

Krzysztof Rybiński: Globalisation and its implications for monetary policy

Speech by Mr Krzysztof Rybiński, Deputy President of the National Bank of Poland, at a series of seminars by the Centre for European Regional and Local Studies and the UNESCO Chair, Warsaw University, Warsaw, 6 April 2006.

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Ladies and Gentlemen,

Globalisation is a term used frequently in the economic debate nowadays, and it would be difficult to find an area of economic research that is “globalisation-free”. However, its meaning is so broad, that when globalisation is referred to in a discussion, various people understand various things. For this very reason, a discussion on globalisation and the monetary policy should commence with an attempt to define the term. One of the definitions of globalisation is provided by the International Monetary Fund (IMF)¹, where it is construed as “the growing interdependence (integration) of national economies, in particular as a result of the growing international trade and financial flows”. Moreover, an element of globalisation that is worth mentioning is the fast flow of information and knowledge, which is the driving force behind globalisation processes. One should keep in mind that globalisation is not a completely new phenomenon². In view of the existence of political barriers to international trade, the flow of capital and goods was equally as possible one hundred years ago as it is today. It goes without saying, however, that as a result of the rapid development of technology, especially in the ICT area, which drastically lowered the cost of the said exchange, the international integration of trade, investment, financial and other services is now more advanced than it has ever been before.

The Economic Policy Committee of the European Union³ points out four factors that have led to the rapid development of globalisation over the past years:

- multilateral trade liberalisation; the average customs duty has been lowered by ca. 30%
- successful economic reforms in many developing countries, especially in China and India
- the technological advancement, especially in the ICT sector and transportation, which has significantly lowered the cost of trade. To give you an example, fees for sea, land and air transportation, telephone calls and satellite calls went down by 21%, 30%, 95% and 88%, respectively.
- the technological advancement has blurred the borderline between what can and what cannot become subject to international trade.

Globalisation may create new macroeconomic interdependences to replace the traditional ones that we know from the books on economics. The majority of economists, politicians and investors may still not quite keep at pace with the “seismic changes” that take place in the economy⁴. However, if we really are witnesses to “seismic changes” in the economy, it may be worthwhile to have a closer look and think about their meaning.

Globalisation and its impact on the economy may be viewed from different perspectives. Today I would like us to look at globalisation from the perspective of a central bank, taking into consideration the objective of the central bank, its ability to contribute to the shape of the economy and the instruments that a central bank has at its disposal. To start with, let us consider what channels there are through which globalisation may impact the monetary policy and the central bank.

¹ “Economic globalization is a historical process, the result of human innovation and technological progress. It refers to the increasing integration of economies around the world, particularly through trade and financial flows. The term sometimes also refers to the movement of people (labor) and knowledge (technology) across international borders.” According to: “Globalization: Threat or Opportunity?” IMF Staff, April 12, 2000 (Corrected January 2002).

² See e.g. Mussa M. “Factors Driving Global Economic Integration” presented in Jackson Hole, Wyoming at a symposium on “Global Opportunities and Challenges,” August 25, 2000.

³ Economic Policy Committee “Responding to the Challenges of Globalisation”, November 2005.

⁴ Roach S. “The New Macro of Globalization”, Morgan Stanley Global Economic Forum, 6 June 2005.

Firstly, globalisation — through shaping real economic processes abroad, its influence on the global business cycle and commodity prices on global markets — influences the external environment of the national economy, which is monitored by the central bank and in which the central bank operates. Today, a central bank in a small open market economy, which would wish to turn a blind eye on the developments in the external environment and focus solely on the developments in the national economy, is doomed to failure.

Secondly, globalisation changes the wage and price setting mechanisms in the national economy, which have an impact on the domestic inflation. Globalisation (the growing openness of economies) — through the growing share of countries with low manufacturing costs in the global output — increases the margin and wage pressures, in consequence lowering the inflation. At the same time, globalisation drives up commodity prices, and thus contributes to — at least temporarily — increased inflation.

Thirdly, increased international migration of workforce changes the situation on local labour markets. Where the workforce outflows, the wage pressures increase; in the case of an inflow of workforce, the wage pressures go down.

Fourthly, globalisation changes the functioning of financial markets and increases the uncertainty as to the impact of decisions made by the central bank on these markets and on macroeconomic variables.

Fifthly, globalisation has an impact on the central bank's perception of the economic environment and the monetary policy strategy it applies. A fast transfer of the economic know-how (flow of the economic knowledge and analytical methods) changes the methods of economic analysis by central bank economists, as well as the way decisions regarding the monetary policy are made.

Sixthly, globalisation increases the risk of speculative bubbles on the assets market.

Let us have a step-by-step look at these channels of influence of globalisation on the monetary policy.

Re 1)

The growing share of international trade in the global output as well as the increasing international capital flows cause a situation, where the growth rate of a national economy depends increasingly on the developments of the global economy. To illustrate the impact of globalisation on the economic prospects, attention should be drawn to the hot topic in the macroeconomic policy, namely the problem of global imbalances.

To give you some facts, the US current account deficit had been growing gradually over the past years to exceed USD 800 billion, i.e. 6.5% of the U.S. GDP, last year. This deficit, which represents import of savings from the rest of the world to the USA, is financed by the Asian central banks, for example the Peoples Bank of China, and by oil-exporting countries. The available forecasts show that the deficit will continue to grow. An animated debate is currently underway to determine whether this is a steady situation that simply reflects the new principles in the global economy⁵, or whether this trend is bound to stop and reverse sooner or later, which may entail a significant increase in the US long-term interest rates, a strong depreciation of the US dollar and a serious slowdown in the global economic growth. The majority of empirical and theoretical studies indicates a growing probability of the latter scenario, especially if no due steps are taken in many countries. These steps include the necessity to accelerate the potential GDP growth in the European Union and Japan through reforms of the labour market and the product market, increasing savings in the US by curbing the budget deficit, and reforms of the financial sector in China and subsequent gradual floating of the renminbi exchange rate.

The central bank must consider possible scenarios of developments in the global economy and possible adjustments of global imbalances, as they significantly impact the perspectives of a national economy, and so the monetary policy pursued. Moreover, the central bank, as an institution that manages foreign exchange reserves, must monitor changes on the global financial market, as these changes and investment decisions made by the central bank influence the return on foreign exchange reserves.

⁵ This thesis was advanced, among others, in the frequently quoted work: M.Dooley, D.Folkerts-Landau, P.Garber "An Essay on the Revived Bretton Woods System", NBER Working Paper 9971, September 2003.

Re 2)

Globalisation changes the wage and price setting mechanisms in a domestic economy. This ensues from the increased international competition and the growing role of outsourcing and offshoring. Offshoring consists in transferring of manufacturing, services or orders abroad, where such transfer may be made within a single company or to another company. Outsourcing consists in renouncing manufacturing or services in a given company and obtaining such goods or services from another company that may be located in the same or another country.

In the past, the major part of the chain of manufacturing and services used to be located in a given country, which meant that, from the monetary policy perspective, the domestic demand was of great importance, and in particular — the size of output in relation to its potential level i.e. the so-called output gap. The impact of the global economy, on the other hand, was observed mainly due to changes in the terms-of-trade i.e. the ratio of export to import prices, which in turn was affected by, among others, commodity prices and changes in external demand. Nowadays, inter alia as a result of globalisation of production and services, the role of the domestic output gap in explaining inflation has decreased significantly, as shown by the BIS research⁶. As in the case of the model applied by the NBP in forecasting inflation, the role of the output gap as a factor that determines inflation is much smaller than it used to be.

In old books on macroeconomics inflation is treated largely as a local development, i.e. dependent in a great measure on domestic factors (such as the domestic output gap and inflation expectations). Today, inflation is becoming increasingly less local, and in turn, becomes more and more dependent on global factors, i.e. the relationship between global demand to global supply. Research that analysed the course of inflation in 22 OECD countries between 1960 and 2003 has shown that 70% of inflation volatility may be explained by a common factor⁷. This global, common factor explains not only the change in the inflation trend (the increasing inflation between 1960 and 1980 and its subsequent decrease), but also inflation fluctuation over a business cycle. The research has also shown that, where domestic inflation deviates from the “global” inflation, it exhibits a “global-inflation-reverting” tendency. As a consequence, modelling and forecasting of domestic inflation may be improved significantly by taking into account the “global inflation”.

The fast-progressing globalisation is closely related to offshoring and outsourcing, whose scope is also growing. Unfortunately there is not much hard data that would allow for assessment of the scale of the phenomenon. Offshoring analysis is available only for selected countries and covers only selected industries. However, the growing scale of the phenomenon is reflected by data on global trade in goods and services and on foreign direct investment. Over the past 15 years, the shares of individual regions in the global trade have changed significantly, whereby the decreasing share of the EU is accompanied by increasing shares of the developing countries, including the Asian countries. Globally, foreign trade expressed as percentage of the GDP increased from the average 19% of the GDP between 1980 and 1989 up to 25% between 2000 and 2004.

Table 1. Shares of individual regions in global trade

% Total	1990	1995	2002
Developed countries	72	67	63
US	12	12	11
UE15	44	39	38
Developing countries	28	33	37
Asia	13	19	20

Source: IMF Direction of Trade Statistics

⁶ BIS 75th Annual Report, 2005.

⁷ Ciccarelli, Mojon “Global Inflation”, Central Bank of Chile Working Papers No 357, December 2005.

Global capital flows keep growing even more dynamically, whereby the share of the global FDI in the global GDP increased from 8% in 1989 to 22.1% in 2003, and foreign assets expressed as percentage of the GDP increased from 62.6% of the GDP to 186.1% of the GDP, respectively.

As evidenced, the role of trade and financial links between enterprises in various countries has become more important over recent years. Previously, in response to growing fuel prices or costs of living, trade unions demanded wage increases, which triggered the so-called second-round effects and central banks had to increase interest rates to mitigate inflation. Nowadays, trade unions must take into account the fact that in the case of wage increases, production and services may be transferred to countries with lower manufacturing costs.

In EU Member States, between 2002 and November 2005, 202 cases of the restructuring of companies related to offshoring were publicly announced, which resulted in the transfer of nearly one hundred thousand jobs. Over that period, offshoring stood behind nearly six per cent of all cases of publicly announced restructurings of companies in the EU. So far, the scale of the phenomenon has not been large. However, offshoring as a strategy of increasing competitiveness is becoming more and more common and includes not only the manufacturing of products but also — increasingly — services.

Table 2. Offshoring in EU Member States

Countries to which job transfer took place	Number of jobs liquidated in the EU between 2002 and 2003 due to transfer of jobs	Number of jobs liquidated in the EU between January and November 2005 due to transfer of jobs
China	3361	3077
India	9458	5470
Asian countries	3786	3271
Czech Republic	780	3890
Hungary	1110	772
Poland	120	2676
	33151	31942

Source: *European Restructuring Monitor*⁸, own calculations

Numerous analyses show that the process of offshoring is bound to grow and increasingly affect services⁹. For example, between 1980 and 2002 the trade in goods and services grew at 6.9%. According to forecasts by McKinsey Global Institute, off-shoring of services to countries with low manufacturing costs in the years 2003 – 2008 is going to grow at a rate of 30% annually. In 2003, the global trade in services was ca. USD 1.7 trillion, of which a mere 3% resulted from offshoring to low cost countries. It is expected that in 2008 the global trade in services will amount to ca. USD 2.4 trillion, of which 10% will represent offshoring of business and ICT processes to low cost countries. To compare, the travel industry represents 30% of trade in services in the OECD data, whereby transportation — 20%. Based upon an analysis of eight representative sectors, McKinsey Global Institute estimated that in 2003, 18.3 million jobs in services could have been transferred to other locations (this applies mainly to sectors such as IT — 2.8 million, banking — 3.3 million, insurance — 2.3 million, healthcare — 4.6 million and retail sales — 4.3 million). Extrapolating the results for the global economy, it may be estimated that in 2008 ca. 160 million jobs in services, i.e. 11% of the

⁸ European Restructuring Monitor is the European Commission service. It gathers all publicly announced cases of restructuring of companies in EU Member States, Bulgaria and Romania if these fulfil on of the following conditions: reduction of employment by at least 100 people within a year, they apply to companies that employ at least 250 people and the redundancy applies to at least 10 per cent of employment, or if as a result of restructuring at least 100 jobs are to be created.

⁹ McKinsey Global Institute "The Emerging Global Labour Market", June 2005.

global employment in services estimated at 1.46 billion, may theoretically be performed at a distance from the customer.

From the monetary policy perspective, it is important to properly understand the impact of offshoring on the functioning of local labour markets, which — as a result of ever greater opening of the economies — have merged into one global labour market. Before the fall of socialism in European countries, the then global market amounted to ca. one billion people. Nowadays, i.e. after China and India have joined the global economy, the market comprises ca. four billion people. This brings about a situation where jobs are being transferred to new, more attractive locations and people increasingly move in search for better-paid jobs. The largest migration known as “the great migration” is taking place in China¹⁰. According to estimates, over the next 10 years ca. 200 million Chinese will migrate from villages to cities and find employment in industry — to a large extent in export-oriented industry sectors — and in services. This means that over the next 10 years, every month one to two million Chinese on average will give up their low-paid, low-productivity jobs in agriculture and take up better-paid and more productive work in other sectors. The monetary policy must take into account the impact that this process is going to have on the Chinese economy and on economies of other countries.

As opposed to trade and capital, the flow of people within EU Member States was stable. The annual net migration to EU-15 remained at a level of less than 5 people per 1000 inhabitants over the past 40 years. Approximately 9% of EU population was born in other countries, whilst in the USA this figure was 12% and ca. 20% in Canada and Australia. However, following the EU enlargement, where 10 new members joined the structures, our part of the world has also seen an increase in migration, which is shown in Table 3 below. In some cases, a significant part of the domestic work force took up employment in other countries. The estimates show that, for example, ca. 5% of Lithuanians took up employment in countries that opened their labour markets for the new EU Member States following 1 May 2004.

Table 3. Number of work permits in the UK, Ireland and Sweden issued to citizens of new Member States following the EU accession

	In thousands				In % of workforce †
	UK *	Ireland**	Sweden***	Total	
Lithuania	44.72	26.37	0.37	71.46	4.4
Latvia	23.03	12.94	0.16	36.14	3.2
Estonia	4.68	3.39	0.36	8.43	1.3
Poland	204.90	70.14	2.16	277.20	1.6
Czech Republic	20.01	6.39	0.07	26.47	0.5
Hungary	10.35	3.83	0.20	14.37	0.3
Slovakia	36.36	10.93	0.09	47.38	1.8

*Source: Accession Monitoring Reports, <http://www.ind.homeoffice.gov.uk>. The data include the period between May 2004 and December 2005. NBP calculations.

**Source: Skills needs in the Irish economy: The role of migration, A submission by the Expert Group on Future Skills Needs and Forfás to the Minister for Enterprise, Trade & Employment, <http://www.skillsireland.ie>. The data include the period between May 2004 and August 2005.

***Source: Migracje specjalistów wysokiej klasy w kontekście członkostwa Polski w Unii Europejskiej. Centre for Migration Research, Warsaw University. The data include the period between May 2004 and December 2004.

†Workforce – people of 15 and more years of age in Q1, 2004.

¹⁰ HSBC “The Great Migration. How China’s 200 million new workers will change the economy forever”, HSBC Global Research, October 2005.

A conclusion may be drawn that opening of the low cost economies, especially of the Chinese economy, and the increasing international competition on the market of goods and services related thereto, changes the methods of setting prices by enterprises and determining wages on the labour market. Enterprises are increasingly becoming price-takers, and thus even in a situation of rising costs of manufacturing, they are unable to lift prices and shift the growing costs onto the customer. Similar is true for wages, whose level is determined on the increasingly global labour market. Research on the manufacturing sector in EU Members States (for the years 1988 - 2000) has shown that the increase in the openness of that sector (growing import) caused a fall of prices by 2.3%, a growth in productivity by 11% and a drop in margins by 1.6%. Altogether, it may explain the inflation fall by 0.14% in annual terms over that period¹¹. When looking at the price processes from the microeconomic perspective, vital structural changes can be observed, which bring about lower inflation.

Analysts also point out that the dynamically growing Chinese economy, which uses more and more commodities, contributes to a significant increase in their prices, and may potentially drive up inflation. However, considering the increased competitive pressure, the possibility of shifting higher cost of commodities (e.g. oil) onto the final prices is limited¹². In addition, in view of fierce competition on the labour market and the changes referred to above, the risk of growing wage demands is limited, and so are the so-called second-round effects.

Re 3)

Over the past three decades, the financial sector has become highly international. Financial services, provided under strictly regulated, separate, domestic financial systems in the past, are now provided under ever more open, competitive and global system. One of the measures of globalisation in the financial services sector is the growing volume of cross-border capital flows. Cross-border transactions in the bonds and shares segment are now exceeding 90 trillion (thousand billion) US dollars per annum, which translates into USD 250 billion daily¹³. Moreover, the size of financial markets and their meaning to the global economy becomes ever greater. According to McKinsey Global Institute¹⁴, the total value of global financial assets is now USD 118 trillion, whilst as far back as in 1980 they were only 12 trillion. The increase in the volume of financial assets is progressing at a higher rate than that of output, and has now reached a threefold of the global GDP, whilst back in 1980 it was approximately equal to the world output. Additionally, the fastest growing segment of the financial market is the segment of private debt securities. What is more, international issues of these securities grow at a higher rate than domestic issues, which means that companies increasingly finance their activities from funds raised abroad. Additionally, an important feature of development of the financial market is the gradual fall in significance of intermediation of the banking sector with a simultaneous increase of significance of the market intermediation¹⁵. As a consequence, the central bank's channels of influence on the economy are changing. In the past the bank loan channel was deemed more important; it is now losing its significance in relative terms.

Until recently, the investment rate in the economy was to a large extent dependent on the domestic savings rate, which by the way was contradictory to one of the fundamental assumptions of some economic models of the full integration of capital markets. The economy was featured by the so-called home bias i.e. greater inclination of domestic investors to invest in domestic assets rather than in foreign assets¹⁶. The latest research¹⁷ suggests that home bias over the past years could have dropped significantly, at least in the OECD countries. The decrease may be attributed to the very

¹¹ Chen N., Imbs J., Scott A. "Competition, Globalization and the Decline of Inflation", CEPR Discussion Paper No. 4695, 2004.

¹² Melick W., Galati G. "The Evolving Inflation Process: an Overview", BIS Working Paper No 196, 2006.

¹³ Hannoun H. "Internationalisation of financial services: implications and challenges for central banks", Conference of the SEACEN Governors Bandar Seri Begawan, Brunei Darussalam, 4 March 2006.

¹⁴ McKinsey Global Institute, \$118 Trillion and Counting: Taking Stock of the World's Capital Markets, February 2005.

¹⁵ In 1980 bank deposits accounted for 45% of total financial assets, currently their share dropped to 30% (McKinsey Global Institute 2005 – ibidem).

¹⁶ It is called the Feldstein-Horioka puzzle, after the two economists, who were the first to empirically prove its existence (Feldstein, 2005).

¹⁷ Feldstein M. Monetary Policy in a Changing International Environment: The Role of Capital Flows, NBER Working Paper 11856, 2005.

growth of cross-border capital flows. What does that mean to the monetary policy? If domestic and foreign financial assets are treated more and more as perfect substitutes, domestic interest rates, especially mid- and long-term ones, are determined on the global market, and thus the influence of particular central banks on their level is weakened. This phenomenon is already observed in the USA. Although the key interest rate of the central bank has been raised from 1.00% in 2004 to 4.75% at present (i.e. by 3.75 percentage points), long-term interest rates, which are more important from the aggregate demand perspective, have remained roughly unchanged¹⁸. As a result, the effect of tightening the monetary policy on the aggregate demand has been significantly contained due to lack of response from long-term interest rates.

In the world of global financial markets nobody seems to be surprised by the fact that during the session of the Federal Open Market Committee (FOMC¹⁹) of the American Federal Reserve, the eyes of the entire financial market are fixed on its Chairman. Why is that? Decisions made by the FOMC in Washington are equally as important for investors in New York as those in London, Tokyo, Rio de Janeiro, Shanghai or even Warsaw. Not only do the FOMC decisions influence US economy, but also — via the financial markets channel — the entire global economy. An unexpected increase in interest rates in the USA may bring about a sudden outflow of capital from the emerging markets, and thus weaken the currencies of those countries and increase their bond yields.

Some economists²⁰ make the point that an important aspect of the growing internationalisation of financial markets is increased discipline, which is extorted by investors on governments and central banks in individual countries. According to this hypothesis, the financial markets, through their continuous valuation of securities, duly reward good and punish bad economic policies. However, the empirical results do not provide hard evidence to support the thesis on fiscal policy discipline. It may be stated, on the other hand, that financial globalisation may have contributed to the discipline of central banks and to “forcing” them to conduct a monetary policy focused on low and stable inflation²¹.

At the same time, a significant risk related to the financial markets integration is the possibility to shift economic problems of one country upon other countries, which is greater than before (the contagion effect). Between 1997 and 1998, countries of South-East Asia experienced this effect, when all of a sudden capital flew out, bringing about financial crisis in economy after economy, which could not be prevented by either the monetary or exchange rate policy.

Re 4)

One of the vital dimensions of globalisation is the fast spreading of knowledge, technology and know-how. The flow of know-how also applies to the public sector, including the central bank. One of the features of modern central banking is gradual homogenisation of the strategies applied to the monetary policy. Since 1990, when for the first time the central bank of New Zealand started to implement the strategy of direct inflation targeting (DIT), over 20 central banks followed and adopted that strategy. As a result, the DIT strategy (applied since 1998 by the NBP) is now the dominating strategy of the monetary policy, applied by the majority of central banks in developed countries²², and more and more, by central banks of the developing countries (such as Turkey, the Philippines, Ghana, Romania and Armenia). A bloom of the DIT strategy endorses the observation that central banks adopt the “technology” of low and stable inflation from one another.

The dissemination of the DIT strategy was accompanied by a decrease in the average inflation level, especially in the developing countries that lowered inflation from a high level. This may prove that the dissemination of the DIT strategy was one of the factors that have contributed to disinflation.

¹⁸ This is even called the Greenspan’s conundrum, after the name of the former Chairman of the US Federal Reserve.

¹⁹ FOMC (Federal Open Market Committee): the decision-making authority on interest rates in the Management Board of the US Federal Reserve.

²⁰ Hannoun H. – *ibidem*.

²¹ Tytell I., Wei S.-J. “Does Financial Globalization Induce Better Macroeconomic Policies?”, IMF Working Paper 04/84, May 2004.

²² The DIT strategy is applied in most developed countries outside the euro area and the USA. However, in the case of the euro area, one may talk of the *de facto* DIT strategy, and in the case of the USA – the current Chairman, Fed Ben Bernanke, is a zealous DIT enthusiast, so its implementation in the USA soon is not out of question.

Admittedly, the impact of the DIT strategy on lowering inflation is a subject matter of discussion²³; however, empirical evidence exists that implementation of the DIT strategy improves macroeconomic outcomes (lower costs of stabilising inflation, decreased influence of price shocks and output shocks on inflation, thereby — decreased effect of past inflation on the current inflation, which reduces inflation persistence)²⁴. Empirical research also suggests that the DIT strategy facilitates stabilisation of long-term inflation expectations²⁵.

An additional result of dissemination of the DIT strategy is elaboration of standards of communication in conducting the monetary policy (announcements of decision-making authorities, inflation reports and published inflation projections), which facilitate contacts of the central bank with the external environment (the financial market and the general public). It may be speculated that these standards make the interpretation of the decisions made by the central bank easier for foreign investors, which should, under the huge cross-border capital flows, increase the effectiveness of the monetary policy in stabilising inflation.

Re 6)

As mentioned before, the process of globalisation is a serious challenge for central banks. Following the increase in human workforce relatively to the capital resource, the pay of the workforce has gone down, and so did the costs of manufacturing of many goods and services. Setting fuel prices apart, whose increase is also brought about by globalisation, inflation in many countries remains very low, whereas a strong increase in the global labour supply mitigates the possibility of occurrence of the second-round effects i.e. wage increases in response to a rise in current inflation. On the other hand, the global surplus of savings over investments causes the capital to chase the high yield opportunities, thus increasing asset prices in many countries. An exemplary case may be increases in stock exchange indices, bond prices or real property prices in Anglo-Saxon countries and e.g. in Spain. As a logical consequence, a question arises about how the monetary policy should be conducted in these circumstances, and in particular, whether it should respond to the increase in asset prices despite the fact that inflation of consumer goods and services remains low or very low. Another vital question arises about the appropriate level of central bank interest rates when long-term interest rates remain low, possibly as a result of globalisation. A hot debate accompanies the issue, both among the central bankers²⁶ and among academics.²⁷

The Chairman of the Federal Reserve, Ben Bernanke, in his address²⁸ last month, presented possible diagnoses regarding the sources of low interest rates on the bond market despite as many as fourteen increases in the central bank reference rates. There are at least two explanations of such situation. If the long-term interest rates remain unchanged and the short-term ones increase, this means that either the markets pessimistically assess the perspectives of economic growth or the risk premium related to forward rates decreases; here this may be the inflation risk premium or real interest rates volatility risk premium. Another explanation may be the very effect of global imbalances, i.e. the result of large purchases of sovereign bonds by Asian central banks and oil-exporting countries. Depending on which hypothesis is true, the implications for the monetary policy are different. If the long-term rates go down as a result of poor growth prospects, the current short-term interest rates should be lowered

²³ See e.g. "Does Inflation Targeting Matter?" Ball L., Sheridan N. in: "The Inflation-Targeting Debate" Bernanke B.S., Woodford M. (2005).

²⁴ See Corbo V., Landerretche O., Schmidt-Hebbel K. "Does Inflation Targeting Make a Difference" in: N. Loayza and R. Soto (red.) "Inflation Targeting: Design, Performance, Challenges" (Central Bank of Chile: Santiago 2002).

²⁵ Gürkaynak R.S., Levin A.T., Marder A.N., Swanson E.T. "Inflation Targeting and the Anchoring of Inflation Expectations in the Western Hemisphere", forthcoming in Mishkin, Frederic and Klaus Schmidt-Hebbel (red.), Series on Central Banking, Analysis and Economic Policies X: Monetary Policy under Inflation Targeting (Santiago, Chile: Banco Central de Chile), 2006 and Gürkaynak R.S., Levin A.T. Swanson E.T. "Does Inflation Targeting Anchor Long-Run Inflation Expectations? Evidence from Long-Term Bond Yields in the U.S., U.K., and Sweden", Federal Reserve Bank of San Francisco Working Paper 2006-09, March 2006.

²⁶ For example a question whether monetary policy should burst asset bubbles was hotly debated during the large European Central Bank conference on 16 to 17 March 2006.

²⁷ The examples are the following articles: N. Roubini "Why Central Banks Should Burst Bubbles", mimeo, Stern School of Business and Roubini Global Economics, January 2006, and A. Posen "Why Central Banks Should Not Burst Bubbles", Institute for International Economics Working Paper WP 06-1, January 2006.

²⁸ Bernanke B. "Reflections on the Yield Curve and Monetary Policy", Remarks by Chairman Ben S. Bernanke Before the Economic Club of New York, 20 March 2006.

respectively so as to prevent possible deflation. If, however, specific factors related to globalisation or decrease in the risk premium are the cause of persisting low long-term interest rates, the short-term interest rate should be higher in order to achieve appropriate restrictiveness of the monetary policy resulting from the entire yield curve. While it is difficult to assess which hypothesis is correct, central banks, as sailors did in the old days, should apply two iron rules: firstly, frequently determine their position, secondly, use as many waypoints as possible. This means that, especially where new phenomena emerge or there are structural transformations, the monetary policy must not be described using just a few simple indicators, as e.g. inflation and output gap in the Taylor rule. Monetary policy decisions should rather be a product of a complex analysis of a number of indicators and data and cross-checked with qualitative information.

In turn, another Federal Reserve governor, Donald Kohn²⁹, devoted his recent address to the analysis of when and on what conditions the central banks should respond to rapid changes of asset prices. In Kohn's opinion, there are two possible approaches. According to one of them, described as the conventional monetary policy, the central bank focuses on stabilising the inflation, treats changes in asset prices as an exogenous process and does not attempt to influence asset prices whatsoever. The other option, described by Kohn as the "extra action policy", allows for a deviation of current inflation from a level determined as stable in return for improvement of the perspectives of achieving price stability in the future. However, the extra action policy does not mean piercing the speculative bubbles by central banks, and means rather "taking out" of additional insurance against possible negative shocks, which may happen in the future. In Kohn's opinion, the extra action policy may be run very rarely and only where the three conditions are met:

- the central bank must be able to identify asset bubbles in a timely manner and high certainty as to the correctness of analysis conclusions;
- there must be a high probability that a slight tightening of the monetary policy will be able to stand against the speculative activity on a given assets market;
- the expected improvement of the future economic situation resulting from a smaller speculative bubble must be significant and higher than the costs incurred by the economy in the aftermath of running the extra action policy.

To recapitulate this train of thought, Kohn was very sceptical whether the three above-mentioned conditions can be sufficiently met; however, he did not preclude that in the future, the understanding of economic processes will improve as much as to enable running the extra action policy where reasonable. Numerous statements following the presentation have indicated that the proper supervision is much better a response to the asset bubbles and many people have stressed that this is why the financial markets supervision should be independent of politicians, as it may be necessary to take actions aimed to restrict the speed of the speculative bubbles build-up, when this does not suit certain politicians due to the elections cycle.

The majority of lectures which are delivered over the series of seminars by the Centre for European Regional and Local Studies and the UNESCO Chair at Warsaw University apply to the issues vital for local communities. The title of today's seminar might suggest that we have discussed problems vital for the global economy and not for a local community, a city, a region or a university/higher education institution. This is not the case, however, as in the years to come the globalisation of manufacturing, services, investments, finances, the labour market and knowledge will progress, irrespective of the scale of national protectionism. The globalisation results will be thus felt by all: countries, regions, local communities and individuals. If we want to succeed, both as a country and as each and every one of us, we must be well prepared for globalisation.

Thank you very much for your attention.

²⁹ D. Kohn "Remarks by Donald Kohn at Monetary Policy: A Journey from Theory to Practice, An ECB Colloquium held in honor of Otmar Issing", 16 March 2006.