveli do značajnog smanjenja stepena finansijske dolarizacije u Turskoj.

Primer zemlje u razvoju sa izuzetno niskim učešćem kredita i depozita u stranoj valuti svakako je Republika Češka. Naravno, ovo nije bio slučaj početkom devedesetih kada su započete ekonomske reforme u ovoj zemlji. Tako se u proleće 1997. Republika Češka suočila sa izuzetno turbulentnim uslovima koje je karakterisala visoka inflacija, pad realnog GDP-a, deprecijacija krune i visok deficit trgovinskog bilansa. Centralna banka svesna nemoći da u takvim uslovima brani kurs krune, napušta režim fiksnog i prelazi na režim rukovođenog fluktuiranja. Usledio je period značajnih oscilacija češke valute, a centralna banka je u kratkom periodu značajno povećala kamatnu stopu. Iako je ovim potezom zaustavljena deprecijacija krune, otvoren je problem finansiranja investicionih projekata. Ekonomija je potom ušla u neizbežnu recesiju tokom 1997. i 1998. Kako monetarne vlasti u Češkoj nisu imale podršku fiskalne politike, njihovi napori ostali su nedovoljni. U periodu koji je usledio eksterna neravnoteža počinje da se smanjuje. Usledilo je aktivno i uspešno makroekonomsko restrukturiranje praćeno ubrzanim ali održivim rastom, aprecijacijom krune ali i padom inflacije. Kreatori makroekonomske politike zadobili su poverenje šire javnosti, zbog čega upotreba lokalne valute beleži snažan rast. Jedino je 2001. zabeležen rast indeksa dolarizacije tj. evroizacije a kao rezultat najavljenog uvođenja evra u opticaj. Ono što češki bankarski sistem danas čini različitim od sistema drugih zemalja u razvoju jeste činjenica da izvori sredstava u najvećoj meri potiču od štednje u lokalnoj valuti, te je nivo finansijske dolarizacije češkog finansijskog sistema najniži od svih evropskih zemalja u tranziciji. Konsekventno, i krediti se mahom odobravaju u lokalnoj valuti po izuzetno niskim kamatnim stopama. Referentna stopa Češke centralne banke (0,75%) danas je niža od referentne stope Evropske centralne banke (1%).

the role of a certain benchmark, thus facilitating the development of the yield curve for domestic currency instruments. Once the yield curve is established, there is room for the development of the market of municipal and corporate bonds denominated in local currency. In order to provide higher liquidity of this market, i.e. sufficient demand for debt instruments in local currency, one may, for instance, oblige the pension funds and insurance companies to place a certain amount of their assets into local currency-denominated instruments (in Kazakhstan, pension funds are obliged to hold 30% of their portfolios in long-term, government-issued bonds denominated in local currency). Assistance by the renowned International Financial Institutions - IFIs, with the long-standing practice of issuing securities in the local currency, is also most welcome. The emergence of these institutions must enjoy regulatory support, since they can be a true catalyst of the development of local currency market, but also of the growth of trust and strengthening of credibility of macroeconomic policy-makers. In addition to all the above-mentioned, alternative, indexed instruments in local currency could also be offered, whose indexation would be by the inflation rate. Still, it is of utmost importance not to generate inflationary inertia by means of these instruments. Therefore, the implementation of inflation-indexed instruments is recommended only in the environment characterized by stable inflation, with the well-developed secondary market. The usage of consumer price index - CPI for the purpose of indexation was characteristic for the countries of Latin America, with Chile being the most successful example. It is believed that the deciding element for the Chilean indexation strategy was actually the fact that, along with the growth of monetary policy credibility, the index's credibility also increased, so that the entire process was supported by the positive sentiments on the part of market transactors.

Derivatives market development may also be not just beneficial, but necessary for de-dollarization, as well as for the achievement and maintenance of financial stability (*Turkish Derivatives Exchange Market*, February 2005). It is of utmost importance for these instruments

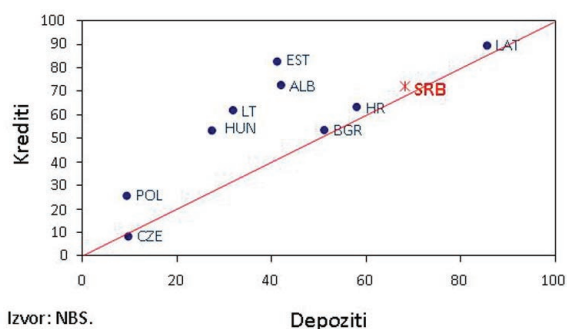
to be adequately implemented - with maximum possible reliance on international practice and availability at reasonable prices. At the same time, it is necessary to work on the promotion of this market, i.e. to educate the corporate and retail sectors about the necessity of protection against the FX and interest rate risk. Once the market of instruments denominated in domestic currency develops, the need for derivative instruments will subside.

Finally, the power of promotional activities should not be disregarded either. In this respect, all major players at the financial market should contribute to the higher usage of local currency. Banks, before all, could engage in educating their clients. To this end, they should point out to their clients that when making a credit-wise decision, they should take into account not just the nominal, but also the real interest rate, and that they should count in the potential currency depreciation which could increase the price of the FX credit. Thus, although seemingly cheaper, foreign exchange credits may be much more expensive than the credits denominated in local currency in times of considerable depreciation. Very often the decision to take an FX loan is determined by the fact that banks do not offer adequate, if any, products in local currency, whereby the choice of a client is simply reduced to foreign currency. This is why some central banks (the example of Poland in June 2006) advised the banks to first offer loans in local currency to their clients. If a client still wants an FX loan, the bank should inform him about the potential FX risk and do the simulation of the loan repayment plan in case of a strong depreciation of local currency during the life-time of the loan (for example, depreciation of 20%).

De-dollarization in Selected Countries

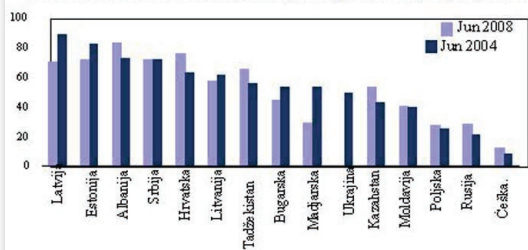
When it comes to developing countries in Europe, huge progress in terms of de-dollarization in the past decade was recorded in Turkey, which has reduced the share of FX deposits from 60% to 30%, and of FX loans from 40% to 10%. Dollarization in Turkey came as a result of macroeconomic instability, as well as the lack of necessary institutional and structural

Grafikon br. 1: Učešće kredita i depozita u stranoj valuti (%), Jun 2008



Izvor: NBS.

Grafikon br. 2: Krediti u stranoj valuti (% ukupnih kredita, uključujući i indeksirane)



Izvor: ISI Emerging Markets, CEIC Data Company Ltd.

Iako je finansijska dolarizacija bila endemska u zemljama Latinske Amerike tokom nekoliko decenija one danas beleže bolje uspehe na polju dedolarizacije od evropskih zemalja u razvoju. Većina ključnih zemalja Latinske Amerike pretrpela je snažnu hiperinflaciju tokom 70-ih, a u nekim zemljama (Argentina i Brazil) ona je trajala sve do 90-ih. Kada su inflaciona kretanja stabilizovana a u pojedinim zemljama i značajno smanjena tokom 90-ih, očekivalo se da će ovakva kretanja podstaći smanjenje dolarizacije njihovih finansijskih sistema. Ono što je došlo kao iznenađenje je da je smanjena samo transakciona dolarizacija dok je finansijska i dalje ostala izuzetno visoka beležeći pik kasnih 90-ih. Usledile su duboke recesije najčešće praćene deviznim krizama (Tekila kriza), pri čemu je dolarizacija kredita bila jedan od ključnih razloga za krize tih razmera. Početkom 2000 otpočeo je proces gradualne dedolarizacije u zemljama Latinske Amerike. Većina zemalja prešla je na režim fleksibilnog deviznog kursa, koji je uglavnom bio praćen usvajanjem režima targetiranja inflacije (osim Argentine), uvođenjem fiskalnih pravila i strukturnim reformama. Započeta je i dedolarizacija javnog duga kroz emisiju dugoročnih neindeksiranih državnih obveznica. Meksiko je prednjačio u ovim aktivnostima. Dedolarizacija u

Meksiku počela je nešto ranije u odnosu na druge zemlje Latinske Amerike. Valutna kompozicija javnog duga počela je da se menja otprilike 1995. što je rezultat jake i konzistentne fiskalne politike, podržane konzistentnom monetarnom politikom. Prema Reinhart et al. (2003), u svega četiri zemlje (Meksiko, Izrael, Poljska, Pakistan) dolarizacija finansijskog sistema je bila uspešna pre svega zahvaljujući dedolarizaciji javnog duga i fiskalnim reformama, pri čemu je u Meksiku ona bila najizraženija. Smatra se da je u nekoliko zemalja Latinske Amerike i penzionarna reforma dala doprinos procesu dedolarizacije jer su penzioni fondovi povećali tražnju za instrumentima u lokalnoj valuti. Meksiko i Brazil su otišli i korak dalje emitujući dugoročnu obveznicu u lokalnoj valuti na međunarodnom tržištu (*brady bonds*), otkupljujući istovremeno neke ranije izdate državne devizne obveznice. Konačno u pojedinim latino-američkim zemljama razvoj tržišta derivata bitno je pomogao procesu dedolarizacije. Brazil i Meksiko razvili su berzansko tržište derivata, dok je u drugim zemljama mahom prevladalo vanberzansko tržište derivatnih instrumenata.

U Čileu je indeksacija bila izuzetno zastupljena usled dugog perioda obeleženog visokom inflacijom. U drugoj polovini devedesetih godina Čile je zabeležio napredak na planu stabilizacije ekonomije, liberalizacije finansijskog sektora i postepenog ukidanja kontrola na kretanje kapitala ali je indeksacija i dalje nastavljena. Čak i nakon usvajanja inflatornog targetiranja (1999) i uvođenja slobodnog fluktuiranja čileanskog pezosa, ona je nastavila da dominira. I država je usvojila posebnu šemu za valutnu konverziju duga - iz deviznog znaka u indeksirane obaveze. Indeksacija je konačno smanjena kada je indeksiranje počelo da se vrši na osnovu fiksnih nominalnih kamatnih stopa, umesto indeksacije bazirane na realnoj kamatnoj stopi. Posledično, učešće depozita u pezosa u ukupnim depozitima povećano je na 50% u 2004.

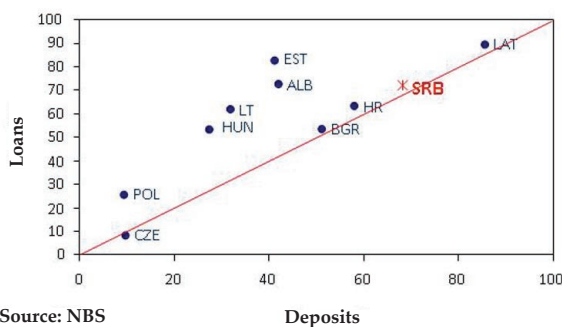
Dolarizacija u Peru-u počela je sa inflatornim pritiscima sredinom 70-ih. I pored pokušaja da se ekonomija dedolarizuje 1985, ona je dostigla svoj pik tokom hiperinflacije u periodu 1988-90. Dolar se koristio i kao sredstvo plaćanja

reforms. In the period since 1983 when residents in Turkey were granted to hold deposits in a foreign currency, an absolute and relative growth of FX deposits has ensued. The same period recorded a growth of FX public debt. Monetary policy was inefficient, and central bank was not independent. What followed was a period of high inflation, with unsuccessful economic stabilization programmes. The 1990s and the beginning of 2000 in Turkey was marked by many crises, high inflation, growth of public debt and increase in financial dollarization. Due to the unsustainability of this state of affairs, after the 2001 crisis, a period of structural reforms ensued, monetary and fiscal policies were much more efficient and consistent, hence inflation and share of public debt in GDP started to decrease. This was followed by the necessary development of the financial market, but also the banking sector reform. It is believed that the transfer to the inflation targeting regime, combined with the flexible foreign exchange rate which indicated the necessity of protection against FX risk by means of derivative instruments, led to the considerable reduction in the level of financial dollarization in Turkey.

An example of a developing country with an extremely low share of loans and deposits denominated in foreign currencies is, by all means, the Czech Republic. Of course, this was not the case in early 1990s when the economic reforms in this country commenced. Thus, in the spring of 1997 the Czech Republic faced the extremely turbulent conditions characterized by high inflation, drop of real GDP, depreciation of Czech crown, and high trade balance deficit. The Central Bank, aware of its powerlessness to defend the crown FX rate in such circumstances, abandons the fixed regime and switches to the managed float regime. This was followed by a period of significant fluctuations of Czech currency, and the Central Bank, in a short time span, considerably increased the interest rate. Although this move put a stop to the depreciation of crown, it opened the problem of investment projects financing. Subsequently, in 1997 and 1998 the economy entered the inevitable recession. Since the monetary authorities in Czech Republic

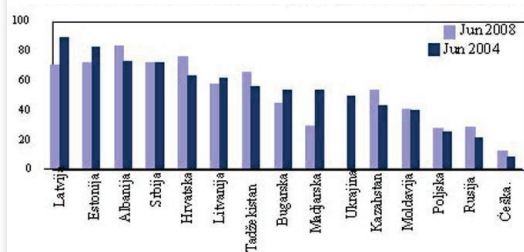
enjoyed no support by the fiscal policy, their efforts remained insufficient. In the following period, external imbalance started to subside. This was followed by an active and successful macroeconomic restructuring, accompanied by accelerated, but sustainable growth, appreciation of crown, but also a drop in inflation. Macroeconomic policy-makers gained the trust of the general public, which is why the usage of local currency recorded a sizeable growth. It was only in 2001 that the dollarization, i.e. euroization index rose, as a result of the announced introduction of Euro into circulation. What makes the Czech banking system today different from the systems of other developing countries is the fact that sources of finance mostly come from the savings in local currency, which is why the level of financial dollarization of the Czech financial system is the lowest of all European countries in transition. Consequently, credits are also mostly extended in the local currency, at extremely low interest rates. Benchmark rate of the Central Bank of the Czech Republic (0.75%) is today lower than the benchmark rate of the European Central Bank (1%).

Figure no. 1: Share of loans and deposits in foreign currency (%), June 2008



Source: NBS

Figure no. 2: Loans in foreign currency (% of total loans, including indexed loans)



Source: ISI Emerging Markets, CEIC Data Company Ltd.

Although financial dollarization was endemic in the countries of Latin America,

i kao čuvar vrednosti. U 1985. u uslovima visoke inflacije, država je nametnula obaveznu konverziju iz dolarskih u depozite u pezosa, što je rezultiralo begom kapitala i kontrakcijom intermedijacije. Kada je ova mera ukinuta, redolirazacija je bila brza, tako da je krajem 90-ih učešće deviznih kredita i depozita dostiglo skoro 80%. Početkom ovog veka (2002) usvojen je režim inflatornog targetiranja, a Peru je postao primer postepene i održive, tržišno zasnovane finansijske dedolarizacije.



Dolarizacija kredita je smanjena za oko 25% u periodu 2004-09, tj. sa 75,7% na 52,3%. U istom periodu i dolarizacija depozita je smanjena sa 67,1% na oko 52,6%. Snažna dedolarizacija depozita beležena je pred kraj 2007, ali je nakon kolapsa Lehman Brothers-a ponovo zabeležena redolarizacija. Ipak, pravovremenim i adekvatnim merama, trend dedolarizacije depozita je ponovo uspostavljen. I transakciona dolarizacija je značajno smanjena i može se reći da je sada minimalna. Dok je kod dedolarizacije kredita u Peru-u glavnu ulogu imala sektorska komponenta, tj. primetno smanjenje dolarizacije kod određenih sektora, kod dedolarizacije depozita ključnu ulogu je imala ročna dedolarizacija tj. smanjenje dolarizacija depozita kraćih ročnosti. Ovo su sasvim očekivana kretanja, obzirom da je deevroizacija postepen proces i da prvo kreće od kraćih ročnosti i nekih specifičnih delatnosti. I dedolarizacija javnog duga je bila uspešna. U 2003. Peru je pokrenuo program usmeren na razvoj tržišta za domaći javni dug, sa akcentom na instrumente u solima sa fiksnom kamatnom stopom. Peruanska strategija upravljanja javnim dugom bila je fokusirana na razvoj krive prinosa za državne obveznice u solima i smanjenje deviznog dela duga. Najduža ročnost perunaskih državnih obveznica je 32 godine (emitovane februara 2010, dok je 2003

bila svega 5 godina). Prema izveštaju MMF-a, dedolarizacija u Peru-u rezultat je poboljšanja na planu makroekonomske stabilnosti u smislu niže inflacije. Neto devizne rezerve povećane su sa 9,6 mlrd. dolara 2002 na 33,1 mlrd. dolara 2009. Istovremeno, Peru je u periodu 2006-08 zabeležio budžetski suficit od 2% - 3,3% BDP-a a javni dug je smanjen na ispod 30% BPD-a, zbog čega su i pokazatelji rizika za zemlju (EMBI/CDS) zabeležili pad. U istom periodu beleži se i veća fleksibilnost sola u oba smera, što se smatra jednim od doprinosa procesu dedolarizacije jer je kurs imao i ulogu svojevrsnog absorbera eksternih šokova. Takođe, veća volatilitnost sola svakako će biti podsticaj razvoju tržišta derivata. I uspešno prebrođena finansijska kriza produbila je poverenje u sol, a pomogle su i regulatorne mere koje su implementirane u poslednjoj dekadi. Pre svega se misli na: a) diferencirane stope obavezne rezerve, posebno za komercijalne kredite, i remuneracija istih; b) obavezna evaluacija deviznog rizika za klijente banke i formiranje obaveznih rezervi za slučaj da se banka ne pridržava ove obaveze; c) diferencirana racija likvidnosti za kratoročne obaveze - 8% za obaveze u solima i 20% za devizne obaveze. Ostvaren je i značajan napredak na planu razvoja tržišta kapitala u solima, kao što je npr. emisija dugoročnih trezorskih hartija u solima. Ono na čemu će biti akcenat u narednom periodu, a u cilju dedolarizacije, je razvoj tržišta kapitala u solima. U tom delu biće dragocena savetodavna pomoć MMF-a za razvoj tržišta hipotekarnih obveznica u solima, što će oživeti i stambene kredite u solima, kao i repo i svop međubankarska tržišta koja mogu biti podrška daljem procesu dedolarizacije.

Faznim stabilizacionim programom u Izraelu inflacija je smanjena sa 400% koliko je iznosila 1984, na jednocifrenu inflaciju kasnih 90-ih. Paralelno sa naporima usmerenim na uspostavljanje makroekonomske stabilnosti, intenzivno je rađeno na smanjenju deviznog dela javnog duga i razvoju tržišta derivata. Primenjene su i diferencirane stope obavezne rezerve koje favorizuju upotrebu lokalne valute, a uz depozite indeksirane kursom dolara uvedeni su i depoziti indeksirani stopom inflacije. Istovremeno, uvedene su dodatne regulatorne mere za devizne kredite

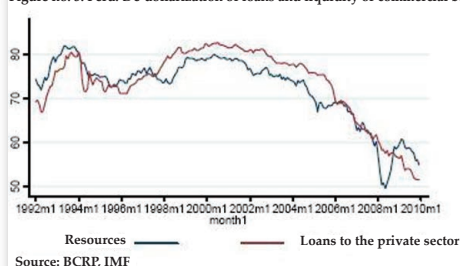
today they have more success in the field of de-dollarization than the developing countries in Europe. Most major countries in Latin America suffered a strong hyperinflation in the 1970s, and in some countries (Argentina and Brazil) it lasted until the 1990s. When the inflationary trends were stabilized, and in certain countries considerably reduced during the 1990s, it was expected for such trends to facilitate the reduction in dollarization of their financial systems. What came as a surprise was that only transaction dollarization was reduced, whereas the financial dollarization still remained extremely high, reaching its peak in late 1990s. This was followed by deep recessions, mostly accompanied by FX crises (e.g. Tequila crisis), with dollarization of loans being one of the key causes of such extensive crises. In early 2000 the process of gradual de-dollarization was launched in the countries of Latin America. Most of the countries switched to the regime of flexible FX rate, which was typically followed by the adoption of the inflation targeting regime (except in Argentina), introduction of fiscal rules and structural reforms. De-dollarization of public debt was also started, by means of issuing long-term, non-indexed, government bonds. Mexico was the leader in these activities. De-dollarization in Mexico started somewhat earlier than in other countries of Latin America. Currency structure of public debt started to change about 1995, as a result of the powerful and consistent fiscal policy, supported by a consistent monetary policy. According to Reinhart et al. (2003), it was only in four countries (Mexico, Israel, Poland, and Pakistan) that the financial system dollarization was successful mostly due to the de-dollarization of public debt and fiscal reforms, and it was most prominent in Mexico. It is believed that in several countries of Latin America the pension reform also contributed to the de-dollarization process, because pension funds increased the demand for instruments in local currency. Mexico and Brazil went a step further, issuing long-term bonds denominated in the local currency at the international market (*Brady bonds*), at the same time purchasing some previously issued, government FX bonds. Brazil and Mexico developed a stock exchange derivative

market, whereas most other countries opted for the over-the-counter (OTC) market of derivative instruments.

In Chile, indexation was exceedingly present, due to the long period marked by high inflation. In the second half of the 1990s, Chile achieved certain progress concerning the stabilization of economy, liberalization of the financial sector and gradual suspension of controls over capital flows. Nevertheless, the practice of indexation was continued. Even after the adoption of inflation targeting (1999) and introduction of free float of the Chilean pesos, it continued to dominate. The state also adopted a special scheme for currency conversion of debt - from FX into indexed liabilities. Indexation was finally reduced when indexing started to be performed based on the fixed, nominal interest rates, instead of indexation based on real interest rate. Consequently, in 2004 the share of pesos deposits in total deposits was increased to 50%.

Dollarization in Peru started with the inflationary pressures in mid 1970s. Despite the attempts to de-dollarize the economy in 1985, it reached its peak during the hyperinflation period between 1988 and 1990. Dollar was used both as a legal tender and as a store of value. In 1985, in the times of high inflation, the state imposed mandatory conversion of dollar deposits into pesos deposits, which resulted in the flight of capital and contraction of intermediation. After the abolishment of this measure, re-dollarization was quick, so that in late 1990s share of FX loans and deposits reached almost 80%. At the beginning of the 21st century (2002), Peru adopted the inflation targeting regime, thus becoming an example of a gradual and sustainable, market-based, financial de-dollarization.

Figure no. 3: Peru: De-dollarization of loans and liquidity of commercial banks (%)



Source: BCRP, IMF

a u cilju adekvatne zaštite od deviznog rizika, i pojačana je bankarska supervizija upravo u domenu izloženosti banaka i njihovih klijenata deviznom riziku. Usledilo je poboljšanje valutne i ročne strukture javnog duga. Devizni depoziti smanjili su učešće sa 39% 1984. na 17% 2002. Dakle, dedolarizacija u Izraelu nije bila brza, ali je bila uspešna i rezultat kombinovanih mera usmerenih na makroekonomsku stabilnost i valutnu rekonstrukciju javnog duga.

Dedolarizacija u Poljskoj došla je kao rezultat uspešno sprovedenih reformi, restriktivne monetarne politike i uvođenja režima fleksibilnog deviznog kursa. Početkom 90-ih, a nakon nekoliko epizoda sa visokom inflacijom i čestih devalvacija, Poljska je pokrenula program makroekonomske stabilizacije praćen liberalizacijom finansijskog sektora. Istovremeno, domaće kamatne stope su značajno povećane. Usledio je oštar pad inflacije a visoke pozitivne realne kamatne stope na instrumente u zlotima bile su inicijalna kapisla za apsolutni i relativni rast depozita u zlotima. Istovremeno, učešće deviznih depozita u M2 smanjeno je sa 72% u 1989. na 30% krajem 1993. Dedolarizacija u Poljskoj bila je dakle nus proizvod stabilizacionog programa.

Dedolarizacija u Egiptu predstavlja primer uspešne kombinacije stabilizacionih napora i bankarske reforme. Učešće deviznih u ukupnim depozitima smanjeno je sa 56% u 1991. na 22% u 1999, i na 18% u 2004. Razlog se može tražiti u setu fiskalnih i monetarnih reformi pokrenutih 1991. A usmerenih na smanjenje inflacije i liberalizaciju finansijskog sistema koji je bio podvrgnut izuzetno rigoroznim kontrolama (ograničenja obima kredita, ograničenja kamatnih stopa i sl). Liberalizacija i reforma bankarskog sistema doveli su do značajnog pada inflacije, pozitivnih realnih kamatnih stopa na lokalnu valutu, i konačno do smanjenja deviznih depozita.

U Pakistanu i Argentini dedolarizacija je bila neophodna, a nakon iskustva sa deviznim i bankarskim krizama. Iako je reč uglavnom o "prinudnim" i ostrim merama, one su bile neophodne za ublažavanje bankarske krize. U Pakistanu je nakon političkog šoka u 1998. usledio nagli odliv stranog kapitala, pad deviznih rezervi i snažna kontrakcija devizne likvidnosti što je primoralo pakistanske vlasti

da ukinu preferencijalni tretman deviznim depozitima koji im je ranije bio dat. Paralelno sa programom makroekonomske stabilizacije vlasti su uvele privremeno zamrzavanje deviznih depozita i uvele brojne kontrole na devizne transakcije. Kasnije je dozvoljeno da zamrznuti devizni depoziti budu isplaćeni u lokalnoj valuti ili konvertovani u srednjoročne obveznice denominirane u dolarima. Iako je devizna štednja ponovo dozvoljena, povoljniji poreski tretman ove štednje i podsticajna šema osiguranja deviznih depozita su prekinute. Po uspostavljanju makroekonomske stabilnosti, uslovi su se normalizovali a dolarizacija depozita je drastično smanjena. Slične mere bile su implementirane i u Argentini, u kojoj su 2001. devizni depoziti bili "zamrznuti" kako bi se sprečio odliv kapitala. Već u 2002. depoziti su odmrznuti, a nivo deviznih depozita privatnog sektora je na kraju 2005. bio znatno niži od pre-kriznog nivoa. Ipak, ovo se donekle može povezati i sa izuzetno niskim stopama rasta ukupnih depozita privatnog sektora obzirom da je zamrzavanje depozita, iako kratkotrajno, narušilo kredibilitet bankarskog sektora.

Evroizacija u Srbiji

Sudeći prema učešću: a) deviznih depozita u ukupnim depozitima; b) deviznih i indeksiranih kredita u ukupnim kreditima c) devizog dela javnog duga; konstatuje se da je Srbija visoko evroizovana zemlja. I ne samo da je visoko evroizovana zemlja, već je Srbija jedna od istočno-evropskih zemalja sa najvećim stepenom finansijske evroizacije.

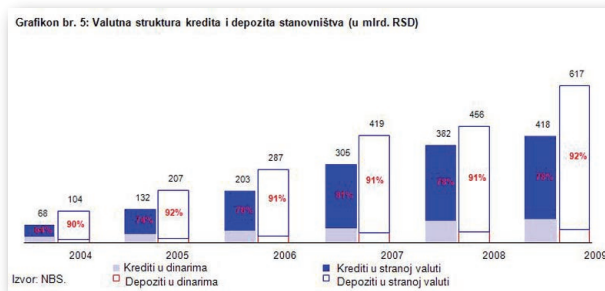
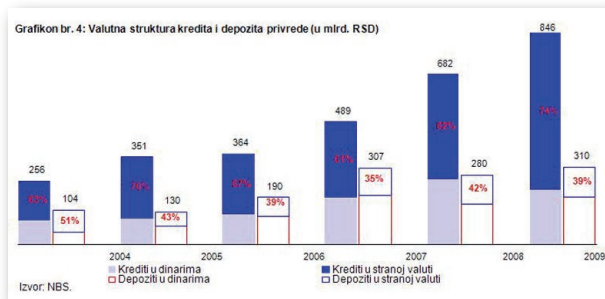
Više od 70% aktive i pasive bankarskog sektora je ili u stranoj valuti, ili je indeksirano u njoj. Učešće čisto deviznih kredita u Srbiji nije visoko, ali je učešće kredita indeksiranih kretanjem kursa izuzetno visoko. I dolarizacija depozita je izuzetno visoka, pri čemu je dolarizacija depozita znatno izraženija kod stanovništva nego kod privrede. Dok je izloženost sektora privrede i stanovništva deviznom riziku visoka, banke nisu izložene ovom riziku, već su ga uspešno prebacile na krajnje zajomprimce. Na kraju 2009, čak 74% ukupnih kredita privrede bilo je u devizama, dok je 78% kredita stanovništva bilo u deviznom znaku. Istovremeno, svega 39% depozita

Dollarization of loans was reduced by about 25% in the period 2004-2009, i.e. from 75.7% to 52.3%. In the same period, dollarization of deposits was also reduced from 67.1% to about 52.6%. Strong de-dollarization of deposits was recorded in late 2007, but in the aftermath of Lehman Brothers' collapse, re-dollarization was reinstated. However, thanks to the timely and adequate measures, de-dollarization trend was once again restored. Transaction dollarization was also reduced considerably, and one may say that it is currently at its minimum. When it came to de-dollarization in Peru, the main role was played by the sector component, i.e. the sizeable reduction of dollarization in certain sectors, whereas when it came to de-dollarization of deposits the key role was played by maturity, i.e. reduction of dollarization of deposits with shorter maturities. These are the trends that could be expected, given that de-dollarization is a gradual process and that it first begins from shorter maturities and some specific fields of activities. De-dollarization of the public debt was equally successful. In 2003 Peru launched a program targeted at the development of the market for domestic public debt, focusing on the instruments in sols with fixed interest rate. The Peruvian strategy of public debt management was focused on the development of a yield curve for government bonds in sols and reduction of the FX part of the debt. The longest maturity of Peruvian government bonds is 32 years (issued in February 2010, whereas in 2003 it was only 5 years). According to the IMF report, de-dollarization in Peru was the result of the improvement in the field of macroeconomic stability in terms of lower inflation. Net FX reserves were increased from USD 9.6 billion in 2002 to USD 33.1 billion in 2009. At the same time, in the period from 2006 to 2008, Peru recorded a budgetary surplus of 2%-3.3% of GDP, whereas the public debt was decreased to below 30% of GDP, which, in turn, caused a drop in country risk indicators (EMBI/CDS). In the same period, a higher flexibility of sol was recorded in both directions, which is considered one of the contributions to the de-dollarization process, since the FX rate played the role of a kind of absorber of external shocks. Also, higher volatility of sol will certainly function as an incentive to the derivatives

market development. Successfully conquered financial crisis deepened the trust in sol, which was aided by the regulatory measures which had been implemented in the past decade. Before all, this refers to: a) differentiated required reserves rates, in particular for commercial loans, and their remuneration; b) mandatory FX risk assessment for banks' clients and allocation of mandatory provisions in case the bank does not comply with this obligation; c) differentiated liquidity ratio for short-term liabilities - 8% for liabilities in sols and 20% for FX liabilities. Considerable progress was also achieved concerning the development of the capital market in sols, such as, for instance, issuing of long-term, treasury bills in sols. What will be the focus of attention in the forthcoming period, with the purpose of de-dollarization, is the development of the capital market in sols. In this segment the advisory assistance of IMF will be invaluable for the development of the market of mortgage bonds in sols, which will revive the housing loans in sols, as well as repo and swap inter-bank markets that may, in turn, support the further de-dollarization process.

By means of a gradual stabilization program, inflation in Israel was reduced from 400% it amounted to back in 1984 to single-digit inflation in late 1990s. In parallel with the efforts directed at the establishment of macroeconomic stability, intensive activities were performed in order to reduce the FX part of the public debt and to develop the derivatives market. Differentiated required reserves rates were implemented, favouring the usage of local currency, and along with the deposits indexed by USD rate, deposits indexed by inflation rate were also introduced. At the same time, additional regulatory measures were introduced for FX loans, with a view to achieving adequate protection against FX risk, and banking supervision was strengthened precisely in the field of exposure of banks and their clients to FX risk. This resulted in the improved currency and maturity structure of the public debt. The share of FX deposits decreased from 39% in 1984 to 17% in 2002. So, de-dollarization in Israel was not rapid, but it was successful and came as a result of the combined measures directed at macroeconomic stability and currency restructuring of the public debt.

privrede bilo je u devizama na kraju 2009, dok je čak 92% depozita stanovništva bilo u deviznom znaku. Istovremeno, srpska domaćinstva u proseku drže oko 3,5 hiljada evra u gotovini (Izvor: *OeNB's EuroSurvey*). Razlozi za ovakvo ponašanje, pored duge istorije maroekonomske nestabilnosti i gubitka dinarske štednje tokom hiperinflacije, jesu i visoke doznake od naših građana koji rade u zapadnoj Evropi a koje se često šalju nezvaničnim kanalima (preko vozača autobusa i sl).



Učešće dinarskog dela duga, iako znatno povećano nakon februara 2009. kada je počela emisija državnih zapisa po tržišnim uslovima, i dalje je nepovoljno (ispod 15%). Dakle, i fiskalna politika je izložena rizicima promene deviznog kursa. I subvencionisani krediti su do maja ove godine bili odobravani i za devizne kredite, a od maja se odobravaju isključivo za dinarske kredite. Pojedina javna preduzeća i dalje drže depozite u devizama i uzimaju devizne kredite bez obzira na prirodu svojih potreba za zaštitom od rizika promene deviznog kursa. Svakako da od pomoći nije bila ni činjenica da tržište hedžing instrumenata nije razvijeno. Iako postoji zakonska obaveza da se plaćanja vrše u dinarima, ne retko se i primaju i devize, a nezvanični podaci ukazuju i da se plate ne retko ugavaraju u devizama a potom se isplaćuje njihova dinarska protivrednost (realna evroizacija). Takođe, kupoprodaja stanova/zemljišta uglavnom se ugovara i vrši u devizama.

Šta je razlog ovako upornoj dolarizaciji u Srbiji? Glavni razlozi za dominaciju evra u Srbiji svakako se mogu sublimirati kroz: a) gubitak dinarske štednje tokom hiperinflacije 90-ih, b) dugi periodi makroekonomske nestabilnosti, tj. visoke i volatilne inflacije; c) nekoliko snažnijih deprecijacija dinara, d) olakšan pristup jeftinijim inostranim izvorima sredstava, te opšte prisutno mišljenje da su krediti u stranoj valuti jeftiniji. Iako je septembra 2006. Narodna banka relativno uspešno prešla na režim implicitnog targetiranja inflacije, a januara 2009. i na režim eksplicitnog targetiranja inflacije objavljujući targete za CPI, kredibilitet makroekonomske politike nije bitnije popravljen. Građani i dalje biraju devize, i pored viših kamatnih stopa na štednju u dinarima. Jedino objašnjenje za to je strah štediša da kamatni diferencijal nije dovoljan da nadoknadi eventualne gubitke po osnovu deprecijacije. Ipak, analiza isplativosti dinarske štednje koja je izrađena u Narodnoj banci ukazuje upravo suprotno - da je dinarska štednja u periodu 2001 - 2009. bila isplativija. Dakle, primarni razlog ipak je bilo odsustvo poverenja u domaću valutu. Ni agresivna ponuda relativno jeftinih deviznih kredita nije išla u prilog finansijske dedolarizacije u našoj zemlji. Ovo ne bi bio problem da su oni korišćeni za investicije i proizvodnju. Umesto toga, oni su mahom korišćeni za potrošnju povećavajući tako agregatnu tražnju i inflatorne pritiske. Dakle, rešenje nije u potpunoj zabrani deviznih kredita. Ne treba zaboraviti nespornu činjenicu da su u jednom periodu nakon 2000. oni bili naš jedini izbor. Da su bili zabranjeni, ne bi bilo ni kreditne aktivnosti, a jedina opcija bile bi kratkoročne dinarske pozajmice. Dakle, nije greška što devizni krediti nisu zabranjeni, već što nisu uporedo stvarani uslovi za veću stabilnost u zemlji, i privrednu i političku, što bi vremenom donelo i veće poverenje u dinar. Vraćanje poverenja u dinar biće veoma težak zadatak kako za centralnu banku tako i za Vladu. Bazična filozofija svodi se na prostu logiku - poverenje u domaću valutu vraća se kvalitetom privrede. Jak dinar može da postoji samo ako je i privreda dovoljno jaka da ga podrži. U Srbiji pak nismo imali ni makroekonomsku ni političku stabilnost, inflacija je tokom godina bitnije oscilirala, kao i privredna aktivnost. Dakle, veće poverenje

De-dollarization in Poland came as a result of successfully implemented reforms, restrictive monetary policy and introduction of the flexible FX rate regime. In early 1990s, after several occurrences of high inflation and frequent devaluations, Poland launched a macroeconomic stabilization program, followed by the liberalization of the financial sector. At the same time, domestic interest rates were considerably increased. This was followed by a sharp drop in inflation, with high, positive, real interest rates on instruments in zlotys being the initial trigger for absolute and relative growth of deposits in zlotys. Simultaneously, the share of FX deposits in M2 was reduced from 72% in 1989 to 30% at the end of 1993. De-dollarization in Poland was, thus, a side-product of the stabilization program.

De-dollarization in Egypt serves as an example of a successful combination of stabilization efforts and banking reform. The share of FX deposits in total deposits was reduced from 56% in 1991 to 22% in 1999, and 18% in 2004. The reason may be found in the set of fiscal and monetary reforms launched in 1991, and targeted at reducing inflation and liberalizing the financial system which had been subjected to extremely rigorous controls (limited volumes of loans, limited interest rates, etc.). Liberalization and reform of the banking sector resulted in a considerable drop in inflation, positive real interest rates on local currency instruments, and, ultimately, reduction of FX deposits.

In Pakistan and Argentina de-dollarization was necessary, in particular after the experiences with a number of FX and banking crises. Even though their measures were mostly "mandatory" and harsh, they were required to alleviate the banking crisis. After the political shock in 1998, Pakistan faced a sudden outflow of foreign capital, fall in FX reserves and strong contraction of FX liquidity, which forced the Pakistani authorities to suspend the preferential treatment of FX deposits that they had up to that point enjoyed. In parallel with the macroeconomic stabilization program, the authorities temporarily froze FX deposits and introduced numerous controls of FX transactions. Later on, it was allowed for the frozen FX deposits to be paid out in

the local currency or converted in middle-term bonds denominated in dollars. Although FX savings were again permitted, the more favourable tax treatment of these savings and the incentive scheme of FX deposits insurance were suspended. Once the macroeconomic stability was established, conditions were normalized, and dollarization of deposits was drastically decreased. Similar measures were implemented in Argentina, where in 2001 FX deposits were "frozen" in order to avoid capital outflows. Already in 2002, deposits were released, and at the end of 2005 the level of FX deposits in the private sector was considerably lower than it was before the crisis. Still, this can, to a certain degree, be attributed to the extremely low growth rates of total deposits in the private sector, given that the freezing of deposits, as temporary as it was, undermined the credibility of the banking sector.

Euroization in Serbia

Judging by the share of: a) FX deposits in total deposits; b) FX and indexed loans in total loans; c) FX part of the public debt - it is hereby stated that Serbia is a highly euroized country. And not just a highly euroized country, but one of the Eastern European countries with the highest degree of financial euroization.

More than 70% of the banking sector's assets and liabilities is either denominated or indexed in a foreign currency. The share of strictly FX loans in Serbia is not particularly high, but the share of loans indexed by FX rate fluctuations is extremely high. Dollarization of deposits is also exceedingly high, being significantly more prominent in the retail than in the corporate sector. The exposure of the corporate and retail sectors to FX risk is rather high, but the banks are not exposed to this risk, because they have successfully transferred it to the end beneficiaries. At the end of 2009, as much as 74% of total corporate loans were in FX, whereas 78% of retail loans were denominated in FX. At the same time, only 39% of corporate deposits were in FX at the end of 2009, whereas 92% of retail deposits were denominated in FX. Simultaneously, households in Serbia on average hold about EUR 3.5 thousand in cash (Source: *OeNB's EuroSurvey*). The reasons

u dinar može se očekivati kada se u Srbiji uspostavi makroekonomska stabilnost na period duži od nekoliko godina.

Pored visokog bilansnog rizika sektora privrede i države po osnovu deviznog rizika, kreatore ekonomske politike u Srbiji „brine“ finansijska dolarizacija i jer znatno otežava targetiranje inflacije. Usled izuzetno visoke dolarizacije kredita - kanal kamatnih stopa u Srbiji je dosta slab. Umesto da prate referentnu kamatnu stopu Narodne banke, kamatne stope uglavnom pulsiraju u skladu sa stopama na evro-tržištu novca uvećanom za rizik zemlje. Ni režim deviznog kursa nije u potpunosti prilagođen targetiranju inflacije, zbog visoke dolarizacije finansijskog sistema. Kurs dinara je u jako kratkom periodu bio zaista fluktuirajući. Već od oktobra 2008, nakon odliva štednje i kratkotrajnog razduživanja banaka prema inostranstvu, Narodna banka je bila dosta prisutna na deviznom tržištu kako bi se obezbedila njegova dovoljna likvidnost i sprečile prekomerne oscilacije deviznog kursa. Od januara 2009. izvršen je povratak na režim rukovođeno fluktuirajućeg kursa. Dakle, dok je deprecijacija bila dobrodošla jer je ublažavala efekte globalne krize na našu privredu, sa druge strane ona je produbljivala bilansne rizike privatnog i državnog sektora nezaštićenog od deviznog rizika.

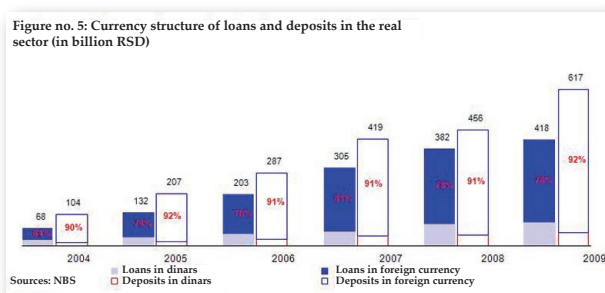
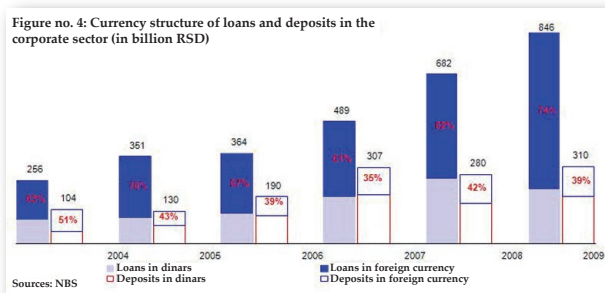
Ni brza dinarizacija ne bi bila dobra, jer i ona nosi izvesne rizike. Ukoliko bi se ceo proces bazirao samo na administrativnim merama, postoji tehnički problem koji bi u našim uslovima usporio, ako ne i značajno otežao proces dinarizacije. Reč je o izuzetno niskoj dinarskoj štednji, i izuzetno nepovoljnoj ročnoj strukturi iste (uglavnom je reč o štednji do godinu dana). Da bi banka odobrila dugoročni dinarski kredit, mora imati dugoročnu dinarsku štednju kao izvor. Zbog toga je neminovno da centralna banka uzme veće učešće u ovom procesu, bar u inicijalnom periodu. Ovo kroz različite oblike obezbeđenja dinarske likvidnosti na duže rokove. Zbog svega navedenog, Narodna banka i Vlada Republike Srbije definisali su strategiju dinarizacije srpskog finansijskog sistema, koja je zasnovana na tri stuba. Prvi stub podrazumeva jačanje makroekonomskog okruženja obezbeđivanjem niske i stabilne inflacije uz fleksibilan devizni

kurs i stabilan finansijski sistem. Apostrofira se i neophodnost sprovođenja strukturnih reformi u realnom sektoru uz održivu fiskalnu politiku usmerenu na obezbeđivanje dugoročno održivog privrednog rasta. Jasno je da se rezultati prvog stuba mogu postići tek nakon dužeg vremena i da će zahtevati istrajnu politiku. Drugi stub strategije sastoji se od mera usmerenih na stvaranje povoljnih uslova za razvoj tržišta dinarskih obveznica. Pokrenuto je nekoliko projekata u okviru „Bečke inicijative plus“ s ciljem razvoja sekundarnog tržišta državnih obveznica. Pojedine međunarodne finansijske institucije su iskazale interes za emitovanjem dinarskih obveznica na našem tržištu (EBRD), što bi moglo da bude od velike koristi za formiranje krive prinosa, povećanje likvidnosti tržišta, i rast poverenja inostranih investitora. Obzirom da je Srbija jedna od retkih zemalja u okruženju koja nema tržište municipalnih obveznica, postoji realan prostor za uvođenje i razvoj tržišta ovih hartija, ali i razvoj tržišta komercijalnih zapisa i korporativnih obveznica. Ovo pre svega kroz smanjenje troškova emisije korporativnih hartija, i njihovo promovisanje kao atraktivnih instrumenata. Treći stub strategije dinarizacije ima za cilj unapređenje zaštite od deviznih rizika u nebankarskom sektoru. I dok prudencijalne mere i dalje ostaju opcija, one se neće koristiti kao glavno sredstvo već samo i isključivo da bi se ograničila izloženost deviznom riziku najosetljivijih segmenata tržišta. Na osnovu svega, jasno je da će dinarizacija biti dugoročan proces postepenog prilagođavanja aktivne i pasivne strane bilansa banaka i nebankarskih institucija.

Šta je do sada urađeno:

- država je povećala udeo dinarskog duga kroz emisiju trezorskih zapisa po tržišnim uslovima (ročnost zapisa kreće se od 3M do 24M);
- obavezna rezerva na dinarsku osnovicu je smanjena sa 10% na 5% (april 2010), a prilagođavanje će se vršiti u tranzitornom periodu od jedne godine. Na deviznu obaveznu rezervu se na plaća kamata, dok se na dinarsku rezervu plaća kamata od 2,5%;
- implementirana su stroža racija za klijente banaka koji nisu hedžovani (diferencirani

behind such behaviour, in addition to the long history of macroeconomic instability and loss of dinar savings in the times of hyperinflation, are the remittances by our citizens working in Western Europe, which are often sent via unofficial channels (through a bus driver, etc.).



The share of dinar part of the debt, though considerably increased after February 2009, when T-bills started to be issued under market conditions, is still unfavourable (below 15%). Therefore, fiscal policy is also exposed to the risks of FX rate differentials. Up until May this year, subsidies were allowed for FX loans as well, whereas since May they are allowed only for loans denominated in dinars. Certain public companies still hold deposits in FX and take FX loans regardless of the nature of their needs for protection against the risk of FX rate fluctuations. The fact that a market of hedging instruments has not been developed yet certainly does not help. Despite the legal obligation for payments to be conducted in dinars, foreign exchange is often accepted, and unofficial data show that salaries are frequently agreed in FX and then paid out in the appropriate counter-value in dinars (real euroization). Also, purchasing and selling of real estate/land is mostly arranged and conducted in FX.

What is the cause of such a persistent dollarization in Serbia? The main reasons for domination of Euro in Serbia may be expressed as follows: a) loss of dinar savings in the times

of hyperinflation in the 1990s; b) long periods of macroeconomic instability, i.e. high and volatile inflation; c) several harsh depreciations of dinar; d) easier access to cheaper foreign sources of finance, and the widespread opinion that loans denominated in a foreign currency are cheaper.

Although in September 2006, the National Bank of Serbia relatively successfully switched to the implicit inflation targeting regime, and in January 2009 to the explicit inflation targeting, announcing the CPI targets, the credibility of the macroeconomic policy has not been visibly improved. The citizens still choose foreign exchange, despite the higher interest rates on savings in dinars. The only explanation for this may be the fear of the deponents that the interest differential does not suffice to compensate for the potential losses caused by depreciation. Yet, the analysis of dinar savings profitability, conducted at the National Bank, indicated quite the opposite - that dinar savings in the period from 2001 to 2009 was more profitable. Therefore, the lack of trust in domestic currency was the main reason. The aggressive offer of relatively cheap FX loans did not help financial de-dollarization in Serbia either. This would not have presented a problem had these loans been used for the purpose of investment and production. Instead, they were mostly used for consumption, thus increasing aggregate demand and inflationary pressures. Hence, the solution is not to fully ban FX loans. We should not forget the undeniable fact that in one period, after 2000, they were our only choice. Had they been banned, there would have been no credit activity, and short-term dinar loans would have been the only option. In other words, it was the right thing not to ban the FX loans, but it was a mistake not to generate the conditions for higher stability in the country, both economical and political, which would over time restore the trust in dinar. The restoration of trust in dinar will be a very difficult task both for the central bank and for the Government. The basic philosophy is reduced to a very simple logic - trust in domestic currency is regained by means of high-quality economy. Strong dinar may exist only if the economy is sufficiently strong to support it. In Serbia, however, we had neither macroeconomic nor political stability; inflation

maksimalno dozvoljeni odnosi kreditnih obaveza i prihoda dužnika, kako bi se napravila razlika između dužnika sa usklađenom i onih sa neusklađenom deviznom pozicijom);

- ukinuto je obavezno učešće za dinarske kredite, dok učešće za devizne i kredite indeksirane deviznom klauzulom iznosi 30%;
- subvencionisani potrošački i krediti za likvidnost odobravaju se isključivo u dinarima od maja 2010;
- Narodna banka je u periodu april - jul 2010. sprovedila 3M devizne svop operacije po tržišnim uslovima, u cilju podsticanja međubankarskih svop transakcija;
- započete su i edukativne kampanje u cilju promovisanja instrumenata zaštite od rizika.

Prvi rezultati preduzetih mera već su vidljivi. Udeo dinarskih u ukupnim bankarskim kreditima povećan je sa 24,6% iz marta na 29% u septembru, a više od 40% novoodobrenih kredita je u dinarima. Tačno je da je dobar deo ovog rasta zasnovan na Vladinom programu subvencija, ali su pojedine banke u svoju ponudu uključile i dinarske kredite s rokom otplate od nekoliko godina. U prilog smanjenju

dolarizacije kredita svakako će ići i donekle smanjen pristup inostranim sredstvima, te očekivani rast kamatnih stopa u evro-zoni. Ipak, treba imati u vidu da je dolarizacija kredita u Srbiji duboko ukorenjena. Čak i u idealnim uslovima ona se može smanjivati samo postepeno, a najkaraće u periodu od 2-3 godine koliko iznosi prosečan kreditni portfolio na nivou bankarskog sistema. Istovremeno, još uvek nema promena u valutnoj strukturi štednje, obzirom da su za promene u ponašanju štediša potrebne godine održive makroekonomske i finansijske stabilnosti, koje će doći tek postepeno.

Zaključci

Generalno, dolarizacija nastaje u uslovima kada lokalna valuta izgubi neke ili sve svoje funkcije (sredstvo plaćanja, obračunsko sredstvo, sredstvo razmene, čuvar vrednosti), tj. obavlja ih lošije u poređenju sa drugim valutama. Dolarizacija i njene konsekvence posebno su bili aktuelni tokom finansijskih kriza u Latinskoj Americi i istočnoj Aziji devedesetih godina, dok su tokom poslednje finansijske krize njene posledice najviše osetile evropske zemlje u razvoju.



had considerable fluctuations over the years, just as the economic activity. So, higher trust in dinar may be expected once Serbia establishes macroeconomic stability for a period longer than several years.

Despite the high balance risk of the corporate sector and the state in respect of FX risk, economic policy makers in Serbia are also “worried” about financial dollarization because it makes inflation targeting considerably more difficult. Due to the extremely high dollarization of loans - the interest rates channel in Serbia is rather weak. Instead of following the benchmark interest rate of the National Bank, interest rates mostly fluctuate in accordance with the rates at the Euro money market, increased by the country risk. The FX rate regime is also not fully adjusted to inflation targeting, due to the high dollarization of the financial system. The rate of dinar has had considerable fluctuations in a very short period. Already since October 2008, after the outflow of savings and short-term repayment of cross-border loans, the National Bank was often present at the FX market wishing to provide its sufficient liquidity and prevent excessive fluctuations of the FX rate. In January 2009 the National Bank returned to the managed floating rate. So, while depreciation was welcome because it alleviated the effects of the global crisis on our economy, it, on the other hand, deepened the balance risks of the private and public sectors, unprotected against the FX risk.

Rapid dinarization would not be good either, since it carries certain risks as well. If the entire process were to be based only on administrative measures, there would be a technical problem which would, in our conditions, slow down, if not considerably aggravate the dinarization process. We hereby refer to the extremely low dinar savings, and its highly unfavourable maturity structure (mostly savings with up to one-year maturity). In order for a bank to extend a long-term dinar loan, it has to have long-term dinar savings as a source. This is why it is necessary for the central bank to take part in this process, at least in its initial stages, by providing various forms of protection for dinar liquidity in the long run. In light of the above, the National Bank and the Government of the Republic of Serbia defined a strategy of the Serbian financial

system dinarization, based on three pillars. The first pillar implies the strengthening of the macroeconomic environment by providing low and stable inflation with flexible FX rate and stable financial system. The emphasis is on the necessity of implementing structural reforms in the real sector, accompanied by a sustainable fiscal policy targeted at the achievement of an economic growth sustainable in the long run. Clearly, the results of the first pillar can be achieved only after a longer period of time and require a persistent policy. The second pillar of the strategy consists of measures directed at generating favourable conditions for the development of the dinar bonds market. Several projects have been launched within the “Vienna Initiative Plus”, with a view to developing the secondary market of government bonds. Certain international financial institutions expressed their interest for issuing dinar bonds in our market (EBRD), which could be highly beneficial for the formation of the yield curve, increase of market liquidity, and growth of trust of foreign investors. Given that Serbia is one of a few neighbouring countries that do not have a market of municipal bonds, there is real room for introduction and development of these securities, but also for development of the commercial papers and corporate bonds markets. This could be done, first and foremost, by reducing costs of corporate securities issuance and their promotion as attractive instruments. The objective of the third pillar of the dinarization strategy is to enhance the protection against FX risks in the non-banking sector. Even though prudential measures still remain an option, they will not be used as a main instrument, but only in order to limit the exposure of the most sensitive market segments to FX risks. Based on all the above, dinarization will clearly be a long-term process of gradual adjustment of assets and liabilities side of balance sheets of banks and non-banking institutions.

What has been done so far:

- The state has increased the share of dinar debt by means of issuing T-bills under market conditions (maturity of bills ranges from 3M to 24M);
- Required reserve on the reserving base in dinars has been reduced from 10% to 5% (April 2010), and the adjustment will

Identifikovanje stvarnog nivoa dolarizacije u jednoj ekonomiji nije jednostavno, zbog čega se u stručnoj literaturi susrećemo sa različitim oblicima i indeksima (pokazateljima) dolarizacije. Za potrebe međunarodnog poređenja stepen dolarizacije najčešće se meri: učešćem deviznih depozita u ukupnim depozitima, odnosno njihovim učešćem u M3; učešćem deviznih i indeksiranih kredita u ukupnim kreditima; učešćem javnog duga u deviznom znaku u ukupnom javnom dugu; i sl. Koji indeks će zemlja koristiti opredeljeno je ne samo karakteristikama ekonomije, već i raspoloživošću relevantnih podataka i mogućnostima merenja pojedinih oblika dolarizacije.

Najrasprostranjeniji oblik dolarizacije je finansijska dolarizacija koju čine obe strane bilansa stanja ekonomskih agenata. Ovo kako privatnog tako i državnog sektora, jer u velikom broju zemalja i državni dug ima izuzetno nepovoljnu valutnu strukturu. Dok je devizni rizik u evropskim zemljama u razvoju mahom skoncentrisan na klijente banaka, same banke izložene su indirektnom, tj. kreditnom riziku. Zbog toga pojedini ekonomisti predlažu uvođenje *de-facto* indeksa finansijske dolarizacije koji bi uvažavao i ovaj implicitni rizik, a u zavisnosti od stepena u kome su klijenti banke hedžovani (usklađenost valutne strukture njihovih prihoda i rashoda). Takođe, u jednoj ekonomiji ne retko se susrećemo sa paralelnom egzistencijom nekoliko oblika dolarizacije. Iz tog razloga, mere usmerene na dedolarizaciju moraju biti usmerene upravo ka prevladavajućem i najdestimulativnijem obliku dolarizacije.

Glavni faktori dolarizacije su visoka i volatilna inflacija, snažnija i kontinuirana deprecijacija domaće valute, nedovoljno razvijeno tržište kapitala, tržišne imperfektnosti i neadekvatna regulativa. Svaki faktor pojedinačno, ali i njihova kombinacija svakako su razlog za slabljenje poverenja u domaću valutu i pojavu i širenje dolarizacije. Za kreatore makroekonomske politike izuzetno je bitno da determinišu ključne faktore dolarizacije u domaćoj ekonomiji, kako bi preduzeli i adekvatne mere usmerene na njeno smanjenje.

Ključni nedostaci dolarizacije finansijskog sistema mogu se sublimirati kroz sledeće: a) čini

ekonomiju osetljivijom na eksterne šokove; b) povećava bilanse rizike u ekonomijama u kojima postoji valutna neusklađenost prihoda i rashoda tržišnih učesnika; c) povećava implicitni, u ovom slučaju kreditni rizik banaka; d) smanjuje efikasnost monetarne politike kroz slabljenje kanala kamatnih stopa i jačanje transmisionog efekta deviznog kursa; e) povećava volatilnost inflacije.

Ne postoji jedinstveno rešenje za uspešnu dedolarizaciju koje bi se moglo primeniti u svim zemljama, niti su za jednu zemlju u različitim fazama ekonomskog razvoja iste mere podjednako efikasne. Zbog toga, prilikom definisanja mera usmerenih na dedolarizaciju treba imati u vidu oblike i faktore dolarizacije u konkretnoj ekonomiji. Istovremeno, treba uvažavati veličinu i otvorenost nacionalne ekonomije, stepen njene finansijske integrisanosti i razvijenost pojedinih tržišnih segmenata. Politika dedolarizacije će zavisiti i od režima deviznog kursa, pri čemu su brojna istraživanja pokazala da je režim inflatornog targetiranja praćen režimom fleksibilnog deviznog kursa povoljan ambijent za sprovođenje strategije dedolarizacije. Praksa i stručna literatura ukazuju da se mere dedolarizacije mogu podeliti u tri velike grupe koje se mogu implementirati pojedinačno ili pak u kombinaciji: a) mere usmerene na uspostavljanje i održavanje makroekonomske stabilnosti; b) regulatorne, tj. administrativne mere i mere direktne podrške domaćoj valuti c) tržišne mere, tj. razvoj tržišta u lokalnoj valuti. Nesporno je da će smanjenje stepena dolarizacije biti olakšano ukoliko bude podržano pravim redosledom mera.

Srbija je visoko evroizovana zemlja. Mereno učešćem deviznih depozita u ukupnim depozitima, deviznih i indeksiranih kredita u ukupnim kreditima, i učešćem deviznog dela javnog duga, Srbija je jedna od istočno-evropskih zemalja sa najvećim stepenom finansijske evroizacije. Glavni razlozi za dominaciju evra u Srbiji su: a) gubitak dinarske štednje tokom hiperinflacije 90-ih, b) dugi periodi makroekonomske nestabilnosti, tj. visoke i volatilne inflacije; c) nekoliko snažnijih deprecijacija dinara, d) olakšan pristup jeftinijim isnostranim izvorima sredstava, te opšte prisutno mišljenje da su krediti u

be done in the transitory one-year period. FX required reserve does not incur any interest, whereas reserves in dinars incur 2.5% interest;

- Stricter ratios have been implemented for non-hedged bank clients (differentiated maximum allowed ratios of credit liabilities and income of debtors, in order to differentiate between the debtors with matched and those with mismatched FX position);
- Mandatory participation for dinar loans has been suspended, whereas the participation for FX loans and loans indexed by FX clause amounts to 30%;
- Subsidized consumer and liquidity loans have been extended exclusively in dinars since May 2010;
- In the period from April to July 2010, the National Bank of Serbia conducted 3-month FX swap operations under market conditions, in order to boost inter-bank swap transactions;
- Educational campaigns have been launched in order to promote the risk protection instruments.

The first results of the undertaken measures are already visible. The share of dinar loans in total bank loans has increased from 24.6% in March to 29% in September, and more than 40% of the newly-extended loans are in dinars. Admittedly, a considerable portion of this growth was based on the Government subsidy programme, but certain banks also included dinar loans in their offer, with a repayment deadline of several years. Reduction of dollarization of loans will certainly be facilitated by a somewhat limited access to foreign funds, and the expected growth of interest rates in the Euro-zone. Still, one should bear in mind that dollarization of loans in Serbia is deeply rooted. Even under ideal circumstances, it may be reduced only gradually, taking at least 2-3 years, which is the average for a credit portfolio at the banking sector level. At the same time, there are still no changes in the currency structure of savings, given that it takes years of sustainable macroeconomic and financial stability, which will come gradually, for deponents to change their behaviour.

Conclusions

Generally speaking, dollarization occurs in the conditions when the local currency performs some or all of its functions (legal tender, calculation instrument, medium of exchange, store of value) in a poorer way compared with other currencies. Dollarization and its consequences were particularly current during the financial crises in Latin America and East Asia in the 1990s, whereas during the recent financial crisis its consequences were mostly felt in the developing countries in Europe.

Identification of the actual degree of dollarization in an economy is not simple, which is why in expert literature on the subject we find various forms and indices (indicators) of dollarization. For the purpose of international comparison, the degree of dollarization is most frequently measured by means of: the share of FX deposits in total deposits, i.e. their share in M3; share of FX and indexed loans in total loans; share of FX public debt in total public debt, etc. The index that a country will use is defined not only on the basis of its economy's characteristics, but also on the basis of availability of relevant data and possibilities of measuring certain forms of dollarization.

The most widespread form of dollarization is financial dollarization which involves both sides of a balance sheet of economic agents. This holds for both private and public sectors, since in many countries the public debt also has an extremely unfavourable currency structure. While FX risk in developing countries in Europe mostly concerns bank clients, the banks themselves are exposed to indirect, i.e. credit risk. Therefore, certain economists propose the introduction of *de-facto* financial dollarization index which would take into consideration the implicit risk as well, depending on the level in which the banks' clients are hedged (matching of the currency structure of their revenues and expenditures). Also, in one economy we often find several forms of dollarization existing at the same time. This is why de-dollarization measures must be directed at the predominant and most discouraging form of dollarization.

The main dollarization factors are high and volatile inflation, strong and continuous

stranoj valuti jeftiniji. Ni prelazak na režim targetiranja inflacije nije povratio kredibilitet makroekonomske politike, pri čemu visoka finansijska dolarizacija znatno umanjuje efikasnost mera Narodne banke čineći kanal kamatnih stopa slabijim, i naglašavajući značaj prenosnog efekta deviznog kursa. Zbog toga je

vraćanje poverenja u dinar neophodno, ali se ono može očekivati kada se u Srbiji uspostavi makroekonomska stabilnost na period duži od nekoliko godina. U tom cilju, definisana je i strategija dinarizacije čiji je cilj postepena deevroizacija srpskog finansijskog sistema.

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depreciation of the local currency, insufficiently developed capital market, market imperfections and inadequate regulations. Each of these factors, taken separately or jointly, is by all means a cause of the loss of trust in the domestic currency and the subsequent occurrence and spreading of dollarization. What is particularly important for macroeconomic policy makers is to determine key dollarization factors in the domestic economy, in order to implement adequate measures for its reduction.

The key drawbacks of financial system dollarization can be summed up as follows: a) it makes the economy more sensitive to external shocks; b) increases the balances of risks in the economies in which there is a currency mismatch of revenues and expenditures of market participants; c) increases the implicit (credit) risk of banks in the conditions of higher local currency depreciation; d) reduces the efficiency of monetary policy by weakening the interest rates channels and strengthening the transmission effects of the FX rate; e) increases inflation volatility.

There is no uniform solution for a successful de-dollarization, which could be implemented in all countries, nor are the same measures equally efficient for one country in different stages of its economic development. Therefore, when determining the measures directed at de-dollarization, one should bear in mind the forms and factors of dollarization in the concerned economy. At the same time, the size and openness of the national economy should be taken into account, along with the degree of its financial integration and development of some of its market segments. De-dollarization policy also depends on the foreign exchange rate regime, and numerous studies have shown that the inflation targeting regime accompanied by a flexible FX rate regime presents a favourable environment for de-dollarization strategy implementation. Practice

and expert references on the subject indicate that de-dollarization measures may be divided into three large groups, to be implemented individually or in combination, as follows: a) measures directed at the achievement and maintenance of macro-economic stability; b) regulatory, i.e. administrative measures and measures of direct support to domestic currency; c) market measures, i.e. development of the local currency market. Undoubtedly, the reduction of dollarization degree will be easier if supported by the implementation of measures in the right order.

Serbia is a highly euroized country. Judging by the share of FX deposits in total deposits, share of FX and indexed loans in total loans and share of FX part of the public debt, Serbia is one of the Eastern European countries with the highest degree of financial euroization. The main reasons for domination of Euro in Serbia are: a) loss of dinar savings in the times of hyperinflation in the 1990s; b) long periods of macroeconomic instability, i.e. high and volatile inflation; c) several harsh depreciations of dinar; d) easier access to cheaper foreign sources of finance, and the widespread opinion that loans denominated in a foreign currency are cheaper. Not even the transfer to inflation targeting regime managed to restore the credibility of the macroeconomic policy, with high financial dollarization considerably reducing the efficiency of the National Bank of Serbia's measures, weakening the interest rates channel, and underlining the importance of the transfer effect of the FX rate. This is why the restoration of trust in dinar is necessary, but it may be expected only when macroeconomic stability is achieved and maintained in Serbia for a period longer than several years. To this end, a dinarization strategy has been defined with a view to gradual de-euroization of the Serbian financial system.