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MONETARNA POLITIKA I NOVI FINANSIJSKI INSTRUMENTI

Govor koji je gospodin Mario Draghi, guverner Bank of Italy i predsjednik Financial Stability Forum, održao je na prvoj sesiji o izazovima na svetskim finansijskim tržištima 2007. na Konferenciji o novcu i bankarstvu "Monetarna politika i neizvesnost", kojoj je domaćin bila Centralna banka Argentine, u Buenos Airesu, 4 juna 2007. godine.



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MONETARY POLICY AND NEW FINANCIAL INSTRUMENTS

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our choice

U svom izlaganju na temu "Monetarna politika i novi finansijski instrumenti" najpre ću dati pregled nekih od najvažnijih finansijskih inovacija koje smo videli tokom poslednjih godina i posledica koje su donele finansijskim tržištima i institucijama. Onda ću izložiti neke implikacije za politiku finansijske stabilnosti, pre nego što završim sa nekim mislima o implikacijama za monetarnu politiku.

Nedavni talas finansijskih inovacija

Mada je bilo mnogo promena u načinu funkcionisanja finansijskih tržišta poslednjih godina, verovatno su se najveće promene dogodile u oblasti kreditnog rizika. Velike banke na razvijenim finansijskim tržištima ubrzano se udaljavaju od tradicionalnih poslova odobravanja kredita i držanja kreditnih plasmana u bilansu do dospelosti. Sve više vide svoj model poslovanja kao *originiranje* kreditnih potraživanja (ili pakovanje potraživanja koje su drugi originirali) i njihovu prodaju investitorima, često u tranšama zasnovanim na senioritetu tranši. Kao posledica procesa dezintermedijacije koji je već bio odmakao na mnogim tržištima ubrzan je tokom 1980-tih i 1990-tih godina prošlog veka. Kredit je sada artikal koji se uveliko kupuje i prodaje na tržištima, umesto što bi se držao na dugi rok u bilansima finansijskih posrednika.

Pojačanu trgovinu sekuritizovanim kreditnim instrumentima prati, kao uzrok i posledica, eksplozivan rast tržišta kreditnih derivata. U međuvremenu, derivati i strukturirani proizvodi u drugim rizičnim kategorijama, kao što su kamatne stope, devize i akcije nastavile su sa rastom u pogledu obima i složenosti.

Brzu inovaciju finansijskih instrumenata prate, takođe kao uzrok i posledica, pojačane aktivnosti netradicionalnih finansijskih igrača, hedž fondova i fondova privatnog kapitala. Kao institucije, one naravno nisu nove. Došlo je, međutim, do kvalitativne promene u veličini i predmetu njihovih aktivnosti. Iz uloge igrača u niši prešli su u glavne učesnike i pokretače inovacija u širokom spektru tržišta i transakcija.

Rast hedž fondova deo je tekuće preraspodele

uloga raznih kategorija finansijskih institucija. Hedž fondovi sada beleže veliki udeo trgovine u mnogim segmentima jezgra tržišta i upravljaju stalno rastućim udelom u aktivni svetskih penzionih fondova i univerzitetskim legatima. U isto vreme, tradicionalni menadžeri aktive su prihvatili strategije nalik strategijama hedž fondova, uključujući uzimanje leveridža i kratkih pozicija. Neki hedž fondovi preuzimaju istaknutu ulogu na kreditnim tržištima, kao direktni dobavljači, kao investitori u najrizičnije tranše CDOs (Collateralized Debt Obligation) sa sredstvima ili sintetičkih CDOs, i pružanjem likvidnosti tržištu kreditnih derivata. Rast samostalne uloge mehanizama za CDO, kao kanala za kreditno posredovanje, sa svoje strane je izmenilo i potencijalno umanjilo ulogu tradicionalnih banaka na kreditnim tržištima. Fondovi privatnog kapitala su uzeli važnu ulogu u restrukturiranju korporacione aktive, uz pomoć inovativnih kreditnih struktura i finansijskih tehnika koje se oslanjaju na hedž fondove kao trgovce i investitore. A granice između funkcija i ponašanja fondova privatnog kapitala i hedž fondova su se zamaglile.

U nekom smislu je još uvek suviše rano da se predviđaju pune konsekvence ovog razvoja. Ali već možemo da vidimo neke od promena u finansijskim sistemima koje su nastale. Dozvolite mi da napomenem neke od konsekvenci koje ove promene mogu da imaju, za finansijska tržišta, finansijske institucije i za to kako izvršavamo našu dužnost kao centralni bankari.

Kada je reč o tržištima, ključna promena koju je ovo izazvalo jeste povećana likvidnost i transferabilnost rizika. Ne samo da stalno ima više instrumenata i tržišta na kojima se može ostvariti hedžing za bilo koji rizik ili trgovati njima, već je i stalno veći pul partnera koji su spremni da preuzmu jednu ili drugu stranu transakcije transfera rizika - ako je cena prava. Kada analitičari govore o povećanoj likvidnosti tržišta misle na to da na sve više tržišta jedna aktiva može odmah da nađe kupca po ceni koja ne zahteva preveliku likvidnu premiju.

Razlog za ovo je što su mnogi novi instrumenti kapitalno - efikasni, što znači da trgovci nemaju potrebu da alociraju veliki iznos kapitala da bi prihvatili relevantnu izloženost. Drugi faktor koji pomaže da se poveća tržišna

In my talk on “*Monetary Policy and New Financial Instruments*” I will first review some of the most important financial innovations we have seen in recent years, and the consequences they have had for financial markets and institutions. Then I’ll discuss some of the implications for financial stability policies, before closing with some thoughts on the implications for monetary policy.

The recent wave of financial innovation

While there have been many changes in how financial markets function in recent years, perhaps the most striking changes have come in the area of credit risk. Large banks in the developed markets are rapidly moving away from the traditional business of making loans and holding them to maturity. Increasingly they see their business model as originating credit claims (or packaging claims originated by others) and selling them, often in seniority-based tranches, to investors. As a result, the process of disintermediation - which was already well underway in many markets in the 1980s and 1990s - has accelerated. Credit is now something that is largely bought and sold on markets, rather than held for the long term on the balance sheets of financial intermediaries.

The increased trading of securitized credit instruments has accompanied, as both cause and effect, the explosive growth in the market for credit derivatives. Meanwhile, derivatives and structured products in other risk categories, such as interest rates, foreign exchange and equities, have also continued to grow in volume and complexity.

Rapid innovation in financial instruments has accompanied - again, both as cause and effect - increased activity by non-traditional financial players, notably hedge funds and private equity funds. As institutions, of course, these are not themselves new. But there has been a qualitative shift in the size and scope of their activity. They have gone from being niche players to being key participants and drivers of innovation in a broad range of markets and transactions.

The growth of hedge funds is part of an ongoing realignment of the roles of different categories of financial institutions. Hedge funds now account for a large share of trading in many core market segments, and manage a steadily increasing share of the assets of the world’s pension funds and university endowments. At the same time, traditional asset



likvidnost je da ima sve više i više igrača koji su strukturno bolji u njenom obezbeđivanju. Na primer, institucionalni investitori sa dugim investicionim horizontima sada su postali najveći investitori u fondove privatnog kapitala i hedž fondove. Pošto ovi investitori mogu da prihvate duže periode fiksiranja, u normalnim vremenima, hedž fondovi i privatni kapitalni fondovi mogu da pružaju promptnu likvidnost tržištima jer sami ne moraju da brinu o potrebama za likvidnošću svojih investitora. Fondovi mogu, međutim, da se suoče sa zahtevima za likvidnošću drugih partnera, naročito u stresnim vremenima - na ovo ću se vratiti za momenat.

Veća raznovrsnost igrača i instrumenata, kao i povećanje likvidnosti, imali su dubok uticaj na funkcionisanje tržišta. Volatilitnost i premija rizika stalno su padali tokom ovog perioda brzih inovacija. Do jednog stepena, ovo je odražavalo smanjenu realnu volatilitnost. Ali, ono što je od veće važnosti, tržišta su postala strukturno efikasnija u određivanju cene rizika i arbitraži razlika u vrednovanju aktive. Finansijske cene se sada aktivnije nego ranije kreću prema fundamentalnim pokazateljima.

Posledica toga je da se krećemo prema svetlu u kome se finansijski šokovi lakše absorbuju nego što je to ranije bio slučaj, jer ima mnogo veći pul igrača koji su spremni i sposobni da brzo prelaze sa jednog na drugo tržište. Otuda, nestašica likvidnosti na jednom tržištu ili finansijskom sektoru brzo može da se nadoknadi transferom likvidnosti sa drugog. Ovo pomaže u obezbeđenju da cene za povezanu aktivu međusobno kreću grubo istom linijom.

U isto vreme rizik od šireg šoka, koji može da pogodi nekoliko tržišta u isto vreme, može da se povećava. Takav šok bi mogao da proizađe iz pada apetita za rizikom kod širokog kruga učesnika, možda u vezi sa padom likvidnosti na raspolaganju hedž fondovima i drugim aktivnim trgovcima. Hedž fondove od potreba za likvidnošću mogu da štite njihovi investitori, fiksirani periodi i kanali za povlačenje sredstava, ali i dalje su im potrebna likvidna sredstva da odgovore pozivima za uplatu margina na svoje pozicije. Ti zahtevi mogu verovatno da rastu oštrije u vreme kada su tržišta turbulentna i kada ponuda likvidnosti drugih trgovaca ili

dilera i primarnih brokera bude smanjena. Ako inicijalno kretanje cena zabrine partnere, onda nastaje dublje i šire zasnovana erozija koja može da izazove rizike sistemske prirode.

Kakve su implikacije ovog novog okruženja za finansijske institucije, naročito za one koje su podvrgnute regulativi? Važan razvoj je što poboljšana trgovina i postupci za utvrđivanje cena rizika omogućavaju finansijskim institucijama svih vrsta da efikasnije upravljaju svojim rizicima. Za zvanični sektor, ovo je jasno dobra vest. U isto vreme, međutim, konkurentski pritisci novih igrača i novi načini na koji se obavljaju "stari poslovi" predstavljaju poteškoću. Veći kapacitet za upravljanje rizikom takođe znači da je učesnicima olakšano da uzimaju rizik, što onda pojačava probleme sa moralnim hazardom. Operativno okruženje je postalo rizičnije, sa složenim instrumentima koji prouzrokuju poteškoće u upravljanju rizikom i valorizacijom čak i za najsofisticiranije firme. Šok koji pogodi profitabilnost i umanju kreditni standing jedne ili više većih institucija, ili vodi banke ka uzimanju rizičnijih strategija da bi postigle željeni nivo profita, može da ima sistemske implikacije za koje vlasti moraju da znaju.

Ključno pitanje za stabilnost globalnih finansijskih tržišta jeste da li jezgro posrednika - petnaest ili dvadeset velikih globalnih firmi koje prave tržišta najšire trgovanim derivatima i deluju kao primarni brokери za hedž fondove - adekvatno upravljaju svojim trgovinskim aktivnostima sa partnerima i za svoj račun, kao principal. Velike dilerske firme upravljaju izloženostima prema partnerima kombinacijom inicijalne margine, variacione margine i alokacijom svog kapitala. Do sada, ove firme izgleda da drže pod kontrolom svoje direktne kreditne izloženosti prema hedž fondovima i principalnoj trgovini. Međutim, postoje dokazi da konkurencija na poslovima hedž fondova jako pritiska aranžmane o marginama. Nejasno je da li firme imaju adekvatnu zaštitu protiv indirektno izloženosti prema posledicama aktivnosti za većim leveridžom, kao što je rizik od iznenadnog globalnog likvidnosnog šoka. Firme još uvek razvijaju metodologije da modeliraju takve događaje i da ih inkorporiraju u stresne testove. Ali na kraju najbolja zaštita je u adekvatnom kapitalu i likvidnosti.

managers have adopted hedge-fund-like strategies, including taking on leverage and adopting short positions. Some hedge funds are taking a prominent role in credit markets, either as direct providers, as investors in the riskiest tranches of funded or synthetic CDOs, and by providing liquidity to the credit derivative market. The rise of standalone CDO vehicles as a channel for credit intermediation in turn has altered and potentially reduced the role of traditional banks in credit markets. Private equity funds have assumed an important role in restructuring corporate assets, with the help of innovative loan structures and financing techniques that rely on hedge funds as traders and investors. And the boundaries between the functions and behaviour of private equity funds and hedge funds have blurred as well.

In some respects it's still too early to forecast the full consequences of these developments. But we can already see some of the changes in financial systems that have resulted. Let me suggest some of the consequences that these changes may have, for financial markets, for financial institutions, and for how we go about fulfilling our responsibilities as central bankers.

With respect to markets, the most critical change has been the increased liquidity and transferability of risk. Not only are there ever more instruments and markets in which all kinds of risks can be hedged or traded; there is also a growing pool of counterparties willing to take one or the other side of a risktransfer transaction - as long as the price is right. When analysts talk about the increased liquidity of markets, this is what they're referring to: in more and more markets, an asset can readily find a buyer at a price that does not command too great a liquidity premium.

One reason for this is that many of the new instruments are capital-efficient, meaning that traders do not need to allocate a large amount of up-front capital to adopt the relevant exposure. A second factor helping to increase market liquidity is that more and more players are structurally better at providing it. For example, institutional investors with long investment horizons have now become the largest investors in private equity and hedge funds. Because these investors can agree to lengthier "lock in" periods, in normal times, hedge funds and private equity funds can provide ready liquidity to markets because they themselves do not need to worry about meeting the liquidity needs of their investors. The

funds may, however, face liquidity demands from other counterparties, particularly in times of stress - a point I'll come back to in a moment.

The greater diversity of players and instruments, and the increase in liquidity, have had a profound impact on how financial markets function. Volatility and risk premia have fallen steadily over this period of rapid innovation. To a degree, this has reflected reduced real volatility. But, more fundamentally, markets have become structurally more efficient at pricing risks and arbitraging valuation differences across assets. Financial prices are now driven more actively towards fundamentals than before.

One consequence of this is that we are moving to a world where financial shocks are more easily absorbed than they used to be, because there is a larger pool of players available who are willing and able to switch quickly from one market to another. As a result, liquidity shortages in one market or financial sector can rapidly be made up by transfers of liquidity from another. This helps ensure that prices for related assets are broadly in line with one another.

But at the same time the risk of a broader shock, affecting several markets at once, may have increased. Such a shock could result from a fall in risk appetites of a broad range of participants, perhaps in conjunction with a fall in the liquidity available to hedge funds and other active traders. Hedge funds may be shielded from liquidity demands from their investors, by lock-up periods and withdrawal gates, but they still need liquid funds to meet margin calls on their positions. Those demands are likely to rise most steeply at times when markets are turbulent and the supply of liquidity, whether from other traders or from dealers and prime brokers, is likely to be reduced. If initial price movements trigger counterparty concerns, this could well generate deeper and more broad-based liquidity erosions that can pose risks of a systemic nature.

What are the implications of this new environment for financial institutions, particularly the ones that are subject to regulation? One important development is that improved trading and pricing of risks enable financial institutions of all kinds to manage their risks better. For the official sector, this is clearly good news. At the same time, however, competitive pressures from new players and new ways of doing "old business" pose challenges. Greater risk management capacity also means it is easier for participants to take on risks, which can

Implikacije za politiku finansijske stabilnosti

Šta znače ovi događaji za politiku finansijske stabilnosti? U novom okruženju, rizik izgleda da je rasprostrt mnogo šire, ali je smanjena transparentnost u pogledu toga gde su rizici locirani. Ovo umanjuje sektorski uticaj realnih i finansijskih šokova, ali može da oteža i anticipiranje koji su sektori ranjivi na šok. Čak i više nego ranije, politika mora da se promeni sa reaktivne orijentacije gde centralne banke intervenišu u odgovoru na probleme i pretnje, na preventivni stav kod koga se sistemi jačaju da budu otporni na potencijalne šokove.

Zadatak zvaničnog sektora sigurno nije da stoji na putu inovacija ili poboljšanja efikasnosti. Međutim, moramo da minimiziramo rizik moralnog hazarda koji može da proizađe iz povećanog kapaciteta otpornosti regulisanih firmi na rizik. Jedan od načina da se to uradi je udvostručavanje napora u korišćenju regulatornih alata - zahtevi za kapitalom zasnovani na riziku, prudencijalna pravila, obelodanjivanje koje je usmereno prema jakoj tržišnoj disciplini - da bi se odluke regulisanih firmi bliže uskladile sa signalima koji dolaze sa tržišta.

Pristup regulaciji hedž fondova dosta je diskutovan tokom proteklih godina. Posle

široke debate koja je pratila krizu LTCM, političke i finansijske vlasti sporazumele su se da primene "indirektni pristup". Ovaj pristup se oslanja na partnere koje obezbeđuju hedž fondovima leveridž - uglavnom regulisane banke ili investicione banke - da primene odgovarajuću disciplinu u svom kreditiranju i poslovanju sa hedž fondovima. Od partnera se očekuje da uvedu limite na svoje izloženosti prema hedž fondu koji preuzima ekscesni leveridž, koji primenjuje ekscesno rizičnu strategiju, ili nije dovoljno otvoren u pogledu informacija o svojoj izloženosti rizicima.

Ovaj indirektni pristup generalno je uspeo u obuzdavanju rizika za finansijsku stabilnost koje su predstavljali hedž fondovi. To je zajednički napor koji obuhvata najpre i u najvećoj meri primenu discipline u privatnom sektoru, pri čemu kontrolori podržavaju tu disciplinu kada je slabe konkurentni pritisci. Sa rastom tržišta i njihovim razvojem potrebno je da radimo neprestano kako bismo obezbedili da sve relevantne strane rade svoj posao.

Ovo je poruka koja je proizašla iz nedavno obnovljenog izveštaja Finansijskog foruma za stabilnost (Financial Stability Forum) iz 2000. godine o institucijama sa velikim leveridžom. U tom obnovljenom izveštaju dali smo pet preporuka - upućenih kontrolorima, partnerima hedž fondova, investitorima i industriji hedž

fondova - za koje se članovi FSF slažu da će verovatno biti najefikasnije u pogledu rizika za finansijsku stabilnost povezanih sa hedž fondovima. Tri od ovih preporuka upućene su kontrolorima. Od njih se traži da zahtevaju od dilerskih firmi da jačaju merenje i upravljanje rizikom partnera, naročito kada su instrumenti novi i njihova složenost visoka. Oni će takođe da rade sa firmama na jačanju njihovog kapaciteta da procenjuju i ublažavaju svoje izloženosti prema erozijama tržišne likvidnosti o kojima sam govorio ranije. Najzad, kontrolori će procenjivati potrebu razvoja više sistematizovanih podataka o izloženosti globalnih kreditnih institucija prema hedž fondovima. Četvrta preporuka

Sedište Centralne banke
Italije - Palazzo Koch,
Rim



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reinforce moral hazard problems. The operating environment has also become riskier, with complex instruments posing risk management and valuation challenges even for the most sophisticated firms. A shock to profitability that reduces the credit standing of one or more large institutions, or leads banks to take on riskier strategies in order to reach a desired level of profits, could have systemic implications that authorities need to be aware of.

A critical question for the stability of global financial markets is whether the core intermediaries - the fifteen or twenty large global firms that make markets in the most widely traded derivatives and act as prime brokers to hedge funds - are adequately managing their counterparty and principal-based trading activities. The large dealers firms manage counterparty exposures through a combination of initial margin, variation margin, and allocations of their own capital. So far, these firms seem to be keeping their *direct* credit exposures to hedge funds and principal trading under control. However, there is evidence that competition for hedge fund business may be putting margining arrangements under pressure. It is also unclear whether firms have adequately protected themselves against *indirect* exposures to the consequences of greater leveraged activity, such as the risk of a sudden global shock to liquidity as I mentioned a moment ago. Firms are still devising methodologies to model such events and incorporate them in stress tests. But ultimately the best safeguard will be adequate capital and liquidity cushions.

Implications for financial stability policy

What do these developments mean for financial stability policy? In the new environment, risks seem to be dispersed more widely, but transparency about where risks are located has declined. This reduces the sectoral impact of real and financial shocks, but may also make it harder to anticipate which sectors are vulnerable to a shock. Even more than before, policy needs to move from a reactive orientation, where we intervene in response to problems and threats, to a preventative stance in which systems are made more robust to potential shocks.

Certainly it's not the task of the official sector to stand in the way of innovation or improved efficiency. However, we do need to minimize the moral hazard risks that might come from the increased risk capacity of regulated firms. One way

to do this is to redouble our efforts to use regulatory tools - riskbased capital requirements, prudential rules, disclosure that is aimed towards strong market discipline - to align the decisions of regulated firms more closely to market signals.

New instruments and trading patterns also call for the expansion or adaptation of the market infrastructure that underpin financial activity. Here, collective action problems among market participants can arise that prevent the market from finding appropriate solutions on its own. Giving the impetus that the markets need to resolve collective action problems is a key task of central banks and financial regulators. We've seen some creative examples of this in the last few years, for example the efforts of the Federal Reserve Bank of New York and the Financial Services Authority in London to press large dealers to reduce their backlogs of unconfirmed credit derivatives contracts and to create more resilient settlement arrangements for these transactions.

The approach to regulation of hedge funds has been much discussed over the years. After extensive debate following the 1998 LTCM crisis, political and financial authorities agreed an "indirect approach". This approach relies on the counterparties who provide hedge funds with leverage - largely regulated banks or investment banks - to exercise appropriate discipline in their lending and dealing with hedge funds. Counterparties are expected to impose limits on their exposure to a hedge fund that takes on excessive leverage, is engaged in excessively risky strategies, or is not sufficiently forthcoming with information about their risk exposures.

This indirect approach has generally worked well in containing the financial stability risks posed by hedge funds. It is a joint effort, involving first and foremost the exercise of discipline by the private sectors, with supervisors buttressing that discipline when competitive pressures erode it. As markets grow and evolve we need to work constantly to ensure that all of the relevant parties are doing what they need to do.

This is the message that came out of the Financial Stability Forum's recent update of its 2000 report on highly leveraged institutions. In the update we set out five recommendations - addressed to supervisors, hedge fund counterparties, investors, and the hedge fund industry - that FSF members agree are likely to be most effective in financial stability risks related to hedge-funds Three of the

upućena je partnerima i investitorima hedž fondova da zahtevaju i deluju na osnovu odgovarajućih informacija od menadžera hedž fondova. Peta preporuka zahteva od industrije hedž fondova da pregledaju i jačaju postojeće repere zdrave prakse za menadžere hedž fondova.

Želeo bih da razbijem iluziju da je ovaj indirektni pristup lak pristup. Da bi kontrolori mogli da procenjuju adekvatnost procesa upravljanja rizikom u firmi i da podstaknu više konzervativizma gde je to potrebno, naročito moraju da, na trajnoj osnovi, određuju gde su granice prakse upravljanja rizikom. I moraju onda da izlože očekivanja u pogledu promena koje firme, pojedinačno i kolektivno, moraju da sprovedu i da nadgledaju uvođenje potrebnih promena u firmama. Sada je u toku širok pregled glavnih kontrolnih vlasti o tome kako najveće banke i primarni brokeri u svetu upravljaju svojim rizicima povezanim sa hedž fondovima. Odvojeno od toga, industrija hedž fondova počela je da preduzima korake da jača postojeće smernice za zdravu praksu, naročito u oblasti upravljanja rizicima, valorizovanju i obelodanjivanju podataka investitorima i partnerima. U narednom periodu pomno ćemo pratiti razvoj u ovim oblastima.

Implikacije za monetarnu politiku

Široke inovacije na finansijskim tržištima koje sam upravo pomenuo - ekspanzija korišćenja utrživih instrumenata, pojava novih igrača, razvoj tržišta derivata i strukturiranih proizvoda - doneli su važne promene u način na koji se monetarna politika vodi, komunicira i prenosi na privredu.

Najpre, mehanizmi transmisije se menjaju. Mada se efekat monetarne politike na raspoloživost i troškove bankarskih kredita smanjuje, akcije monetarne politike imaju neposredne efekte na čitavu lepezu prinosa na finansijskom tržištu i cenu aktive. Ovaj poslednji razvoj može da bude pozitivan, ako se naše namere dobro prenose i investitori ih korektno interpretiraju. Moglo bi da bude pogubno, ukoliko to izaziva veću volatilnost.

Naš proces odlučivanja se takođe menja. Imamo na raspolaganju širok raspon novih informacija iz cena aktive, koje nam

omogućavaju da pažljivije odmeravamo očekivanja na tržištu i da ih uzimamo u obzir. Međutim, interpretacija drugih ključnih promenljivih, kao što su monetarni i kreditni agregati, teža je nego do sada, mada nikako nije manje važna i zahteva obnovljene istraživačke napore.

Dozvolite mi da izložim neka od ovih pitanja.

Monetarna politika, sekuritizacija aktive i uloga banaka koja se menja

Nekada je bila centralna uloga bankarskog sistema u transmisiji odluke monetarne politike na privredu - takozvani "bankarski kanal za kreditiranje". Sada se ubrzano umanjuje. U poređenju sa tradicionalnim načinom mišljenja to je suštinska promena.

Banke su ranije bile u centru procesa transmisije monetarne politike. Postojanje asimetričnih informacija o kvalitetu zajmoprimaca dalo je posebnu ulogu bankama u procenjivanju kreditne sposobnosti firmi i pružanju eksternog finansiranja. Osetljivost bankarskih depozita na tekućim računima na promene kamatnih stopa dalo je monetarnoj politici snažan alat kojim se utiče na bankarske aktivnosti mobilisanja sredstava i posredovanja.

Ovaj ambijent korenito menja razvoj novih finansijskih proizvoda i posrednika. Banke preuzimaju novu ulogu u *originiranju*, sakupljanju i distribuciji kreditnih rizika izvan bankarskog sistema. Na većini tržišta sekuritizacija bankarskih kredita je u zamahu i to utiče na način na koji funkcioniše monetarna politika. Širenjem informacija o firmama, sekuritizacija pomaže da se umanjí spred između troškova internog i eksternog finansiranja. Mogućnost da se zajmovi sekuritizuju i prodaju institucionalnim investitorima, kao što su hedž fondovi, osiguravajuće kompanije i penzioni fondovi, opuštaju bankarska ograničenja u sredstvima za novo kreditiranje. To takođe dozvoljava bankama da znatan deo kreditnog rizika transferišu i umanje svoje zahteve za kapitalom, čime se omogućava, ceteris paribus, dalje povećanje kredita.

Posvećujemo veliki deo istraživanja implikacijama sekuritizacije na ulogu banaka u mehanizmu transmisije. Tekuće istraživanje

recommendations are addressed to supervisors. They are urged to press dealer firms to strengthen counterparty risk measurement and management, especially where instruments are new and complexity is high. They will also work with firms to strengthen their capacity to assess and mitigate their exposures to the market liquidity erosions I mentioned earlier. Lastly, supervisors will evaluate the case for developing more systematic data on core institutions' global credit exposures to hedge funds. A fourth recommendation calls on counterparties and investors in hedge funds to demand and act upon appropriate information from hedge fund managers, while a fifth urges the hedge fund industry to review and enhance existing sound practice benchmarks for hedge fund managers.

I would like to dispel the notion that this indirect approach is a light approach. In particular, for supervisors to be able to judge the adequacy of firms' risk management processes and to induce more conservatism where this is needed, they must establish - continuously - where the frontier in terms of risk management practices is. And they must then set out expectations about changes that firms individually and collectively must make, and oversee firms' implementation of necessary changes. An extensive review by the main supervisory authorities of how the largest banks and prime brokers in the world manage their hedge fund related risks is now underway. Separately, the hedge fund industry has begun to take steps to strengthen existing sound practice guidance, notably in the areas of risk management, valuation practices and disclosures to investors and counterparties. We will be following progress in these areas very closely in period ahead.

Implications for monetary policy

The widespread innovations in the financial markets that I just mentioned - the expansion in the use of marketable instruments, the rise of new players, the development of derivatives and structured products markets - have brought important changes in the way monetary policy is conducted, communicated and transmitted to the economy.

First of all, the transmission mechanism is changing. While the effect of monetary policy on the availability and cost of bank credit is decreasing, monetary policy actions have prompter effects on a whole range of financial market yields and asset

prices. The latter development may be positive, if our intentions are communicated well and correctly interpreted by investors. It could be detrimental, if it causes more volatility.

Our decision-making process is also changing. We have at our disposal a wide range of new information from asset prices, which enables us to gauge market expectations more carefully and take them into account. However, the interpretation of other crucial variables, such as monetary and credit aggregates, is more difficult than in the past, although by no means less important, and calls for renewed research efforts.

Let me address some of these issues in turn.

Monetary policy, asset securitization and the changing role of banks

The role of the banking system in the transmission of monetary policy decisions to the economy - the so called "bank lending channel" - was once central. It is now rapidly diminishing. Compared with the traditional way of thinking, this is a sea change.

Banks were previously at the centre of the monetary transmission process. The existence of asymmetric information on the quality of borrowers assigned a special role to banks in assessing firms' creditworthiness and providing external finance; the sensitivity of banks' checking deposits to interest rate changes gave monetary policy a powerful tool with which to affect banks' funding and intermediation activity.

The development of new financial products and intermediaries is radically reshaping this environment. Banks are taking on a new role in originating, pooling and distributing credit risks outside the banking system. In most markets the securitization of bank loans is booming, and this is affecting the way monetary policy operates. By disseminating information about firms, loan securitization is helping to reduce the spread between the cost of internal and external finance. The possibility to securitize loans and sell them to institutional investors, such as hedge funds, insurance companies and pension funds, eases banks' funding constraints for new lending. It also allows banks to transfer a substantial part of credit risk and reduce their capital requirements, making possible, other things being equal, a further increase in loans supplied.

We are devoting a good deal of research to the implications of securitization on the role of banks in

Bank of Italy i ECB (koristeći mikropodatke o 3.000 banaka u eurozoni tokom poslednjih osam godina)¹ pokazuje da su banke koje u većoj meri koriste sekuritizaciju više zaštićene od efekata promena u monetarnoj politici: u reagovanju na povećanje zvaničnih stopa, njihova kreditna aktivnost manje opada nego kod drugih institucija. Otuda izgleda da sekuritizacija znatno umanjuje ukupan efekat monetarne politike na ponudu kredita.

Ovaj nalaz ima znatne implikacije na to kako procenjujemo politiku. Više ne možemo da se ograničavamo na ispitivanje stanja bankarskog sistema i njegovog kreditnog rizika da bismo procenjivali efekat monetarne politike na kreditne uslove i stabilnost finansijskog sistema. Mada bankarski sistem može još uvek da bude poluga za kontrolu ukupnog finansijskog sistema, drugi akter, često locirani daleko od mesta nastajanja kredita, imaju sve veći uticaj na ponudu kredita. Promene u distribuciji kreditnog rizika u privredi mogu da utiču na funkcionisanje transmisionog mehanizma na načine koje još uvek ne razumemo u potpunosti.

Otpornost finansijskog sistema na velike šokove tek treba da se u potpunosti testira. Mada će kreditni rizik biti manje koncentrisan u bankama, finansijski rizici koje stvara sistem mogu biti stvarno veći. Ne može se preduprediti da posle epizode pogrešne cene kreditnog rizika nastupe nagla prolagođavanja, koja predstavljaju nove probleme za stabilnost finansijskog sistema kao celine. Suviše je rano reći da li su promene na finansijskim tržištima odredile kraj "kreditnih ciklusa".

Monetarna politika i tržišta aktive

Dok se uloga banaka u transmisiji monetarne politike umanjuje, drugi kanali dobijaju na značaju. U stepenu u kome finansijske inovacije čine tržišta kompletnijim i efikasnijim, tekuće i očekivane promene zvaničnih kamatnih stopa odmah se prenose na širi krug finansijske aktive. Ukupno, efekti odluka monetarne politike na finansijska tržišta jači su i brži.

Neposredniji uticaj monetarne politike na široki krug cena aktive može da ima povoljne

implikacije, jer pruža monetarnim vlastima snažan instrument za uticaj na privredu. Tržišna očekivanja o budućim namerama pomeraju dugoročne stope i utiču na uslove finansiranja, čak i pre nego što se zvanične kamatne stope promene. Modifikacija cena aktive utiče na potrošnju i investicione odluke. Ako je komunikacija monetarne politike efektivna, ove promene mogu delimično "da urade posao" za centralne banke.

U isto vreme, ukoliko nismo dovoljno pažljivi konsekvence mogu da budu razorne. Akcije monetarne politike koje odudaraju od brzine koju očekuju ekonomski agensi, koja je ugrađena u dugoročne kamatne stope i druge prinose, kao i u pozicije koje su uzete na tržištu, mogu da uznemire tržišta, povećaju volatilnost i u ekstremnim slučajevima, izazovu istovremenu reviziju pozicija, sa potencijalnim štetnim efektima na likvidnost i cenu aktive.

Briga da se ne destabilizuju finansijska tržišta jedan je od razloga što mnoge centralne banke, poslednjih godina, nastoje da umanje neizvesnost koja nastaje iz odluka monetarne politike. One poklanjaju više pažnje pravom načinu komuniciranja svojih ciljeva, strategija i uz razne nijanse i praksu, buduće namere. Trend ka većem gradualizmu u akciji monetarne politike nastao je u svim glavnim industrijalizovanim privredama (pomeranja politike preko 25 bazičnih poena sada su sasvim retka za velike centralne banke) delom kao odgovor na veću neizvesnost u pogledu uticaja na promene stopa na finansijskim tržištima.

Kako odnosi između akcija monetarne politike i tržišnih očekivanja dobijaju na značaju, treba se čuvati rizika od onog što je Alan Blinder opisao kao "pas juri svoj rep". Od bitnog je značaja da izbegnemo situaciju u kojoj finansijska tržišta očekuju od centralne banke a centralna banka očekuje od tržišta, pri čemu obe strane gube iz vida osnovne faktore koji određuju inflaciju.

U Eurosistemu smatramo da je definitivno poželjno da naša politika bude predvidiva da bi se umanjila neizvesnost i volatilnost finansijskih tržišta. Međutim, naše akcije su u krajnjoj linije diktirane ekonomskim izgledima,

¹ Y. Altunbans, L. Gambacorta and D. Marques, "Securitisation and monetary policy", mimeo, May 2007

the transmission mechanism. Ongoing research by the Bank of Italy and the ECB (using microdata on 3,000 euro-area banks over the last eight years)¹ finds that banks that make greater use of securitization are more sheltered from the effects of monetary policy changes: in response to increases in official rates, their lending activity shrinks less than does that of other institutions. Securitization therefore appears to reduce the overall effect of monetary policy on loan supply significantly.

This finding has important implications on how we assess policy. We can no longer limit ourselves to examining the state of the banking system and its credit risk in order to evaluate the effect of monetary policy on credit conditions and the stability of the financial system. While the banking system may still be the lever by which the entire financial system is controlled, other actors, often located far from where the loans are originated, have an increasing influence on credit supply. The changing distribution of credit risk in the economy may affect the way the transmission mechanism operates, in ways we do not yet completely understand.

The resilience of the financial system in the face of larger shocks has yet to be fully tested. Although credit risk will be less concentrated on banks, the financial risks that are being created by the system may actually be greater. It cannot be precluded that episodes of credit risk mispricing may be followed by abrupt adjustments, posing new challenges to the stability of the financial system as a whole. It is too early to tell whether the changes on the financial markets have determined the end of “credit cycles”.

Monetary policy and asset markets

While the role of banks in monetary policy transmission is diminishing, other channels are gaining in importance. To the extent that financial innovation makes markets more complete and more efficient, actual and expected changes in official interest rates are readily transmitted to a wide range



Bank of Italy branch office Venice - 16 century Palazzo Dolfin-Manin.

of financial assets. Overall, the effects of policy decisions on

financial markets are stronger and faster.

A more immediate impact of monetary policy on a wide range of asset prices may have favourable implications, since it provides monetary authorities with a powerful instrument for affecting the economy. Market expectations on future policy intentions move long-term rates and affect financing conditions, even before official interest rates are changed. The modification of asset prices affects consumption and investment decisions. If policy communication is effective, these changes may partly “do the job” for central banks.

At the same time, unless we are suitably careful the consequences may be disruptive. Policy actions that diverge from the pace expected by economic agents, which is built into long-term interest rates and other yields as well as into positions taken on the market, may upset markets, increase volatility and, in extreme cases, induce a simultaneous revision in positions, with potentially disorderly effects on liquidity and asset prices.

The concern not to destabilize financial markets is one reason why many central banks have striven in recent years to reduce the uncertainty arising from policy decisions. They are paying more attention to proper communication of their objectives, strategies

¹ Y. Altunbas, L. Gambacorta and D. Marqués, “Securitisation and monetary policy”, mimeo, May 2007.

a ne gledištima finansijskih tržišta. Generalno je bolje izbegnuti iznenađenja za tržišta, ali ima situacija kada to ne može da se izbegne, jer imamo nove informacije, ili, jednostavnije, imamo različita gledišta u odnosu na gledišta učesnika na tržištu. U takvim slučajevima efektivna komunikacija je još važnija. Da se postigne stabilnost cena na srednji rok, bitno je da vođstvo ostane kod monetarnih vlasti.

Monetarna politika i indikatori finansijskih tržišta

Dozvolite mi dalje da primetim da razvoj finansijskih tržišta i uvođenje novih instrumenata deluju ne samo na monetarnu transmisiju već takođe na naš proces donošenja odluka. Raspoloživost širokog izbora novih proizvoda daje nam bogatstvo informacija koje smo samo pre nekoliko godina s mukom dobijali. Nasuprot tome, tradicioalni indikatori se sada teže interpretiraju.

Imamo na raspolaganju veliki skup informacija sa tržišta derivata (fjučersi, opcije, svopovi) koje su od ključnog značaja za naše odlučivanje. Cene sa ovih tržišta nam omogućavaju da procenimo, sa stepenom preciznosti koji je pre nekoliko godina bio nezamisliv, celokupnu distribuciju tržišnih očekivanja u pogledu ključnih promenljivih. Sada imamo indikatore tržišnih očekivanja u pogledu inflacije, rasta i odluka monetarne politike. Ovo nam pomaže da donosimo bolje odluke monetarne politike: očekivanja investitora pokazuju način na koji će privreda verovatno da reaguje na naše akcije i one su izvor informacija o osnovnim ekonomskim trendovima.

Međutim, difuzija novih finansijskih instrumenata će takođe verovatno da utiče na informacioni sadržaj nekih indikatora koje centralne banke redovno prate i koji služe kao osnova za odluke monetarne politike. Ponašanje novca i kredita naročito trpi uticaj nastajanja novih proizvoda i novih igrača.

Pre deset godina, veći deo M3 u euro zoni držali su građani i firme, čije smo ponašanje

kao vlasnika novca mogli prilično dobro da razumemo. Samo oko 6 procenata su držali takozvani nebankarski posrednici (u koje spadaju uzajamni fondovi i "korporacije finansijski mehanizmi" koji kupuju, prikupljaju i prepakuju bankarske zajmove kao utržive hartije od vrednosti). Ovaj procenat je sada skoro udvostručen i jednu petinu rasta M3 imaju ovi posrednici.² Njihova tražnja za novcem verovatno će reagovati na različite motive i teže je da se interpretira. Dalje, utrživi instrumenti (kao što su fondovi novčanog tržišta) sada predstavljaju 14 posto od M3, u poređenju sa 10 procenata početkom devedesetih i samo 5 procenata sredinom osamdesetih. Drže ih u svrhu portfolija i manje su direktno vezani sa transakcije i potrošnju na robu i usluge.

Ovaj razvoj zahteva dublju analizu. Bilo bi pogrešno zaključiti, kao što su to izgleda uradili neki komentatori, da to zahteva umanjenje uloge novca u strategiji centralnih banaka, naročito ECB. Dinamika monetarnih agregata još uvek prenosi važne informacije o budućem kretanju cena, ali da bi se izvukle ove informacije neophodno je da se obradi veći skup monetarnih podataka i da se uzme u obzir značajan uticaj nedavnih finansijskih inovacija. Sve centralne banke Evrosistema pristupile su poboljšanju svojih analiza u ovom pravcu.

Tekuća istraživanja Bank of Italy imaju za cilj razvoj tehnika za izvlačenje informacija iz zajedničkog trenda velikog skupa monetarnih indikatora (M3, ali takođe njegovih komponenti, monetarnih holdinga u raznim sektorima privrede, i pandana M3, uključujući razvoj kredita), korišćenjem "multivariate" tehnika (analiza dinamičkih faktora) da bi se izbegli šumovi. Naši rezultati ukazuju na to da zajednički trend izvučen iz različitih monetarnih komponenti prenosi korisne informacije o ponašanju inflacije nekoliko godina unapred.³ Ovo potvrđuje da analiza monetarnih promenljivih ostaje bitna za vođenje monetarne politike, pod uslovom da je zasnovana na proceni velikog skupa informacija i na zdravoj ekonomskoj interpretaciji.

² G. Ferrero, A. Nobili and P. Passiglia, "The sectoral distribution of money supply in the euro area", *Temi di discussione*, No. 627, 2006

³ A. Nobili, "A composite indicator for monetary analysis", Banca d'Italia, mimeo, May 2007

and, with different nuances and practices, future intentions. A trend to greater gradualism in policy action has emerged in all the main industrialized economies (policy moves in excess of 25 basis points are now quite rare for major central banks) partly in response to the greater uncertainty over the impact of rate changes on the financial markets.

As the interplay between policy actions and market expectations gathers importance, we should also guard against the risk of what has been described by Alan Blinder as the “dog chasing its tail”. It is fundamental that we to avoid a situation in which financial markets look at the central bank and the central bank looks at financial markets, both losing sight of the underlying factors that determine inflation.

In the Eurosystem, we consider it definitely desirable that our policy be predictable in order to reduce uncertainty and volatility in financial markets. However, our actions are ultimately dictated by the economic outlook, not the view of the financial market. In general it is better to avoid surprising the market, but there are times when it cannot be avoided, because we have new information or, more simply, different views from market participants. In these cases, effective communication is even more important. To deliver price stability over the medium term, it is essential that the leadership remain with the monetary authorities.

Monetary policy and financial market indicators

Let me further observe that the development of financial markets and the introduction of new instruments affect not only monetary transmission but also our decision-making process. The availability of a wide range of new products gives us a wealth of information that we lacked even just a few years ago. By contrast, the traditional indicators are now harder to interpret.

We have at our disposal a large set of information from derivatives markets (futures, options, swaps) that is key to our decision-making. Prices on these markets allow us to estimate, with a degree of precision that a few years ago would have been unthinkable, the entire distribution of market expectations about crucial variables. We now have indicators of market expectations about inflation, growth and policy

decisions, of the uncertainty surrounding those expectations, and even of investors’ attitude towards risk. This helps us to produce better policy decisions: investors’ expectations shape the way the economy is likely to react to our actions and are a source of information on the underlying economic trends.

However, the diffusion of new financial instruments is also likely to affect the information content of some of the indicators that central banks regularly monitor and that serve as a basis for policy decisions. The behaviour of money and credit is particularly affected by the emergence of new products and new players.

Ten years ago, most of M3 in the euro area was held by households and firms, whose behaviour as money-holders we could understand reasonably well. Only around 6 per cent was held by so-called non-bank intermediaries (which include mutual funds and “financial vehicle corporations” that purchase, pool and repackage bank loans as marketable securities). This percentage is now almost twice as large, and about one fifth of M3 growth is accounted for by these intermediaries.² Their demand for money is likely to respond to different motives, and is harder to interpret. Moreover, marketable instruments (such as money market funds) now represent 14 per cent of M3, as against 10 per cent at the beginning of the nineties and only 5 per cent in the mid-eighties. They are held for portfolio purposes and are less directly connected to transactions and spending on goods and services.

These developments call for deeper analysis. It would be wrong to conclude, as some commentators seem to have done, that they require a reduction in the role of money in the strategy of central banks, and of the ECB in particular. The dynamics of monetary aggregates still conveys important information on the future evolution of prices, but in order to extract this information it is necessary to process a larger set of monetary data and take account of the significant impact of the recent financial innovations. All the central banks in the Eurosystem are committed to improving their analysis in this direction.

Ongoing research at the Bank of Italy is aimed at developing techniques to extract information from the common trend of a large set of monetary indicators (M3, but also its components, the

² G. Ferrero, A. Nobili and P. Passiglia, “The sectoral distribution of money supply in the euro area”, Banca d’Italia, *Temi di discussione*, No. 627, 2006.

Ovo implicira da ne treba da budemo samozadovoljni u pogledu vrednosti naših postojećih alata, na koje jasno utiču tekuće promene na finansijskom pejzažu euro-zone. Međutim, podceniti značaj monetarne i kreditne analize bila bi opasna greška. U tom pogledu verujem da je strategija "pune informacije" koju je usvojio Eurosistem, zasnovane na unakrsnoj proveru signala izvučenih iz realnih i monetarnih promenljivih, verovatno najbolja za bavljenje izazovima koje postavlja okruženje koje se menja.

Zaključci

Ponudio sam nekoliko misli o tome kako finansijske inovacije mogu delovati na monetarnu politiku. Sigurno je da nisam iscrpeo ova pitanja, već pokušao da osvetlim ključne

teme i glavne linije takućih promišljanja među centralnim bankama i drugim finansijskim institucijama. Potrebno nam je iskustvo o punom kreditnom ciklusu pre izvlačenja zaključaka. Kao kod svakog perioda brzih inovacija, postoji velika neizvesnost o tome kako će se ključne promenljive - uključujući kreditne agregate, potrošnju, fiksne investicije i inflaciju - ponašati po raznim scenarijima. Donosioci politike moraju da budu skromni u pogledu onog što ne znaju i da budu kreativni i fleksibilni u postupanju sa promenama u tradicionalnim odnosima koje se ubrzano događaju. Konferencije kao što je ova od vitalnog su značaja za jačanje razumevanja ovog razvoja i za razmenu gledišta o tome šta on znači za zadatke koji se nalaze pred centralnim bankarima.

Napomena

Za krizu LTCM možete videti: Upravljanje rizicima na globalizovanim finansijskim tržištima - ilustracija na incidentu sa LTCM (Jugoslovensko bankarstvo 1/2 2000).

monetary holdings of different sectors of the economy, and the counterparts of M3, including credit developments), using multivariate techniques (dynamic factor analysis) to get rid of noise. Our results indicate that the common trend derived from the various monetary components conveys useful information on the behaviour of inflation a few years down the road.³ This confirms that the analysis of monetary variables remains essential in the conduct of monetary policy, provided it is based on the assessment of a large information set and sound economic interpretation.

This implies that we should not be complacent about the value of our current tools, which are clearly affected by the ongoing change in the euro-area financial landscape. However, playing down the importance of monetary and credit analysis would be a dangerous mistake. In this respect I believe that the “full-information” strategy adopted by the Eurosystem, based on cross-checking the signals derived from real and monetary variables, is probably the best to deal with the challenges posed by a changing environment.

Conclusions

I have offered a few thoughts on how financial innovation may affect monetary policy. Certainly, I have not exhausted the issues, but sought rather to highlight the key themes and the main lines of current thinking among central banks and other official institutions. We need the experience of a full credit cycle before drawing conclusions. As with any period of rapid innovation, there is a great deal of uncertainty about how critical variables - including credit aggregates, consumption, fixed investment, and inflation - will behave under different scenarios. Policymakers will need to be humble about what they do not know, and to be creative and flexible in dealing with the changes to the traditional relationships that are rapidly taking place. Conferences like this one are of vital importance to foster understanding of these developments and exchange views on what they mean for the tasks we face as central bankers.

³ A. Nobili, “A composite indicator for monetary analysis”, Banca d’Italia, mimeo, May 2007.