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Monetarna politika u Srbiji

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IZAZOVI MONETARNE POLITIKE U DOLARIZOVANOJ MALOJ OTVORENOJ PRIVREDI: SLUČAJ SRBIJE

MONETARY POLICY CHALLENGES IN DOLLARIZED SMALL OPEN ECONOMY: CASE OF SERBIA

Rezime: Monetarna politika zasnovana na strategiji ciljanja inflacije počela je da daje rezultate u Srbiji. Inflacija je niža i predvidljivija i kredibilitet monetarne politike poslednjih godina je u porastu. Međutim, ciljanje inflacije zahteva određene pretpostavke koje u Srbiji još uvek nisu u potpunosti uspostavljene. Visoka dolarizacija (eurizacija) predstavlja izazov kako za finansijsku stabilnost, tako i za monetarnu politiku. Devizni kurs i njegove promene u Srbiji su važna tema ali dinar deli sudbinu drugih valuta čije zemlje sprovode ciljanje inflacije. Određena unapređenja u vođenju monetarne politike u uslovima visoke dolarizacije već su učinjena od strane NBS, ali uspešnije ciljanje inflacije i dugoročna stabilizacija zahtevaju krupne korake u pravcu odgovorne fiskalne politike, smanjivanja dolarizovanih (eurizovanih) finansijskih instrumenata u sistemu i smanjivanje nestabilnosti cena hrane na domaćem tržištu.

Ključne reči: monetarna politika, dolarizacija, ciljanje inflacije.

Abstract: Monetary policy based on inflation targeting has gradually become more effective in Serbia. Inflation is lower and more predictable and monetary policy credibility is gradually on the rise in recent years. Still, effective inflation targeting in Serbia requires certain prerequisites which are still not fully in place. High Dollarization (Euroization) poses a serious challenge not just for financial stability, but for monetary policy as well. Exchange rate and its movement are important topics for Serbia, but Dinar shares the faith of other currencies of similar countries in inflation targeting regime. Certain improvements in conduct of monetary policy in highly Dollarized environment have been introduced by NBS. But fully effective inflation targeting and long term macroeconomic balance call for significant steps forward in terms of responsible fiscal policy, decrease in Dollarized (Euroized) financial instruments in the system and decrease in volatility of local market food prices.

Key words: Monetary Policy, Dollarization, Inflation Targeting.

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Inflacija u Srbiji poslednjih godina pokazuje visok stepen nestabilnosti ali i postepenog smanjivanja ka koridoru inflacionog cilja. Od zvaničnog uvođenja ciljanja inflacije (kraj 2008. godine), bazna inflacija (bez cena hrane, energije, alkohola i cigareta) u Srbiji se kretala u dozvoljenim odstupanjima od inflacionog cilja (plava linija na Grafikonu 1.), ali je ukupna inflacija merena indeksom potrošačkih cena (IPC) još uvek daleko nestabilnija i sa tendencijom kratkoročnog znatnog probijanja granica dozvoljenog odstupanja od ciljane inflacije (crna linija na Grafikonu 1.). Srbija je, uvođenjem ciljanja inflacije, ušla u danas vrlo brojnu grupu naprednih zemalja koje primenjuju monetarnu strategiju ciljanja inflacije. Globalno posmatrano, ova monetarna strategija pokazala je sposobnost stabilizacije cena na srednji rok uz kredibilnu i konzistentnu monetarnu politiku².

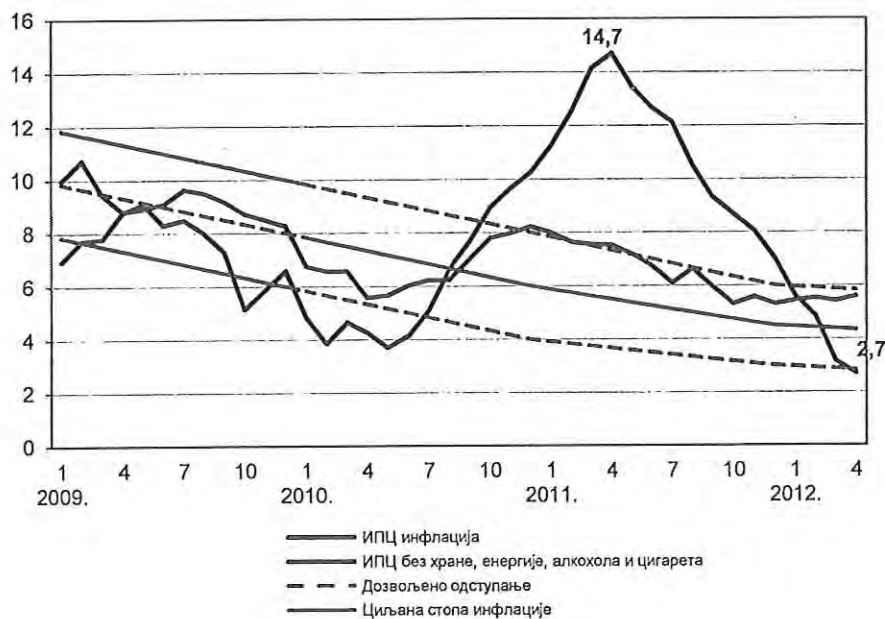
Ciljanje inflacije zasniva se na pet osnovnih elemenata: 1. Objavljivanje srednjoročnog numeričkog cilja za inflaciju; 2. Institucionalna posvećenost centralne banke cenovnoj stabilnosti kao osnovnom cilju u odnosu na koga su drugi ciljevi podređeni; 3. Strategija monetarne politike koja, uz praćenje kretanja monetarnih agregata i deviznog kursa, uključuje i informacije o kretanju niza drugih promenljivih pri donošenju odluka u vezi instrumenata monetarne politike; 4. Transparentnost monetarne politike i komunikacija Centralne banke sa javnošću i finansijskim tržištima o njenim planovima, ciljevima i odlukama; 5. Rast kredibiliteta Centralne banke u vezi ispunjenja inflacionih ciljeva³. Svi ovi elementi u određenoj meri uspostavljeni su i u našoj zemlji. Međutim, ciljanje inflacije nije idealno. Za razliku od ciljanja monetarnih agregata ili deviznog kursa na koje centralna banka može direktno uticati, ciljanje inflacije je složenije i zahteva protok vremena od trenutka promene instrumenata monetarne politike do trenutka njihovog uticaja na inflaciju (tzv. *monetary policy transmission lags*) i koji se mogu bitno razlikovati od zemlje do zemlje⁴. Ove docnje od donošenja mera monetarne politike do njihovog uticaja na inflaciju mogu uticati na niži kredibilitet Centralnih banaka posebno kod zemalja u razvoju. Uz to, ciljanje inflacije ne može preduprediti dominaciju fiskalne politike nad makroekonomskim kretanjima i, s obzirom da zahteva fleksibilnost deviznog kursa, ne može potpuno sprečiti negativne efekte koje nestabilnost deviznog kursa može imati na finansijsku stabilnost zemalja u razvoju.

Grafikon 1. Kretanje inflacije (međugodišnje stope, u %)

² Videti Bernanke, Ben S.; Laubach, Thomas; Mishkin, Frederic S.; and Posen, Adam S., 1999, *Inflation Targeting: Lessons from the International Experience*, Princeton, NJ, Princeton University Press.

³ Videti Mishkin, Frederic S., and Posen, Adam S., 1997, „Inflation Targeting: Lessons from Four Countries“, *Federal Reserve Bank of New York Economic Policy Review*, Avgust, p 9-110.

⁴ Videti npr. Goodhart, C. A., 2001, „Monetary transmission lags and the formulation of the policy decision on interest rates.“ *Review, Federal Reserve Bank of St. Louis*, July, p:165–186. Ili Ehrmann, M., 2000: „Comparing Monetary Policy Transmission across European Countries.“ *Review of World Economics*, 136(1):58 – 83.



Izvor: NBS

Otuda, uvođenje ciljanja inflacije u zemljama u razvoju daje mnogo bolje rezultate nakon ozbiljnih i uspešnih svođenja inflacije na relativno niske nivoe⁵. Uz to, mora se imati u vidu da je odsustvo fiskalne discipline nespojivo sa ciljanjem inflacije jer visoki budžetski deficiti vode krizi javnog duga ili monetizaciji javnog duga uz visoke depresijacije i visoku inflaciju kao nužne posledice. Otuda, odsustvo dominacije fiskalne politike nad makroekonomskim kretanjima i uspostavljanje institucionalnih pretpostavki za vođenje održive fiskalne politike, kao što je aktivni program sa MMFom i Fiskalni savet u Srbiji, nužne su pretpostavke uspeha ciljanja inflacije, mada su te iste pretpostavke uslov uspeha i alternativnih strategija monetarne politike (valutni odbor ili puna dolarizacija)⁶. Dakle, u trenutku uvođenja ciljanja inflacije u Srbiji nisu bili ispunjeni svi preduslovi za njeno uspešno sprovođenje. Ti preduslovi ni danas ne postoje u potpunosti, a stvari dodatno komplikuje činjenica da su cene hrane u Srbiji vrlo nestabilne (znatno nestabilnije od zemalja u regionu) i da utiču na ICP sa 38,8%, što inflaciju čini dominantno zavisnom od kretanja cena hrane na koju, kao na jednokratni šok na strani ponude, monetarna politika, po pravilu, ne treba da reaguje⁷. Tako je rast inflacije tokom prve polovine 2011 godine bio pre svega uslovljen rastom cena hrane, kao i što je pad inflacije od 4,3% od

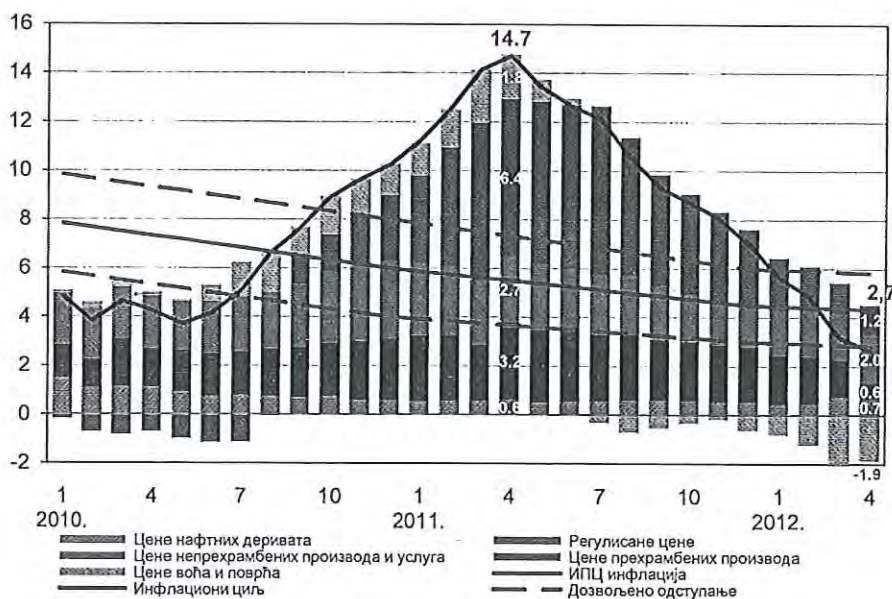
⁵ Videti Masson, Paul R., Savastano, Miguel A., and Sharma, Sunil, 1997., „The Scope of Inflation Targeting in Developing Countries“, *IMF Working Paper 97/130*, October. Videti takođe i Bernanke, Ben S.; Laubach, Thomas; Mishkin, Frederic S.; and Posen, Adam S, 1999, *Inflation Targeting: Lessons from the International Experience*, Princeton, NJ, Princeton University Press.

⁶ Videti Mishkin, Frederic S., and Savastano, Miguel A., 2001, „Monetary Policy Strategies for Latin America“ *Journal of Development Economics*, October.

⁷ Videti Aoki, K., 2001, "Optimal Monetary Policy Response to Relative Price Changes" *Journal of Monetary Economics* 48, pp55-80.

kraja 2011 (IPC 7%) do aprila 2012 (IPC 2,7%) dominantno tj. 73% bio uslovljen padom cena hrane (Grafikon 2.)

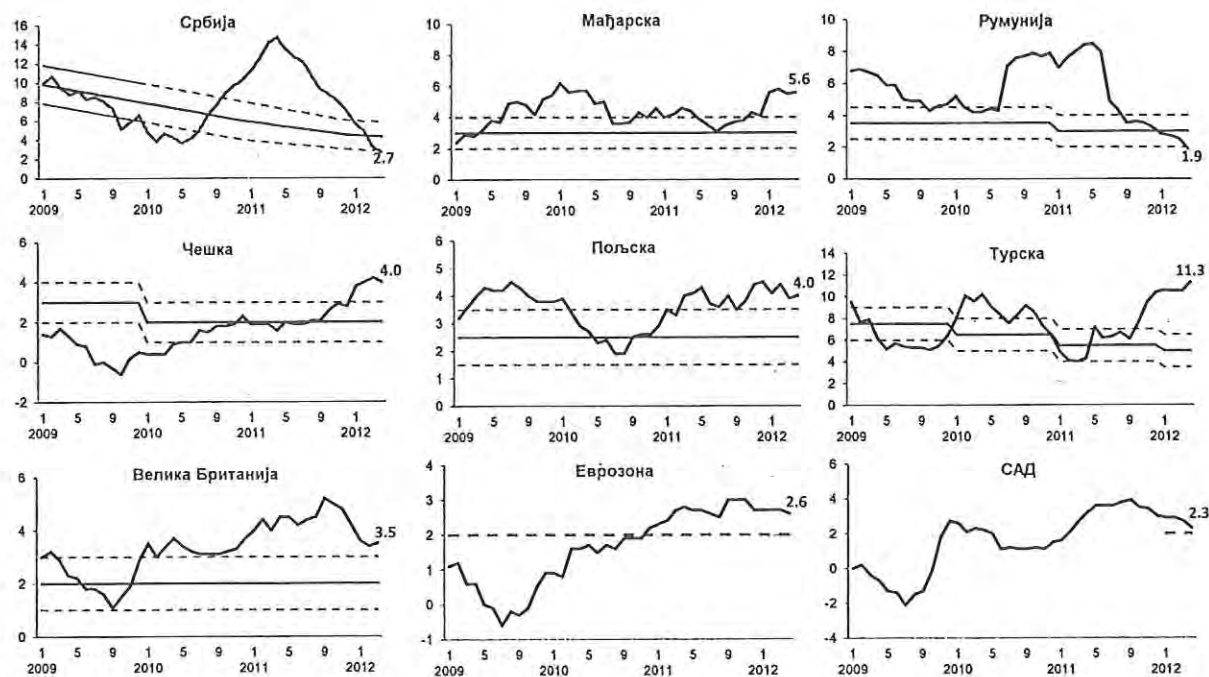
Grafikon 2. Doprinosi komponenti Indeksa potrošačkih cena rastu međugodišnje inflacije u Srbiji (međugodišnje stope, u %)



Izvor: NBS

Otuda, za uspešno ciljanje inflacije u Srbiji nije dovoljno da postoji odgovorna budžetska politika već i da zažive mehanizmi otklanjanja nestabilnosti u kretanju cena hrane (jednostavan i neopterećen uvoz, zaštita useva, otklanjanje monopolizovanih tržišnih struktura u trgovini hranom, adekvatne intervencije iz robnih rezervi i sl.). Uprkos tome, ciljanje inflacije u Srbiji je relativno uspešno i sve uspešnije. U međunarodnoj perspektivi, nivo inflacije i odnos tog nivoa prema inflacionom cilju u prvoj polovini 2012. u Srbije se kreće povoljnije u odnosu na neke druge zemlje među kojima i neke znatno uređenije i naprednije (Grafikon 3.).

Grafikon 3. Inflacija u Srbiji i drugim zemljama (kretanje inflacije u zemljama koje su u režimu ciljanja inflacije, evrozoni i SAD – međugodišnje stope, u %)



Izvor: NBS

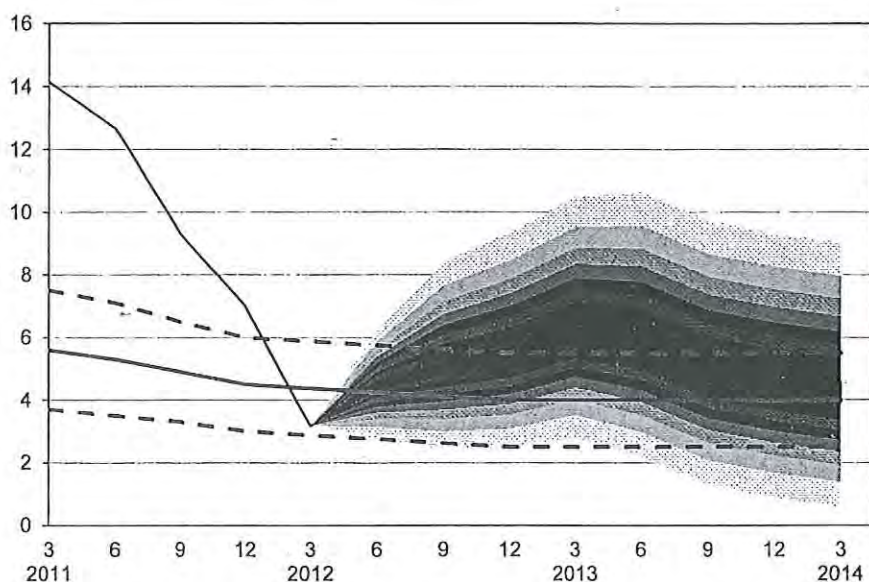
Ipak, do kraja godine i u 2013. očekuje se blagi rast inflacije. Grafikon 4., pre svega pod dejstvom očekivanog rasta regulisanih cena, neizvesnosti nove poljoprivredne sezone, a jednim delom i zbog niske obračunske baze iz trećeg kvartala 2011. godine.

Kretanje kursa dinara je često u fokusu javnosti. Razlog tome pre svega leži u visokom nivou dolarizacije, tj. eurizacije domaće privrede i finansijskog sistema. Obaveze većine transaktora u jednom značajnom iznosu iskazane su u stranoj valuti ili indeksirani za kurs kretanja strane valute. U Srbiji je to posebno naglašeno i naš finansijski sistem spada u red najviše dolarizovanih (eurizovanih) finansijskih sistema u Centralnoj, Istočnoj i Jugoistočnoj Evropi⁸. Otuda, pri ciljanju inflacije, iako se podrazumeva fleksibilnost deviznog kursa, ne može se ignorisati njegovo kretanje u visoko dolarizovanim (ili eurizovanim) ekonomijama zemalja u razvoju⁹ jer može uticati na smanjivanje kreditne sposobnosti dužnika, na slabljenje kapitalizacije banaka i na ugrožavanje finansijske stabilnosti zemlje.

⁸ O kretanju Euroizacije u Centralnoj, Istočnoj i Jugoistočnoj Evropi redovne ankete Centralne banke Austrije OeNB Euro Survey. Posebno videti Videti Stix, H., 2010, "The Euro as a Safe Haven Asset in Central, Eastern and South-Eastern Europe" In: Nowotny, E., P. Mooslechner and D. Ritzberger-Grünwald (eds.). *The Euro and Economic Stability: Focus on Central, Eastern and South-Eastern Europe*, Cheltenham, UK/Northampton, MA: Edward Elgar.

⁹ Videti Mishkin, Frederic S., and Savastano, Miguel A., 2001, "Monetary Policy Strategies for Latin America" *Journal of Development Economics*, October.

Grafikon 4 Srednjoročna projekcija inflacije NBS (međugodišnje stope, u %)



Izvor: NBS

Iako se u javnosti, posebno u nekim dnevnim štampanim medijima, sa dosta pesimizma najavljuje bilo kakva deprecijacija kursa dinara¹⁰, zaboravljamo da je fleksibilnost kursa nužna u režimu ciljanja inflacije, kao i da kretanja kursa dinara bitno ne odstupaju od kretanja drugih valuta u istom režimu monetarne politike (Grafikon 5.). Dosta kritika u vezi kretanja deviznog kursa od početka ove godine upućuju se na račun Narodne banke Srbije iako je fleksibilnost deviznog kursa naše zvanično državno opredeljenje već godinama, jer su se Vlada Republike Srbije i Narodna banka Srbije još 2008. godine saglasile da „Narodna banka Srbije sprovodi režim rukovođeno plivajućeg deviznog kursa, pri čemu se neće utvrđivati ciljevi za devizni kurs.“¹¹ Saglasno tome, i intervencije iz deviznih rezervi sprovode se sa ciljem ograničavanja prekomernih dnevnih oscilacija kursa dinara, radi ograničavanja opasnosti po finansijsku stabilnost i radi održavanja adekvatnog nivoa deviznih rezervi.¹² Iako je u javnosti vladalo medijima podstaknuto mišljenje da je dinar vrlo nestabilan i da je puno izgubio na vrednosti u kratkom roku, realnost je zapravo drugačija. Dinar je od početka godine do maja meseca 2012. oslabio za ukupno 9,3%. Tokom 2011. godine valute drugih zemalja koje su bile u režimu

¹⁰ Što je loše po sebi jer kreira negativna očekivanja i može uticati na rasprostranjeno individualno ponašanje transaktora (prekomerno i bezrazložno „bežanje“ u Evro) koje u masi ne podržava stabilnost sistema i u krajnjoj liniji dovodi do rasta transakcionih troškova, češćih i nešto većih intervencija iz deviznih rezervi i težeg uspostavljanja stabilnosti deviznog tržišta i cena kao bitnih preduslova za dinamičniju ekonomsku aktivnost u zemlji.

¹¹ Sporazum o ciljanju (targetiranju) inflacije između Vlade RS i NBS (usvojen na sednici Vlade RS 19. decembra 2008), Član 5.

¹² Memorandum o ciljanju (targetiranju) inflacije, NBS, Tačka 3.

ciljanja inflacije imali su veće padove u kraćim vremenskim intervalima: Poljska Zlota izgubila je 12,4% od jula do septembra 2011., Mađarska Forinta izgubila je 9,5% od oktobra do decembra 2011, Turska Lira izgubila je 12,5% od juna do avgusta 2011. Dakle, kretanje kursa dinara nije bilo bitno različito od kretanja valuta drugih zemalja koje su zvanično imale monetarnu strategiju ciljanja inflacije.

Grafikon 5. Kretanje kurseva valuta zemalja koje su u režimu ciljanja inflacije (31.12.2010.=100, rast predstavlja apresijaciju).



Izvor NBS

U javnosti se povodom fleksibilnosti deviznog kursa često čuju zagovaranja fiksiranja kursa dinara prema nekoj stranoj valuti kao moguće rešenje za Srbiju. Zaboravljamo, međutim, da su svi pokušaji fiksiranja kursa dinara u našoj zemlji u poslednjih 50 godina propali. Kurs dugoročno mora da odražava stepen ravnoteže u tekućem delu bilansa plaćanja zemlje. Ako privreda nema održive odnose priliva i odliva u tekućem bilansu, fiksiranje kursa, po pravilu, troši više deviznih rezervi. U slučaju nedovoljnosti deviznih rezervi povećava se rizik nagle velike depresijacije kursa uz izbijanje finansisje krize i visok rizik masovnog bankrotstva građana, privrede i banaka, ali (uz visok deo deviznog duga u javnom dugu zemlje) i države u celini prema njenim kreditorima. Svako fiksiranje kursa uz relativno visok deficit tekućeg bilansa povećava verovatnoću povlačenja kapitala iz zemlje jer otklanja gubitke onima koji to

prvi učine tj. dok traju devizne rezerve i koriste se za „odbranu“ neodbranljivog i nerealnog deviznog kursa. Uvođenje ili održavanje fiksnog kursa često mora da podrazumeva spremnost na nominalno smanjivanje plata¹³, ali i veći pad BDP-a¹⁴. Veštačko uvođenje i odbrana fiksnog deviznog kursa u slučaju krize mogu koštati veoma mnogo deviznih rezervi, a da se rezultati u vezi stabilizacije kursa ne samo ne ostvare, već i da naknadna depresijacija bude znatno veća od realno potrebne¹⁵. Takva dramatična promena kursa može proizvesti sveobuhvatnu finansijsku i privrednu krizu sa nenadoknadivim gubicima u ekonomskoj aktivnosti pogođenih zemalja¹⁶.

Dakle, fleksibilni devizni kurs ne samo da je nužan u monetarnoj strategiji ciljanja inflacije, već ima i svoje bitne prednosti za zemlje sa nedostatkom pune eksterne ravnoteže. Od kraja 2011. godine depresijacijski pritisci na dinar poticali su, pre svega, od povećanog trošenja dinarskih sredstava države¹⁷, rasta trgovinskog deficita (delom i zbog većeg uvoza energenata) ali i zbog psiholoških faktora (uzrokovanih pre svega zaustavljanjem aranžmana sa MMFom, odlaskom kompanije US Steel sa domaćeg tržišta i sl.).

Ipak, ocena međunarodne javnosti o makroekonomskoj poziciji i ekonomskoj politici zemlje relativno se popravlja i u odnosu na slične ali razvijenije zemlje; Srbija se kotira relativno dobro. Mereno EMBI¹⁸ indeksom, ocena Srbije od strane međunarodne investicione javnosti povoljnija je od ocene Hrvatske ili Mađarske koje su zemlje sa boljim kreditnim rejtingom. EMBI indeks za Srbiju je 549 baznih poena što je niže tj. bolje u odnosu na Hrvatsku (590 baznih poena) i Mađarsku (612 baznih poena). Status kandidata za EU, aranžman sa MMF-om, solidne i održive ekonomske politike vodiće ne samo održavanju i jačanju kreditnog rejtinga zemlje, već i

¹³ Vlada Estonije u trenutku izbijanja finansijske krize donela je odluku o smanjivanju plata zaposlenima u javnom sektoru za 20% u cilju očuvanja režima fiksnog deviznog kursa prema evru.

¹⁴ Izbijanje krize izazvalo je visoki pad ekonomske aktivnosti u 2009. u nekim zemljama sa fiksnim deviznim kursom: Litvanija -14,8%, Letonija -17,7%, Estonija -14,3%.

¹⁵ O prekomernoj promeni deviznog kursa u slučaju krize (overshooting) videti: Dornbusch, R., 1976. „Expectations and Exchange Rate Dynamics”. *Journal of Political Economy* 84, 1161-1176 i Rogoff, K., 2002., „Dornbusch's Overshooting Model after Twenty-Five Years”. *IMF Working Paper* 02/39.

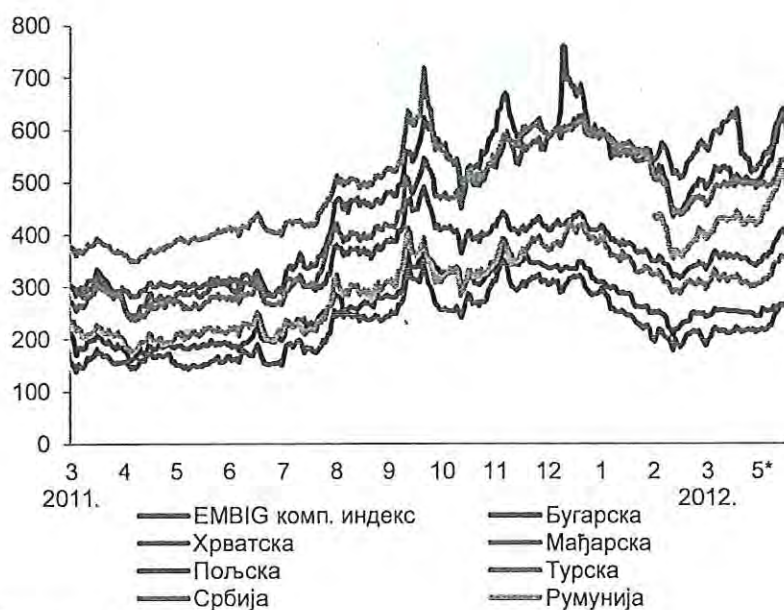
¹⁶ Npr. U Argentini krajem 2001. godine režim valutnog odbora doveo je do krize koja je potrošila više od 50% deviznih rezervi uz lokalne kamatne stope koje su išle i do 60%, da bi januara 2002 zemlja prešla na fluktuirajući devizni kurs uz kumulativnu devalvaciju do sredine 2001 od 265%. Slično je bilo u Meksiku 1995. Kada su devizne rezerve pale sa 29 mlrd USD na 7 mlrd USD za manje od godinu dana uz pad vrednosti valute od oko 50%.

¹⁷ Dobijenih od prodaje deviza sa deviznih računa države, čime se de facto vrši monetarna ekspanzija jer država svoje devize prodaje NBS a ne na međubankarskom deviznom tržištu, čime se kreira nova likvidnost.

¹⁸ Emerging Markets Bond Index – daje spred ili riziko premiju u baznim poenima za zemlje u razvoju u celini ali i za pojedine zemlje u odnosu na najkvalitetnije državne papire u datoj valuti. Npr. EMBI Srbija od 549 baznih poena znači da je stopa prinosa na srednjoročne državne obveznice Srbije u USD 5,49% veća u odnosu na stopu prinosa na slične obveznice SAD. To je i indikacija kolika bi mogla biti razlika u uslovima finansiranja u slučaju emitovanja novih obveznica na međunarodnom tržištu.

jeftinijem finansiranju javnog duga zemlje na međunarodnom tržištu o čemu EMBI daje neposrednu indicaciju.

Grafikon 6. EMBI indeks (u baznim poenima)



* Закључно са 21. мајем.

Izvor: NBS

Činjenica da je visoko učešće EUR denominirane ili EUR indeksirane aktive (Grafikon 7.) i pasive prisutno u bankarskom sistemu zemlje i da je najveći broj kredita stanovništvu i privredi, posebno srednjoročnih i dugoročnih, u deviznom znaku ili indeksiran za kretanje kursa, predstavlja ozbiljan izazov za finansijsku stabilnost i monetarnu politiku u našoj zemlji. Zbog visokog nivoa dolarizacije (eurizacije) i potencijala da se tržišni rizik promene deviznog kursa vrati kroz bitan i rasprostranjen kreditni rizik tj. smanjenu sposobnost izmirivanja obaveza dužnika prema bankama, regulativa bankarskog sistema mora biti konzervativnija (tj. skuplja) radi očuvanja finansijske stabilnosti. Istovremeno, dolarizacija (eurizacija) bitno utiče i na monetarnu politiku.

Grafikon 7. Učešće kredita u deviznom znaku u ukupnim kreditima u mlrd RSD (ls) i u % (ds)



Izvor NBS

Naime, monetarna politika je manje efikasna i precizna u uslovima izražene dolarizacije (eurizacije). Ovde ima nekoliko bitnih aspekata.

Prvo. Svako podizanje referentne kamatne stope trebalo bi da podiže cenu kredita i smanjuje agregatnu tražnju. Međutim, podizanje referentne kamatne stope od strane NBS utiče samo na cenu dinarskih finansijskih instrumenata i time samo na agregatnu tražnju koja se finansira dinarima, dakle ne i na dominantni deo kreditima podstaknute agregatne tražnja koja se finansira deviznim ili devizno indeksiranim kreditima. Uz to, rast kamatne stope trebalo bi da stimuliše štednju i smanjuje potrošnju. Međutim, rastom referentne kamatne stope NBS stimuliše se dodatna štednja samo u dinarima, ali ne i u devizama što je dominantni oblik štednje stanovništva¹⁹. Otuda kretanje referentne kamatne stope ima mnogo manji uticaj na agregatnu tražnju i čini nužnim da referentna kamatna stopa bude viša da bi ostvarila potreban uticaj, ali i da se više menja tj. da bude nestabilnija.

Drugo. Činjenica da je dominantan deo kredita denominiran ili indeksiran za Evro, čini da referentna kamatna stopa ECB i kretanja na EURIBOR tržištu praktično više utiču na cenu kredita u zemlji od kretanja referentne kamatne stope NBS.

Treće. Visoka dolarizacija (eurizacija) povećava uticaj kretanja deviznog kursa na nivo cena²⁰. Time se potencijalno može smanjiti prostor za relaksaciju monetarne politike koja cilja inflaciju jer manji kamatni diferencijal između RSD i EUR može da izazove povlačenje iz RSD u EUR uz depresijaciju kursa i, posledično, višu inflaciju.

¹⁹ Oko 92% štednje građana je devizna štednja. Videti *Izveštaj o finansijskoj stabilnosti NBS 2012*.

²⁰ Jer su i mnoga plaćanja u zemlji indeksirana za kretanje kursa (poslovni prostor, stambeni prostor, plate, repromaterijali....)

Četvrto. Podizanje referentne kamatne stope NBS, bez promene uslova finansiranja u Evrima, utiče na rast kamatnog diferencijala između RSD i EUR i daje dodatni podsticaj uzimanju EUR kredita tj. eurizaciji što je u suprotnostima sa interesima stabilnosti finansijskog sistema²¹.

Peto. Podizanje referentne kamatne stope NBS, bez promene uslova finansiranja u Evrima, utiče na rast kamatnog diferencijala između RSD i EUR i daje dodatni podsticaj za uvoz vrućeg kratkoročnog i nestabilnog kapitala (tzv. *Carry trade*) koji na ulasku može izazvati neopravdane apresijacije, a na izlasku neopravdane depresijacijske pritiske na domaću valutu i time podići nestabilnost finansijskog sistema.

Šesto. U slučaju rasta očekivanja o depresijaciji domaće valute, visoka dolarizacija (eurizacija) može izazvati nagli i preterani prelazak šoroke baze transaktora iz domaće valute u inostranu (bežanje u sigurnost), što može ne samo uticati da se depresijacija dogodi i bude veća, već i da se, u dolarizovanim (eurizovanim) ekonomijama u većoj meri, prelije u višu inflaciju. Cene jednom podignute zbog depresijacije kursa, po pravilu, ne vraćaju se na prethodni nivo.

Ukratko, za uspešno sprovođenje ciljanja inflacije i stabilizaciju privrednog sistema zemlje nužna je stroga fiskalna disciplina tj. uredan budžet sa niskim deficitom i niskim održivim javnim dugom, rast učešća dinarskih finansijskih instrumenata u finansijskom sistemu zemlje²² i stabilizacija kretanja cena hrane na domaćem tržištu s obzirom na naglašen uticaj ovih cena na ukupnu domaću inflaciju

²¹ Kao odgovor na ovaj problem NBS je u poslednje dve godine dovela u red instrument obavezne rezerve uz pomoć koga može promenom nivoa i strukture devizne obavezne rezerve uticati na cenu EUR kredita. Time je otvorena mogućnost da se paralelno sa promenama referentne kamatne stope kojom se vrši uticaj na cenu RSD kredita, promenom nivoa i strukture devizne obavezne rezerve pokuša da napravi odgovarajući uticaj i na cenu EUR kredita.

²² U poslednje dve godine NBS promoviše strategiju „Dinarizacije“ koja se zasniva na niskoj i predvidivoj inflaciji, razvoju dinarskog tržišta obveznica i većem korišćenju instrumenata zaštite od deviznog rizika (hedžing).

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Globalna finansijska kriza i Srbija – pouke i mere –

Abstract: Finansijska kriza u svetu na pragu je da izazove duboku globalnu recesiju. Uzroci krize leže u nedovoljnoj regulaciji finansijskog tržišta, pre svega u SAD. Ipak, uticaj ove krize može ozbiljno uticati na Srbiju. U novonastalim nestabilnim uslovima najranjiviji je devizni kurs. Zbog vezivanja naše ekonomske politike za stabilnost deviznog kursa, danas smo u protivrečnoj situaciji da donosimo restriktivne mere u uslovima očekivane recesije. Predložene mere u ovom radu bi trebalo da podignu poverenje u finansijski sistem, podstaknu pozitivno ponašanje (štednju i investiranje) i pomere skretnicu tokova novca sa potrošnje ka investicijama i unutar investicija ka investicijama u izvoznu industriju koja otvara nova radna mesta.

Danas prolazimo kroz period za koji se, po svoj prilici, može očekivati da će sa istorijske distance predstavljati jednu (u nizu) prekretnicu u razvoju tržišnog sistema privređivanja. Kriza u kojoj se nalazi svet je otpočela u finansijskoj sferi, vrlo brzo se proširila na realnu privredu i zahvatila je, gotovo bez izuzetka, čitav svet. Globalizacija je pokazala da može da posluži za gotovo istovremeno (*real-time*) širenje i globalizaciju finansijske krize i privredne recesije. Globalizacija je pokazala i da može da posluži za to da će se šteta plaćati globalno iako su „krivci“ (i oni koji su imali koristi od postupaka koji su generisali krizu) vrlo „lokalni“. Globalizacija je još jednom podvukla da postojeća institucionalna i regulatorna struktura nacionalnih država i međunarodnih institucija nije dovoljna da se promptno i efikasno reaguje na izazove globalnog kapitalizma.

1. Anatomija krize

Aktuelna kriza, kao i sve druge dosadašnje krize, nastala je usled nedovoljne regulisanosti pojedinih bitnih funkcija u finansijskom sistemu SAD i u svetu, ali i velikim

delom i iz psiholoških razloga. O postojanju i prirodi kriza zna se dosta. Još je Adam Smith govorio o „prekomernom trgovanju“ („*overtrading*“) kao uzročniku nestabilnosti na tržištu. Model nestabilnosti u tržišnoj privredi razvijali su i klasici poput John Stuart Mill-a, Alfred Marshall-a i Knut Wicksell-a. Klasični model nestabilnosti kreditnog sistema, tj. deflacije dugova, razvio je Irving Fisher¹, a važne postavke u funkcionisanju kreditiranja, novca i finansijskog sistema postavio je još Schumpeter². Model samoodržanja i podsticanja neravnoteže razvio je Kindleberger³, a uticaj zavisnosti profita od strukture agregatne tražnje – Kalecki⁴. Ipak, danas se u kontekstu aktuelne krize najčešće, rekao bih s pravom, spominje Hyman P. Minsky⁵ koji još 60-ih godina razvio poznati model generisanja finansijske krize⁶. Minsky u svojim radovima razvija tezu da finansijska kriza prolazi kroz nekoliko tipičnih faza:

- Iskorak (*displacement*), koji predstavlja reakciju na eksternu promenu zbog koje investitori postaju frenetični i vrlo spremni da investiraju (pojava interneta, izbijanje rata, novi izum, jeftin novac i priliv stranih investicija i sl.).
- Ekspanzija (*boom*), nastaje zbog uvećanja kreditiranja i ekspanzije novca uz odobravanje kredita sve slabijim dužnicima. Često se u ekspanziji kreiraju i novi instrumenti (*junk* obveznice, sekjuritizacija hipotekarnih kredita i sl.).

¹ Fisher, Irving, 1933, "The Debt Deflation Theory of Great Depressions", *Econometrica*, 1, s. 337-357.

² Schumpeter, Joseph A., 1934, *Theory of Economic Development*, Harvard University Press, Cambridge, Mass.

³ Kindleberger, Charles, 1978, *Manias, Panics and Crashes*, Basic Books, New York.

⁴ Kalecki, Michal, 1965, *Theory of Economic Dynamics*, Allen and Unwin, London. Kalecki je na temu privrednih ciklusa objavio veći broj radova počevši od 1933 (*The Essay on The Theory of the Business Cycle*).

⁵ Hyman P. Minsky (1919-1996), doktorirao na Harvardu i bio profesor na Braunu (Brown University), Berkliu (UC at Berkeley) i Vašington univerzitetu (Washington University, St. Louis). Godinama je bio i direktor banke (Mark Twain Bank, St. Louis). Njegovo polje rada se uglavnom odnosilo na stabilnost bankarskog sistema i generisanje finansijskih kriza, posebno u novim uslovima, kako ih je Minsky nazivao uslovima „kapitalizma novčanih menadžera“ (*money manager capitalism*). Videti Wray, L.R., 2008, "Financial Markets Meltdown: What can we learn from Minsky?", Public Policy Brief No.94., Annandale-on-Hudson, N.Y., The Levy Economics Institute, April.

⁶ Videti Minsky, Hyman P., 1974, "The Modeling of Instability: An Introduction", *Modelling and Simulation* i Minsky, Hyman P., 1975, *John Maynard Keynes*, Columbia University Press, New York.

- Euforija (*euphoria*), ekspanzija vodi ka euforiji u kojoj vlada pogrešno sagledavanje rizika i očekivanih prinosa, sledstveno i pogrešno vrednovanje finansijskih instrumenata.
- Izlazak obaveštenih (*profit taking*), se po pravilu dešava na „vrhu tržišta“ kada dobro informisani investitori povlače svoje uloge što izaziva zaustavljanje rasta cena i vodi ka sledećoj sekvenci u kretanju krize.
- Panika i krah (*panic*), kada dolazi do deflacije vrednosti kreditnih instrumenata, do masovnog povlačenja u gotovinu (keš) i dramatičnog pada vrednosti finansijskih instrumenata ispod njihove realne ravnotežne vrednosti.

Gotovo istu strukturu faza krize navodi i Kindleberger⁷: eksterni šok, bum, spekulacije, psihološko širenje u zemlji i inostranstvu, vrh tržišta i bekstvo u likvidnost uz paniku i krah.

Ekspanzija i euforija, kao i panika, hrane se same sobom. One se podstiču do krajnje nerazumnih novoa (naviše i naniže). U prvom slučaju sve veća grupa ljudi želi da se obogati bez istinskog razumevanja procesa u koji se uključuju. Dok god cene aktiva rastu svi i dalje ulažu nezavisno od toga što su cene već iznad ravnotežnog nivoa. Očekivanja o rastu cena podstiču dalje ulaganje koja dovode do ostvarenja očekivanja o podizanju cena, i razvija se ono što Mishkin⁸ (i neki drugi teoretičari) naziva racionalni mehurovi (*rational bubbles*), koji su racionalni dok god se ne očekuje krah cena, tj. dok god investitori kupuju i dalje zbog očekivanja da će cene rasti i dalje (čak iako znaju da su postojeće cene iznad ravnotežnih).

Minsky⁹, međutim, pravi jednu suptilniju analizu učesnika u ekspanziji koji dovode do euforije i potpuno pogrešnog vrednovanja finansijske aktive. Naime, po njemu, postoje:

⁷ Kindleberger, Charles P. i Robert Z. Aliber, 2005, *Manias, Panics, and Crashes: A History of Financial Crises*, Fifth Edition, John Wiley & Sons, New York.

⁸ Mishkin, Frederic S. i S.G. Eakins, 2000, *Financial Markets and institutions*, Addison Weesley Longman, Inc. Reading, MA. s. 175.

⁹ Videti npr. Minsky, Hyman P. 1993, "The Financial Instability Hypothesis", u *Handbook of Radical Political Economy*, Philip Arestis and Malcolm Sawyer (eds.), Edward Elgar, Aldershot.

- hedž finansijske jedinice, koje mogu da ispunjavaju svoje obaveze iz svojih prihoda;
- spekulativne finansijske jedinice, koje mogu da plaćaju svoje tekuće obaveze ali finansiranje glavnice duga moraju da prenose na naredne periode („roll over“),
- „ponzi“ finansijske jedinice¹⁰, kod kojih njihovi prihodi nisu dovoljni ni za finansiranje tekućih obaveza, već moraju da prodaju aktivu ili da se dodatno zadužuju kako bi finansirali svoje tekuće obaveze.

Minsky je pokazao da privrede sa dominantnim hedž finansijskim jedinicama mogu da budu stabilne i da teže ekvilibrijumu. Nasuprot tome, privrede sa većim učešćem spekulativnih i „ponzi“ finansijskih jedinica imaju veću predodređenost da postaju sistemi za pojačavanje finansijskih i privrednih devijacija. Minsky tvrdi da za privredu postoje finansijski sistemi pod kojima je ona stabilna i finansijski režimi pod kojima ona nije stabilna, te da posle dužih perioda stabilnosti u kojima dominiraju hedž finansijske jedinice, privrede spontano prelaze ka strukturi gde dominiraju spekulativne i „ponzi“ finansijske jedinice.

2. Da li je aktuelna finansijska kriza „Minsky kriza“?

Sve faze krize, po Minsky modelu, lako se uočavaju i kod aktuelne krize.

Iskorak (*displacement*) se desio kada su za vreme Alena Greenspan-a kamatne stope pale na istorijski minimum uz istovremeno priticanje kapitala iz Kine. Investiranje je postalo jeftino.

Ekspanzija (*boom*) se desila kada su zbog jeftinih kredita nekretnine počele da beleže kontinuiran i značajan cenovni rast.

¹⁰ Minsky ih je tako nazvao po Charles Ponzi-ju koji je početkom 20. veka bio poznat po svojoj finansijskoj prevari u kojoj je obećavao izuzetno visoke prinose novim investitorima sa čijim je parama plaćao svoje prethodno dospеле obaveze. Vrlo slično piramidalnim šemama i iskustvu u našoj zemlji sa kvazi bankama poput Dafiment banke i Jugoskandika početkom 90-ih godina.

Euforija (*euphoria*) je zahvatila tržište nekretnina u celini. Pojedinci su uzimali nove kredite i kupovali kuće i stanove koji im nisu trebali za stanovanje već za rentiranja ili dalju prodaju po očekivanoj višoj ceni (masovna kupovina stanova i kuća u Kaliforniji i na Floridi). I banke su u euforiji i odobravaju kredite onima koji zaista nisu dovoljno sposobni da redovno izmiruju svoje obaveze u budućnosti (*sub-prime mortgages*). Dolazi do naglašenog rasta spekulativnih i „ponzi“ jedinica u sistemu (domaćinstva sa prevelikim kreditima, masovna sekjuritizacija, nekontrolisano izdavanje kredit difolt svopova).

Izlazak obaveštenih (*profit taking*) se dominantno dešava kroz sekjuritizaciju¹¹ kroz koju se glavni učesnici (komercijalne i investicione banke) oslobađaju najvećeg dela „loših“ kredita i emituju ih u formi hartija od vrednosti, najčešće hipotekarnih založnica (*mortgage backed securities - MBS*)¹² ili kolateralizovanih dugovnih obligacija (*collateralized debt obligations - CDO*)¹³. Ove hartije, pre svega zbog dobrog rejtinga, prodaju se po nerealno visokim cenama i odlaze u „etar“ međunarodnog finansijskog tržišta. Time potencijal krize direktno dobija globalni karakter jer se „loša aktiva“ kreirana u SAD sada nalazi u bilansima finansijskih institucija u različitim delovima sveta. Ova „tempirana bomba“ je čekala deflaciju kredita da bi bila aktivirana.

Panika i krah (*panic*) počinju zaustavljanjem rasta cena nekretnina (kolateralala za odobrene kredite) sredinom 2007. Nove kupovine se zaustavljaju. Nakon toga počinju da se javljaju prvi difolti dužnika i prinudne prodaje kolateralala (stanova i kuća). Cene

¹¹ Sekjuritizacija predstavlja izmeštanje aktive (npr. hipotekarnih kredita) finansijske institucije (npr. banke) u posebno pravno lice (*special purpose vehicle - SPV*) koje emituje svoje hartije od vrednosti (npr. hipotekarne založnice) zainteresovanim investitorima. Sa prihodima od prodaje svojih hartija, SPV plaća banci preuzete hipotekarne kredite. Banka tako više nema prodane kredite u svom bilansu već keš od njihove prodaje. SPV u svom bilansu ima samo kredite u aktivu i emitovane hipotekarne založnice u pasivi. O sekjuritizaciji videti npr. Šoškić, Dejan, 2002, „Sekuritizacija: novo poglavlje u finansijama, *Ekonomika preduzeća*, decembar 2002.

¹² O hipotekarnim založnicama videti npr. Urošević, B. i D. Šoškić, 2002, „Sekundarna hipotekarna tržišta“, *Ekonomski Anali*, br. 151-152, oktobar 2001- mart 2002. i Šoškić D. i B. Urošević, 2002, „Hipotekarne založnice: mogućnost, potreba, nužnost“, uvodni referat za savetovane NDEJ: Finansijska tržišta, finansijske institucije i tranzicija, Beograd 4-5 jun 2002, *Ekonomski anali*, Tematski broj, jun 2002.

¹³ O kolateralizovanim dugovnim obligacijama (*Collateralized debt obligations*) videti npr. Hull, John C., 2006, *Options, Futures, and other derivatives*, Sixth Edition, Pearson Prentice Hall, New Jersey, glava 21, s. 516.

nekretnina počinju da padaju i negativni lančani efekat nezadrživo vodi daljem padu cena. Sa padom cena kolaterala dramatično raste učešće spekulativnih i „ponzi“ jedinica (pre svega prezaduženih pojedinaca koji, u slučaju pada vrednosti kolaterala, ne mogu da izmiruju svoje obaveze po preuzetim hipotekarnim kreditima) koje u slučaju potrebe izmirivanja obaveza moraju da prodaju aktivu koju poseduju što vodi daljem padu cena i rastu učešća „ponzi“ jedinica. Krah tržišta nekretnina je neminovan.

Krah tržišta nekretnina, direktno je izazvao pad vrednosti kredita i kreditnih instrumenata (pre svega hipotekarnih) tj. deflaciju kredita. To je, rekli smo, iniciralo „tempiranu bombu“ u bilansima finansijskih institucija širom sveta. Deflacija kredita je izazvala mnogo veće negativne posledice, nego bi to inače bio slučaj, zbog emitovanja tzv. kredit difolt svopova (*Credit default swaps* - CDS)¹⁴ – posebnih instrumenata kojima njihov emitent od njihovog kupca preuzima kreditni rizik treće strane. Na osnovu tih instrumenata su često hartije iz sekjuritizacije dobijale viši rejting i prodavane po znatno višim cenama u odnosu na njihovu realnu vrednost, što je stvaralo fikciju vrednosti u bilansima finansijskih institucija koje su kupovale hartije iz sekjuritizacije. S druge strane, CDS su bili emitovani bez prave kontrole i ne samo da institucije koje su ih emitovale realno nisu mogle da ispune svoje obaveze koje nastaju po CDSu (u slučaju većeg broja difolta) već su kao vanbilansne obaveze generisali prihode bez jasno vidljivih obaveza u bilansima tih institucija. Drugim rečima, sve je izgledalo dobro dok nisu krenuli difolti. Njihovom inicijacijom institucije emitenti CDSa¹⁵ su se odjednom našli u poziciji da moraju da izmire obaveze koje objektivno ne mogu, što ih je munjevito guralo ka bankrotstvu¹⁶. Njihova nesposobnost da izmiruju obaveze po CDSu, direktno je gurala ka bankrotstvu kupce njihovih CDSa, kao i one koji su kupili CDS-e koji su pokrivali potencijalne gubitke od nesposobnosti izmirivanja obaveza emitenata CDS-a. Opšta panika i strah zavladali su na tržištu bilo kakvih pozajmica među finansijskim

¹⁴ O kredit difolt svopovima videti npr. Hull, John C., 2006, *Options, Futures, and other derivatives*, Sixth Edition, Pearson Prentice Hall, New Jersey, glava 21, s. 507.

¹⁵ Emitenti CDSa su bili i specijalizovani garantori kreditnog rizika (kao AIG) ali i hedž fondovi, investicione banke i druge finansijske institucije.

¹⁶ Investiciona banka Lehman Brothers je sama bila vrlo značajan trgovac sa CDS instrumentima ali i na nju su drugi ispisivali CDS. Neposredno pre bankrotstva na Lehman Brothers bilo je emitovano CDS-a oko \$ 400 milijardi obračunske (notional) vrednosti. Posle bankrotstva 1 dolar potraživanja prema Lehman Brothers-u je vredeo ispod 10 centi (videti: www.ft.com).

institucijama jer niko nije zaista znao kakve sve obaveze ima i u kakvom je realnom finansijskom stanju potencijalna druga ugovorna strana. Finansiranje je stalo.

3. Osnovni generatori nekontrolisanih rizika

Dominantno učešće, po terminologiji Minsky-og, spekulativnih i „ponzi“ jedinica u savremenoj terminologiji se može okarakterisati kao rasprostranjeni finansijski leveridž. Upravo u rasprostranjenom finansijskom leveridžu, po oceni MMF-a¹⁷, i leži osnovni razlog nastanka sadašnje finansijske krize. Bez regulative i supervizije koja kontroliše finansijske institucije u smisla da obuzdava i sprečava prekomerni finansijski leveridž, tj. rast učešća spekulativnih i „ponzi“ finansijskih učesnika u sistemu, nije moguće održavati stabilnost sistema i potreban nivo poverenja. Bez poverenja učesnika u finansijski sistem, opšte je poznato, nije moguće obezbediti njegovo nesmetano funkcionisanje. Krah finansijskog sistema, kroz deflaciju (gubitak) vrednosti dugovnih instrumentata i rast rizika druge ugovorne strane (*counterparty risk*), neizostavno generiše recesiju i u realnom sektoru.

Ako se pažljivo analizira kontekst aktuelne krize, može se videti da je ona nastala i zbog nekoliko regulatornih „faulova“ tj. nedostataka u regulativnom okviru u SAD koji su se pokazali kao osnovni generatori nekontrolisanih rizika.

3.1. Faul I – Originacija i „podizvođači“

Odobranje kredita u SAD je često karakterisano netipičnim ponašanjem banaka u tom procesu. Pomenimo dve potencijalno opasne prakse.

Prva je odvajanje izdavanja kredita (originacije), od vlasništva nad kreditom i od servisiranja po osnovu kredita (primanje kreditnih otplata i njihovo prosleđivanje vlasnicima kredita). Ove tri funkcije su tradicionalno (i dalje jesu u evropskom

¹⁷ Videti Global Financial Stability Report, 2008, Financial Stress and Deleveraging: Macrofinancial Implications and Policy, IMF, World Economic and Financial Surveys, October 2008, Washington DC.

bankarstvu) objedinjene i obavljaju ih samo banke. U SAD¹⁸, banke su često u prilici da odobre kredit, po tom osnovu naplate određenu proviziju i nakon toga sekjuritizuju takav kredit, tj. zajedno sa drugim sličnim kreditima prenesu ga na specijalno pravno lice (SPV) koje emituje hipotekarne založnice. Nakon toga, do dospeća kredita, banka nastavlja, po pravilu, da obavlja funkciju servisiranja, tj. naplate kreditnih rata i prosleđivanja tih prihoda SPV-u. Na ovaj način, banka se oslobađa potencijalno rizičnih kredita i podložna je moralnom hazardu, tj. dodeljivanju kredita bez strogih kriterijuma, što unosi nekontrolisani kreditni rizik u finansijski sistem.

Druga praksa ima slične posledice. Naime, banke mogu da angažuju posrednike koji obavljaju originaciju kredita (tzv. brokeri hipotekarnih kredita – *mortgage brokers*) za račun banaka. Ove institucije nisu finansijske institucije, niti su pod dejstvom supervizije regulatora finansijskog sistema i imaju nepovoljnu motivacionu strukturu jer naplaćuju provizije po odobrenom kreditu, a ne snose konsekvence zbog potencijalnih budućih „loših“ dužnika. Brokeri hipotekarnih kredita su, sledstveno, takođe podložni moralnom hazardu tj. situaciji da masovno dodeljuju kredite bez strogih kriterijuma. I ova praksa unosi nekontrolisani kreditni rizik u finansijski sistem.

Obe prakse su, u velikoj meri, odgovorne za inicijalno kreiranje loše aktive sa nedopustivo visokim kreditnim rizikom.

3.2. Faul II – Sekjuritizacija

Samo kreiranje loše aktive u finansijskom sistemu ne mora da generiše probleme ako se pravilno proceni rizik te imovine (hipotekarnih kredita), ako se vrše odgovarajuća rezervisanja za slučaj gubitaka i ako se proces drži pod kontrolom. Da su odobreni krediti trajno ostali u bilansima banaka, one bi snosile odgovarajuće posledice. Morale bi da drže odgovarajuće rezerve i, zbog većeg rizika, morale bi da uvećavaju svoj kapital kao

¹⁸ Videti Korell, Mark L., 2000, "The Workings of Private Mortgage Bankers and Securitization Conduits", u *Securitization*, MIT Press paperback edition.

osnovnu garanciju za slučaj gubitaka. Da su banke morale da zadrže loše kredite u svom bilansu do njihovog dospeća, verovatno ne bi ni dopustile stvaranje tih „loših“ kredita, tj. starale bi se da kredite dobiju samo oni koji ih zaista redovno mogu servisirati. Ovakvo, oslanjajući se na mogućnost da se „loši“ krediti kroz sekjuritizaciju prenesu na nekog drugog, banke su dopuštale ovakvu pogubnu praksu.

Ali zaustavimo se malo više na sekjuritizaciji¹⁹. Tradicionalno, ona je služila kao sredstvo da se obezbedi likvidnost nelikvidnoj imovini. Pretvorila se, međutim, u sredstvo rasprostranjivanja hartija od vrednosti emitovanih po osnovu dubiozne imovine globalnim investitorima koji, u krajnjoj instanci, nisu zapravo ni znali koliko je uistinu rizično to što kupuju.

Ovo, nažalost, nije sve. Naime, sekjuritizacija omogućava da čim se prodaju krediti od strane banke SPV-u, banka se oslobađa obaveze rezervisanja svojih sredstava po osnovu odobrenih kredita i uvećavanja kapitala banke proporcionalno rizičnosti odobrenih kredita. Formalno, bilans banke je „čist“. Dakle, mehanizmi koji su ugrađeni u tradicionalni bankarski sistem sa ciljem da kontrolišu izlaganje rizicima, sa sekjuritizacijom više „ne rade“. Uz to, mehanizam ograničavanja ukupnih kreditnih aktivnosti (obavezna rezerva), takođe više „ne radi“ jer se sa istim iznosom obaveznih rezervi sekjuritizacijom može neograničeno i nekontrolisano generisati kreditna aktivnost (jednom odobreni krediti se prodaju i od prikupljenog novca se izdaju novi krediti, koji se opet prodaju i td.). Ova se karakteristika sekjuritizacije u literaturi ponekad naziva finansijsko premošćavanje (*bridge financing*)²⁰. Dakle, sekjuritizacija, paralizuje klasične mere odbrane bankarskog sistema i omogućava da se krediti rizičniji od prihvatljivog nivoa mogu emitovati bez adekvatnih ograničenja i kontrole regulatornih tela.

3.3. Faul III - Liberalizacija

¹⁹ Videti Phillips, Susan M., 2000, "The Place of Securitization in the Financial System: Implications for Banking and Monetary Policy", u *Securitization*, MIT Press paperback edition.

²⁰ Videti npr. Minsky, Hyman P., 2008, "Securitization", *Policy Note*, The Levy Economics Institute of Bard College, s. 3 (priredio za štampu i napisao predgovor: L.Randall Wray).

Izlazak kredita putem sekjuritizacije iz bankarskog sistema u sistem hartija od vrednosti je istovremeno i izlazak iz solidno uređenog sistema kakav je bankarski u nedovoljno uređen sistem hartija od vrednosti gde „inovacije“ uvek prestižu regulaciju i gde postoje jaki pritisci da se pod izgovorom „liberalizacije“ ostave potencijalno opasne prakse bez regulacije i supervizije²¹. Tako je moguće da se potencijalno pogubne poslovne prakse „provuku“ nezapaženo dugo vremena iako kreiraju vrlo ozbiljne javne rizike. U postojećoj krizi, nedovoljno regulacije i supervizije je bilo u oblasti osiguranja kreditnog rizika²² (*monoline insurers* i CDS), SPV i rejting agencija.

Osiguranje kreditnog rizika u SAD institucionalno su obavljale specijalizovane osiguravajuće kompanije²³ (*monoline insurers*) bez jedinstvene nacionalne regulacije i supervizije (njih su regulisali zakoni na nivou federalnih jedinica i, otuda, različito u različitim delovima zemlje). Uz to, njihove filijale u inostranstvu, de facto, su poslovale izvan organizovane regulacije i supervizije. Dodatni problem je što su instrumenti za osiguranje od kreditnog rizika treće strane – CDS bili bez ikakve ozbiljne regulacije. Naime, Alan Greenspan je godinama odbijao potrebu regulisanja kredit difolt svopova (CDS) iako je tržište ovih derivatnih instrumenata u međuvremenu naraslo na obračunsku vrednost (*notional amount*) u iznosu od \$ 58.000 milijardi²⁴. Samo pozicije banaka u CDS-ima su bile pod supervizijom. Međutim, ogroman deo CDS-a je bio emitovan od strane investicionih banaka i hedž fondova koje niko u SAD nije kontrolisao u ovoj aktivnosti.

U proces sekjuritizacije, često su bili uključeni SPV-i registrovani van jurisdikcije SAD, po pravilu, u of šor zonama u karipskom arhipelagu. Takva praksa je opravdavana potrebom izbegavanja dvostrukog oporezivanja, što je važno za efikasno obavljanje

²¹ Tako je bilo sa elementima procesa kako sekjuritizacije tako i osiguranja kreditnog rizika.

²² Najveći osigraivaoc kreditnog rizika u svetu (kroz direktno garantovanje i kroz emitovanje CDS) bio je AIG, koji je bio na rubu bankrotstva kada mu je priskočila u pomoć vlada SAD sa finansijskom injekcijom od preko \$85 milijardi.

²³ Monoline insurance kompanije su institucije novijeg datuma. Prvi put su se javile tek 70-ih godina u SAD. Dve su najveće institucije ovog tipa u SAD: Ambac Financial Group Inc., osnovana 1971. godine i MBIA Inc. osnovana 1973. godine.

²⁴ Videti Bank for International Settlements, 2008, „OTC derivatives market activity in the second half of 2007“, Monetary and Economic Department, BIS, Basel, s.5. www.bis.org

sekjuritizacije, ali je sporedan efekat bio vrlo loš u smislu da je uvid u bilansne pozicije SPV-a bio otežan. Rejting agencije²⁵ su često strukturirale imovinu SPVa na način da se zadovolje kriterijumi modela ocene kreditnog rizika radi dobijanja visokog rejtinga. Takođe, prilikom dodatnog osiguranja kreditnog rizika, preuzimale su rizik davaoca osiguranja (po pravilu AAA) bez dovoljno realne analize sposobnosti izmirivanja obaveza od strana davaoca osiguranja. Obe prakse rejting agencija za posledicu su imale davanje većeg kreditnog rejtinga u odnosu na realan, što je unelo bitnu distorziju u vrednovanje emitovanih hartija od vrednosti. U raspletu događaja u ovoj krizi, rejting agencije još uvek ne snose bilo kakvu odgovornost iako su njihove prakse veoma doprinele kreiranju uslova za nastanak krize.

4. Globalna finansijska kriza i recesija.

Iako među njima postoje sličnosti i koegzistencija, finansijska kriza i recesija ne moraju ići „ruku pod ruku“. Berzanski krah iz oktobra 1987. je dobar primer za ovu tezu. I u postojećoj krizi meseci usporavanja ekonomske aktivnosti i pada vrednosti na tržištu nekretnina prethodili su bankrotstvu banke Lehman Brothers i panici na finansijskom tržištu. Generalno, moglo bi se reći da uticaj finansijske krize na realnu ekonomiju zavisi od rasprostranjenosti, dubine i dužine finansijske nestabilnosti ali i od odgovora ekonomske politike i državne regulative. Svaki oporavak iz finansijske krize oslanja se na ponovnoj uspostavi poverenja u finansijski sistem i taj pokušaj uspostavljanja poverenja nalazi se u osnovi većine preduzetih mera širom sveta.

Odgovori država širom sveta na izazov finansijske krize bili su uglavnom u domenu izgradnje poverenja i povećanja likvidnosti.

Mere izgradnje poverenja, po pravilu, uključuju:

²⁵ O poslovanju i značaju kreditnih rejting agencija za razvoj tržišta HoV videti: *Report of The Activities of Credit Rating Agencies*, 2003, The Technical Committee of the International Organization of Securities Commissions, IOSCO, September. O kreditnoj analizi i rejtingu moguće je konsultovati brojnu literaturu. Osnovne postavke mogu se naći npr. u Frank J. Fabozzi, 2004, *Fixed Income Analyses*, CFA Institute, Glava 15. Za detalje više videti u Arnaud de Servigny and Olivier Renault, 2004, *Measuring and Managing Credit Risk*, McGraw Hill, New York.

- povećanje osiguranja depozita u bankama,
- državnu pomoć finansijskim institucijama: državne garancije dubiozne aktive u bilansima finansijskih institucija, direktan otkup loše aktive iz bilansa finansijskih institucija, dokapitalizacija finansijskih institucija kupovinom novih običnih i preferencijalnih emisija akcija od strane države ili punu nacionalizaciju tj. potpuno preuzimanje finansijske institucije od strane države, i
- popularne regulatorne mere: ograničavanje primanja uprave, transparentnost, državne garancije za nove kreditne linije privredi i bankama i sl.

Mere usmerene na povećanje likvidnosti i same doprinose povećanju poverenja tržišnih učesnika. Najčešće se preduzimaju:

- obaranje kamatnih stopa pod neposrednom kontrolom centralnih banaka,
- obezbeđenje povoljnih državnih kredita za likvidnost, pre svega finansijskim institucijama (od strane centralnih banaka i države),
- smanjivanje obaveznih rezervi,
- poreski podsticaji i sl.

Cilj ovih mera je zaustavljanje kriznih očekivanja i izbegavanje prožimanja finansijske krize i recesije i njihovog međusobnog podsticanja. Negativna očekivanja (psihološki efekti) učesnika u privrednom životu mogu predstavljati vrlo težak problem za poznate mere ekonomske politike. Otuda su mere ekonomske politike morale biti brze i efektne kako u smislu povratka poverenja u finansijski sistem, tako i u obuzdavanju recesionih pritisaka. Nažalost, dosadašnje preduzete mere u svetu ne izazivaju željene reakcije ni u finansijskoj ni u realnoj sferi. Po oceni analitičara, SAD su, kao vodeća ekonomija u svetu, u vrlo ozbiljnoj i, očekivano, dugoj recesiji²⁶ koja će, po oceni nekih analitičara, imati veće negativne efekte na rast nezaposlenosti nego na pad GDP-a²⁷.

5. Pouke za Srbiju i njen finansijski sistem

²⁶ Economist, "A thoroughly modern recession", dec. 6th – 12th 2008, s 50.

²⁷ Hall, Robert, 2007, "How much do we understand about the modern recession?", Brookings Papers on Economic Activity, 2.

Koje lekcije bi Srbija mogla da izvuče iz uzroka finansijske krize u svetu.

Pre svega, klasični dobro uređeni i nadgledani mehanizmi finansijske intermedijacije (bankarski sistem) imaju manju sklonost generisanja nekontrolisanih rizika u odnosu na tržište hartija od vrednosti.

Drugo, jačati funkciju risk menadžmenta u svim finansijskim institucijama do nivoa osposobljenosti da u celini sagledavaju sve izvore rizika poslovanja (kao npr. u skladu sa Basel II standardima u bankarstvu).

Treće, jačati regulativu i superviziju finansijskih institucija kao način da se sprečava jačanje finansijskog leveridža tj. rast učešća spekulativnih i „ponzi“ učesnika kao generatora nestabilnosti u finansijskom sistemu.

Četvrto, angažovanje „podizvođača“ (*outsourcing*) u finansijskim poslovima ne bi trebalo dozvoljavati. Alternativno, angažovani „podizvođači“ finansijskih institucija morali bi imati motivacionu strukturu koja je usklađena sa potrebom kontrolisanja rizika u finansijskom sistemu radi prevencije moralnog hazarda. Takvi „podizvođači“ morali bi biti regulisani i nadgledani od strane državnih regulatornih tela.

Peto, sa uvođenjem sekjuritizacije potrebno je biti vrlo obazriv i konzervativan²⁸. Moguće ju je uključiti u finansijski sistem (o čemu se u Srbiji raspravlja već duže vreme²⁹) samo ako se obezbedi njena puna transparentnost, puna odgovornost uključenih institucija i jasan mehanizam kontrole i nadzora procesa od strane državnih regulatornih

²⁸ Posebno imati u vidu Nemačku tradiciju *Pfandbrief* modela emitovanja hipotekarnih obveznica (tzv. bilansnu „sekjuritizaciju“) koja se bazira na konzervativnijem modelu izdavanja obveznica po osnovu hipotekarnih kredita u kome se, za razliku od anglosaksonske prakse, aktiva ne izmešta iz bilansa banaka. *Pfandbrief* model bez difolta u Nemačkoj funkcioniše više od 300 godina. Za više o tržištu hipotekarnih obveznica u Evropi videti npr. u Hardt, J. and J. Lichtenberger, 2001, „The Economic and Financial Importance of Mortgage Bonds in Europe“, *Housing Finance International*, No. 4, 19-29, ili Stöcker, O.M., 2001, „The Renaissance of the Pfandbrief in Europe“, *Housing Finance International*, No. 4, 30-36.

²⁹ U optičaju je nacrt Zakona o sekjuritizaciji.

tela. Mora se imati u vidu da ona menja strukturu finansijskog sistema u smislu da smanjuje udeo, bolje kontrolisane, bankarske aktive u korist, slabije i teže kontrolisane, aktive u hartijama od vrednosti³⁰.

Šesto, rejting agencije su vrlo korisne, ali se mora sprečiti stihijnost njihovog ulaska u domaći finansijski sistem. Potrebno je obezbediti kompetentan mehanizam njihovog licenciranja i nadzora, kao i odgovornosti za funkciju koju obavljaju.

6. Uticaj globalne krize na Srbiju

Srbija i njene finansijske institucije direktno i značajnije nisu bile izložene dubioznoj aktivni generisanoj u SAD, hartijama od vrednosti emitovanih na njihovoj osnovi (ABS, MBS i CDO), niti CDS instrumentima institucija koje su bile najviše uključene u ove poslove. Ipak, posledice tih, nama dalekih kriznih uzroka, na Srbiju se mogu odraziti vrlo negativno³¹.

1. Kratkorični efekti prvobitne krizne nelikvidnosti na međunarodnim finansijskim tržištima na Srbiju su se odrazili kroz nagli, ali privremen rast, LIBOR/EURIBOR kamatnih stopa. Taj, kratkotrajni šok je, međutim, izazvao zadržku u finansiranju iz inostranstva ali i zadržku u domaćoj tražnji. Nestabilnost i rast domaćih kamatnih stopa izaziva recesione posledice za Srbiju.

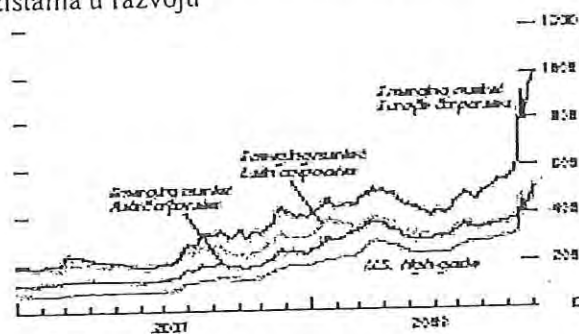
2. Prvobitno drastično smanjenje kreditne aktivnosti i opšti pad likvidnosti svih finansijskih instrumenata, ublažen je masovnim merama podsticanja likvidnosti u svetu (što se odrazilo na pad kamatnih stopa). Poverenje, međutim, nije uspostavljeno. Odsustvo poverenja, po pravilu, najviše pogađa one koji se smatraju rizičnim u očima

³⁰ Udeo banaka u finansijskoj aktivni u SAD je pao sa oko 50% 50-ih godina, na oko 25% 90-ih godina. Videti Minsky, Hyman P., 2008, "Securitization", *Policy Note*, The Levy Economics Institute of Bard College, s. 5 (priredio za štampu i napisao predgovor: L.Randall Wray).

³¹ Stavovi MMF o efektima krize na zemlje u tranziciji izneti su u *Global Financial Stability Report, 2008, Financial Stress and Deleveraging: Macroeconomic Implications and Policy*, IMF, World Economic and Financial Surveys, October 2008, Washington DC, s.44.

međunarodnih investitora a to su tzv. tržišta u razvoju (*emerging markets*). Među njih, i to u rizičniji njihov deo, spada i Srbija. Tako je uprkos relativno brzom ponovnom padu kamatnih stopa (LIBOR/EURIBOR) zbog državnih intervencija, došlo do rasta riziko premije u odnosu na privrede u razvoju, posebno Istočnu Evropu. Krajnji ishod je da kamatne stope u svetu nisu porasle, ali su porasle za Srbiju. Otuda, treba očekivati teškoće u okončanju privatizacije i potencijalno postizanje nižih cena od očekivanih. Rast riziko spreda³² za rizik ulaganja u tržišta u razvoju očigledno je prikazan na Slici 1, gde se vidi da je rast spreda najveći kod tržišta u razvoju iz Istočne Evrope. Drugim rečima, finansiranje Istočne Evrope je najviše poskupelo na globalnom tržištu.

Slika 1. Riziko spred na ulaganja u kvalitetne korporacije u SAD i u korporacije u tržištama u razvoju



Izvor: J.P. Morgan Chase & Co. i Merrill Lynch, preuzeto iz Global Financial Stability Report, 2008, Financial Stress and Deleveraging: Macrofinancial Implications and Policy, IMF, World Economic and Financial Surveys, October 2008, Washington DC, s.47.

3. Iz istih, gore navedenih, razloga realno je očekivati i pad direktnih stranih investicija.
4. Eventualno zaduživanje u inostranstvu, zbog rasta premije na rizik zemlje, Srbiju (i preduzeća u njoj) će, po svoj prilici, koštati više

Ipak, glavni izazov je, po svemu sudeći, pitanje oko koga smo najranjiviji: devizni kurs.

³² Spred ili riziko spred predstavlja razliku u kamatnim stopama u odnosu na bezrizičnu aktivu.

Naš problem leži u sledećem:

1. Stabilnost deviznog kursa u Srbiji nije posledica stabilnosti cena i platnobilansne ravnoteže. U Srbiji se stabilnost deviznog kursa postavlja kao uslov relativne stabilnosti cena.
2. Srbija ne zasniva stabilnost deviznog kursa na jakoj izvoznoj privredi koja generiše devizni priliv. Srbija stabilnost deviznog kursa zasniva na održavanju kontinuiranog priliva novca iz inostranstva po osnovu doznaka, kredita, investicija i špekulativnog (vrućeg) novca.
3. Bitna promena deviznog kursa može izazvati značajan inflatorni pritisak i rasprostranjeni kreditni rizik dužnika koji otplaćuju kredite sa deviznom kaluzulom.

U uslovima svetske finansijske krize, priliv novca i kapitala iz inostranstva se smanjuje i može se lako pokazati da je nedovoljan za podršku i održavanje stabilnosti deviznog kursa na ovom nivou.

Mere monetarne politike (podizanje repo stope, oslobađanje od obaveznih rezervi na zaduživanje u inostranstvu, dodatne obaveze držanja dinara kod NBS) imaju za neposredan cilj podsticanje priliva kapitala iz inostranstva i smanjivanje ponude dinara na deviznom tržištu. Time se, uz povremene intervencije NBS na deviznom tržištu koje troše devizne rezerve, obezbeđuje jača podrška stabilnosti deviznog kursa. Nažalost, veliku kolateralnu korist od ovakve politike mogu imati nosioci spekulativnog kapitala (koji uvoze, ili su uvezli, kapital i ulažu ga u REPO poslove tj. blagajničke zapise NBS) i uvoznici (koji doprinose našem ogromnom trgovinskom deficitu). Nažalost, veliku kolateralnu štetu ima privreda Srbije koja se uz pad likvidnosti i rast kamatnih stopa nikako ne može braniti od recesije, a u okviru privrede Srbije, posebno izvoznici, tj. onaj deo koji bi trebalo najviše da podstičemo.

U kontekstu restriktivnih mera NBS treba imati u vidu da neke mere mogu imati sasvim suprotne efekte od željenih u zavisnosti od očekivanja investitora. „Nedovoljna ponuda

novca u datom finansijskom centru može da služi bilo privlačenju, bilo odbijanju finansijskih sredstava, u zavisnosti od očekivanja koje generiše rast kamatnih stopa.³³

Takođe, može se desiti da „stranci dožive rast diskontne stope³⁴ ne kao znak snage, već kao znak slabosti, i da radije prodaju nego što kupuju valutu....“³⁵

Zbog vezivanja naše ekonomske politike za stabilnost deviznog kursa, danas smo u protivrečnoj situaciji. Naime, zbog očuvanja stabilnosti kursa, prinuđeni smo da donosimo restriktivne mere u uslovima očekivane recesije.

Naši osnovni propusti:

1. Reforme u realnoj privredi Srbije su bile sporije nego što je trebalo da budu i bez pravilno usmerenih podsticaja ka razvoju izvozno orijentisane industrije: kasnili smo sa privatizacijom, kasnili smo sa propisima u vezi stečaja i likvidacije, nismo obezbedili čitav niz mogućih podsticajnih mera ekonomske politike za rast i razvoj izvozno orijentisane industrije i zaposlenosti.
2. Akcenat ekonomske politike smo gotovo isključivo stavili na stabilnost deviznog kursa, verujući da će u uslovima stabilnosti kursa postojati i stabilnost cena i da su to najvažniji uslovi za privredni razvoj.
3. Odsustvo smanjivanja deficita trgovinskog bilansa i znatno viša domaća bazna, tj. „core“, inflacija od inflacije u euro zoni, morali su biti jasni signali da se na vreme napusti politika forsirane stabilnosti deviznog kursa.
4. Dopustili smo da spekulativni kapital privučen visokim kamatnim stopama (naročito REPO stopom) svojim ulaskom u monetarni sistem podrži stabilnost deviznog kursa, ne vodeći dovoljno računa da u trenutku njegovog potencijalnog naglog izlaska može da izazove veliku štetu u vidu narušene makroekonomske stabilnosti zemlje.

³³ Kindleberger, Charles P. i Robert Z. Aliber, 2005, *Manias, Panics, and Crashes: A History of Financial Crises*, Fifth Edition, John Wiley & Sons, New York, s 8. (prevod D.Š.)

³⁴ REPO stopa NBS u kontekstu situacije u Srbiji.

³⁵ Kindleberger, Charles P. i Robert Z. Aliber, 2005, *Manias, Panics, and Crashes: A History of Financial Crises*, Fifth Edition, John Wiley & Sons, New York, s 165. (prevod D.Š.)

7. Strategija odbrane u postojećim uslovima

Mere za smanjivanje negativnog uticaja globalne krize na našu zemlju bi trebalo da imaju za cilj da eliminišu nepovoljne psihološke efekte i podstaknu zdrave izvore podrške stabilnosti i privrednom rastu – domaću štednju i investicije u izvozno orijentisanu industriju.

1. Vlada je preduzela već neke dobre mere u pravcu podizanja poverenja i podsticanja štednje kao što su podizanje nivoa osiguranja štednih depozita i ukidanje poreza na kamate na deviznu štednju. Nažalost, ove mere su donešene nešto kasnije nego što je trebalo, a poresko oslobođenje na kamate od devizne štednje je samo za jednu, 2009. godinu. Ovaj korpus mera bi trebalo proširiti i produbiti:

- u pravcu potpunog i trajnog oslobađanja kamata na štednju od poreza
- smanjivanja obaveznih rezervi banaka na deviznu štednju građana

Cilj ovih mera je podsticanje štednje i ulazak tezaursane štednje domaćinstava u zvanične bankarske tokove. Ovim merama bi se povećala ponuda deviza, podržala stabilnost deviznog kursa iz domaćih izvora i podstakla štednja na račun potrošnje, tj. smanjio inflatorni pritisak agregatne tražnje. Sledstveno, ovim merama bi se smanjio i negativan efekat na kurs koji bi imalo eventualno masovnije povlačenja REPO stoka u inostranstvo (tj. u euro). Istovremeno, podsticanjem štednje, smanjio bi se inflatorni efekat eventualnih korekcija kursa.

2. I druge forme štednje i investicija bi trebalo da imaju podsticajni poreski tretman:

- Izdvajanja (štednja) za polise životnih osiguranja;
- Ulaganje u investicione jedinice penzionih fondova;
- Namenska štednja i investiranje kroz investicione fondove radi potrošnje građana posle njihovog penzionisanja.

Ove forme štednje i investiranja trebalo bi izuzeti iz poreske osnovice na dohodak građana. Cilj ovih mera je da građani budu dodatno stimulisani da dobrovoljno smanjuju svoju potrošnju, a više da štede i investiraju.

3. Tako prikupljena štednja i investicije kroz institucionalne investitore (osiguravajuće kompanije, dobrovoljne penzijske fondove i investicione fondove) treba kanalisati ka produktivnim investicijama (izvozna industrija, infrastruktura). Ovo se može postići sledećim merama:

- investicije u inicijalne javne ponude hartija od vrednosti industrijskih i izvozno orijentisanih preduzeća bi trebalo da su oslobođene i poreza na prenos apsolutnih prava i poreza na kapitalnu dobit³⁶.
- Kupovina municipalnih obveznica kojima bi se finansirali javni radovi u oblasti infrastrukture na lokalnom nivou (mostovi, irigacioni sistemi, nasipi, vodosnabdevanje, prerada otpadnih voda, i sl.) trebalo bi da bude izuzeta iz poreske osnovice na dohodak građana³⁷.
- Državne hartije emitovane na domaćem tržištu kao dopunski izvor finansiranja javnih radova na infrastrukturnim objektima od nacionalnog značaja, takođe bi trebalo osloboditi poreza.

Ove hartije od vrednosti bi, zbog dodatnog podsticanja ulaganja u njih, trebalo da budu denominirane u Eurima, bez obzira što bi time emitent na sebe morao da preuzme valutni rizik. Naime, dugoročno finansiranje u dinarskoj denominaciji bi odbilo mnoge ulagače i pozitivan efekat ovih mera bi bio znatno manji.

4. Država je već najavila program garancije kredita koji će se odobravati privredi. To je korak u dobrom pravcu. Mislim da bi garantovanje trebalo da bude ograničeno na kredite izvozno orijentisanoj industriji i da bi tada garancija mogla da bude i viša od predviđenih 75% odobrenih kredita. Visoka državna garancija bi mogla da bude osnova da NBS na bazi takvih niskorizičnih kredita (zbog državne garancije) zahteva manji iznos regulatornog kapitala od banaka. Ako bi se razmotrila i politika izdvajanja manjih obaveznih rezervi za kredite odobrene izvoznoj industriji, onda bi ovaj kanal finansiranja imao osnova da bude povoljan za privredu, a isplativ za banke. U slučaju neizmirivanja obaveza preduzeća, i aktiviranja državne garancije, država bi mogla da zauzvrat preuzme

³⁶ Kao što već jesu obveznice stare devizne štednje.

³⁷ Time bi se i imućni građani dodatno podstakli da svoj novac ulože na način da „gradi zemlju“ umesto da se sliva u luksuzne uvozne proizvode.

odgovarajuće pakete akcija čijom prodajom bi jednim delom mogla da pokrije potencijalne gubitke.

5. Značajna i dugoročna poreska oslobađanja za strane direktne „greenfield“ investicije u izvozno orijentisanu industriju. Ova poreska oslobodjenja bi trebalo da budu veća za veći broj novih radnih mesta i za investicije u nerazvijena područja Srbije. Ove investicione beneficije za strane direktne investicije u Srbiju trebalo bi aktivno promovisati uz smišljenu kampanju u međunarodnim medijima i na privrednim skupovima u inostranstvu.

6. Trebalo bi formirati i državni fond za finansijsku pomoć dužnicima koji bi, u slučaju korekcije deviznog kursa zbog devizne klauzule njihovih kredita, dospeli u situaciju nesposobnosti izmirivanja obaveza. Ovaj fond bi se pre svega bavio restrukturiranjem i vremenskom preraspodelom obaveza dužnika. U izuzetno teškim slučajevima mogao bi jedan deo obaveza da preuzme na sebe kako bi se obaveze prema bankarskom sektoru izmirivale u visokom procentu. Cilj ove mere je da se spreči linearan rast kreditnog rizika dužnika u slučaju korekcije deviznog kursa, što može biti potencijalno opasno za stabilnost bankarskog sektora čije je „finansijsko zdravlje“ od ključne važnosti za privredni razvoj naše zemlje.

Ukratko, predložene mere bi trebalo da uspostave poverenje u finansijski sistem, podstaknu pozitivno ponašanje (štednju i investiranje) i pomere skretnicu tokova novca sa potrošnje ka investicijama i unutar investicija ka investicijama u izvoznu industriju koja otvara nova radna mesta. Moramo napustiti dosadašnju paradigmu da se zemlja može razvijati na bazi stabilnog deviznog kursa, restriktivne monetarne politike, uvoza i usluga. Treba se okrenuti klasičnom razvoju industrije, državnim investicijama u infrastrukturu i izvozu. Na bazi takve privredne strukture stabilnost deviznog kursa će se javiti kao zdrava posledica zdrave privrede.

Po donošenju ovakvih mera, verujem da bismo se mogli konačno osloboditi fetiša deviznog kursa i pustiti ga da se slobodno formira pod dejstvom ponude i tražnje. Tako

bismo došli u poziciju da ne moramo da trošimo devizne rezerve ili pribegavamo restriktivnoj monetarnoj politici u predvečerje recesije.



SUMMARY

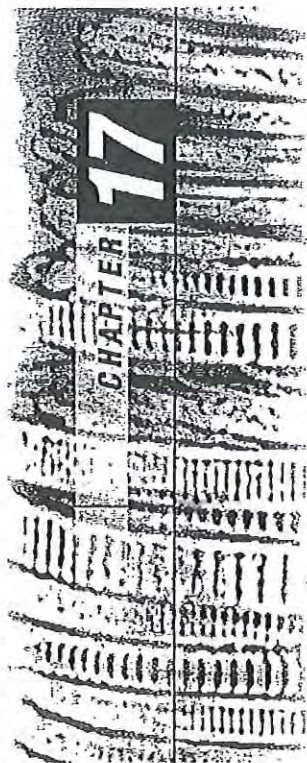
TABLE A1 Response of the M2 Money Supply to Changes in MB/DL , r_D , (ER/D) , (C/D) , (T/D) , and (MMF/D)

Variable	Change in Variable	M2 Money Supply Response	Reason
MB/DL	↑	↑	More MB to support C and D
DL	↑	↑	More MB to support C and D
r_D	↑	↓	Less multiple deposit expansion
(ER/D)	↑	↓	Fewer reserves to support C and D
(C/D)	↑	↓	Less overall deposit expansion
(T/D)	↑	↑	More multiple deposit expansion
(MMF/D)	↑	↑	More multiple deposit expansion

Note: Only increases (↑) in the variables are shown; the effects of decreases in the variables on the money multiplier would be the opposite of those indicated in the "Response" column.

The M2 money multiplier and M2 money supply are positively related to both the time deposit ratio (T/D) and the money market fund ratio (MMF/D) .

The response of the M2 money supply to all the depositor and required reserve ratios is summarized in Table A1.



TOOLS OF MONETARY POLICY

PREVIEW

In the chapters describing the structure of the Federal Reserve System and the money supply process, we mentioned three policy tools that the Fed can use to manipulate the money supply and interest rates: open market operations, which affect the quantity of reserves and the monetary base; changes in the discount rate, which affect interest rates and the monetary base by influencing the quantity of discount loans; and changes in reserve requirements, which affect the money multiplier. Because the Fed's use of these policy tools has such an important impact on interest rates and economic activity, it is important to understand how the Fed wields them in practice and how relatively useful each tool is.

In recent years, the Federal Reserve has increased its focus on the federal funds rate, the interest rate on overnight loans of reserves from one bank to another, as the primary indicator of the stance of monetary policy. Since February 1994, the Fed announces a federal funds rate target at each FOMC meeting, an announcement that is watched closely by market participants because it affects interest rates throughout the economy. Thus, to fully understand how the Fed's tools are used in the conduct of monetary policy, we must understand not only their effect on the money supply, but their direct effects on the federal funds rate as well. The chapter thus begins with a supply and demand analysis of the market for reserves to explain how the Fed's settings for the three tools of monetary policy determine the federal funds rate. We then go on to look in more detail at each of the three tools—open market operations, discount rate policy, and reserve requirements—to see how they are used in practice and to ask whether the use of these tools could be modified to improve the conduct of monetary policy.

THE MARKET FOR RESERVES AND THE FEDERAL FUNDS RATE

In Chapter 15, we saw how open market operations and discount lending affect the balance sheet of the Fed and the amount of reserves. The market for reserves is where the federal funds rate is determined, and this is why we turn to a supply

Supply and Demand in the Market for Reserves

and demand analysis of this market to analyze how all three tools of monetary policy affect the federal funds rate.

The analysis of the market for reserves proceeds in a similar fashion to the analysis of the bond market we conducted in Chapter 5. We derive a demand and supply curve for reserves. Then the market equilibrium in which the quantity of reserves demanded equals the quantity of reserves supplied determines the federal funds rate, the interest rate charged on the loans of these reserves.

DEMAND CURVE To derive the demand curve for reserves, we need to ask what happens to the quantity of reserves demanded, holding everything else constant, as the federal funds rate changes. Recall from Chapter 16 that the amount of reserves can be split up into two components: (1) required reserves, which equal the required reserve ratio times the amount of deposits on which reserves are required, and (2) excess reserves, the additional reserves banks choose to hold. Therefore, the quantity of reserves demanded equals required reserves plus the quantity of excess reserves demanded. Excess reserves are insurance against deposit outflows, and the cost of holding these excess reserves is their opportunity cost, the interest rate that could have been earned on lending these reserves out, which is equivalent to the federal funds rate. Thus as the federal funds rate decreases, the opportunity cost of holding excess reserves falls and, holding everything else constant, including the quantity of required reserves, the quantity of reserves demanded rises. Consequently, the demand curve for reserves, R^d , slopes downward in Figure 1.

SUPPLY CURVE When discount lending increases, the quantity of reserves supplied to the banking system also increases. When banks borrow from the Fed, their

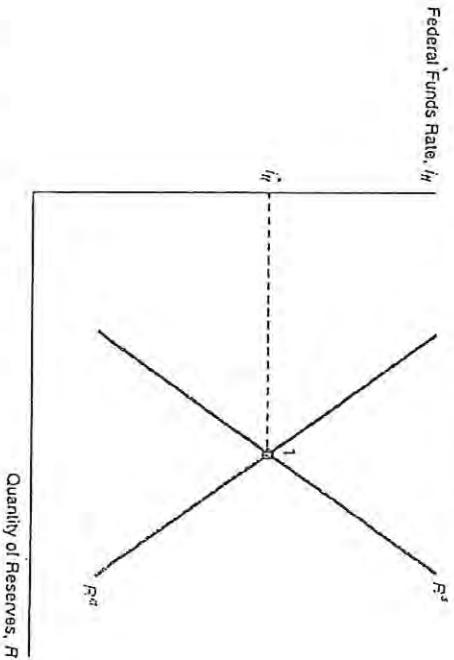


FIGURE 1 Equilibrium in the Market for Reserves
Equilibrium occurs at the intersection of the supply curve, R^s , and the demand curve, R^d , at point 1 and an interest rate of i_H^* .

How Changes in the Tools of Monetary Policy Affect the Federal Funds Rate

principal benefit is not having to borrow these funds from the federal funds market. Discount loans are a substitute for borrowing federal funds. Thus holding everything else constant (especially the discount rate), when the federal funds rate increases, banks will borrow more from the Fed, and the resulting rise in discount lending means that the quantity of reserves supplied rises. For this reason, the supply curve for reserves, R^s , slopes upward, as shown in Figure 1.

MARKET EQUILIBRIUM Market equilibrium occurs where the quantity of reserves demanded equals the quantity supplied, $R^d = R^s$. Equilibrium therefore occurs at the intersection of the demand curve, R^d , and the supply curve, R^s , at point 1, with an equilibrium federal funds rate of i_H^* .

Now that we understand how the federal funds rate is determined, we can examine how changes in the three tools of monetary policy—open market operations, discount lending, and reserve requirements—affect the market for reserves and the equilibrium federal funds rate.

OPEN MARKET OPERATIONS We have already seen that an open market purchase leads to a greater quantity of reserves supplied; this is true at any given federal funds rate. An open market purchase therefore shifts the supply curve to the right from R^s_1 to R^s_2 and moves the equilibrium from point 1 to point 2, lowering the federal funds rate from i_H^1 to i_H^2 (see Figure 2).¹ The same reasoning implies that an open market sale decreases the quantity of reserves supplied, shifts the supply curve to the left and causes the federal funds rate to rise.

The result is that *an open market purchase causes the federal funds rate to fall, whereas an open market sale causes the federal funds rate to rise*.

DISCOUNT LENDING We have also seen that increases in discount lending raise the quantity of reserves supplied. The primary cost of borrowing discount loans from the Fed is the interest rate the Fed charges on these loans, the discount rate. With the federal funds rate constant, banks borrow more from the Fed as the discount rate falls. A lower discount rate thus leads to a greater quantity of reserves supplied and shifts the supply curve to the right from R^s_1 to R^s_2 in Figure 2. The result is that the equilibrium moves from point 1 to point 2, lowering the federal funds rate from i_H^1 to i_H^2 .

The conclusion is that *when the Fed lowers the discount rate, the federal funds rate falls*.²

Similar reasoning implies that when the discount rate is raised, discount lending falls, the supply curve for reserves shifts to the left, and the federal funds rate rises. Therefore, *when the Fed raises the discount rate, it leads to a rise in the federal funds rate*.

¹We come to the same conclusion using the money supply framework in Chapter 16 along with the liquidity preference framework in Chapter 5. An open market purchase raises reserves and the money supply, and then the liquidity preference framework shows that interest rates fall.

²We obtain the same conclusion using the money supply and liquidity preference frameworks by recognizing that a decline in the discount rate raises discount lending, which increases reserves and the money supply. Then, using the liquidity preference framework, we can show that the interest rate falls.

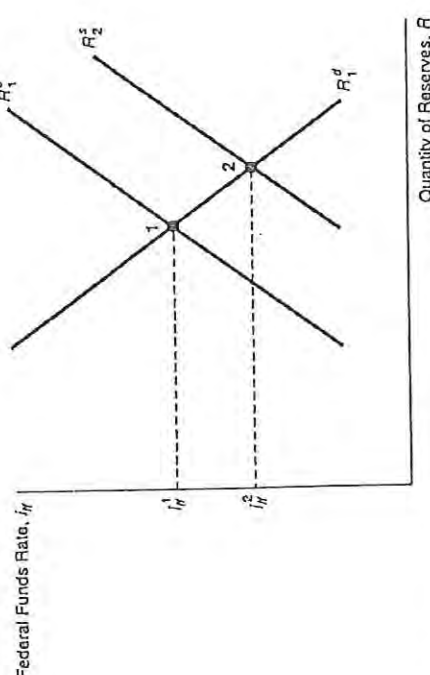


FIGURE 2 Response to an Open Market Operation or a Change in the Discount Rate
An open market purchase increases reserves supplied, shifts the supply curve from R_1^s to R_2^s , and moves the equilibrium from point 1 to point 2, lowering the federal funds rate from i_H^1 to i_H^2 . A fall in the discount rate causes discount lending and reserves supplied to increase, shifts the supply curve from R_1^s to R_2^s , and moves the equilibrium from point 1 to point 2, lowering the federal funds rate from i_H^1 to i_H^2 .

RESERVE REQUIREMENTS When the required reserve ratio increases, required reserves increase and hence the quantity of reserves demanded increases for any given interest rate. Thus a rise in the required reserve ratio shifts the demand curve to the right from R_1^d to R_2^d in Figure 3, moves the equilibrium from point 1 to point 2, and in turn raises the federal funds rate from i_H^1 to i_H^2 .
The result is that *when the Fed raises reserve requirements, the federal funds rate rises.*³

Similarly, a decline in the required reserve ratio lowers the quantity of reserves demanded, shifts the demand curve to the left, and causes the federal funds rate to fall. *When the Fed decreases reserve requirements, it leads to a fall in the federal funds rate.*

Now that we understand how the three tools of monetary policy—open market operations, discount lending, and reserve requirements—can be used by the Fed to manipulate the money supply and interest rates, we will look at each of them in turn to see how the Fed wields them in practice and how relatively useful each tool is.

³Because an increase in the required reserve ratio means that the same amount of reserves is able to support a smaller amount of deposits, a rise in the required reserve ratio leads to a decline in the money supply. Using the liquidity preference framework, the fall in the money supply results in a rise in interest rates, yielding the same conclusion in the text that raising reserve requirements leads to higher interest rates.

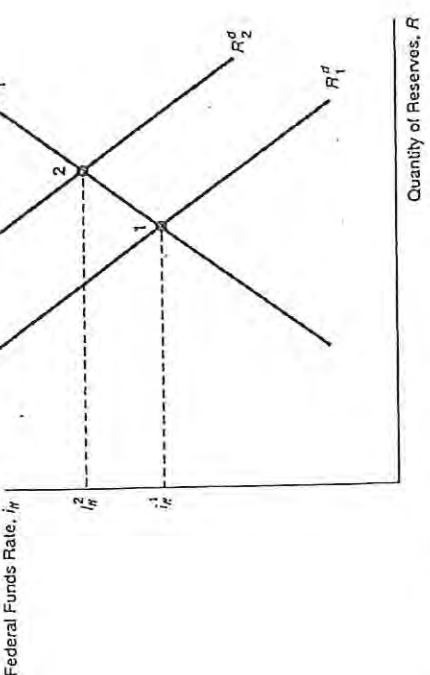


FIGURE 3 Response to a Change in Required Reserves
When the Fed raises reserve requirements, required reserves increase, which increases the demand for reserves. The demand curve shifts from R_1^d to R_2^d , the equilibrium moves from point 1 to point 2, and the federal funds rate rises from i_H^1 to i_H^2 .

OPEN MARKET OPERATIONS

Open market operations are the most important monetary policy tool because they are the primary determinants of changes in interest rates and the monetary base, the main source of fluctuations in the money supply. Open market purchases expand reserves and the monetary base, thereby raising the money supply and lowering short-term interest rates. Open market sales shrink reserves and the monetary base, lowering the money supply and raising short-term interest rates. Now that we understand from Chapter 15 the factors that influence the reserves and monetary base, we can examine how the Federal Reserve conducts open market operations with the object of controlling short-term interest rates and the money supply.

There are two types of open market operations: **Dynamic open market operations** are intended to change the level of reserves and the monetary base, and **defensive open market operations** are intended to offset movements in other factors that affect reserves and the monetary base, such as changes in Treasury deposits with the Fed or float. The Fed conducts open market operations in U.S. Treasury and government agency securities, especially U.S. Treasury bills.⁴ The Fed conducts most of its open market operations in Treasury securities because the

⁴To avoid conflicts of interest, the Fed does not conduct open market operations in privately issued securities. (For example, think of the conflict if the Federal Reserve purchased bonds issued by a company owned by the chairman's brother-in-law.)

market for these securities is the most liquid and has the largest trading volume. It has the capacity to absorb the Fed's substantial volume of transactions without experiencing excessive price fluctuations that would disrupt the market.

As we saw in Chapter 14, the decision-making authority for open market operations is the Federal Open Market Committee (FOMC). The actual execution of these operations, however, is conducted by the trading desk at the Federal Reserve Bank of New York. The best way to see how these transactions are executed is to look at a typical day at the trading desk, located in a newly built trading room on the ninth floor of the Federal Reserve Bank of New York.

A Day at the Trading Desk

The head of domestic open market operations, currently Sandy Krieger, supervises the analysts and traders who execute the purchases and sales of securities. To get a grip on what might happen in the federal funds market that day, her workday and that of her staff begins with a review of developments in the federal funds market the previous day and with an update on the actual amount of reserves in the banking system the day before. Later in the morning, Sandy's staff issues updated reports that contain detailed forecasts of what will be happening to some of the short-term factors affecting the supply and demand of reserves (discussed in Chapter 15). For example, if float is predicted to decrease because good weather throughout the country is speeding up check delivery, Sandy knows that she will have to conduct a defensive open market operation (in this case a *purchase* of securities) to offset the expected decline in reserves and the monetary base from the decreased float. However, if Treasury deposits with the Fed are predicted to fall, a defensive open market *sale* would be needed to offset the expected increase in reserves. The report also predicts the change in the public's holding of currency. If currency holdings are expected to rise, then, as we have seen in Chapters 15 and 16, reserves fall, and an open market purchase is needed to raise reserves back up again.

This information will help Sandy and her staff decide how large a change in reserves is needed to obtain a desired level of the federal funds rate. If the amount of reserves in the banking system is too large, many banks will have excess reserves to lend that other banks may have little desire to hold, and the federal funds rate will fall. If the level of reserves is too low, banks seeking to borrow reserves from the few banks that have excess reserves to lend may push the funds rate higher than the desired level. Also during the morning, the staff will monitor the behavior of the federal funds rate and contact some of the major participants in the funds market, which may provide independent information about whether a change in reserves is needed to achieve the desired level of the federal funds rate. Early in the morning, members of Sandy's staff contact several representatives of the so-called *primary dealers*, government securities dealers (who operate out of private firms or commercial banks) that the open market desk trades with. Her staff finds out how the dealers view market conditions to get a feel for what may happen to the prices of the securities they trade in over the course of the day. They also call the Treasury to get updated information on the expected level of Treasury balances at the Fed in order to refine their estimates of the supply of reserves.

Afterward, members of the Monetary Affairs Division at the Board of Governors are contacted, and the New York Fed's forecasts of reserve supply and demand are

compared with the Board's. On the basis of these projections and the observed behavior of the federal funds market, the desk will formulate and propose a course of action to be taken that day, which may involve plans to add reserves to or drain reserves from the banking system through open market operations. If an operation is contemplated, the type, size, and maturity will be discussed.

The whole process is currently completed by midmorning, at which time a daily conference call is arranged linking the desk with the Office of the Director of Monetary Affairs at the Board and with one of the four voting Reserve Bank presidents outside of New York. During the call, a member of Sandy's unit will outline the desk's proposed reserve management strategy for the day. After the plan is approved, the desk is instructed to execute immediately any temporary open market operations that were planned for that day. (Overnight operations, to be described shortly, may be conducted at other times of the day.)

The desk is linked electronically with its domestic open market trading counterparts by a computer system called TRAPS (Trading Room Automated Processing System), and all open market operations are now performed over this system. A message will be electronically transmitted simultaneously to all the primary dealers over TRAPS indicating the type and maturity of the operation being arranged. The dealers are given several minutes to respond via TRAPS with their propositions. The propositions are then assembled and displayed on a computer screen for evaluation. The desk will select all propositions, beginning with the most attractively priced, up to the point where the desired amount is purchased or sold, and it will then notify each dealer via TRAPS which of its propositions have been chosen. The entire selection process is typically completed in a matter of minutes.

These temporary transactions are of two basic types. In a *repurchase agreement* (often called a *repo*), the Fed purchases securities with an agreement that the seller will repurchase them in a short period of time, anywhere from 1 to 15 days from the original date of purchase. Because the effects on reserves of a repo are reversed on the day the agreement matures, a repo is actually a temporary open market purchase and is an especially desirable way of conducting a defensive open market purchase that will be reversed shortly. When the Fed wants to conduct a temporary open market sale, it engages in a *matched sale-purchase transaction* (sometimes called a *reverse repo*) in which the Fed sells securities and the buyer agrees to sell them back to the Fed in the near future.

At times, the desk may see the need to address a persistent reserve shortage or surplus and wish to arrange an operation that will have a permanent impact on the supply of reserves. Overnight transactions, which involve a purchase or sale of securities that is not self-reversing, are also conducted over TRAPS. These operations are traditionally executed at times of day when temporary operations are not being conducted.

Advantages of Open Market Operations

Open market operations have several advantages over the other tools of monetary policy.

1. Open market operations occur at the initiative of the Fed, which has complete control over their volume. This control is not found, for example, in discount operations, in which the Fed can encourage or discourage banks to take

out discount loans by altering the discount rate but cannot directly control the volume of discount loans.

2. Open market operations are flexible and precise; they can be used to any extent. No matter how small a change in reserves or the monetary base is desired, open market operations can achieve it with a small purchase or sale of securities. Conversely, if the desired change in reserves or the base is very large, the open market operations tool is strong enough to do the job through a very large purchase or sale of securities.

3. Open market operations are easily reversed. If a mistake is made in conducting an open market operation, the Fed can immediately reverse it. If the Fed decides that the federal funds rate is too low because it has made too many open market purchases, it can immediately make a correction by conducting open market sales.

4. Open market operations can be implemented quickly; they involve no administrative delays. When the Fed decides that it wants to change the monetary base or reserves, it just places orders with securities dealers, and the trades are executed immediately.

DISCOUNT POLICY

Discount policy, which primarily involves changes in the discount rate, affects the money supply by affecting the volume of discount loans and the monetary base. A rise in discount loans adds to reserves and the monetary base and expands the money supply; a fall in discount loans reduces reserves and the monetary base and shrinks the money supply. The Federal Reserve facility at which discount loans are made to banks is called the **discount window**. The easiest way to understand how the Fed affects the volume of discount loans is by looking at how the discount window operates.

Operation of the Discount Window

The Fed can affect the volume of discount loans in two ways: by affecting the *price* of the loans (the discount rate) or by affecting the *quantity* of the loans through its administration of the discount window.³

The mechanism through which the Fed's discount rate affects the volume of discount loans is straightforward: A higher discount rate raises the cost of borrowing from the Fed, so banks will take out fewer discount loans; a lower discount rate makes discount loans more attractive to banks, and loan volume will increase. To examine how the Fed affects the quantity of discount loans through its administration of the discount window, we have to examine more closely how these loans are made.

The Fed's discount loans to the banks are of three types: adjustment credit, seasonal credit, and extended credit. *Adjustment credit loans* are the discount loans that play the most important role in monetary policy. They are intended to be used by banks to help them with short-term liquidity problems that may result

³Each Federal Reserve bank administers its own discount window facility. In our discussion here of discount policy, when we discuss the Fed's administration of the discount window, we are actually referring to the district banks' administration of their discount window facilities.

from a temporary deposit outflow, and the rate charged on them is the basic discount rate established by the Federal Reserve banks and approved by the Board of Governors. Adjustment credit, which can be obtained with a phone call, is expected to be repaid fairly quickly—by the end of the next business day for the larger banks. In the 1990s, adjustment credit shrank to very low levels, with the result that discount lending now plays a less important role in monetary policy.

Seasonal credit is given to meet the needs of a limited number of banks in vacation and agricultural areas that have a seasonal pattern. Since 1992, the interest rate charged on seasonal credit is tied to the monthly average federal funds rate and certificate of deposit rates, with the basic discount rate as a floor. *Extended credit*, given to banks that have experienced severe liquidity problems because of deposit outflows, is not expected to be repaid quickly. The interest rate on these loans is set at one-half of a percentage point above the interest rate charged on seasonal credit. Banks obtaining extended credit have to submit a proposal outlining the need for extended credit and a plan for restoring the liquidity of the bank. The most important example of extended credit to a bank was the Fed's loans to Continental Illinois in 1984, which exceeded \$5 billion.

The Fed administers the discount window in several ways to prevent its credit funds from being misused and to limit this borrowing. In recent years, as depicted in Figure 4, the discount rate has frequently been below market interest rates, so there is an incentive for banks to take out low-interest discount loans from the

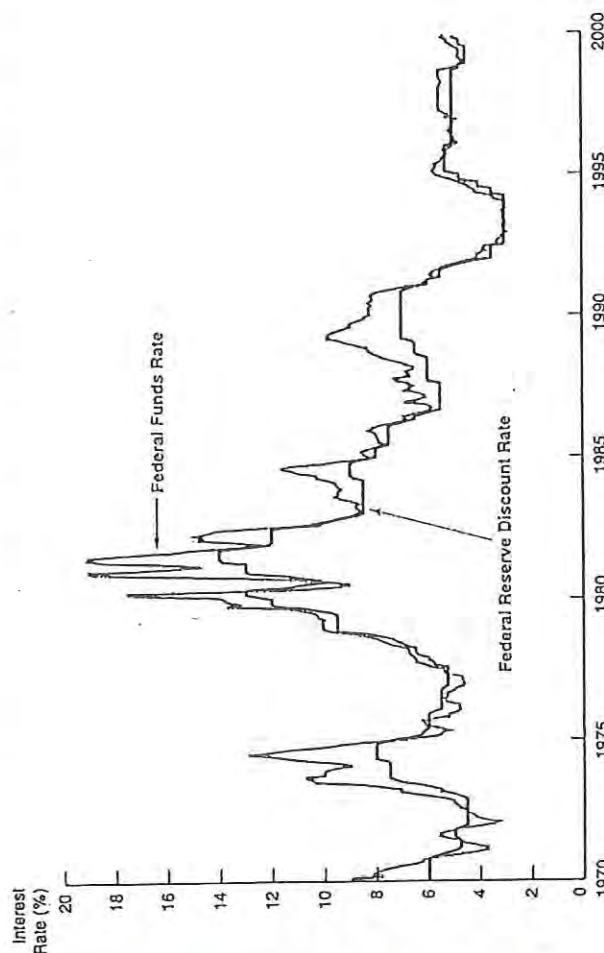


FIGURE 4 Market Interest Rates and the Discount Rate, 1970–1999
Source: Federal Reserve: www.fed.us/releases

Fed and use the proceeds to make loans or purchase securities with higher interest rates. (Figure 2 in Chapter 16 shows that the volume of discount loans has risen abruptly when the discount rate fell below market interest rates.) Banks are not supposed to make a profit from discount loans, and the Fed tries to prevent that by indicating to individual banks that they should not come to the discount window too often. If a bank comes to the discount window too frequently, the Fed will deny it loans in the future. Its position is that coming to the discount window is a privilege, not a right.

A bank faces three costs when it borrows from the discount window: the interest cost represented by the discount rate, the cost of concerns that might be raised about the health of the bank if the market guesses that the bank has gone to the discount window, and the cost of being more likely to be turned down for a discount loan in the future because of too frequent trips to the discount window. The Fed's setting of rules for use of the discount window is frequently referred to as *moral suasion*.

In addition to its use as a tool to influence reserves, the monetary base, and the money supply, discounting is important in preventing financial panics. When the Federal Reserve System was created, its most important role was intended to be as the **lender of last resort** to prevent bank failures from spinning out of control, it was to provide reserves to banks when no one else would, thereby preventing bank and financial panics. Discounting is a particularly effective way to provide reserves to the banking system during a banking crisis because reserves are immediately channeled to the banks that need them most.

Using the discount tool to avoid financial panics by performing the role of lender of last resort is an extremely important requirement of successful monetary policymaking. As we demonstrated with our money supply analysis in Chapter 16, the bank panics in the 1930–1933 period were the cause of the sharpest decline in the money supply in U.S. history, which many economists see as the driving force behind the collapse of the economy during the Great Depression. Financial panics can also severely damage the economy because they interfere with the ability of financial intermediaries and markets to move funds to people with productive investment opportunities (see Chapter 8).

Unfortunately, the discount tool has not always been used by the Fed to prevent financial panics, as the massive failures during the Great Depression attest. The Fed learned from its mistakes of that period and has performed admirably in its role of lender of last resort in the post–World War II period. Two examples of the use of the Fed's discount weapon to avoid bank panics are the provisions of huge loans to Franklin National Bank in 1974 and to Continental Illinois ten years later (see Box 1).

At first glance, it might seem that the presence of the FDIC, which insures depositors from losses due to a bank's failure up to a limit of \$100,000 per account, would make the lender-of-last-resort function of the Fed superfluous. (The FDIC is described in detail in Chapter 11.) There are two reasons why this is not the case. First, it is important to recognize that the FDIC's insurance fund amounts to around 1% of the amount of these deposits outstanding. If a large number of bank failures occurred, the FDIC would not be able to cover all the depositors' losses. Indeed, the large number of bank failures in the 1980s and

BOX 1 INSIDE THE FED

Discounting to Troubled Banks

Franklin National and Continental Illinois. In May 1974, the public learned that Franklin National Bank, the twentieth-largest bank in the United States, with deposits close to \$3 billion, had suffered large losses in foreign exchange trading and had made many bad loans. Large depositors, whose accounts exceeded the \$100,000 limit insured by the FDIC, began to withdraw their deposits, and the failure of the bank was imminent. Because the immediate failure of Franklin National would have had repercussions on other vulnerable banks, possibly leading to more bank failures, the Fed announced that discount loans would be made available to Franklin National so that depositors, including the largest, would not suffer any losses.

By the time Franklin National was merged into the European-American Bank in October 1974, the Fed had lent Franklin National the sum of \$1.75 billion, nearly 5% of the total

amount of reserves in the banking system. The quick Fed action was completely successful in preventing any other bank failures, and a possible bank panic was avoided.

A 1984 episode involved Continental Illinois National Bank and the Fed in a similar action. Continental Illinois had made many bad loans (primarily to businesses in the energy industry and to foreign countries), and rumors of financial trouble in early May 1984 caused large depositors to withdraw over \$10 billion of deposits from the bank. The FDIC arranged a rescue effort in July 1984 that culminated in a \$4.5 billion commitment of funds to save the bank; still, the Fed had to lend Continental Illinois over \$5 billion—making its \$1.75 billion loan to Franklin National look like small potatoes! The Fed's action prevented further bank failures, and again a potential bank panic was averted.

early 1990s, described in Chapter 11, led to large losses and a shrinkage in the FDIC's insurance fund, which reduced the FDIC's ability to cover depositors' losses. This fact has not weakened the confidence of small depositors in the banking system because the Fed has been ready to stand behind the banks to provide whatever reserves are needed to prevent bank panics. Second, the nearly \$500 billion of large-denomination deposits in the banking system are not guaranteed by the FDIC because they exceed the \$100,000 limit. A loss of confidence in the banking system could still lead to runs on banks from the large-denomination depositors, and bank panics could still occur despite the existence of the FDIC. The importance of the Federal Reserve's role as lender of last resort is, if anything, more important today because of the high number of bank failures experienced in the 1980s and early 1990s.

Not only can the Fed be a lender of last resort to banks, but it can also play the same role for the financial system as a whole. The existence of the Fed's discount window can help prevent financial panics that are not triggered by bank failures, as was the case during the Black Monday stock market crash of 1987 (see Box 2).

Although the Fed's role as the lender of last resort has the benefit of preventing bank and financial panics, it does have a cost. If a bank expects that the Fed will provide it with discount loans when it gets into trouble, as occurred with



BOX 2 INSIDE THE FED

Discounting to Prevent a Financial Panic

The Black Monday Stock Market Crash of 1987. Although October 19, 1987, dubbed "Black Monday," will go down in the history books as the largest one-day decline in stock prices to date (the Dow Jones Industrial Average declined by more than 500 points), it was on Tuesday, October 20, 1987, that financial markets almost stopped functioning. Felix Rohatyn, one of the most prominent men on Wall Street, stated flatly: "Tuesday was the most dangerous day we had in 50 years." Much of the credit for prevention of a market meltdown after Black Monday must be given to the Federal Reserve System and the chairman of the Board of Governors, Alan Greenspan.

The stress of keeping markets functioning during the sharp decline in stock prices on Monday, October 19, meant that many brokerage houses and specialists (dealer-brokers who maintain orderly trading on the stock exchanges) were severely in need of additional funds to finance their activities. However, understandably enough, New York banks, as well as foreign and regional U.S. banks, growing very nervous about the financial health of securities firms, began to cut back credit to the securities industry at the very time when it was most needed. Panic was in the air. One chairman of a large specialist firm commented

that on Monday, "from 2 p.m. on, there was total despair. The entire investment community fled the market. We were left alone on the field." It was time for the Fed, like the cavalry, to come to the rescue.

Upon learning of the plight of the securities industry, Alan Greenspan and E. Gerald Corrigan, then president of the Federal Reserve Bank of New York and the Fed official most closely in touch with Wall Street, became fearful of a spreading collapse of securities firms. To prevent this from occurring, Greenspan announced before the market opened on Tuesday, October 20, the Federal Reserve System's "readiness to serve as a source of liquidity to support the economic and financial system." In addition to this extraordinary announcement, the Fed made it clear that it would provide discount loans to any bank that would make loans to the securities industry, although this did not prove to be necessary. As one New York banker said, the Fed's message was, "We're here. Whatever you need, we'll give you."

The outcome of the Fed's timely action was that a financial panic was averted. The markets kept functioning on Tuesday, and a market rally ensued that day, with the Dow Jones Industrial Average climbing over 100 points.

"Terrible Tuesday: How the Stock Market Almost Disintegrated a Day After the Crash," *Wall Street Journal*, November 20, 1987, p. 1. This article provides a fascinating and more detailed view of the events described here and is the source of all the quotations cited.

Continental Illinois, it will be willing to take on more risk knowing that the Fed will come to the rescue. The Fed's lender-of-last-resort role has thus created a moral hazard problem similar to the one created by deposit insurance (discussed in Chapter 11): Banks take on more risk, thus exposing the deposit insurance agency, and hence taxpayers, to greater losses. The moral hazard problem is most severe for large banks, which may believe that the Fed and the FDIC view them as "too big to fail"; that is, they will always receive Fed loans when they are in trouble because their failure would be likely to precipitate a bank panic.

Similarly, Federal Reserve actions to prevent financial panic, as occurred after the October 1987 stock market crash, may encourage financial institutions other than banks to take on greater risk. They, too, expect the Fed to ensure that they could get loans if a financial panic seemed imminent. When the Fed considers using the discount weapon to prevent panics, it therefore needs to consider the trade-off between the moral hazard cost of its role as lender of last resort and the benefit of preventing financial panics. This trade-off explains why the Fed must be careful not to perform its role as lender of last resort too frequently.

Announcement Effect

Discount policy serves another function for the Federal Reserve: It can be used to signal the Fed's intentions about future monetary policy. Hence if the Fed decides to slow the expansion of the economy by increasing the federal funds rate, it can amplify the announcement that it makes after the FOMC meeting by also raising the discount rate. This signal alone may rein in economic expansion because the public will expect monetary policy to be less expansionary in the future.

The problem with the announcement effect is that it is subject to misinterpretation. We saw in Chapter 16 that if the federal funds rate is rising relative to the discount rate, the volume of discount loans will rise. In such a situation, the Fed may have no intention of amplifying the announcement of a federal funds rate increase, but to keep the amount of discounting from becoming excessive, it may raise the discount rate to keep it more in line with market interest rates. When the discount rate rises, the market may interpret this as a signal that the Fed is moving to a more contractionary policy, even if that is not the case. The announcement effect may be a hindrance rather than a help. Another approach is for the Fed to communicate directly with the public by announcing its intentions about monetary policy outright and then carrying them out. Fed announcements would be believed, and the market would respond accordingly.

Advantages and Disadvantages of Discount Policy

The most important advantage of discount policy is that the Fed can use it to perform its role of lender of last resort. Experiences with Continental Illinois, Franklin National Bank, and the Black Monday crash indicate that this role has become more important in the past couple of decades. Yet two significant disadvantages of discount policy cause many economists to suggest that it should not be used as a tool of monetary control. First is the confusion about the Federal Reserve's intentions that may be created by the announcement of discount rate changes. Second, when the Fed sets the discount rate at a particular level, large fluctuations will occur in the spread between market interest rates and the discount rate ($i - i_d$) as market interest rates change. As we have noted (see Figure 2 in Chapter 16), these fluctuations in the past led to large unintended fluctuations in the volume of discount loans and hence in the money supply. Discount policy can make it harder to control the money supply.

The use of discount policy to control the money supply seems to have little to recommend it. Not only does it suffer from the two disadvantages described, but it is also less effective than open market operations for two additional reasons: Open market operations are completely at the discretion of the Fed, whereas the volume of discount loans is not—the Fed can change the discount rate, but it can't make banks borrow. In addition, open market operations are more easily reversed than changes in discount policy.



APPLICATION Evaluating Proposed Reforms of Discount Policy

The disadvantages of discount policy as a tool of monetary control have prompted economists to suggest two proposed reforms of discount policy: abolishing discounting entirely and tying the discount rate to a market rate of interest. Here we evaluate whether either of these suggested reforms would be a good idea.

Milton Friedman and other economists have proposed that the Fed should terminate its discount facilities in order to establish better monetary control.⁹ Friedman has contended that the presence of the FDIC eliminates the possibility of bank panics; therefore, the use of discounting is no longer as necessary. Abolishing discounting would eliminate fluctuations in the monetary base due to changes in the volume of discount loans and so would reduce unintended fluctuations in the money supply.

Critics of Friedman's proposal emphasize that the FDIC is effective at preventing bank panics only because the Fed stands behind it and plays the role of lender of last resort. Furthermore, as we have seen in the case of the Black Monday crash, the existence of the Federal Reserve's discount facilities can help avert a financial panic unrelated to bank failures. Because of the increased number of bank failures in recent years, the need for the Fed's use of the discount facility to preserve the health of the financial system has become more apparent. Hence most economists do not support Friedman's proposal.

Should the Discount Rate Be Tied to a Market Rate of Interest?

An alternative proposal, much less radical than abolishing discounting, is that the discount rate be tied to a market rate of interest, such as the three-month U.S. Treasury bill rate or the federal funds rate. One version of this proposal, called the *penalty discount rate concept*, involves setting the discount rate at a fixed amount above the market interest rate—say, at 3 percentage points above the three-month bill rate—and allowing banks to borrow all the funds they want at that rate.

The advantages of tying the discount rate to a market rate of interest are many. First, the Fed could continue to use discounting to perform its role of lender of last resort. Second, most fluctuations in the spread between market interest rates and the discount rate ($i - i_d$) would be eliminated, removing a major source of fluctuations in the volume of discount loans. Third, if the penalty discount rate concept were used, the administration of the discount window would be greatly simplified: There no longer would be a need to ration discount loans because they would cost more than any income that could be earned by using the proceeds to make additional loans. Fourth, because discount rate changes would be automatic, there would be no false signals about the Federal Reserve's intentions, and the announcement effect would disappear.

⁹Milton Friedman, *A Program for Monetary Stability* (New York: Fordham University Press, 1960); Marvin Goodfriend and Robert C. Kung, "Financial Deregulation, Monetary Policy, and Central Banking," *Federal Reserve Bank of Richmond Review* 74 (1988): 3–22.

RESERVE REQUIREMENTS

Tying the discount rate to a market rate of interest is supported by many professional economists. However, other economists have opposed this proposed reform because they think that keeping the discount rate fixed when market interest rates change would reduce fluctuations in market interest rates. Such a policy would cause discount loans and hence reserves to rise when market interest rates rise, possibly countering some of the rise in market interest rates.

Even though the Federal Reserve does not formally tie the discount rate to a market rate of interest, we can see from Figure 4 that the Fed already pursues a discount policy that is not too far removed from this proposal. It does not let the discount rate move too far away from market rates of interest because it does not want to let the volume of discount loans get out of hand. •

As we saw in Chapter 16, changes in reserve requirements affect the money supply by causing the money supply multiplier to change. A rise in reserve requirements reduces the amount of deposits that can be supported by a given level of the monetary base and will lead to a contraction of the money supply. A rise in reserve requirements also increases the demand for reserves and raises the federal funds rate. Conversely, a decline in reserve requirements leads to an expansion of the money supply and a fall in the federal funds rate. The Fed has had the authority to vary reserve requirements since the 1930s, and this is a powerful way of affecting the money supply and interest rates. Indeed, changes in reserve requirements have such large effects on the money supply and interest rates that the Fed rarely resorts to using this tool to control them.

The Depository Institutions Deregulation and Monetary Control Act of 1980 provided a simpler scheme for setting reserve requirements. All depository institutions, including commercial banks, savings and loan associations, mutual savings banks, and credit unions, are now subject to the same reserve requirements, as follows: Required reserves on all checkable deposits—including non-interest-bearing checking accounts, NOW accounts, super-NOW accounts, and ATS (automatic transfer savings) accounts—are equal to 3% of the bank's first \$44.3 million of checkable deposits and 10% of the checkable deposits over \$44.3 million, and the percentage set initially at 10% can be varied between 8 and 14%, at the Fed's discretion. In extraordinary circumstances, the percentage can be raised as high as 18%.

The main advantage of using reserve requirements to control the money supply and interest rates is that they affect all banks equally and have a powerful effect on the money supply. The fact that changing reserve requirements is a powerful tool, however, is probably more of a curse than a blessing because small changes in the money supply and interest rates are hard to engineer by varying

¹⁰The \$44.3 million figure is as of the end of 1999. Each year, the figure is adjusted upward by 80% of the percentage increase in checkable deposits in the United States.

reserve requirements. With checkable deposits currently around the \$700 billion level, a $\frac{1}{2}$ -percentage-point increase in the reserve requirement on these deposits would reduce excess reserves by \$35 billion. Because this decline in excess reserves would result in multiple deposit contraction, the decline in the money supply would be even greater. It is true that small changes in the money supply could be obtained by extremely small changes in reserve requirements (say, by 0.001 percentage point), but because it is so expensive to administer changes in reserve requirements, such a strategy is not practical. Using reserve requirements to fine-tune the money supply is like trying to use a jackhammer to cut a diamond.

Another disadvantage of using reserve requirements to control the money supply and interest rates is that raising the requirements can cause immediate liquidity problems for banks with low excess reserves. When the Fed has raised these requirements in the past, it has usually softened the blow by conducting open market purchases or by making the discount window more available, thus providing reserves to banks that needed them. Continually fluctuating reserve requirements would also create more uncertainty for banks and make their liquidity management more difficult.

The policy tool of changing reserve requirements does not have much to recommend it, and it is rarely used.

APPLICATION

Evaluating Proposed Reforms of Reserve Requirements

Two extreme proposals have been suggested to reform reserve requirements. One is to abolish reserve requirements entirely, and the other is to set required reserves at 100% of deposits. Again we examine whether reforms like these make sense.

Should Reserve Requirements Be Abolished?

As we will see in the following application, central banks in many countries have been reducing reserve requirements, and some have eliminated them entirely. If you had studied only the simple deposit multiplier (Chapter 15), you might think that abolishing reserve requirements would result in an infinite money supply. However, as our more sophisticated money supply model (Chapter 16) indicates, this reasoning would be incorrect. Banks would still want to hold reserves to protect themselves against deposit outflows, and there would still be a demand for currency. Both these factors would limit the size of the money supply.

The case for keeping reserve requirements must rest on the proposition that having reserve requirements results in a more stable money multiplier and hence a more controllable money supply. Since the evidence for or against this view is limited, the desirability of this proposed reform remains an open question.

Should Reserve Requirements Be Raised to 100%?

At the same time that Milton Friedman suggested abolishing discounting, he also suggested that required reserves be set equal to 100% of deposits.⁸ With a 100% reserve requirement, the money supply could be strictly controlled by the Fed because it would be equal to the monetary base. The advantage of this proposal is clear, but several major disadvantages surface. Banks would no longer be able to make loans because with a 100% reserve requirement, no excess reserves would be available. Loans would have to be made by other financial intermediaries. Not only would this restructuring of the banking system be extremely costly, but the financial intermediaries not subject to reserve requirements might develop ways of making their liabilities function more like checkable deposits in order to attract funds.⁹ The outcome might be that the Fed would enjoy complete control of the official money supply, but the *economically relevant* money supply might be even less under the Fed's control because it would be affected by the activities of nonbank financial intermediaries. In addition, the Fed's control over the financial system could be weakened further because all the loan activity would be in the hands of financial institutions not subject to the Fed's reserve requirements.

APPLICATION

Why Have Reserve Requirements Been Declining Worldwide?

In recent years, central banks in many countries in the world have been reducing or eliminating their reserve requirements. In the United States, the Federal Reserve eliminated reserve requirements on time deposits in December 1990 and lowered reserve requirements on checkable deposits from 12% to 10% in April 1992. As a result, the majority of U.S. depository institutions—but not the largest ones with the bulk of deposits—find that reserve requirements are not binding. In order to service their depositors, many depository institutions need to keep sufficient vault cash on hand (which counts toward meeting reserve requirements) that they more than meet reserve requirements voluntarily. Canada has gone a step further: Financial market legislation taking effect in June 1992 eliminated all reserve requirements over a two-year period. The central banks of Switzerland, New Zealand, and Australia have also eliminated reserve requirements entirely. What explains the downward trend for reserve requirements in most countries?

You may recall from Chapter 9 that reserve requirements act as a tax on banks. Because central banks typically do not pay interest on reserves, the bank

⁸Friedman, *Program for Monetary Stability*. This proposal was outlined earlier by Henry Simons in *Economic Policy for a Free Society* (Chicago: University of Chicago Press, 1948).

⁹We would expect this to happen because it would trigger the process of financial innovation discussed in Chapter 9.

earns nothing on them and loses the interest that could have been earned if the bank held loans instead. The cost imposed on banks from reserve requirements means that banks, in effect, have a higher cost of funds than intermediaries not subject to reserve requirements, making them less competitive. We have already seen in Chapter 10 that additional market forces have been making banks less competitive, weakening the health of banking systems throughout the world. Central banks have thus been reducing reserve requirements to make banks more competitive and stronger.¹⁸ The Federal Reserve was explicit about this rationale for its April 1992 reduction when it announced it on February 18, 1992, stating in its press release that the reduction "will reduce funding costs for depositories and strengthen their balance sheets. Over time, it is expected that most of these cost savings will be passed on to depositors and borrowers." •

¹⁸Many economists believe that the Fed should pay market interest rates on reserves, another suggestion for dealing with this problem.

SUMMARY

1. A supply and demand analysis of the market for reserves yields the following results. When the Fed makes an open market purchase, lowers the discount rate, or lowers reserve requirements, the federal funds rate declines. When the Fed makes an open market sale, raises the discount rate, or raises reserve requirements, the federal funds rate rises.
2. The amount of an open market operation conducted on any given day by the trading desk of the Federal Reserve Bank of New York is determined by the amount of the dynamic open market operation intended to change reserves and the monetary base and by the amount of the defensive open market operation used to offset other factors that affect reserves and the monetary base. Open market operations are the primary tool used by the Fed to control the money supply because they occur at the
- initiative of the Fed, are flexible, are easily reversed, and can be implemented quickly.
3. The volume of discount loans is affected by the discount rate and the discounting of borrowing by moral suasion. Besides its effect on the monetary base and the money supply, discounting allows the Fed to perform its role as the lender of last resort. However, discount policy does make control of the money supply more difficult because it results in unintended fluctuations in the volume of discount loans and hence in the money supply. Many economists support tying the discount rate to a market interest rate to reduce these unintended fluctuations in the volume of discount loans.
4. Changing reserve requirements is too blunt a tool to use for controlling the money supply, and hence it is rarely used.

QUESTIONS AND PROBLEMS

Questions marked with an asterisk are answered at the end of the book in an appendix. "Answers to Selected Questions and Problems."

1. If the manager of the open market desk hears that a snowstorm is about to strike New York City, making it difficult to present checks for payment there and so raising the float, what defensive open market operations will the manager undertake?
2. During Christmastime, when the public's holdings of currency increase, what defensive open market operations typically occur? Why?
3. If the Treasury has just paid for a supercomputer and as a result its deposits with the Fed fall, what defensive open market operations will the manager of the open market desk undertake?
4. If float decreases below its normal level, why might the manager of domestic operations consider it more desirable to use repurchase agreements to affect the monetary base rather than an outright purchase of bonds?
5. Most open market operations are currently repurchase agreements. What does this tell us about the likely volume of defensive open market operations relative to dynamic open market operations?
6. "The only way that the Fed can affect the level of discount loans is by adjusting the discount rate." Is this statement true, false, or uncertain? Explain your answer.
7. If the Fed did not administer the discount window to limit borrowing, what do you predict would happen to the money supply if the discount rate were several percentage points below the interest rate on loans?
8. "If the discount rate were always kept above the interest rate on loans, the Fed would rarely have to administer the discount window to limit borrowing." Is this statement true, false, or uncertain? Explain your answer.
9. "Discounting is no longer needed because the presence of the FDIC eliminates the possibility of bank panics." Discuss.
10. The benefits of using Fed discount operations to prevent bank panics are straightforward. What are the costs?
11. You often read in the newspaper that the Fed has just lowered the discount rate. Does this signal that the Fed is moving to a more expansionary monetary policy? Why or why not?
12. How can the procyclical movement of interest rates (rising during business cycle expansions and falling during business cycle contractions) lead to a procyclical movement in the money supply as a result of Fed discounting? Why might this movement of the money supply be undesirable?
13. Which proposal would lead to tighter control of the money supply: abolishing discounting or tying the discount rate to a market rate of interest? Which of the two proposals would you prefer and why?
14. "Considering that raising reserve requirements to 100% makes complete control of the money supply possible, Congress should authorize the Fed to raise reserve requirements to this level." Discuss.
15. Compare the use of open market operations, discounting, and changes in reserve requirements to control the money supply on the following criteria: flexibility, reversibility, effectiveness, and speed of implementation.

KEY TERMS

defensive open market operations, p. 439	lender of last resort, p. 444	primary dealers, p. 440
discount window, p. 442	matched sale-purchase transaction (reverse repo), p. 441	repurchase agreement (repo), p. 441
dynamic open market operations, p. 439		