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The Subprime Mortgage Crisis and Credit Crunch in the United States – Causes and Consequences

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Summary

The present subprime mortgage crisis began in 2006 with deflating of housing bubble in the U.S. real estate market; however the crisis significantly affected other markets as well. This paper analyzes the main factors triggering the subprime mortgage crisis and also the innovations at the financial markets through which the crisis spread. There have been many symptoms of the "crisis of securitization" from substantial losses of many financial institutions all over the world to decrease in lending activity and dry-up of inter-banking liquidity and trust. The monetary and fiscal interventions were proceeded in order to avoid potential recession. Nevertheless the problems of financial system have had impact on the real economic activities and curbed economic growth.

Keywords: Subprime Mortgage Crisis, Financial Crisis, Securitization.

Hypoteční a úvěrová krize ve Spojených státech amerických – příčiny a následky

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Současná hypoteční krize začala již v roce 2006 pomalým splaskáváním cenové bubliny na americkém trhu s nemovitostmi, tato krize však ovlivnila i další trhy. Toto pojednání analyzuje hlavní faktury, které vedly ke spuštění hypoteční krize a inovace na finančních trzích, díky nimž se krize rozšířila. Již jsme mohli v USA vidět řadu příznaků tzv. krize sekuritizace, a to od ztrát řady finančních institucí na celém světě až po pokles poskytování půjček a omezení likvidity i důvěry na mezibankovním trhu. Za účelem zabránit recesi byla provedena mnohá monetární i fiskální opatření. I přesto se však krize finančního systému promítla do výkonnosti ekonomiky a omezila hospodářský růst ve Spojených státech amerických i v dalších zemích.

Klíčová slova: hypoteční krize, finanční krize, sekuritizace

JEL: E44, G15

Content:

Introduction

This paper summarizes the main causes and consequences of the crisis in the United States beginning with the housing bubble in the real estate market. First chapter outlines how deflating of the housing bubble and high default rate of subprime borrowers has influenced the real estate market, construction activity and also financial market through the process of securitization. This process of issuing bonds secured by the underlying mortgages was very advantageous for banks (originators of the mortgages) because of receiving future value of current cash flows now and transferring risks to other parties in the market. However, the still more complex structured products were difficult to price and estimate the risk that the Mortgage backed securities (MBSs) are connected with. In the times of rapid economic growth in the U.S. and positive investment mood, the MBSs received high ratings from rating agencies such as Standards and Poor´s and therefore many investors underestimate the risk of MBSs, or the probability of mortgage default securing the MBSs. Mass defaults of subprime borrowers has caused bulk sales of MBSs, significant losses of banks and uncertainty in the inter-bank market. The Federal Reserve has intervened several times in order to calm the situation in the financial market and bring the missing liquidity. Beside decreases in federal funds target interest rates and use of standard tools (discount window) the Fed has also launched new instrument for the banks – Term Auction Facility – as a new term borrowing facility for 28 or 35 days. As the crisis has reassumed the Fed also made direct loan to investment bank Bear Stearns in order to rescue it from bankruptcy. It was the first direct loan to investment bank since the crisis in the 30's. The crisis in the United States has also influenced the performance of the real economy. The economic growth in the U.S. slowed down in the last quarter of 2007 and first quarter of 2008 as well. Current prospects are also not very positive mainly because of high unemployment rate.

1. Factors triggering the U.S. subprime mortgage crisis

The American real estate market suffered enormous housing bubble. In the period from 1997 to 2006 the housing prices in the U.S. increased by 124%. This increase of prices until unsustainable levels relatively to income and price-to-rents ratio must be followed by the correction in the real estate market. Normally, home prices are between 9 and 11 times the annual level of rent paid. But since 2000, prices have skyrocketed in comparison to the rents. The price-to-rent ratio peaked at the end of 2006, reaching extraordinary level of 14.5, indicating the existence of a "bubble" in residential housing. The bubble started deflating in the United States in 2006. The house-price bust then speeded up in 2007.

According to the December issue of The Economist "*America's housing market is on its sickbed. Sales of lived-in houses fell by more than a fifth in the year to October. The backlog of unsold single-family homes has risen to 10.5 months of sales, the highest for 22 years. And despite a sustained fall in house building, there is still more than eight months' supply of new homes yet to be sold.*" (The Economist 2007: 82). Even if the problems looked enormous at the end of last year the situation at the real estate market in the U.S. has not improved yet. The average decline in house prices since 2006 until March 2008 were 10%. But it is necessary to add that there are significant regional discrepancies. Mainly Florida, Nevada and California and some parts of industrial Midwest were overheated. The average decrease of home prices in big cities has been 16%.

The drop in home prices led in many cases to the negative equity of homeowners. It means that if the homeowner decided to sell his/her house he would not be able to pay off the rest of his/her mortgage debt. If we look at the supply and demand of houses in the U.S. we can see that the prices of homes could continue decreasing substantially. There is an enormous amount of excess vacant houses for sale (approximately 1.1 million) which stands for 2.9% homeowner-vacancy rate. Although the activities of construction building have curbed, the supply of houses is pushed up by high level of foreclosures connected with decrease in home prices. In 2007 there were more than 2.2 million foreclosure filings on almost 1.3 million properties which is 75% increase in comparison to 2006 (The Realty Trac 2008). Analysts at Goldman Sachs estimate that the correction in national house prices is only halfway through. They expect an 18-20% correction overall, or another 11-13% decline from current price levels. According to their analysis, six states - Arizona, Florida, Virginia, Maryland, California and New Jersey, could suffer from further price declines of 25% or more.

Regarding the aspects of the real estate market cited above, the second factor of subprime mortgage crisis beside the housing bubble is the high default rates of "subprime borrowers" which worsened the situation in the real estate market. The subprime borrower is a higher-risk borrower with lower income or lesser credit history than "prime" borrower. This kind of borrowers was unable to receive large-scale loans such as mortgage until recently. However, with the reform of lending laws and new structured products in the financial market, this new mortgage channel for subprime borrowers emerged. Subprime borrowing became a phenomenon in this market in the 21st century. Firstly it had serviced only subprime borrowers, later the market has also provided mortgages to households that did not want to provide down-payment for the home purchase ("zero-borrowers") or that wanted to purchase a larger home than they could afford according to the conditions of prime lenders. Therefore the subprime market became a market servicing the marginal and thus riskier borrowers to whom subprime lenders have charged higher interest rate in order to compensate for higher risk connected with lending.

This process of providing mortgages to marginal borrowers enabled further increase in American consumption after the “tech” crisis in 2001 and was another factor of increase in house-prices because of higher demand. Higher prices of real estate mean wealthier households that are more willing to consume. According to Case, Quigley and Shiller (2001:10) a one per cent rise in housing wealth increases consumption by between 0.11 to 0.17% in developed countries. Furthermore, the United States have one of the highest homeownership rate which has been rising since 90’s and is currently at the level of 70%. The level of indebtedness of an average American consumer is on the other hand much higher than e.g. in European or Asian countries and amounts to 120% of households’ income despite the fact that this ratio used to be 60% in 1980 (Dynan 2007: 2). The biggest part of households’ debt is obviously created by expenditures on house purchase (prime or subprime mortgages).

The ratio of subprime mortgages on the total loan market has been shooting up since 2001. Despite of quite low share of subprime mortgages on total originations in the 90’s (5% in 1994 worth 35 billion USD), in 2006 the subprime mortgages created almost 20% of the U.S. mortgage market with the value of 600 billion USD. The rate of payment delinquency (borrower not able to pay installment for more than 30 days) of subprime borrowers reached 21% in 2007. Indeed the subprime borrowers are more sensitive to foreclosures and most of such mortgages have adjustable rates. It means that the initial payment is lower and installments are fixed for 2 years only. After that payments are higher and also derived from Federal Reserve interest rate which also has been growing until August 2007. With decreasing home prices and also increasing interest rates, homeowners were not able to pay off their mortgage debt. For example in Cleveland, often cited as capital city of subprime mortgages, one in ten homes had been repossessed by late 2007. That is the subprime mortgages were popular mainly in working class black area where many people achieved homeownership through them. However, after two years when mortgages reset to higher interest rates, lot of them came to foreclosures.

We can see that deflating of housing bubble at the real estate market in the U.S. has caused many severe problems of U.S. households, mainly high delinquency rates of subprime borrowers often followed by foreclosures. Excess vacant houses has contributed to worsening of the market conditions as the excess supply push the prices even lower and many entrepreneurs in building industry has suffered big losses or has gone into bankruptcy. Further we will study the problems of financial institutions connected with the housing bust.

2. Role of securitization

When taking into account the fact of spreading the crisis from real estate market to financial market, we have to explain the process of securitization. This process was initiated by Government-Sponsored Entrepreneurship Fannie Mae (Federal National Mortgage Association) and Freddie Mac (Federal National Mortgage Corporation) in the 70's. Asset securitization is the sale of financial assets (mortgages, car loans, leases) by the originator of the financial assets to a special purpose vehicle. (SPV). The SPV is a company or a trust created for the special purpose of financing the purchase of these assets by issuing of bonds secured by these assets. Therefore the bonds are called "Asset backed securities" (ABS). Investors (mainly institutional) purchase these bonds which performance is linked to the performance of underlying assets. This is the process how an originator of income generating financial assets (bank) receives now the future value of cash flows. Furthermore, the bank changes something illiquid in its balance of payment (provided loan) to liquid and marketable securities and transfers the risk connected with borrowers' default to the Special purpose vehicle. In case the bank groups mortgages to the pool against which the bond is issued by the SPVs, those are so called Mortgage-Backed Securities (MBSs). Nevertheless, the innovations in the financial markets has not stayed at MBS only but banks began to group the mortgages with other kind of loans (leases, credit card loans, student loans) into the pools and their purchase was financed by issue of Collateralized Debt Obligations (CDOs). CDO are cut up into tranches, whereas each tranche has its own risk exposure and therefore rating from the senior (A) one up to B and C ratings serving as a protection for senior tranches. The tranches with highest rating have the first claim on the cash flows which SPVs receives. The key role in rating of particular tranches occupied rating agencies – Moody's, Standard and Poor's, Fitch. These structured products were difficult to understand and also price. Without AAA ratings, the senior tranches of CDOs would have had lower prices and not such a blessing for investors.

However the Government Sponsored Entrepreneurships (GSEs) began this process, the private sector has gained its importance in the mortgage bond market recently. Even in the middle 90's most of the new mortgages were being purchased and pooled by GSEs with the peak in 1996 (70%). By 2004 the share of GSEs on issuing of new mortgages was only 10%; other financial intermediaries issuing ABS obtained a share of 40% (Cecchetti 2008: 3). Now the value of mortgage bond market is 6.8 trillion USD representing the largest single part of the U.S. bond market worth 27 trillion USD. The low credit quality mortgages (Alt-A and subprime mortgages) back almost 30% of all mortgage bonds. Between 2001 and 2007 the share of low quality mortgages on total new issued mortgages jumped from 9.7% to 33.5%. The main difference between mortgage backed securities issued by the GSEs and other private financial intermediaries is that GSEs provides investors with insurance of the securities against default on underlying mortgages. Furthermore, GSEs set credit quality standards for borrowers in order to be included in GSE pools and also maximum value of the loan. These criteria limited the mortgages in their pools and helped private financial intermediaries to raise their pools and issue still growing number of MBSs. Consequently, the private financial intermediaries have had mortgages in their pools provided to higher risk borrowers, with high debt-to-income ratio, little or no documentation on the mortgage or high loan-to-value ratio (percentage of the property price being borrowed).

Nevertheless, there are several problems of securitization. At first, there are more opportunities for investors to hedge the risk with new financial instruments, however the risk connected with mortgage backed securities ends up with those most willing to bear it but not necessarily most able to bear it. Furthermore, SPVs and investors do not have information about the performance of assets in the pool securing the bond. The "principal-agent" problem occurs at this market. Investors – principals, failed to impose sufficient discipline on their agents – subprime mortgage originators (Cecchetti 2008: 4). The structured financial products were so difficult to understand that investors even did not know what they should ask the sellers about. Lack of discipline and transparency in issuing of mortgage-backed securities led to their overpricing and also to underestimating of the risk connected with them. The creation of Special Purpose Vehicles enabled financial institutions to elude capital-adequacy rules by getting the loan (transferred to asset backed securities) out of their balance sheets. Innovations and spread of financial services have not been regulated enough in order to avoid current "crisis of securitization".

3. Hit of financial crisis

In February 2007 several large subprime mortgage lenders reported losses because of mortgage payments delinquencies. However, the crisis hit at the beginning of August 2007 when French bank BNP Paribas temporarily stopped redemptions from its funds holding U.S. mortgage backed securities. The ECB responded with large short term liquidity injection of 156 billion EUR totally in two days for overnight repurchase agreements. Fed injected 62 billion USD into repos also during two days. These arrangements were made in order to calm inter-bank market suffering from low supply of liquidity than usually and skyrocketing overnight interest rates. Consequently, one of the main features of the financial crisis has been increasing credit spreads (spreads between risky and risk-free bonds). Investors wanted to hold only risk free bonds as e.g. U.S. Treasury bonds. Before the crisis, the U.S. government agency securities issued by Fannie Mae and Freddie Mac were considered only slightly more risky and less liquid than the U.S. Treasury securities. Therefore the spread between these kinds of securities used to be around 20 basis points until August 2007. Since then the spread initially jumped to 40 basis points and remained high by the end of 2007 with escalating of the crisis. In March 2008 this spread even reached 90 basis points. The spread between the U.S. non-financial commercial papers and asset backed commercial papers increased from 10 basis points at the beginning of August 2007 up to 100 basis points at the end of 2007.

Furthermore, widely used measure of credit risk, the spread between the 3-month Libor (London inter-bank offer rate) and 3-month Treasury bill rate, rose from 50 basis points up to 200 basis points by the end of 2007 with some fluctuations. As many private loans are linked to Libor, this increase in spread has significantly raised the costs of borrowing. Despite of the average annual increase of 10% in quantity of commercial papers in the financial market till 2006, their quantity has decreased substantially by 400 billion USD till the end of 2007 (Cecchetti 2008: 9).

Mortgage payment defaults and with them connected mortgage asset devaluation caused significant losses of banks, mortgage lenders, real estate investment trusts and hedge funds. The losses and write-downs of financial institutions amounted to 379 billion USD as of May 2008 (Onaran 2008). The Citigroup is the financial institution with the biggest losses of almost 42 billion USD together with Swiss bank UBS with 38.2 billion USD losses. Also investment banks, such as Merrill Lynch or Morgan Stanley suffered from substantial write-downs and credit losses. The crisis also hit European financial institutions holding securities backed by the U.S. subprime mortgages. We can mention e.g. the U.K. bank HSBC (19.5 billion USD total reported losses), IKB Deutsche Industriebank (16 billion USD) or Royal bank of Scotland (15.2 billion USD). The crisis also negatively influenced Indian banks such as ICICI bank with the reported losses of 264 million USD (Wikipedia 2008).

The lack of confidence between the players in the financial market has spread widely in the second half of 2007. Dispersion of credit risk and losses of financial institutions reduced their lending activity and ability of corporations to obtain funds by issuing of commercial papers. This reduction in the availability of loans or sudden increase in the cost of obtaining a loan connected with mistrust of solvency of other banks within the banking system is called credit crunch. It is necessary to understand why the supply of liquidity among banks has dried up. Banks were suffering uncertainties about their own balance sheets as they did not know how to value a range of included assets after triggering the crisis. Consequently, they were not sure what their lending capacity was in order to keep their reserve requirements. In autumn 2007 the rating agencies, certifying high ratings of some mortgage backed securities, enter to the scene again and downgraded many of these instruments. For example at the beginning of 2008 the Standard and Poor's rating agency downgraded more than eight thousands securities backed by various assets in a single report. The assets which value is not known cannot serve as collateral for issuing of commercial paper of provision of lending anymore. Reduced level of lending because of mistrust of borrowers' creditworthiness and impossibility of financial intermediaries to finance themselves by issuing of commercial papers backed by MBS are the main symptoms of this financial crisis. Crisis has also caused panic in stock-markets where investors took their money out of risky mortgage bonds and flew to quality (mainly risk-free treasury bonds) or to commodities as a store of value. The stock-market indexes dropped down significantly in summer 2007 and again in first quarter of 2008 worldwide, with huge daily drops becoming quite common. Not only Dow Jones and S&P 500 were hit, but each market was affected, enormously e.g. Brazil and Korea. Since the crisis the volatility of stock-markets increased strongly elevating the distrust of investors.

4. The role and interventions of the Federal Reserve

The Federal Reserve has made appropriate steps in order to address the crisis. The Federal Reserve (Fed) has implemented appropriate monetary policy and made efforts to support market liquidity. The role of Fed in the crisis could be described as risk managers of the financial system in order to minimize systemic risk of the system.

The goal of Fed as the U.S. central bank is not only to maintain stable prices but also to support the economic growth and employment of the U.S. economy. Regarding the steps of monetary policy that Fed has executed, there were cuts in federal funds rate target from 5.25% to 2% in seven separated actions between September 2007 and April 2008. These actions were intended to help offset the tightening of credit conditions resulting from the financial turmoil (Bernanke 2007), decrease the risk of recession of the U.S. economy deriving from the subprime mortgage crisis and credit crunch in the financial market. The first cut in the interest rates was managed in the middle of September 2007 by 50 basis points. In October and December 2008 further cuts of 25 basis points followed. In January 2008 there were two broad cuts in target federal funds rate; 75 basis points in January 21 and 50 basis points in January 30. At a regular meeting of Federal Open Market Committee (FOMC) on March 18, there was resolved another cut of 75 basis points to the level of 2.25%. Meanwhile the last cut in target federal funds rate was implemented in April by 25 basis points to the level of 2%. From the recent speech of Feds Chairman Ben Bernanke made on June 3, we can expect that current level of interest rates will be maintained or possibly, with the rising level of inflation, the target rate will be increased by the FOMC by the end of 2008 or in 2009.

In order to provide banks with short-term lending the banks were demanding, Fed prolonged the discount window term lending from overnight up to one month and cut interest rates level for these kind of loans from 100 to 50 basis points over federal reserve fund target on August 17, 2007. It should have motivated banks to borrow money via the discount window; however lot of them were reluctant to borrow this way. This standard tool of Fed did not bring its expected results and the crisis even worsened in autumn and winter 2007. This fact could be portrayed by the increasing spread between effective federal funds rate (the average rate at which overnight Fed funds actually transact) and federal funds rate target (Taylor; Williams 2008: 1). Under stable conditions at the financial markets the effective rate fluctuates minimally along the target, after August 2007 the fluctuations were higher with the clear tendency to come in below the target (Cecchetti 2008: 9).

Fed therefore decided to launch the new lending instrument for banks called Term Action Facility (TAF) in December 2007. Concerning the functioning of the TAF, any commercial bank in the U.S. could bid for term borrowing in two auctions in a month whereas the individual bid could not exceed the 50 percent of the value of its pledged discount window collateral. The typical maturity period if this term borrowing is 28 or 35 days. This enabled banks to offer the Fed collateral for price above the real market value. The total reserves supplied by Fed via this facility amounted to 60 billion USD per month and since March 2008 up to 100 billion USD. The reports evaluating the effectiveness of TAF were generally favourable. According to the study of Federal Reserve Bank of Dallas TAF has reduced the spread between the 3-month Libor and the overnight index swap (OIS) rate, by at least 44 basis points on average. This provides evidence suggesting that the TAF has helped relieve financial stress in the inter-bank money market (Wu 2008: 2). TAF was successful in bringing the liquidity for the banks that needed it whereas the standard Open market operations of Fed had failed. The reason of this failure is that injecting liquidity via these operations to the 19 primary dealers (investment banks and brokers) in the U.S. does no guarantee that the liquidity will be distributed properly to the inter-bank money market where the money sources are needed mostly. This tool also brought time to the banks they needed for valuation of their assets. However, the Libor-OIS spread started to increase again in February 2008 from 30 basis points in January up to 90 basis points in April 2008. Consequently, there have been recently working papers (Taylor; Williams 2008) claiming that there is no evidence that TAF has relieved strains in the inter-bank markets.

Another instrument launched by the Fed in March 2008 was the extended Term Securities Lending Facility (TSLF). The Fed had lent Treasury securities to the primary dealers via this instrument on an overnight basis accepting only other Treasury securities as collateral. Nevertheless, since March 2008 the maturity was prolonged to 28 days and Fed was willing to accept wide range of collateral including the mortgage backed securities and to lend up to 200 billion USD. This mechanism, as well as TAF, changes the composition of the Fed assets without affecting their size. The Fed hopes that if the primary dealers can change the MBSs for Treasury securities via TSLF, than traders will again be willing to hold MBSs.

Finally I would like to mention the action that Fed has managed in order to rescue the Bear Stearns from the bankruptcy. On March 14 The Fed provided Bear Stearns with the direct loan of around 12.9 billion USD over the weekend, because this investment bank would have been unable to meet the demands of the counterparties in its repurchase agreements and its potential breakdown would have brought risk to the whole financial system. Right after that the Fed has closed a deal in which JP Morgan Chase purchased the Bear Stearns and FED committed to provide a loan of 29 billion USD to Bear Stearns in order to support the sale. As the Bear Stearns is the investment bank, it could not have obtained the traditional discount window loan as any commercial bank. This action of Fed was really extraordinary, as the direct loan provided to any corporation based on the Article 13.3. of the Federal Reserve Act was worked out for the last time in the 30's. This article was again used on March 16, when the Fed created the Primary Dealer Credit Facility, enabling investment banks to access direct borrowing from Fed similar to commercial banks. Furthermore, primary dealers could have set forward wider range of collaterals to Fed than in standard open market operations including mortgage backed securities. This popular instrument was aimed to increase the liquidity of investment banks and to reduce spreads on the eligible collateral (Cecchetti 2008: 15). The Fed's decision to set up this facility reflects the potential of this important group of institutions (investment banks and brokers) to create systemic risk with unacceptable consequences for the economy as a whole. The total amount of liquidity that Fed has injected was massive and should have brought order back into the financial market. I will summarize the effects of the financial crisis and the Fed's responds on the real economy in the following paragraph.

5. Impact of the financial crisis on the real economy

Decreasing activity in the U.S. construction building is one of the factors of slow-down of economic growth in the U.S. in the last quarter of 2007 as well as the first half of 2008. The rate of economic growth amounted only to 0.6% in Q4 2007 and to 1% in Q1 2008 because of housing downturn and the financial shock (Bureau of Economic Analysis 2008). The fell in housing construction spending by 13% in 2006 and 19% in 2007 subtracted 0.75% of GDP growth in 2006 and 1% in 2007. According to Yellen (2008: 12), CEO of Federal Reserve Bank of San Francisco, the residential construction will be the major drag of the economic growth in the U.S. in 2008 and also 2009.

Crisis of financial markets affected health of many financial institutions, created panic in the stock-markets and brought tightening of financial conditions in private sector. The Structure of current GDP in the U.S. is furthermore quite negative. In the first quarter of 2008 there was decrease in total companies' sales and increase in company stocks. On the other hand, there were positive contributions from exports of goods and services and federal spending. The U.S. exports have done very well recently because the American goods became more competitive abroad also because of decline in the U.S. dollar in past several years. However, growth in consumption and business investment spending has slowed markedly after years of robust performance. Regarding the consumer spending, the index of consumer confidence compiled by the research group "Conference Board" hit a 16-year low at the end of May 2008. More Americans worry about inflation mainly because of rising commodity prices, which could deepen these problems. Such negative consumer sentiment indicates that real spending is at risk of starting to decline for the first time since the recession of 1990-1991 (The Economist.com 2008). Another factors negatively influencing consumer spending in the U.S. are still decreasing housing prices thus lowering also the households' equity. Furthermore, labour market in the U.S. has weakened significantly. For example in May 2008, employment continued to fall in construction, manufacturing, retail trade, and temporary help services. The unemployment rate amounted to 5.5% in the same period in comparison to 5% in April 2008 (Bureau of Labor Statistics 2008). This will bring another strain for households' consumption.

As I have already indicated above, the Federal Reserve has eased the U.S. monetary policy by decreasing the federal funds rate target from 5.25% to current 2%. This monetary stimulus should help the economy to avoid recession together with fiscal stimulus of tax rebates. However, the eased Feds monetary policy contributed to the decline in the dollar hitting the record lowest value versus euro – 1.6 USD/EUR at the end of April 2007. Because of decline in the value of the dollar and the sharp increase in the price of energy and other commodity prices, the rate of inflation has increased substantially in recent months not only in the United States but also in the Europe and many emerging countries. Current rate of inflation in the U.S. exceeds 4% mainly due to rocketing prices of commodities. The core inflation excluding the prices of food and energy amounted to 2%; therefore the surge in headline inflation should be temporary, if the prices of commodities are stabilized in the future. Consequently, the fear of inflation could be seen in latest speeches of central bankers around the world indicating the probable increase in interest rates in euro area and stable interest rates in the U.S. There is an evident dilemma for the Federal Reserve managing monetary policy recently. The U.S. economy still fights against slowdown which could lead Fed to another monetary policy easing. On the other hand, the weak dollar strongly contributed to unwelcome rise in inflation which is considered as highest risk for the economy currently. According to the speech of Ben Bernanke, chairman of the Fed, further dollar weakness is not desirable. This speech towards the European audience at the beginning of June 2008 should have supported the dollar and assure that Fed would struggle with inflation, therefore not decrease the interest rates anymore, more probably there would be an increase in the U.S. interest rates later this year or in 2009. Furthermore, there is a record level of inflation expectations in the U.S. amounted to 3.4%, the highest level since 1995 (The Economist 2008: 77). This is a negative point as firms could transmit its cost increases into final consumer prices and wage negotiators could push for higher wage deal creating a risk of wage-price spiral more likely. On the other hand, the weakening economic activity will put downward pressure on inflation.

Current level of inflation is also not welcomed on the other side of the Atlantic. The European Central Bank raised interest rates in euro area at the beginning of July by 25 basis points to 4.25%. The biggest risk of inflation consists in emerging markets not only because of soaring energy and food prices. Many developing countries, for example Gulf states, still peg their currencies to U.S. dollar. The Fed's cuts in interest rates followed by steep decline in dollar should lead these countries to let their currencies appreciate. Nevertheless, most of them were reluctant to tighten their monetary policy by increasing interest rates and left monetary conditions too loose. It has been fostering domestic demand and leading to high rates of inflation. In countries such as China, India, Indonesia and Saudi Arabia prices have risen by 8-10% over the past year; in Argentina the rate of inflation is 23% and in Venezuela it is 29% (The Economist.com 2008). Not only overall inflation but also core inflation is accelerating together with sharp rise in wages in emerging markets implying similar mistakes as of rich countries in the 70's. It would be therefore suitable to raise domestic interest rates instead of price controls and subsidies in order to temper domestic inflation. The longer emerging economies hold down their exchange rates, the greater the risk of rising global inflation.

Conclusion

According to the OECD, the financial crisis already passed its peak but the effects for the real economy will persist by the end of 2009. The OECD predicts that the economic growth in the U.S. will be at the level of 1.8% in 2008 mainly thanks to strong exports. In September 2008 the OECD also curtailed its prediction of economic growth in euro area from 1.7% to 1.3% in 2008. Although the emerging markets are still running fast, also giants as China and India are expected to slow down their economic growth in 2008 mainly because of weaker exports and rocketing energy prices representing a big parts of total country's expenditures. It is too early now to evaluate the total consequences of subprime mortgage and financial crisis; however it is sure, that it has already affected the development of real economy not only in the United

States but all over the world.

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