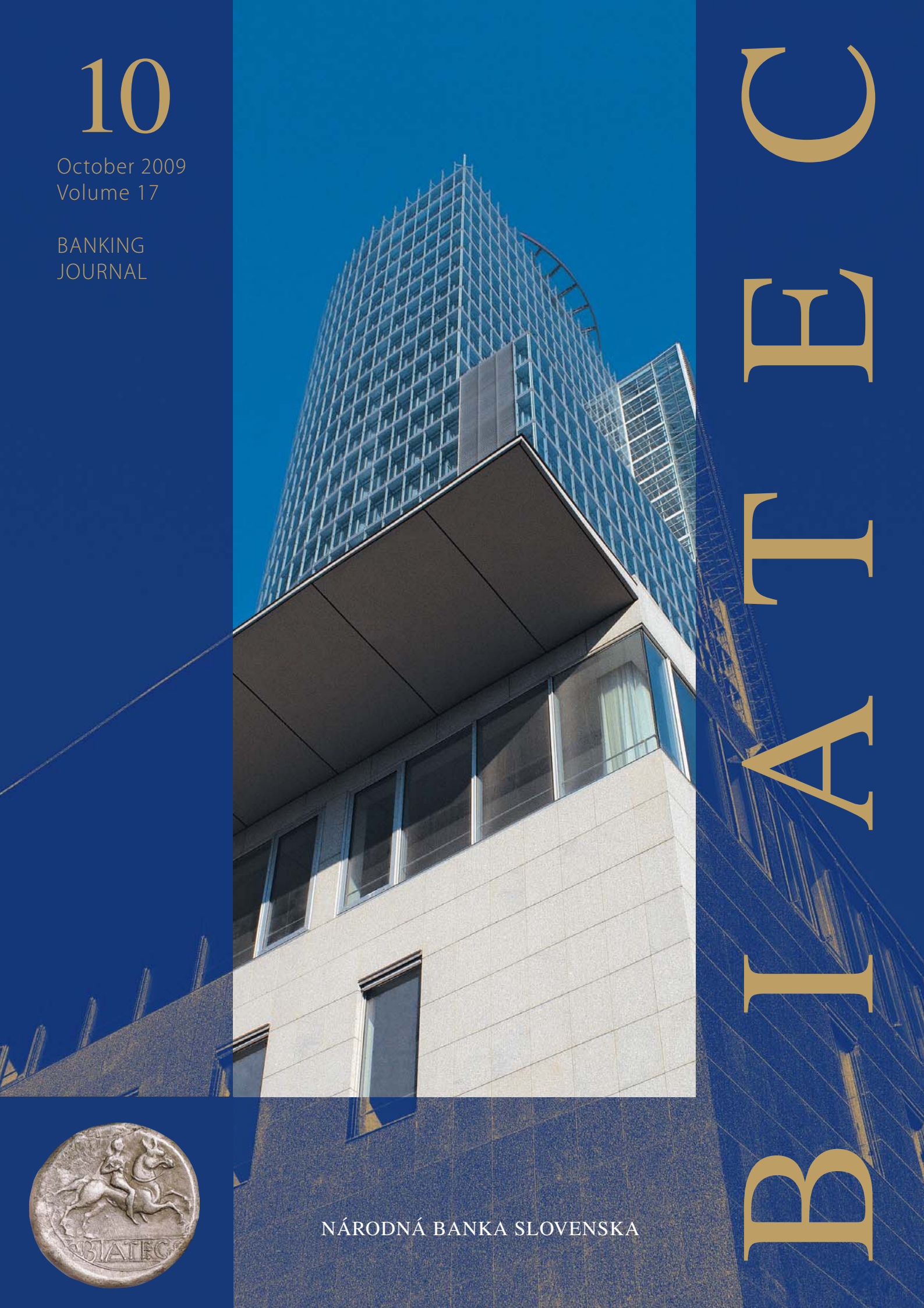
10

October 2009
Volume 17

BANKING
JOURNAL



BIATEC

NÁRODNÁ BANKA SLOVENSKA

Slovakia, the country at the heart of Europe

At the end of September 2009, at the headquarters of Národná banka Slovenska, an exhibition was opened for entries in the 1st annual competition "Slovakia, the country at the heart of Europe".

Photo: Miroslav Košírer

NBS Governor Ivan Šramko (centre) views the exhibition in the company of representatives of the Bratislava Self-Governing Region and of the EC Representation in Slovakia.

The exhibition was ceremonially opened by the NBS Governor Ivan Šramko, and also in attendance were Branislav Slyško, secretary of the EC Representation in Slovakia, Bystrík Hollý, deputy chairman of the Bratislava Self-Governing Region, Roman Csabay, head of the Department of Education, Youth and Sport of the Bratislava Self-Governing Region, and Ján Palkovič, chief advisor of the Regional Education Section.

The exhibition showcases the winning entries on the theme of the euro single European currency. The competition was announced in the previous academic year by the Ministry of Education of the Slovak Republic and it was organized by the Secondary Art School on Sklenarova street in Bratislava. There were entries from 1 032 pupils and students and they were judged by a nine-member jury led by Mgr. art. Ondrej Zimka.

The theme caught the imagination of pupils and students. The exhibited works were lavish with colours and ideas, and the young, artistically-talented pupils employed a variety of techniques and materials to depict the theme.

BIATEC

Banking journal

October 2009

Publisher:
National Bank of Slovakia

Editorial staff:
Ing. Alica Polónyiová
tel.: +421/2/5787 2153
alica.polonyiova@nbs.sk
PhDr. Dagmar Krištofičová
tel.: +421/2/5787 2150
dagmar.kristoficova@nbs.sk

Address:
NBS, Editorial Office BIATEC
Imricha Karvaša 1, 813 25 Bratislava
e-mail: biatec@nbs.sk

Graphic design: Bedrich Schreiber
Typo&lito: AEPress, s.r.o.
Printing: Patria I., s.r.o.

The English version of selected articles is available at the website of the National Bank of Slovakia:
http://www.nbs.sk

Evidence number: EV 2817/08
ISSN 1335 – 0900

Contents

Convergence of the Slovak economy in the time of the global economic crisis

Ing. Tibor Lalinský
National Bank of Slovakia

The consequences of the global financial crisis started to be reflected in the real economy towards the end of 2008. Economic conditions worsened most rapidly and intensely in countries that were directly hit by the crisis. On the other hand, numerous economies, including Slovakia, started to be affected adversely at the beginning of 2009, when the pass-through of the weakening demand from advanced industrial countries was registered. The process of nominal and real convergence, ongoing within the EU for years, has come to a halt. The next few years are likely to witness economic divergence, rather than convergence.

The first part of this article contains an overview of the current developments and an outlook for nominal convergence in the Slovak Republic. Despite a slowdown in consumer-price inflation, Slovakia ceased to meet the inflation criterion in March 2009. Owing to the unfavourable trends in the global and domestic economies, Slovakia will record an excessive deficit at least in the next two years. An overview of the state of fulfilment of the Maastricht criteria in other EU countries indicates that none of these countries meets all the criteria. The next phase of euro-area enlargement is not expected to take place within the next few years.

An integral part of the present analysis of nominal convergence is an assessment of the state of real convergence. The global economic recession affected the macroeconomic results of Slovakia for 2008 only slightly. At the beginning of 2009, however, the situation in the real economy of Slovakia worsened dramatically. The outlook for the coming years indicates that the pace of real convergence in Slovakia will slow down.

Nominal convergence

The fulfilment of the Maastricht criteria is a vital condition for the adoption of the euro. After the adoption of the euro, however, the euro-area countries (including Slovakia) are not formally obliged to meet all four criteria further on. An exception is the fiscal criterion, the fulfilment of which is laid down in the Stability and Growth Pact.[1]

Fulfilment of the Maastricht criteria in Slovakia

At the time when the degree of nominal convergence achieved in Slovakia was officially evaluated before the country's entry into the euro area (in March 2008), the Maastricht criteria were met in Slovakia with a significant margin. Even a year later, the general government budget deficit stood at 2.2% of GDP,[2] i.e. a value sufficiently below the permitted level of 3% of GDP. In 2008, the ratio of general government debt to GDP decreased to 27.6% (from 29.4% in 2007).

The inflation criterion was also fulfilled with a sufficient margin (1 percentage point). Later, however, inflation began to rise gradually. The annual headline inflation rate culminated in September 2008.[3] In 2008, the price increase in Slovakia was determined by factors outside the control of monetary policy, such as developments in the global prices of energy-producing and agricultural commodities.

At the end of 2008, inflation began to slow. In 2009, overall inflation continued to fall, as well as its 12-month average.[4] Owing to the deepening economic crisis, however, average inflation in the three best performing Member States was falling more rapidly. In March 2009, the reference value of the inflation criterion was lower than the level of inflation in Slovakia. Thus, Slovakia ceased to meet the inflation criterion.[5] Despite reaching a historical low in annual inflation (0.5%), Slovakia did not meet the criterion even in August 2009. Although average inflation fell to 2.3% in Slovakia, the reference rate dropped to 1.7%.

In the conditions of the worsening global economic conditions and increased domestic inflation, the cost of long-term financing gradually increased in 2008. In December 2008, the average 12-month interest rate reached 4.7% in Slovakia. During 2009, it increased by a further 20 basis points (to 4.9%). The criterion of long-term interest rate stability remained fulfilled in August 2009, with a significant margin.

When the impact of the global financial crisis started to be reflected in the economies of the region, Slovakia began to enjoy the advantages

1 *In fact, only two of the euro area countries (Finland and Luxembourg) managed to meet the fiscal criterion in the long term after the adoption of the euro.*
2 *In the previous year, the originally recorded figure was also 2.2% of GDP. After a revision, the deficit for 2007 was corrected to 1.9% of GDP.*
3 *The reference value of the inflation criterion fluctuated around its historical maximum in that period. The highest value seen since the creation of the euro area (4.2%) was recorded in October 2008.*
4 *The strongest dampening impact was exerted by the falling prices of industrial and food products.*
5 *If the mathematically more precise average 12-month HICP inflation rate (rounded off to two decimal places) had been taken into account, Slovakia would have ceased to meet the inflation criterion as early as February 2009. Slovakia managed to meet the inflation criterion for 19 (or 18) successive months, starting from August 2007.*

of the single currency already before its actual entry into the euro area, for the euro contributed to its economic stability. This was indicated by the different developments in the long-term interest rates of the new EU Member States and, in particular, in their exchange rates. Unlike in the currencies of the neighbouring countries, the koruna did not depreciate in the exchange rate market, because its official conversion rate was already known. Until the end of 2008, the exchange rate of the koruna fluctuated within a very narrow band above the conversion rate. The currencies of the V4 countries showed high volatility even in 2009. Thus, the single European currency has created better conditions in Slovakia for long-term business activity and for the inflow of foreign investments.

Outlook for the fulfilment of the Maastricht criteria in Slovakia and the risks involved

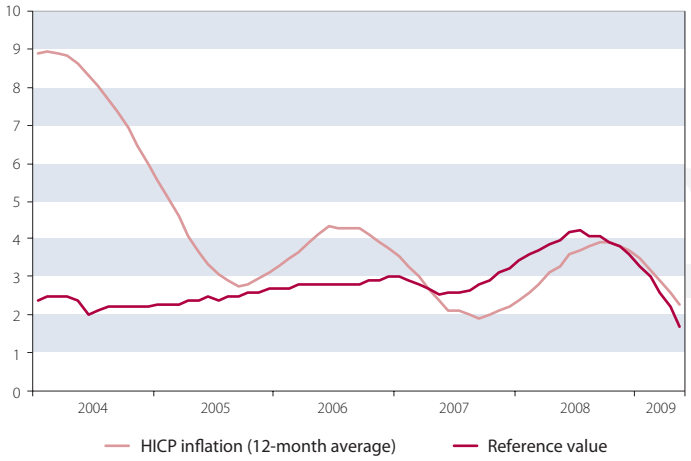
According to the current medium-term forecast of the NBS[6], the average annual HICP inflation rate will fall to 1.1% in 2009. The main factor in this development will be the downturn in economic activity, combined with the deteriorated economic results of enterprises and the slower rise in food prices. In the next years, inflation should rise gradually as a result of an expected revival in economic activity. It is expected to rise to 1.8% in 2010, and then to 2.4% in 2011.

Owing to the economic recession, the majority of other EU countries will record a very low or negative annual inflation rate in 2009. The reference value of the inflation criterion is close to its minimum (1.5%). Slovakia's annual inflation rate will fall even further in the coming months, then it will rise to 0.6% in December. The 12-month rate of HICP inflation will probably fall below the level of the reference value and thus Slovakia will manage to meet the inflation criterion again, before the end of 2009.

In connection with the continuing real convergence process, consumer prices in Slovakia are expected to rise more rapidly than the EU average[7] over the long-term horizon, at least until the EU average is achieved in terms of output. Consumer price developments will be greatly influenced by price developments in the non-tradable sector. Depending on the heterogeneity of the future trends in inflation within the EU, this may lead to the non-fulfilment of the inflation criterion.

The risks arising from the non-fulfilment of the inflation criterion as assessed previously were virtually identical to the risks assessed in the medium-term inflation forecast. The dominant risks in the past were the faster than expected consumer price increase and the consequent breach of the inflation criterion. With regard to the global economic recession, there are predominantly downside risks in 2009. A greater than expected fall in demand may lead to a slower rise in consumer prices. Paradoxically, the possible occurrence of these risks may ensure that the inflation criterion will be re-fulfilled earlier.

Chart 1 Inflation in Slovakia compared with the reference value (in %)



Source: Eurostat, own calculations.

Chart 2 Exchange rates of the V4 currencies vis-à-vis the euro (Index – 1.08 = 100)

Source: NBS.

In the medium-term horizon, the dominant risk in Slovakia in the case of faster economic recovery will again be the risk of accelerated price increase. There is uncertainty about the trend in regulated energy prices in 2010. Faster rise may be recorded in commodity prices, as well as in import prices.

The marked fall in economic activity, combined with lower general government budget revenues, led to an apparent deterioration in public finances against the budget as early as the first quarter of 2009. According to the draft general government budget for the years 2010 to 2012, the deficit in 2009 and 2010 will be well above the level required by the rules laid down in the Stability and Growth Pact (6.3% of GDP and 5.5% of GDP respectively). The excessive deficit will not be eliminated even in 2011. In connection with the growing general government budget deficit and the continuing negative trend in the economy, the ratio of the deficit to GDP will also increase. By 2011, the deficit will increase to 42.5% of GDP.

6 Medium-term forecast (MTF-2009Q3), NBS, September 2009.
7 Over the long-term horizon, inflation in Slovakia will be roughly 1.2 percentage points higher than in the EU (NBS, 2008).

Appeals for the faster consolidation of public finances in the years of exceptionally strong economic growth were not accepted. Slovakia failed to create sufficient reservers for a period of economic downturn. Hence, the implementation of the budgetary policy in line with the Stability and Growth Pact and the further consolidation towards the medium-term objective will be more difficult in the coming years. The sustainability of public finances will also worsen in the long term. The determining factors will be the interest costs of debt servicing and public expenditures induced by the ageing population. Hence, even a seemingly small increase in the public debt and destabilising changes in the pension system may have a strong negative impact on the sustainability of public finances in the long term.

Owing to the unfavourable economic conditions in the previous year and the resulting fall in the output of the corporate sector, budget revenues may suffer a deeper than expected decrease in 2010, to say the least. Apart from the lower tax revenues, budgetary performance in the general government sector will be adversely affected this year, as well as in the next years, by lower social and health insurance revenues.

The risks on the expenditure side of the budget mainly arise from the fact that a general election will be held in 2010. Uncertainty on the expenditure side is also caused by the utilisation of EU funds and the related co-financing expenditures. The uncertainty arises from their inadequate and uneven utilisation in the past, the consequent shift of unused expenditure limits, and in particular from an expected large increase in the amount of funds planned for the coming years. In the case of a further deterioration in the financial market conditions, interest rates on government bonds may record a noticeable rise, which will cause an increase in the estimated interest costs. With regard to the expected revival in the domestic economy and the planned dynamic public debt growth, it would be appropriate to accelerate the consolidation of the public finance deficit in the coming years.

Fulfilment of the Maastricht criteria in non-euro area EU Member States

On a year-on-year basis, all EU Member States outside the euro area recorded a deterioration in the economic situation. The strongest negative effects were recorded in the Baltic States, which experienced not only the consequences of the weaker foreign demand but also the direct impact of the financial crisis. At the present time, none of the non-euro area EU Member States meets the Maastricht criteria in full.

According to data for June 2009, the inflation criterion was met only by Denmark and Sweden. In the following two months, the reference value recorded such a big fall that the inflation criterion was no longer met in August by any of the EU Member States outside the euro area. This happened in spite of the fact that average inflation fell on a year-on-year basis in the majority of these countries. Consumer-price inflation accelerated only in Hungary and Poland, as a result of currency depreciation.

The global economic recession puts additional pressures on public finances. According to the latest data available (for 2008), the fiscal criterion is met by the Czech Republic, Bulgaria, Denmark, and Sweden. Even in these countries (except in Bulgaria), the deficit increased or the surplus decreased in public finances. The reference value of the public debt is currently exceeded only in

Table 1 Fulfilment of the Maastricht criteria in non-euro area EU countries (August 2009)

Country	HICP inflation (%)	General government surplus (+)/ deficit (-) (% of GDP)*	General government gross debt (% of GDP)*	Long-term interest rate (%)
Czech Republic	2.2	-1.5	29.8	4.9
Hungary	3.9	-3.4	73.0	9.5
Poland	4.0	-3.9	47.1	6.1
Lithuania	6.9	-3.2	15.6	12.0
Latvia	7.7	-4.0	19.5	10.3
Estonia	3.8	-3.0	4.8	8.4
Bulgaria	5.4	1.5	14.1	6.9
Romania	6.4	-5.4	13.6	9.4
Denmark	1.9	3.6	33.3	3.8
Sweden	2.2	2.5	38.0	3.3
United Kingdom	2.9	-5.5	52.0	3.6
Reference value	1.7	-3.0	60.0	6.7

Source: Eurostat.
Note: The red colour highlights the figures that exceed the reference value.
** The most recent figure available (2008).*

Hungary, but indebtedness is growing in the majority of countries under review. Compared with the previous year, indebtedness increased most significantly in Latvia and Hungary. A relatively large increase was also recorded in Denmark. In the United Kingdom, the ratio of debt to GDP exceeded 50%.

With the growing indebtedness, the cost of long-term financing is growing too. All EU Member States outside the euro area, except for Denmark, Sweden and the United Kingdom, pay interest at higher rates than a year earlier. Owing to the financial crisis, average long-term interest rates in Hungary, the Baltic States, Bulgaria, and Romania exceeded the reference value, so these countries do not meet the interest rate criterion either.

To meet the exchange rate stability criterion, a country is required to participate in the ERM II exchange rate mechanism for at least two years. This criterion is currently fulfilled by Denmark, Lithuania, Latvia, and Estonia. All three Baltic States maintain a fixed exchange rate vis-à-vis the euro. The Danish koruna hovers around the level of central parity in the long term.

Outlook for the fulfilment of the Maastricht criteria in non-euro area EU Member States

In their convergence programmes, the V4 countries (except for Slovakia) planned to achieve consolidation in public finances and a gradual reduction in inflation. Hungary is not likely to meet the fiscal criterion by 2011, nor the inflation criterion. In the case of Poland and the Czech Republic, there is a chance to meet all the criteria by 2011, but they would have to join the exchange rate mechanism in 2009. However, the current forecast of the European Commission indicates that public finances will be negatively affected by the global recession. In all four V4 countries (including Slovakia), the public finance deficit will greatly exceed the reference value in 2009 and 2010. In Poland, public debt will also increase in 2010, to 59.7% of GDP, i.e. a level just below the reference value.

For the Baltic States, the main obstacle to entry into the euro area had been, until recently, the high inflation rate. In the convergence programmes (except in that of Estonia), a sufficient fall in inflation was expected in the horizon until 2011. This represented a good chance to fulfil all the criteria. The current EC forecast predicts accelerated disinflation, as well as large public finance revenue losses and additional expenditures induced by the financial crisis. Thus, the Baltic States will record large public finance deficits in the coming two years. With the growing debt, long-term interest rates will rise still further.

Bulgaria will be the only non-euro area EU country that will not exceed the excessive deficit limit in 2010, and will record the smallest deficit within the EU. However, recession is unlikely to have a sufficiently strong dampening effect on inflation, and thus Bulgaria will fail to meet the inflation criterion in the coming years. Romania will meet neither the fiscal nor the inflation criterion. The convergence reports for Denmark and Sweden predicted developments in line with the Maastricht criteria. However, the current developments and the EC forecast indicate that the originally expected public finance surpluses will change into deficits in 2010.

Economic forecasts issued for the countries under review by Consensus Economics (in September 2009) has confirmed the conclusions derived from the Spring Forecast of the EC. At present,

Table 2 Outlook for nominal convergence in non-euro area EU countries

Country	HICP inflation (%)		General government surplus (+)/deficit (-) (% of GDP)		Gen. government gross debt (% of GDP)	
	2009	2010	2009	2010	2009	2010
Czech Republic	1.1 (1.2)	1.6 (1.6)	-4.3 (-5.7)	-4.9 (-5.6)	33.7	37.9
Hungary	4.4 (4.6)	4.1 (4.0)	-3.4 (-4.0)	-3.9 (-3.9)	80.8	82.3
Poland	2.6 (3.6)	1.9 (2.5)	-6.6 (-5.5)	-7.3 (-5.8)	53.6	59.7
Lithuania	3.6 (4.2)	-0.4 (0.1)	-5.4 (-6.8)	-8.0 (-6.0)	22.6	31.9
Latvia	4.6 (3.5)	-0.7(-1.7)	-11.1 (-10.4)	-13.6 (-7.6)	34.1	50.1
Estonia	0.6 (-0.3)	0.5 (0.2)	-3.0 (-4.1)	-3.9 (-4.0)	6.8	7.8
Bulgaria	3.9 (2.8)	3.6 (2.7)	-0.5 (-0.6)	-0.3 (-0.1)	16.0	17.3
Romania	5.8 (5.5)	3.5 (4.0)	-5.1 (–)	-5.6 (–)	18.2	22.7
Denmark	1.0 (1.2)	1.3 (1.5)	-1.5 (–)	-3.9 (–)	32.5	33.7
Sweden	0.9 (-0.8)	1.4 (1.2)	-2.6 (–)	-3.9 (–)	44.0	47.2
United Kingdom	1.6 (1.9)	0.7 (1.8)	-11.5 (–)	-13.8 (–)	68.4	81.7
Reference value	1.8 (1.6)	2.0 (1.8)	-3.0	-3.0	60.0	60.0

Source: EC, Consensus Economics, own calculations.
Notes: The red colour highlights the figures that exceed the reference value. The figures in brackets are estimates from Consensus Economics Inc.

8 Eurostat estimate for 2008.

it is not realistic to assume that any EU country outside the euro area will meet the Maastricht criteria over the horizon of the next two years, and will thus maintain its eligibility for entry into the euro area. Denmark and Bulgaria have a certain chance. Denmark should not exceed the 3% deficit limit, and its intention to adopt the euro should be confirmed by the population in a referendum, which is scheduled for 2011. Bulgaria should accelerate the disinflation process, what is not a simple task in a fixed exchange rate system. Bulgaria is lagging behind in terms of real convergence. This poses a significant risk to the fulfilment of the nominal criteria in a sustainable manner.

REAL CONVERGENCE

Advancement in nominal convergence is virtually impossible without successful real convergence. The favourable economic development in the past years created conditions for Slovakia to meet all the Maastricht criteria in a relatively short time. On the other hand, the current slowdown in real convergence caused by the global economic crisis restricts the country's possibilities for restoring the former pace of nominal convergence in a short time.

Current state of real convergence in Slovakia

Slovakia's dynamic economic growth continued in 2008. The pace of economic growth, as measured by GDP at constant prices, reached 6.4%. Employment also increased on a year-on-year basis, while unemployment decreased. After a relatively long period of steadily accelerating growth, however, the economy started to experience a downturn in 2008. Economic growth slowed from 9.3% in the first quarter to 2.5% in the fourth quarter. At the end of the year, the global economic crisis caused a sharp fall in foreign demand, which dampened the growth in the investment component of domestic demand. Overall, domestic demand maintained its growth dynamics in 2008 as a result of rapid growth in consumption.

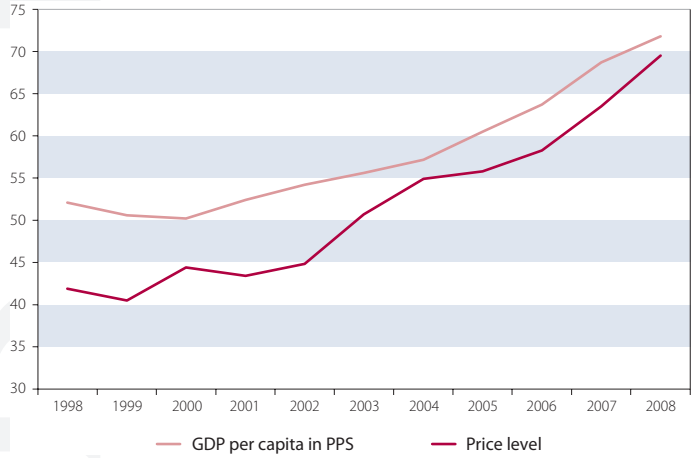
Slovakia's economic performance, as measured by GDP per capita in purchasing power standards (PPS), increased to 71.8%[8] of the EU average. The inflation differential between Slovakia and the EU average was very small. The exchange rate of the Slovak koruna markedly strengthened in a relatively short time (from the beginning of the year to the fixation of the conversion rate). Hence, the relative price level in 2008 rose more significantly than economic performance.

Foreign trade represents the main channel through which the global economic crisis has spread to Slovakia. Although the value of total exports of goods and services at current prices increased on a year-on-year basis in 2008, it fell significantly at the end of year. In December, the volume of exports decreased to the level recorded three years earlier. Imports followed the same trend as exports. The negative trade balance decreased somewhat on a year-on-year basis (to -1.1% of GDP). The deficit in the b.o.p. current account increased to 6.5% of GDP. The main factor behind this increase was a deterioration in the services and current transfers balances. The growth in imports and exports lagged behind the GDP growth at current prices. The overall degree of openness of the Slovak economy, expressed in terms of foreign trade in goods and services as a share of GDP, decreased to 166.8% in 2008.

The situation in the area of employment improved in 2008, compared with 2007. Overall employment increased to 62.3%, while unemployment decreased to 9.6%. The growth in compensation per employee accelerated only slightly. With regard to the marked slowdown in labour productivity growth, however, relatively dynamic growth was recorded in unit labour costs. Labour productivity in Slovakia reached 77.5% of the level of productivity in the EU.

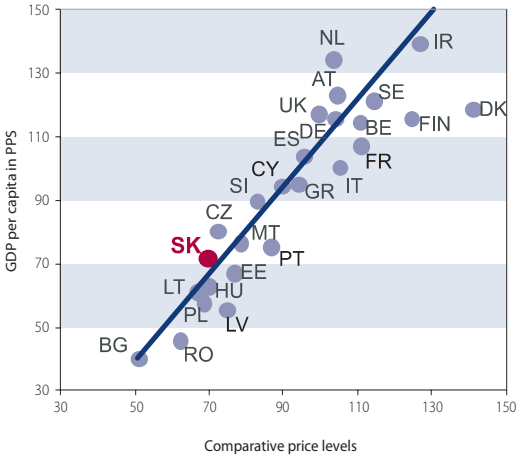
The structure of the economy remained virtually unchanged in 2008. Most value added was

Chart 3 Real convergence in Slovakia (EU-27 average=100)



Source: Eurostat, own calculations.

Chart 4 Performance and comparative price levels in EU countries (EU-27 average=100, 2008)

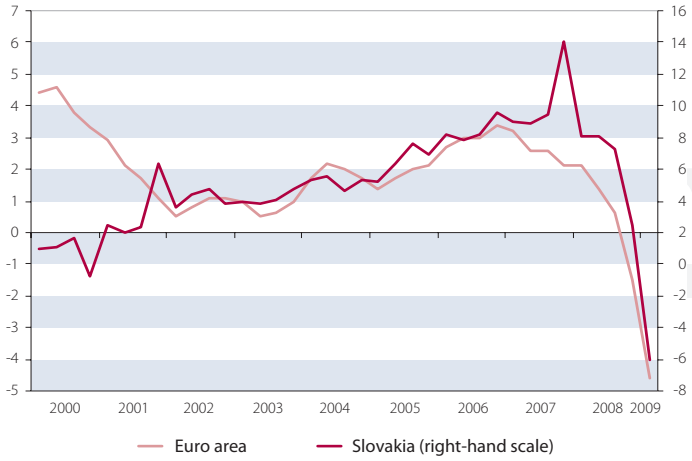


Source: Eurostat.

produced in industry (28.1%). The share of industry in total value added was partially reduced by the share of construction (8.7%), which increased year-on-year by 1.6 percentage points. This change took place in the conditions of a moderate slowdown in the year-on-year dynamics of value added creation (to 9.9%). After several years of dynamic growth in the profits of non-financial corporations, the profits generated in 2008 were 7.6% lower than in 2007.

In connection with the transition to the single monetary policy, the importance of convergence between the Slovak economy and the euro-area economy has increased. The degree of correlation between GDP growth in Slovakia and in the euro area decreased at the end of 2008 (to 0.7). This was due to the extremely strong economic growth in Slovakia in 2007 and the relatively strong growth in 2008, which well exceeded the growth in the euro area. In 2009, the degree of synchronisation continues to increase: Slovakia (though with a certain delay) as well as the euro area record GDP fall. The symmetry of shocks also increased.[9]

Chart 5 Real GDP growth in Slovakia and in the euro area (year-on-year changes in %)



Source: Eurostat, own calculations.

Structural and institutional reforms

A vital condition for the restoration of the former pace of real convergence is the continuation of the structural and institutional reforms. However, it is possible to say in general that the advancement of Slovakia in the area of structural and institutional reforms is still at the level of plans and strategies. The adoption of specific measures and their implementation are lagging behind these plans and strategies. Measures are taken mostly in the area of employment, representing the second main objective of the Lisbon agenda, while the promotion of sustainable growth is still in the background.

The evaluation of the implementation of Slovakia's National Programme of Reforms[10] has confirmed that Slovakia has taken certain measures to enhance the business environment and to reform the educational system. However, the European Commission has advised Slovakia to take additional measures to create better conditions for business activity, employment for the young, and to work out a strategy for the ageing population, and to enhance competition in energy sector. Slovakia should reallocate more public funds for education, research, development, and innovation. A strategy should also be adopted to improve the regulation of businesses, to simplify the existing legislation, and to reduce the existing administrative burdens. In connection with the need for 'flexicurity' (the combination of labour market flexibility and security for workers), measures are to be taken to promote lifelong education and to carry out further reforms in the educational system.

9 See: Analysis of Convergence in the Slovak Economy, NBS, July 2009.

10 mplementation of the Lisbon Strategy Structural Reforms in the context of the European Economic Recovery Plan: Annual country assessments – a detailed overview of progress made with the implementation of the Lisbon Strategy reforms in Member States in 2008, EC, January 2009.

Table 3 Indicators of real convergence and economic development in Slovakia (2008)

Indicators of real convergence	SR	Comparable indicator in EU-27
GDP per capita in SR / EU (in PPS)	71.8% [1)]	100%
Price levels in SR / EU	69.5% [1)]	100%
Real GDP growth	6.4%	0.9%
Openness of the economy		
Exports	82.2% GDP	
Imports	84.6% GDP	
B.o.p. current account	-6.5% GDP	-2.0% GDP
FDI inflow	3.7% GDP	1.4% GDP
Labour market and employment		
Employment rate	62.3%	65.9%
Unemployment rate (LFSS)	9.6%	7.0%
Labour productivity growth (ESA 95)	3.5%	0.0%
ULC growth (ESA 95)	5.3%	3.4%

Source: Statistical Office of the SR, Eurostat, own calculations.
1) Eurostat estimate.
Explanatory notes: PPS – purchasing power standards, LFSS – labour force sample survey, FDI – foreign direct investment, b.o.p – balance of payments.

11 Doing Business 2010, World Bank, 2009.

The National Reform Programme is closely associated with the 'Slovakia 21' Modernisation Programme. The majority of short-term measures were implemented or adjusted in legal terms within the prescribed time limit (until the end of 2008). In the area of research, development, innovation, and education, increased emphasis is placed on international cooperation, for which there are now better conditions and which is expected to lead to quality improvement. The most significant measure designed to improve the business environment was the adoption of an electronic system for monitoring the legislative process. In the area of employment, a bonus system for employees and increased support for the renting of dwellings were introduced. The employee bonus effectively reduces the tax and contribution payment burdens of low-income workers (whose average income is lower than the minimum wage). The bonus is designed to motivate the disadvantaged to work and to give preference to earned income over social benefits.

Measures taken to improve the pension system, such as the announcement of another interim period during which pension savers may leave the capitalisation pillar, will generate only a short-term increase in the general government budget revenue, and will not contribute significantly to the sustainability of the system.

Significant measures taken to improve the business environment in Slovakia were the creation of points of single contact for sole traders and the computerisation of certain customs procedures. Regarding the quality of the business environment, however, the position of Slovakia has worsened (according to the rankings of Doing Business[11], compiled by the World Bank). Numerous countries have carried out more far-reaching reforms. Nonetheless, Slovakia still offers the best conditions for business activity within the V4. Hungary has made apparent progress on a year-on-year basis, and the difference between Slovakia and Hungary in terms of business conditions has decreased to a significant extent.

Outlook for real convergence in Slovakia

The global economic crisis will have a strong negative impact on the real economy of Slovakia, mainly in 2009, but its unfavourable effects will persist for several years. The catching-up process is expected to slow down. In certain areas, a divergence from the EU average may appear on a temporary basis.

The negative impact of recession on the Slovak economy was most apparent in the first quarter of 2009, when real GDP contracted on a year-on-year basis by 5.6%. In the next quarter, real GDP growth stabilised to some extent. The downturn in economic activity is also reflected in the labour market. Employment is falling, unemployment is rising. The fall in labour productivity is accompanied by an increase in unit labour costs.

According to the NBS forecast, real GDP growth will reach -5.6% during 2009. The main factor in this trend will be the low foreign demand, which will have a dampening effect on production in export-oriented companies. As a result, the contribution of net exports will be negative. Exports will probably fall by 17.6% on a year-on-year basis. The creation of gross fixed assets will be re-

Table 4 Outlook for real economic developments in Slovakia

	2009	2010	2011
GDP (real growth)	-5.6%	2.9%	4.2%
Household final consumption (real growth)	-1.3%	-0.6%	3.3%
General government final consumption (real growth)	4.8%	3.3%	2.9%
Gross fixed capital formation (real growth)	-10.4%	2.9%	1.4%
Exports of goods and services (real growth)	-17.6%	6.0%	6.7%
Imports of goods and services (real growth)	-17.4 %	6.0%	4.3 %
B.o.p. current account (share of GDP)	-5.8%	-5.0%	-2.9%
Employment (LFSS, growth)	-1.9%	-0.2%	0.4%
Compensation per employee (curr. prices, growth)	4.8%	1.3%	5.3%
Labour productivity (real growth)	-3.8%	3.1%	3.8%

Source: NBS.

Table 5 Outlook for performance, price levels, and the openness in the SR economy

	2009	2010	2011
GDP per capita in the SR / EU (in PPS)	70.8%[1)]	72.6%[1)]	74.7%[1)]
Comparative price levels in the SR / EU	69.9 %[1)]	70.4%[1)]	71.1%[1)]
Exports and imports as a share of GDP	136.7 %	139.5%	140.3%

Source: Eurostat, NBS, own calculations.
1) Own estimate.

stricted; investment activity will be driven only by infrastructure investments. The subsequent fall in employment (1.9%) and slowdown in the growth of compensation per employee will result in lower final consumption in the household sector. The most dynamic GDP component at constant prices will be general government spending. After several years of strong growth, labour productivity in Slovakia will decrease in 2009 (by 3.8%). If the positive growth in employee compensation continues, this will cause a noticeable increase in wage costs and a deterioration in the country's competitiveness. The external imbalance will improve somewhat on a year-on-year basis. The trade deficit will decrease, as well as the b.o.p. current account deficit.

Exports from Slovakia should start growing again in the coming years, owing to a gradual revival in the global economy. The external imbalance is expected to moderate further on. The increased productivity is likely to lead to favourable labour market developments with a certain time delay. In 2011, Slovakia is expected to experience a very moderate but positive growth in employment. The growing labour productivity will be accompanied by slower growth in unit labour costs. The most rapidly growing components of economic growth in 2011 should be net exports and household final consumption again. However, output gap is expected to remain highly negative in the next three years.

The growth in economic performance and the relative price increase will decelerate to a significant extent. The performance of the Slovak economy will fall somewhat in 2009. In the following years, Slovakia is expected to converge the EU average again. According to our estimates based on the current macroeconomic forecasts of the NBS and ECB, the ratio between GDP per capita in Slovakia and in the EU (in PPS) will increase to 74.7% by 2011. The ratio between price levels in Slovakia and in the EU will increase to 71.1%. Owing to a fall in the volume of foreign trade, the degree of openness in the Slovak economy will noticeably decrease in 2009. After a revival in foreign demand, the degree of openness should increase again in the next years.

Weak points in real convergence

The adoption of the euro has brought many benefits, as well as challenges. In its Economic Survey of the Slovak Republic[12], the OECD recommends that flexibility should be raised in the country's labour and product markets, the fiscal policy framework should be improved, and housing policies should be reformed. Long-term unemployment is still high in Slovakia. However, some of the measures adopted have actually reduced the level of labour market flexibility. The legal extension of collective bargaining agreements to firms that do not participate in the bargaining should be abolished or, alternatively, the conditions for exoneration should be eased. The increasing ratio between the minimum wage and the median exerts additional pressures on employment. Therefore, decisions concerning the minimum wage should take into account the opinions of independent experts. In the area of products and services, obstacles to the extension of the 'e-business' should be removed and the implementation of the 'e-government' strategy should be accelerated. The OECD criticises the frequent ad hoc changes in legislation pertaining to the pension system, which tend to reduce the transparency and financial stability of the system. The large regional differences in unemployment are closely connected with the low labour mobility. The removal of the existing barriers hindering the development of flat/house renting would contribute to the mobility of labour.

Some of the measures implemented within the scope of the Slovakia 21 Modernisation Programme have contributed to the solution of these priorities. In *Economic Policy Reforms: Going for Growth*[13], the OECD proposes further measures to improve the priority areas. In order to raise the level of female employment, the period of maternity leave is recommended to be reduced and the child care benefit to be increased. Financial support for the creation of new jobs should be concentrated on the long-term unemployed. The situation in the area of education should be improved through the parallel introduction of school fees and school fee loans. Higher education should be made more attractive through the launch of new vocation-oriented professional programmes. In line with the priority of reducing the administrative burdens of companies, it would be appropriate to remove the barriers to entry into markets, existing in the form of various professional chambers.

The Report on the State of the Business Environment[14] acknowledges that, at the present time, there are no major barriers to business activity in Slovakia. In addition to the creation of points of single contact, the measures taken to increase the quality of the business environment included the introduction of the possibility of entering data in the Commercial Register in electronic form, submitting tax documents, or reducing the obligations of entrepreneurs arising from the Act on Archives and Registries. Negative effects are mainly exerted by measures taken in the area of taxes and contributions, increasing the direct financial burdens and new obligations of employers in connection with the arrangement of health care services. Chronic problems are the enforcement of rights, the existence of complicated and unstable regulations, and the absence of impact assessment before their introduction. The report also deals with the stagnation of science, research, and innovation.

The situation in the area of research and development shows no signs of improvement. The original objective of the Lisbon strategy for science and research was to increase the overall expenditure on research and development to 3% of GDP by 2010. Within the EU, this objective is

12 *OECD Economic Survey: Slovak Republic, OECD, February 2009.*
13 *Economic Policy Reforms: Going for Growth 2009, OECD, March 2009.*
14 *Report on the State of Slovakia's Business Environment with Proposals for Improvement (2008), Ministry of the Economy of the Slovak Republic, January 2009.*

Table 6 Current state of real convergence in non-euro area EU countries

	GDP growth (in %)	GDP per capita in PPS (EU-27 = 100)	Price level (EU-27 = 100)	Labour productivity (EU-27 = 100)
	2008 [1)]	2008	2008	2008
Slovakia	6,4	71,8	69,5	77,6
Czech Republic	3,2	80,4	72,4	73,1
Hungary	0,5	62,9	69,7	74,0
Poland	5,0	57,5	68,6	61,5
Estonia	-3,6	67,2	76,7	61,7
Lithuania	3,0	61,3	66,8	60,8
Latvia	-4,6	55,6	74,7	50,6
Bulgaria	6,0	40,1	51,0	35,8
Romania	7,1	45,8	62,1	46,6
Denmark	-1,1	118,7	141,0	99,8
Sweden	-0,2	121,4	114,4	110,3
United Kingdom	0,7	117,2	99,4	111,6

Source: Eurostat.
1) The average annual GDP growth rate in euro-area countries in the same period was 0.7%.

being fulfilled only by Sweden and Finland. Slovakia seems to have abandoned its own objective, which was set at 1.8% of GDP to be achieved by 2010. Expenditure on research and development is below 0.5% of GDP, and shows a decreasing tendency on a year-on-year basis.

A special category is formed by government measures taken to mitigate the effects of the economic crisis.[15] These measures are designed to improve the indicators of the real economy – to stimulate economic growth and to raise the level of employment, incomes, consumption, and the living standard of the population. At the same time, however, they tend to increase the level of government spending, as well as the deficit in public finances. This will cause a deterioration in nominal convergence. Some of the measures adopted have had favourable effects and mitigated the impacts of the economic crisis. However, many of them were only temporary measures. A positive fact is that some of the measures were recommended to Slovakia in connection with the need to create better conditions for sustainable growth and to eliminate the weak points of the real economy.

Real convergence in non-euro area EU Member States

Only some of the new non-euro area EU Member States[16] managed to achieve strong economic growth in 2008. The strongest growth was recorded in Romania. An average annual growth rate above 5% was also achieved in Slovakia, Bulgaria, and Poland. On the other hand, Latvia and Estonia suffered a sharp year-on-year GDP decline as early as 2008. Economic activity also slowed in Denmark and Sweden. In these four countries and in the United Kingdom, the labour productivity indicators also worsened in connection with the GDP decline. Owing to its robust economic growth, Slovakia managed to strengthen its position as the country with the highest labour productivity among the new Member States under review.

In line with the GDP dynamics, the output of the Slovak economy has noticeably approached the EU average. At present, Slovakia boasts the second-highest value of GDP per capita (in PPS) in comparison with the new EU Member States outside the euro area. The highest output is recorded in the Czech Republic. As a result of negative developments, the performance of Latvia and Estonia has decreased in relation to the EU. Despite a marked year-on-year rise in the relative price level, Slovakia has maintained the second-lowest price level within the V4. The lowest price level and weakest output, not only among the countries under review but also in comparison with the other EU countries, is recorded in Bulgaria.

The fall in demand, accompanied by a fall in production, led to deterioration in the labour market situation. All EU countries recorded an increase in unemployment. The highest unemployment rate was recorded in the Baltic States (at end-2008). In Latvia, unemployment increased to 11.5% (from 5.6% at end-2007). The increased number of unemployed was reflected in the average employment rate in 2008, but to a limited extent only. Among the countries under review, a fall in employment was observed only in Lithuania.[17] In Slovakia, the average rate of employment rose to 62.3%.

In general, the slowdown in the global economy and decline in foreign trade moderated the external imbalances. An exception was Bulgaria, where the current account deficit increased to an unsustainable level, i.e. 25.3% of GDP. In the Baltic States, where similar values had been recorded a year earlier, the external imbalance decreased considerably.

The real economy indicators from the beginning of 2009 show no signs of improvement, quite the opposite. In the first half of 2009, all the coun-

15 *Three sets of measures have been adopted so far (more than 60 measures in total): Set of Government Measures Designed to Mitigate the Effects of the Financial Crisis, Set of Measures Designed to Moderate the Effects of the Global Financial Crisis and Economic Crisis on Employment, Set of Measures Designed to Mitigate the Effects of the Economic Crisis.*
16 *The new EU Member States, excluding Slovenia, Cyprus, and Malta.*
17 *The sharpest fall in employment within the EU was recorded in Ireland.*

tries under review (except for Poland) recorded a year-on-year decline in real GDP. The sharpest fall was recorded in Latvia (-18.4%). At the same time, unemployment continued to grow. In Latvia, the unemployment rate increased to 17.3% in August 2009.[18]

Conclusion

On average, the convergence of the Slovak economy towards the EU average continued in 2008. Nonetheless, the pace of economic growth followed a decelerating trend during the year. The slowdown caused by the weakening foreign demand led to decline in employment and domestic consumption. Inflationary pressures weakened and overall inflation began to fall at the end of 2008. Despite this, Slovakia ceased to meet the inflation criterion, because numerous EU Member States recorded extremely low inflation rates, or deflation. In 2008, the ratio of general government deficit to GDP was lower than the reference value. The fiscal criterion was still fulfilled in Slovakia. Despite the unstable situation, the long-term interest rate rose only slightly, owing to the adoption of the euro and the relatively low public debt. It is still well below the reference value.

In the coming period, some of the non-euro area EU Member States will be diverging from the EU average, rather than converging towards it. The outlook for the coming years indicates that Slovakia's real convergence towards the EU average will slow down. The unfavourable trend in the real economy will cause a noticeable revenue decline and expenditure growth in public finances. Slovakia will probably be unable to meet the fiscal criterion in the horizon until 2011. Similar (or worse in many cases) developments are expected in virtually all EU countries outside the euro area. Hence, the process of euro area enlargement will be interrupted for a few years.

18 The highest unemployment rate within the EU is recorded in Spain (17.6%).

Bibliography:

Analysis of Convergence of the Slovak Economy, NBS, July 2009.
Consensus Forecasts, Consensus Economics Inc., September 2009.
Doing Business 2010, World Bank, 2009.
Eastern Europe Consensus Forecasts, Consensus Economics Inc., September 2009.
Economic Forecast Spring 2009, European Commission, May 2009.
Economic Policy Reforms: Going for Growth 2009, OECD, March 2009.
Implementation of the Lisbon Strategy Structural Reforms in the context of the European Economic Recovery Plan: Annual country assessments – a detailed overview of progress made with the implementation of the Lisbon Strategy reforms in Member States in 2008, EC, January 2009.
Convergence Report 2008, ECB, May 2008.
Modernisation Programme Slovakia 21, Ministry of Finance SR, May 2008.
National Reform Programme of the Slovak Republic for 2008–2010, MF SR, September 2008.
Draft of the General Government Budget for 2010–2012, MF SR, September 2009.
OECD Economic Survey: Slovak Republic, OECD, February 2009.
Stability Programme of Slovakia for 2008–2012, Ministry of Finance SR, April 2009.
Report on the State of Slovakia's Business Environment with Proposals for Improvement (2008), Ministry of the Economy SR, January 2009.
Stability and Convergence Programmes Submitted by Member States, EK: http://ec.europa.eu/economy_finance/thematic_articles/article10982_en.htm
Medium-Term Forecast (MTF-2009Q3), NBS, September 2009.

The procyclicality of banks' accounting rules and capital regulation rules

Ing. Tomáš Tőzsér, PhD.
*Národná banka Slovenska**

In its latest forecast,[1] the International Monetary Fund expects world output to decline by 1.1% in 2009. This will be the worst result for the world economy's year-on-year pace of growth since the Second World War. In Slovakia, too, we are clearly feeling the negative repercussions of the global economic crisis.

This exceptionally strong and rapid downturn in the global business cycle is to a large extent driven by the financial crisis, the possible causes of which are addressed in detail by, for example, the Financial Services Authority (FSA, 2009). In this article, we want to focus on the epicentre of the current problems, i.e. the banking sector, in the context of some of the rules under which it operates. These, according to several observers, have contributed to the escalating mistrust and thus also the systemic risk in the banking sector of certain advanced countries. As a result, the global economy is in its current serious condition.

Financial leverage, equity capital, and systemic risk

A bank can operate smoothly even with high financial leverage (a high ratio of debt to equity), provided that it is able to keep managing the maturity mismatch between its assets and liabilities. A bank will not be able to manage this mismatch if it cannot, under moderate conditions, obtain financing and sell its assets (e.g. securities) in the financial market. What is important, however, is that the liquidity and solvency of the bank depends not only on its own soundness, but also on the soundness of other banks in the system. Just recently we saw how asset price movements brought about a spiral of losses, driven by the procyclical adjustment of leverage by financial institutions (Box 1). The self-sustaining mechanism paralysed the whole system, even though many institutions were not themselves in a bad financial condition. The behaviour of financial institutions is to a large extent determined by rules for accounting, capital, and risk management. These rules can, particularly at the level of mutual interaction, give rise to procyclical behaviour and thereby intensify the effects of the business cycle.

Procyclicality of accounting rules

The recent financial crisis has contributed not only to the problem of valuing complex financial instruments in illiquid markets, but also, substantially, to the unfolding procyclical impact of fair value accounting (FVA) on bank balance sheets.

Both U.S. Generally Accepted Accounting Principles (U.S. GAAP) and International Financial Reporting Standards (IFRS) use a mixed attributes model[2] in which different valuation methods are applied to different types of assets and liabilities, depending on their characteristics and on management's intentions in holding them. In essence, both frameworks require fair value valuation for financial assets and liabilities held for trading purposes and available-for-sale assets, and derivatives. Held-to-maturity assets, loans and liabilities not fair valued are valued at amortized cost. Both frameworks provide a carefully specified option to fair value certain financial assets and liabilities that would normally be valued at amortized cost.[3]

A simple model analysis by the International Monetary Fund (IMF, 2008) came to the conclusion that the application of FVA contributes to unwanted volatility across time, and also to the procyclical impact on bank balance sheets. The IMF's simulations confirmed the existence of three potential channels through which FVA introduces volatility into financial statements. The first is the volatility associated with changes in the underlying economic parameters. The second is the volatility produced by risk measurement errors and/or changing views regarding economic prospects throughout the business cycle. The third transmission channel of volatility is the mixed attributes model itself, which by definition reduces the balance-sheet netting effect that full fair valuation of assets and liabilities would produce. The simulation results highlight three key points regarding FVA and its financial stability implications:

1. strong capital buffers are crucial to withstand business cycle fluctuations in balance sheet components, especially when FVA is applied more extensively to assets than liabilities;
2. fair valuing an expanded set of liabilities acts to dampen the overall procyclicality of the balance sheet; and

* *The views expressed in this article are the author's own views and do not necessarily represent the views of the NBS.*
1 *World Economic Outlook, October, 2009.*
2 *IFRS are now used in over 100 countries and are binding on around 8 000 firms listed on EU stock markets. The U.S. Securities and Exchange Commission (U.S. SEC) is seeking full convergence between the U.S. GAAP and International Financial Accounting Standards by around 2014.*
3 *Further information on U.S. GAAP and IFRS and a comparison of U.S. GAAP and IFRS is provided by, for example, the U.S. SEC (2008).*

Box 1

The loss spiral and margin/haircut spiral in modern financial systems

The trigger of the mortgage crisis, as with any credit crisis, was the inability of a large number of entities (in this case U.S. households) to service their debts at the given interest rates. A sharp rise in credit risks quickly showed up in deteriorating credit ratings for a whole range of complex structured securities that were backed by mortgage loans. The value of these instruments fell rapidly, and then it became uncertain, as the market in the instruments all but seized up.[1] Given that a large volume of these securities were held by financial institutions, particularly in the United Stated and Western Europe, the contagion in the banking systems of the affected countries spread very rapidly.

Brunnermeier et al. (2009) describe how banking systems in the United States and certain Western European countries came close to collapse within a relatively short space of time. They argue that in a banking system increasingly interconnected with financial markets, contagion may begin to spread without even a single firm going bankrupt.[2] It may be enough if the market asset prices change. Banks suffered a hit to their capital in the current episode, since they had overvalued their portfolios of structured mortgage-backed securities in accordance with applicable accounting rules. Banks necessarily reacted to current and expected negative developments in the mortgage market and looming capital losses by deleveraging through trimming balance sheets rather than by raising capital (the latter is more difficult in distressed market conditions). By tightening credit, banks contributed to the worsening conditions in the money market, too. As a consequence, some financial institutions had serious problems to refinance short-term liabilities and were forced to make quick sales at fire-sale prices of otherwise high quality securities. The depreciation of these assets led to further losses that again hit the capital of financial institutions, and so on. The loss spiral in this case caused a sharp decline in the prices of a wide range of financial assets.

Falling prices of assets usually lead to an increase in the margin/haircut on repo borrowings:[3] if firm X borrows from firm Y against a security deposited as collateral and firm Y increases the margin/haircut for firm X, then firm X will have to increase its equity capital (which is tough to do at times of crisis) and/or to reduce its debts by selling other assets. Therefore as a result of margins/haircuts rising amid falling asset prices, financial institutions had to deleverage still further. The margin/haircut spiral lead to further sales, and thus reinforced losses across the financial system.

1 Certain types of structured instruments were never traded on liquid markets, but only on an OTC basis, and their prices were derived through various private models. This further added to the uncertainty about their value.

2 The domino model of contagion, often used in simulations and testing of systemic risk, assumes that if institution A defaults, then institution B will suffer a loss. If the loss is large enough, institution B will go bankrupt, too, and so on. This model therefore assumes passive banks. In practice, however, banks take steps to protect themselves, irrespective of the effects that their actions have on other market entities in the system.

3 The margin/haircut here means the positive difference between the market price of the security and its value as collateral in short-term repo borrowings. This difference must be financed by the borrower's equity capital.

3. when combined with liquidity shortages in financial markets, the FVA framework magnifies the cyclical volatility of capital.

Plantin, Sapra and Shin (2008) compared the pros and cons of fair value accounting and historical cost accounting and showed that where markets are illiquid, FVA generates externalities in the form of endogenous volatility of prices (volatility stemming not from movements in fundamentals, but from the accounting framework itself). This degrades the information value of prices and induces sub-optimal decisions, especially in institutions whose assets are long-lived, senior, and illiquid. This "artificially" induced volatility of prices can therefore lead to undesirable effects in the real economy.

Allen and Carletti (2008 a), too, demonstrate that when liquidity plays an important role (as in times of financial crisis), asset prices may reflect the amount of liquidity available in the market (***cash in the market***) rather than the future earning power of the asset. At the same time, they show how fair value accounting can lead to contagion between the insurance sector and banking sector where none would occur with historical cost accounting. Because of imperfections in the supply of liquidity, FVA can lead to crises.

Gorton, He and Huang (2006) study the effect of compensation schemes for traders on asset prices. They show that marked-to-market compensation contracts can lead traders to herd and to trade on irrelevant information. The consequence of this is that asset prices are less informative than they would otherwise be. Security prices are therefore not the exogenous indicators of value that the efficient markets theory assumes.

Adrian and Shin (2008) highlighted the difference in the way financial intermediaries and households react to changes in asset prices and risk. Aggregate cash flow data for the U.S. household sector shows that leverage of households (the ratio of their debt to assets) falls when their total assets rise, and vice versa. In the case of financial intermediaries, the relationship between changes in leverage and asset price movements is positive. Financial intermediaries, unlike households, adjust their balance sheets actively in response to changes in prices and measured risk. Under conditions where parts of the balance sheet are continuously being marked to market and risk measurement is price sensitive (the value-at-risk approach), financial institutions react in such a way that leverage is high during booms and low

during busts. Such procyclical adjustment of financial institutions' balance sheets leads, through the escalation of financial market volatilities, to a feedback effect on asset prices. The authors also make the empirical finding that the liquidity of financial markets can be understood as the rate of growth of aggregate balance sheets.

Brunnermeier et al. (2009) propose a new accounting rule. Their aim is to reduce, in a manner that is true to the economic situation of the firm, the procyclicality that fair value accounting induces due to the loss spiral (Box 1). The authors contend that current accounting rules should be adjusted in such a way that assets are valued not according to whether management intends to hold them to maturity but according to the funding capacity of their owner. This "mark-to-funding" approach should better reflect the prudential interests of financial institutions, since it would limit liquidity-sapping forced sales where there is no funding difficulty (i.e. where the institution has a relatively favourable maturity mismatch between assets and liabilities). In other words, if a bank is funding its thirty-year assets with short-term borrowings, then whatever the management's intention, the asset should be valued using current market prices. If, however, the asset is funded with the issuance of a 10-year bond, it can be valued on the basis of the present value of the likely average price over the next ten years.[4]

Allen and Carletti (2008 b) suggest that assets, as well as being fair valued, should be valued on the basis of models that have plausible assumptions in regard to fundamentals. When model-based valuations differ by more than, say, 5% from market prices, each financial institution should be required to publish balance sheets valued at market prices, on the model basis, and at historical prices. Excessive differences would signal to investors (and other interested parties) that they need to be careful to identify what is going on in the market.

A different approach to evaluating the usefulness of fair value accounting is taken by the U.S. Securities and Exchange Commission. According to its report (U.S. SEC, 2008), fair value accounting did not play a meaningful role in the U.S. bank failures occurring during 2008. Rather, these failures were the result of growing credit losses, concerns about asset quality, and eroding lender and investor confidence. The report defends fair value accounting for its contribution to transparency, which in turn supports effective capital allocation. It recommends in particular that in situations where markets are illiquid or inactive, the existing accounting standards for fair value accounting need to be refined.

Procyclicality of banks' capital regulation

The procyclicality of banks' capital regulation is another widely discussed subject. Volatility in market prices feeds straight through to the balance sheets and capital of financial companies. Likewise the regulatory capital requirement, which is based on the market value of risk, may rise in bad times and fall in good times. Consequently, there may be greater sensitivity of bank credit supply to economic conditions (procyclicality).

Before Basel II was even implemented, a number of studies attempted to estimate the scope of capital requirement change under the new rules, using simulations and making various assumptions about how bank rating systems behave when economic conditions change.[5] Benford and Nier (2007) present the results of certain simulations based on corporate credit portfolios (Table 1). These point to a significant and sizable cyclical behaviour of capital requirements. Not surprisingly, cyclicality is greater under point-in-time (PIT)[6] rating systems that fully reflect the market situation, but it is sizable even under the assumptions of through-the-cycle (TTC) rating systems that are based on stable parameter estimates.[7]

Using data on retail mortgage arrears in the United Kingdom over the full economic cycle, Benford and Nier (2007) also confirmed that the fluctuations in the capital requirement under Basel II were in line with the stage of the economic cycle. Likewise they found that differences in the capital requirement were substantially greater with the PIT rating system than with the TTC system (Table 2). The capital requirement fluctuations present under the TTC approach were driven by the impact of mortgage income gearing (the ratio of mortgage interest payments to household income), undrawn housing equity (defined as one minus the ratio of household mortgage debt to housing wealth), and the unemployment rate on the TTC measure. As the TTC measure for the

Table 1 Studies that simulate variations in Basel II capital requirements for corporate portfolios

Study	Country	Time period considered	Rating system	
			TTC (agency rating)	PIT (market)
Segaviano a Lowe (2002)	Mexico	3/1995 – 12/1999	16 – 70%	-
Catarineu-Rabell, Jackson and Tsomocos (2003)	USA, Europe	12/1990 – 12/1992 recesia	15 – 18%	8 – 53%
Kashyap and Stein (2004)	USA, Europe, Rest of world	12/1998 – 12/2002	32 – 34%	3 – 83%

Source: Benford and Nier (2007).
Note: References for the study are given in the source literature.

4 The authors say that in order to minimize the risk of fraudulent valuation, this asset can be valued by a third party. They also propose that the valuation be carried out on pools of assets and pools of liabilities, and not on an individual item by item basis.
5 The Basel II rules lay down a formula for mapping credit ratings (obtained from external agencies or on the basis of banks' own models) to the capital requirement. This formula is constructed on a value-at-risk basis. Credit losses, expected and unexpected, may not exceed a bank's capital over a period of one year.
6 PIT rating systems such as Merton models of default or Moody`s KMV model, are used, for example, for economic capital modeling in portfolio asset management.
7 TTC rating systems are used by credit rating agencies to assess the ability and willingness of entities to service their debts (credit rating) over the full economic cycle (not only at a single point in time).

Table 2 Variations in Basel II capital requirements for mortgage loan portfolios over the period 1983–2006

	Rating system		
	PIT	Smoothed PIT	Error correction (TTC)
Minimum to maximum	300%	170%	202%
Cyclical downturn (1989–1992)	120%	42%	23%

Source: Benford and Nier (2007).
Note: The minimum to maximum variation is calculated as the percentage increase in capital requirements from the minimum of the series to the maximum. Cyclical downturn is calculated as the percent increase in capital requirements from 1989 to 1992.

probability of default (PD) of mortgage loans, the authors used a long-run equilibrium default rate implied by an error correction model.

Similar results were obtained by Saurina and Trucharte (2007) using a panel of data on retail borrowers from the Spanish Credit Register. The authors were able to estimate PDs for individual mortgage borrowers using information of roughly 3 million borrowers. The capital requirement under their PIT rating system has a 245% variation range (from a minimum value of 0.85% to a maximum 2.93 %), and under the TTC system there is a variation range of 56% (from 1.84% to 2.87%). Their TTC measure is affected by cyclical and structural factors, and some structural factors (borrower credit histories, undrawn loans) change also with the cycle. This generally illustrates the practical problems of constructing TTC rating systems.

These results show that even when banks calculate risk weights using the rather problematically constructed TTC ratings (where the "average" credit risk over the whole business cycle is assessed), the capital requirement will rise when the economy is in recession, and vice versa. In the scenario of an economic downturn, where it is sufficiently deep, losses will hit capital. If a bank's capital comes under such twin pressures (losses and an increase in requirements), the bank may react in any of various ways: it could limit the payment of dividends, attempt to issue new shares, raise margins, or, highly likely when solvency is under strong pressure, "hoard capital". The bank may substantially cut back on new lending to the economy, which will ultimately only contribute to deepening the recession.

Such measures, however, may damage the institution's reputation with clients and credibility with investors. Banks therefore maintain a buffer of capital above the regulatory requirement to allow them to continue to provide financial services across a range of economic conditions.[8]

As we have seen in the recent systemic episode, however, in some cases even a strong capital buffer is not enough to meet requirements for the protection of depositors and investors. One reason for this is that financial institutions did not fully and accurately assess the risks they were taking on. Large risks were concentrated in off-balance-sheet activities, and so they were neither subject to capital requirements, nor were they transparent to (and measurable by) counterparties. Risks were underestimated also because of irrational expectations and the focus of financial institutions on short-term profits (Trichet, 2009). Another factor here may have been the pressure of strong competition and the battle for market share (Blankfein, 2009). A further reason was that the capital regulation of individual financial institutions, as it was (Basel I) and is (Basel II) constructed, does not afford sufficient protection and support to the financial system as a whole. In fact it could, in certain circumstances, be a factor in systemic failure and have strong procyclical effects at the aggregate level.[9]

Brunnermeier et al. (2009) argue that while the present capital regulation stresses the credit quality of assets, the current crises has shown that systemic risk stems also from how assets are funded. The authors propose that the capital requirement be supplemented with an explicit capital charge for liquidity risk, and therefore that the risk assessment of assets will also take into account the method of their funding, i.e. leverage and the maturity mismatch between assets and liabilities. A multiple of the Basel II capital requirement would be a function of the effective mismatch between the asset maturity and the funding maturity. Besides strengthening systemic stability, this adjusted capital adequacy regulation could also dampen procyclicality in its current form: during booms, when leverage and the maturity mismatch between assets and liabilities have a tendency to rise, the capital charge would increase, and vice versa.

Gordy and Howells (2006) evaluate various proposals for dampening the procyclicality of Basel II. Like a technical system, Basel II may be changed at the point of input (by smoothing the probability of default by means of TTC rating systems), inside the system (by flattening the formula for the minimum capital requirement calculation), and at the point of output (through counter-cyclical indexing of outputs from the capital formula and through the autoregressive rule). After weighing the pros and cons of the different approaches, the authors favour counter-cyclical indexing of outputs. They propose linking the multiplier either to credit default swap (CDS) indices or to a moving average of the aggregate default rate for bank borrowers. It is doubtful, though, whether this approach is consistent with seeking to refine banks' internal risk management systems.

8 Alfon et al. (2004) give additional reasons for actual capital usually exceeding the regulatory minimum. For Spanish banks over 1986-2000, Ayuso et al. (2004) find that, controlling for other possible determinants of surplus capital, the capital buffer is negatively related to the position in the cycle but that the buffer does not absorb all the cyclicality.

9 In this regard, the current episode largely confirms the conclusions of earlier theoretical studies (for example: Blum and Hellwig, 1995, Eichberger and Summer, 2004, Danielsson and Zigrand, 2003, and Danielsson et al., 2004).

Conclusion

The effects of the global financial crisis, and its debt-driven nature, have already fully fed through to the real economy.

As far as financial institutions are concerned, their principal errors were to focus on maximizing short-term profits and to underestimate systemic risks. As for regulators, their greatest errors were to overestimate the ability of the market and financial institutions to regulate themselves and to underestimate the extent of the systemic risk. Another problem was the inadequate coordination and cooperation between competent institutions at both national and international levels.

At the same time, however, a role was played by accounting rules and bank capital regulation rules, which, being based on market prices, interacted to reinforce the effects of the downturn in the business cycle. Several international initiatives recommend that these rules be changed so as to dampen their procyclical effect.

On 14 July 2009, the International Accounting Standards Board (IASB), which sets IFRS, published a proposal to divide financial assets into two groups according to how they are valued. Loans and securities with loan features (assets whose value is determined by interest payments and repayment of the principal) should be valued at cost, provided that banks demonstrate their intention to hold them on a long-term basis. Other assets, including shares, derivatives and structured securities, should be measured at fair value. Firms should be able to apply the new rules from the end of this year and should be required to apply them from 2012. This proposal would substantially simplify the IAS 39 standard and dampen its procyclicality.[10] There may be problems, however, in establishing the dividing line between the two proposed asset groups. The IASB plans to complete the replacement of IAS 39 (Financial Instruments: Recognition and Measurement) during the course of 2010.

According to the response of the Basel Committee on Banking Supervision (BCBS) to specific deficiencies in the regulation of bank capital, the next steps in the regulation of bank capital will take the form of amendments to Basel II. The proposals presented so far, reflecting recommendations made by the Financial Stability Forum (FSF) in April 2008, concern the improvement of capital adequacy through increasing the capital charge on trading book risks (complex and illiquid credit instruments), on banking book risks (complex securitized instruments), and on exposures to off-balance-sheet instruments. Within the Pillar 2 framework of Basel II, the BCBS is proposing improvements in the valuation of financial instruments, liquidity risk management, and firm-wide stress testing. Under Pillar 3, it is proposing to raise the disclosure requirements for information on securitization and off-balance-sheet instruments. The BCBS aims to dampen the procyclical effect of Basel II by building up shock absorbers in form of additional capital buffers. It is also planning measures to enhance the quality of equity capital, and, in 2010, it will reassess the minimum capital requirement.[11]

During July 2009, both the United Kingdom and the European Union published legislative proposals for tightening the regulation of bank capital. The commencement of these measures will be postponed owing to their expected negative impact on bank lending during the current difficult period.

10 Under this standard, financial institutions are required to periodically revalue their assets at market prices. Under pressure from the EU, IAS 39 was amended in October 2008 to allow banks to reclassify certain assets out of the fair value category. Although the change was used by banks to make short-term improvements to their balance sheets, it has only postponed the problems.

11 Further information may be found at http:// www.bis.org/publ/bcbsca.htm.

Bibliography:

1. Adrian, T. and Shin, H. S.: Liquidity and Leverage. FRB of New York, Staff Report No. 328, 2008.
2. Alfon, I., Argimon, I. and Bascunana-Ambros, P.: What Determines How Much Capital Is Held by UK Banks and Building Societies? FSA Occasional Paper 22, 2004.
3. Allen, F. and Carletti, E.: Mark-to-market Accounting and Liquidity Pricing. Journal of Accounting and Economics, No. 45, 2008 (a).
4. Allen, F. and Carletti, E.: Should Financial Institutions Mark-To--Market? Banque do France Financial Stability Review No. 12 – Valuation and Financial Stability, October 2008 (b).
5. Ayuso, J., Perez, D. and Saurina, J.: Are Capital Buffers Procyclical? Journal of Banking and Finance, Volume 13, No. 2, pp. 249–264, 2004.
6. Benford, J. and Nier, E.: Monitoring Cyclicality of Basel II Capital Requirements. Bank of England Financial Stability Paper, No. 3, December 2007.
7. Blankfein, L.: Do not destroy the essential catalyst of risk. Financial Times, 8 February 2009.
8. Blum, J. and Hellwig, M.: The Macroeconomic Implications of Capital Adequacy Requirements for Banks. European Economic Review, Volume 39, No. 3–4, pp. 739–749, 1995.
9. Brunnermeier, M., Crockett, A., Goodhart, Ch., Persuad, A. D., and Shin, H.: The Fundamental Principles of Financial Regulation. ICMB Geneva Reports on the World Economy 11, Preliminary Draft, 2009.
10. Catarineu-Rabell, E., Jackson, P. and Tsomocos, D.: Procyclicality and the New Basel Accord – Banks' Choice of Loan Rating System. Bank of England Working Paper No. 181, 2003.
11. Danielsson, J., Shin, H. S. and Zigrand, J. – P.: The Impact of Risk Regulation on Price Dynamics. Journal of Banking and Finance, Volume 28, No. 5, pp. 1069–1087, 2004.
12. Danielsson, J. and Zigrand, J. – P.: What Happens When You Regulate Risk? Evidence from a Simple Equilibrium Model. http://www-cfap.jbs.cam.ac.uk/publications/files/Danielsson% 20and%20%20Zigrand.pdf, 2003.
13. Eichberger, J. and Summer, M.: Bank Capital, Liquidity and Systemic Risk. Oesterreichische Nationalbank Working Paper, No. 87, 2004.
14. FSA: The Turner Review: A Regulatory Response to the Global Banking Crisis. Financial Services Authority, London, March 2009.
15. Gordon, G., He, P. and Huang, L.: Asset Prices When Agents Are Marked-To-Market. NBER Working Paper No. 12075, 2006.
16. Gordy, M. and Howells, B.: Procyclicality in Basel II: Can We Treat the Disease Without Killing the Patient? Journal of Financial Intermediation, Volume 15, No. 3, pp. 395–417, 2006.
17. Jones, H.: Accounting Standard Setter Plans Fair Value Revamp. Reuters, 23 February 2009.
18. Kashyap, A. and Stein, J.: Cyclical Implications of Basel 2 Capital Standards. FRB of Chicago Economic Perspectives, Volume 28, No. 1, pp. 18–31, 2004.
19. IMF: Fair Value Accounting and Procyclicality. Global Financial Stability Report, Chapter 3, October 2008.
20. Plantin, G., Sapra, H. and Shin, H. S.: Marking-To-Market: Panacea or Pandora's Box? Journal of Accounting Research, Volume 46, No. 2, pp. 435–460, 2008.
21. Saurina, J. and Trucharte, C.: An Assessment of Basel II Procyclicality in Mortgage Portfolios. Journal of Financial Services Research, Volume 32, No. 1, pp. 81–101, 2007.
22. Segaviano, M. and Lowe, P.: Internal Ratings, the Business Cycle and Capital Requirements: Some Evidence from an Emerging Market Economy. BIS Working Paper, No. 117, 2002.

23. Taylor, A. and Goodhart, C.: Procyclicality and Volatility in the Financial System: The Implementation of Basel II and IAS 39, Preliminary draft. http://ashleytaylor.org/procyvol_draft_sep2004. pdf, 2004.
24. The Economist: Divine intervention. www.economist.com, 16 July 2009.
25. Trichet, J. C.: A paradigm change for the global financial system. Remarks at the International Colloquium "Nouveau Monde, Nouveau Capitalisme" roundtable, Paris, 9 January 2009, accessible at www.ecb.int.
26. U.S. SEC: Report and Recommendations Pursuant to Section 133 of the Emergency Economic Stabilization Act of 2008: Study on Mark-To-Market Accounting. http://www.sec.gov/news/studies/2008/marktomarket123008.pdf.

Comparison of the key interest rates of the V4 central banks with those of the ECB

Ing. Kristína Kočišová, PhD.
Technical University of Košice, Faculty of Economics

Key interest rates are monetary policy instruments used by central banks for the maintenance of price stability and the stability of the banking system. This article presents a comparison of the key interest rates of the V4 central banks with the key ECB interest rates, and an analysis of the gradual harmonisation of these rates before entry into the euro area.

Monetary policy of the Eurosystem

Under the Treaty establishing the European Community, the primary objective of the Eurosystem, and of the single monetary policy for which it is responsible, is the maintenance of price stability[1]. Moreover, the Eurosystem supports the general economic policies in the Community with a view to contributing to the achievement of the objectives of the Community, which include a high level of employment and sustainable and non-inflationary growth. The Treaty establishes a clear hierarchy of objectives for the Eurosystem and assigns overriding importance to the maintenance of price stability. The Treaty makes it clear that ensuring price stability is the most important contribution that monetary policy can make to achieving a favourable economic environment and a high level of employment. [2]

In pursuing its primary monetary policy objective, the Eurosystem has at its disposal a set of monetary policy instruments, which can be divided into three main groups [8]:

- **Open market operations** Open market operations play an important role in the monetary policy of the European Central Bank (ECB). The ECB conducts such operations for the purposes of steering interest rates, managing the liquidity situation in the money market, and signalling the stance of monetary policy. With regard to their aims, regularity and procedures, open market operations can be divided into the following four categories:
  - *Main refinancing operations* – regular liquidity-providing reverse transactions with a weekly frequency and a maturity of normally one week. These operations are conducted by the national central banks on the basis of standard tenders. They play a key role in the Eurosystem's monetary policy as an instrument ensuring the refinancing of the financial sector.
  - *Longer-term refinancing operations* – liquidity-providing reverse transactions with a monthly frequency and a maturity of normally three months.
  - *Fine-tuning operations* – operations conducted on an ad hoc basis with the aim of managing the liquidity situation in the market and steering interest rates, in particular in order to smooth the effects on interest rates caused by unexpected liquidity fluctuations in the market.
  - *Structural operations* – operations conducted through the issuance of debt certificates, reverse transactions, and outright transactions. These operations are executed whenever the ECB wishes to adjust the structural position of the the financial sector vis-à-vis the Eurosystem.
- **Standing facilities.** The standing facilities of the Eurosystem are aimed at providing and absorbing overnight liquidity, signal the general stance of monetary policy, and bound overnight market interest rates. Counterparties can use two types of standing facilities through the national central banks:
  - *the marginal lending facility,* which enables the counterparties (i.e. financial institutions, e.g. banks) to obtain overnight liquidity from the national central banks against eligible securities. The interest rate on the marginal lending facility normally provides a ceiling for the overnight market interest rate.
  - *the deposit facility,* which enables the counterparties to use their excess liquidity to make overnight deposits with the national central bank. The interest rate on the deposit facility normally provides a floor for the overnight market interest rate.
- **Minimum reserves.** The minimum reserve system pursues the aims of stabilising money market interest rates and creating (or enlarging) a structural liquidity shortage.

Monetary policies in the V4 countries

The Visegrad Group or Visegrad Four (V4) represents a community of four eastern European

1 *Definition of price stability in quantitative terms: The Governing Council of the ECB has defined price stability as 'a year-on-year increase in the euro-area Harmonised Index of Consumer Prices (HICP) smaller that 2%. Price stability is to be maintained in the medium-term horizon.' [1]*

countries, i.e. the Czech Republic, Hungary, Poland, and Slovakia. As from 2004, all four countries are members of the European Union.

Slovakia

The National Bank of Slovakia (Národná banka Slovenska, NBS) was established as the Slovak Republic's independent central bank on 1 January 1993. As from the date of changeover to the euro (1 January 2009), the NBS is part of the Eurosystem. Since then the NBS has been participating in the implementation of the ECB's single monetary policy. In pursuing the primary objective of price stability, the NBS uses the monetary policy instruments of the ECB.

Before the adoption of the euro, the NBS had used three key interest rates for monetary policy implementation:

- *the basic interest rate of the NBS*[2], which corresponded to the two-week repo tender limit rate[3];
- *the overnight refinancing rate;*
- *the overnight sterilisation rate.*

The rates for overnight refinancing and overnight sterilisation operations were used for fine-tuning the financial positions of commercial banks at at end of a working day.

Czech Republic

The Czech National Bank (Česká národní banka, CNB) operates as the independent central bank of the Czech Republic. The CNB pursues its primary objective, the maintenance of price stability, through changes in its key interest rates. In so doing, the CNB uses the following set of monetary-policy instruments:

- Open market operations – i.e. operations used for steering the interest rates in the economy. Such operations are conducted mostly in the form of repo operations. With regard to their aims and regularity, open market operations can be divided into the following categories:
  - *the main monetary instrument* – i.e. repo operations conducted in the form of tenders. The duration of such an operation is normally 14 days. Repo tenders are conducted at variable rates. This means that the two-week repo rate serves as the maximum limit rate at which the bids of banks can be satisfied at the tender;
  - *the supplementary monetary instrument* – i.e. three-month repo tenders[4], serving for liquidity absorption for a period of 3 months;
  - *fine-tuning instruments* – i.e. instruments used in the case of unexpected short-term liquidity fluctuations in the market, when the stability of interest rates is at risk[5].
- Standing facilities – facilities designed to provide liquidity or to absorb the excess liquidity overnight. There are two types of standing facilities:
  - *the marginal lending facility* – a standing facility enabling banks to borrow liquidity from the CNB in repo operations. The interest rate applied to this facility is the Lombard rate, which represents a ceiling for short-term money market interest rates;
  - *the deposit facility* – a standing facility enabling banks to utilise their surplus liquidity in the form of overnight deposits with the CNB. Such deposits are remunerated at the discount rate, which normally provides a floor for short-term money market interest rates;
- extraordinary facilities;
- minimum reserves.

Hungary

The National Bank of Hungary (Magyar Nemzeti Bank, MNB) is Hungary's autonomous monetary-policy institution, as from 1991. Its primary objective is to achieve and maintain price stability. In pursuing this objective, the MNB uses the following monetary policy instruments:

- *the base rate of the MNB* – the MNB's most important monetary policy instrument is the issuance of two-week MNB securities. The interest rate on these securities represents the base rate of the MNB. These securities are traded at fixed rate tenders once a week;
- *overnight standing facilities* – used for reducing the volatility of overnight interbank market rates. In order to prevent the interbank market rates from fluctuating extremely, the MNB maintains an interest rate corridor for overnight operations. This corridor is currently defined as ± 1 percentage point around the base rate. The upper limit of the corridor is given by the rate of interest on *overnight collateralised loans*, which serve as a temporary source of liquidity for commercial banks. The interest rate on *overnight deposits with the central bank*, which are used to drain the excess liquidity from the banking sector, represents the lower limit of the interest rate corridor, below which the interbank market rates should not fall.

Poland

The National Bank of Poland (Narodowy Bank Polsky, NBP) is the central bank of the Republic of Poland. The primary objective of the NBP is to maintain price stability. The NBP uses a set of monetary policy instruments to influence the level of interest levels in the market. These instruments include:

- *open market operations* – which include the conditional and outright sale or purchase of securities or foreign currencies, as well as the issuance of own debt securities by the central bank. These are 7-day NBP money market bills, whose minimum yield represents the *reference interest rate* used by the Monetary Policy Council;
- *minimum reserves;*
- *credit and deposit operations* – they include Lombard loans and time deposits made by commercial banks with the NBP (overnight deposits). These credit and deposit operations influence the level of money market rates; the *Lombard rate* is the ceiling and *the deposits rate* represents the floor.

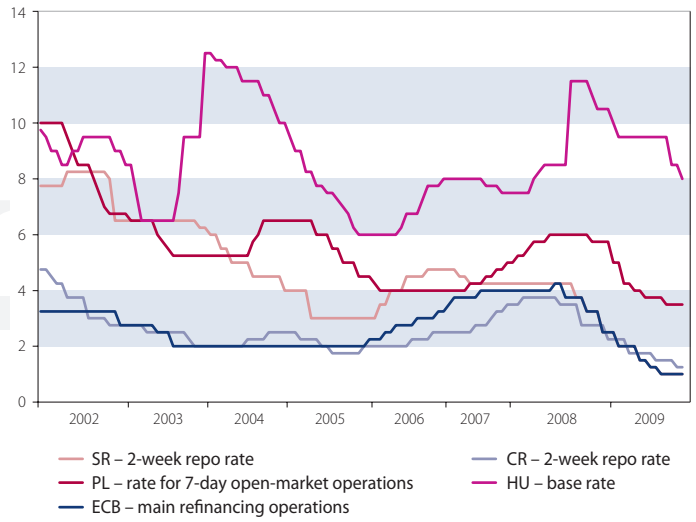
2 Until 31 December 2002, this function had been performed by the so-called discount rate. On 12 December 2002, the Bank Board of the National Bank of Slovakia decided to introduce the basic interest rate of the NBS, with effect from 1 January 2003.

3 The repo rate was set and announced by the National Bank of Slovakia. It was calculated as the average interest rate used in the secondary market for Treasury bills and NBS bills between the central bank and commercial banks, which was organised in the form of tenders. [7]

4 This instrument is no longer used. The last three-month repo tender was held in 2001.

5 They are used only exceptionally in practice.

Chart 1 Open market operations – main refinancing operations



Source: The author's chart based on [2], [3], [4], [5], [6].

COMPARISON OF THE KEY INTEREST RATES OF THE V4 CENTRAL BANKS WITH THOSE OF THE ECB

Comparison of the rates for main refinancing operations

Open market operations represent the main monetary policy instrument used by the national central banks of the countries under review. This instrument is used mainly for steering interest rates in the economy and regulating the level of liquidity in the banking sector. These operations are mostly executed on the basis of tenders, with a 7-day or 14-day maturity.

The comparison of interest rates on the main refinancing operations (Chart 1) shows that the selected interest rates are gradually harmonised with the ECB interest rates. The only exception is Hungary, where intense interest rate fluctuations and large deviations from the ECB interest rates can be observed.

From the start of activity to the middle of 2000, the ECB used fixed rate tenders for its main refinancing operations. On 8 June 2000, the ECB announced that, starting from 28 June 2000, the main refinancing operations of the Eurosystem would be conducted through variable rate tenders. The minimum acceptable rate corresponded to the minimum interest rate at which counterparties could submit bids. Variable rate tenders had been used until 2008. At the beginning of 2008, the ECB announced that, with effect from the transaction due on 15 October 2008, the main refinancing operations of the Eurosystem would be executed through fixed rate tenders.

At the beginning of the period under analysis (in 2002), the variable rate stood at 3.25%, then in December the same year its value fell to 2.75%. The following course of the rate can be characterised by a gradual fall until June 2003, when it dropped to 2%. The interest rate remained at this level until December 2005, when it rose to 2.25%. After that period, the rate for the main refinancing operations began to rise gradually. This trend continued until July 2008, when the rate rose to 4.25%, representing a historical high (the highest value recorded in the period under analysis). The following period to date was characterised by a falling trend in the rate, resulting in a historical low, at 1%[6] (the current value).

Interest rates on the main refinancing operations in the other countries basically followed the trend in the ECB rate. This mainly applies to the rate for two-week repo tenders conducted by the CNB. This interest rate was introduced by the CNB in 1995, and was set at 11.3%. In the period under analysis (2002 to 2009), the rate fluctuated within the range of 1.50% to 4.75%. It reached its maximum at the beginning of the period. The minimum value was recorded at the end of the period (2009), in line with the trend in the ECB rates. Chart 1 illustrates that, at the beginning of the period under analysis, the CNB interest rates were higher than the ECB rates. A change occurred in July 2002, when the CNB interest rates fell below the level of the ECB rates. With short-term deviations, this trend continued until February 2009, when it became reversed.

A gradual interest rate harmonisation with the ECB can also be observed in the monetary policy of the NBS. Until the end of 2002, the NBS had used the so-called discount rate. After that period, the discount rate was replaced by the basic interest rate, which corresponded to the rate for two-week repo tenders. The basic interest rate was introduced on 1 January 2003, with a value of 6.50%. From that time, the basic interest rate followed a falling trend until May 2006, when it began to rise gradually. The rise continued until March 2007, when the rate started to fall again. The falling trend continued until 31 December 2009, when the validity of two-week NBS repo tenders ended at a rate of 2.50%, i.e. at the level of the rate used for the main refinancing operations of the ECB. On 1 January 2009, the interest rates of the NBS were replaced by the ECB interest rates. Chart 1 illustrates that the process of gradual interest rate harmonisation between the NBS and the ECB was completed in October 2008. Since that time, the interest rates of the two banks have been identical.

The current reference rate of the NBP corresponds to the rate used for 7-day open market operations. This interest rate became the central bank's reference rate in 2005, when the maturity of the reference instrument was changed from 14 days to 7 days. Fourteen-day open market operations we used by the NBS as a key monetary policy instrument in 2003 and 2004. At the beginning of the period under analysis (in 2002), the NBP used 28-day open market operations for monetary policy implementation. Chart 1 shows that, at the beginning of the period under analysis, the highest interest rates were recorded in Poland. Subsequently, the rates began to fall. With certain inter-

6 This interest rate is valid as from 13 May 2009.

ruptions, the falling trend continued until March 2006, when the rate for 7-day operations stopped at the level of 4%. After a short period of stagnancy, the reference rate started to rise again. The rising trend lasted until November 2008, when the rate reached a historical high (6%). After that period, however, the NBP rate for 7-day operations began to fall (in line with the trend in euro-area markets), and is still falling. The rate is currently at 3.50%. Its current value is 2.50 percentage points higher than the rate used for the main refinancing operations of the ECB.

The highest interest rate volatility and the largest deviations from the ECB rates were recorded in Hungary. The largest difference between the ECB and MNB interest rates was observed in November 2003, when the base rate of the MNB reached 12.50%[7], representing a value 10.50 percentage points higher than the rate for the ECB's main refinancing operations. The smallest difference between these rates was recorded in June 2006 (3.25 percentage points). At the present time, the base rate of the MNB reaches above-average values, higher than the key interest rates of the countries under analysis.

Comparison of interest rates on the deposit facility

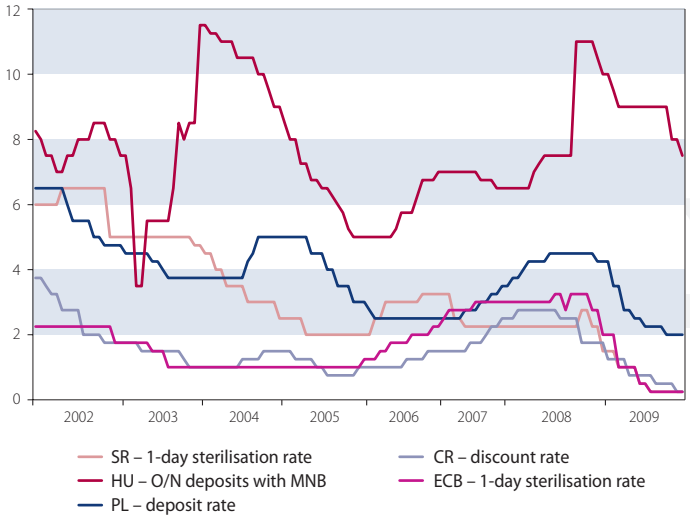
Interest rate harmonisation in the V4 countries can also be observed (Chart 2) in the case of interest rates on overnight sterilisation operations (the deposit facility). The only exception is Hungary where large deviations are recorded, as in the case of interest rates on the main refinancing operations.

The ECB interest rate on the deposit facility showed minimal volatility throughout the period under analysis: its value fluctuated within the range of 0.25% to 3.25%. The maximum value was recorded repeatedly in July and October 2008, and the minimum is being achieved at the present time, i.e. 0.25% since 8 April 2009.

The course of the NBS's overnight sterilisation rate shows that, at the beginning of the period under analysis, its value was well above the level of the ECB rate (Chart 2). This situation persisted until March 2007, when the NBS rate fell below the level of the ECB rate. It remained at that level until 31 December 2009, when it was replaced by the deposit facility rate of the ECB.

The trend in the deposit facility rate of the ECB was followed most closely by the deposit facility rate of the CNB. In the period under review (2002 to 2009), the discount rate for deposit operations fluctuated within the range of 0.25% to 3.75%. It reached its maximum at the beginning of the period. The minimum value was recorded at the end of the period (in 2009), in line with the trend in the corresponding ECB rate. Chart 2 illustrates that, at the beginning of the period under analysis, the CNB interest rate was higher than the ECB rate. A change occurred in July 2002, when the CNB interest rate fell below the level of the ECB rate. With short-term deviations, this situation

Chart 2 Interest rates on the deposit facility



Source: The author's chart base on [2], [3], [4], [5], [6].

persisted until March 2009. Since August 2009, these two rates have been identical.

At the present time, the deposit rate is used for the overnight sterilisation operations (deposit facility) of the NBP. At the beginning of the period under analysis, the deposit rate stood at 6.50%. Then it began to fall gradually. With certain interruptions, the falling trend continued until March 2006, when the rate stopped at the level of 2.50%. After a short period of stagnancy, the deposit rate started to rise again. The rising trend lasted until November 2008, when the rate reached a maximum at 4.50%. After that period, however, its value began to fall, in line with the euro-area market trends. The falling trend is still continuing: the rate is currently at 2.00%. The current value of this rate is substantially higher than the deposit facility rate of the ECB, specifically by 1.75 percentage points.

The highest interest rate volatility and the largest deviations from the ECB rates were recorded in Hungary. The largest difference between the ECB and MNB deposit facility rates was observed in November 2003, when the MNB rate reached 11.50%, a value 10.50 percentage points higher than the ECB rate. The smallest difference between these rates was recorded in January 2003 (1.75 percentage points). At present, the deposit facility rate of the MNB shows above-average values (7.50%), higher than the corresponding rates in the countries under analysis.

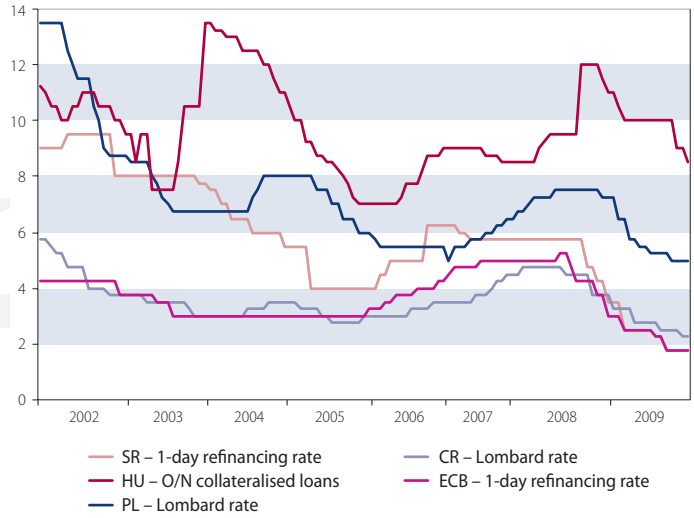
Comparison of interest rates on the marginal lending facility

In terms of volatility, interest rates on overnight refinancing operations (the marginal lending facility) were comparable with the rates of interest on the main refinancing operations.

The overnight refinancing rate of the NBS was above the ECB's marginal lending facility rate throughout the period under analysis. In 2008, the NBS rate started to approach the ECB rate.

7 At the end of 2003, Hungary in fact experienced a regular monetary crisis, causing a sharp depreciation in the forint and a rapid rise in interest rates, and/or a depreciation in the prices of fixed-interest-earning assets denominated in HUF. The crisis resulted from the country's slack budgetary policy, which led, through wage stimulation in the general government sector, to a high budget deficit (5.6% of GDP) and, in particular, to a high current account deficit (8.3% of GDP, including reinvested earnings). The Hungarian government authorities reacted to the crisis in two ways:
1. the central bank raised its base rate from 9.50% to 12.50%, to prevent the HUF from weakening still further;
2. the government adopted additional austerity measures in order to start a decreasing trend in the budget deficit.
The above macroeconomic measures managed to ease the situation in the markets. As a result, the exchange rate strengthened and bond prices increased to a significant extent. (Source: http://www.csob.sk/Analyzydocument.axd?id=5794).

Chart 3 Interest rates on the marginal lending facility



Source: The author's chart based on [2], [3], [4], [5], [6].

Before the country's entry into EMU, it reached values which were only 0.5 of a percentage point higher than the ECB rate.

The Lombard rate for the marginal lending facility of the CNB followed the course of the ECB's marginal lending facility rate, as in the case of interest rates on the main refinancing operations and overnight sterilisation operations. At the beginning of the period under analysis, the CNB rate was 1.50 percentage points higher than the ECB rate. At the end of the period, this differential amounted to only 0.5 of a percentage point.

Marginal lending facility rates in Poland and Hungary showed higher volatility and larger deviations from the corresponding ECB rate. At the beginning of the period under analysis, the highest rate was recorded in Poland, where the NBP's rate for lombard loans reached 13.50%. From that period, the rate was falling sharply until December 2006, when it reached a minimum at 5.00%. After that period, the rate increased to 7.50%. Then, in line with the trend in euro-area interest rates, it dropped again, to its current value (5.00%).

The highest volatility and largest deviation from the ECB rate were recorded in the MNB's interest rate on overnight collateralised loans. At the beginning of the period, the differential between these rates amounted to 5.50 percentage points. At the end of period, however, a differential of 6.75 percentage points was recorded.

Conclusion

Key interest rates are monetary policy instruments used by central banks for achieving their primary objectives, i.e. the maintenance of price stability and the stability of the banking system. It is possible to say that the key interest rates determine the price of funds that commercial banks can borrow from the central banks, and thus they influence the level of interest rates in the banking market.

In pursuing their primary objectives, central banks have numerous monetary policy instruments at their disposal. The main instruments are the main refinancing operations, the deposit facility, and the marginal lending facility. Central banks use these instruments to manage the liquidity situation in the banking sector and to steer interest rates in the economy.

The comparison of the key interest rates of the V4 central banks with those of the ECB indicates that these interest rates were harmonised in the majority of countries during the period under review.

The trends in the key ECB interest rates were followed most closely by the rates of the CNB and NBS, while interest rates in Poland and, in particular, in Hungary showed higher volatility and larger deviations from the ECB rates. A gradual interest rate harmonisation was also observed in the case of the NBS, where this process was completed on 1 January 2009, when the Slovak Republic adopted the euro as legal tender, as a result of which the monetary policy instruments of the NBS have been replaced by those of the ECB.

Bibliography:

1. BÁRÁŇOVÁ-ČIDEROVÁ, D., LIBERČAN, A.: *Euro, Advantages and Risks.* Prešov: Publishing House of Michal Vaška, 2007, ISBN: 978-80-7165-604-3.
2. *Monetary Policy.* [online]. Bratislava: NBS [4 May 2009]. Available on the website: <http://www.nbs.sk/sk/menova-politika>
3. *Monetary Policy Instruments of the CNB* [online]. Praha: CNB [20 April 2009]. Available on the website: http://www.cnb.cz/cs/menova_politika/mp_nastroje/index.html#facility
4. *Monetary Policy Instruments* [online]. Budapest: MNB [18 April 2009]. Available on the website: http://english.mnb.hu/engine.aspx?page=mnben_jegybanki_eszkoztar
5. www.nbp.pl
6. www.ecb.int
7. CHOVANCOVÁ, B.: *Financial Market.* Bratislava: Iura Edition, 2006, ISBN: 80-8078-089-7.
8. ECB: *Monetary Policy Implementation in the Euro Area.* Frankfurt: European Central Bank, 2008, ISBN: 1830-284X.

Fiscal impulses and global stock markets

prof. Ing. Božena Chovancová, PhD.
University of Economics in Bratislava

The dynamic development of stock markets in the second half of the 20th century, but particularly over the last twenty years, has supported the development and implementation of state-of-the-art technologies across the world. The performances of global stock markets (given the above-mentioned processes) led to the dot-com bubble of 2000 and then another modern bubble in 2007. Soon afterwards, stock markets began to plummet, and Table 1 shows how rapidly particular indices declined.

Last year, stock markets were highly volatile and investors suffered considerable losses. The declining trend in stock markets (in some cases they fell by more than 50 %) was at the same time coupled with the economic slowdown in both the United States and other countries of the world – the global recession. Although global stock markets are now rising again, the reversal of this negative trend has been assisted largely by extensive government stimulus measures.

In the midst of such a deep global recession, fiscal policy has a key role to play. In regard to the stock market, its role is mainly to help dampen cyclical fluctuations in the economy (often described as "smoothing" the peaks, during rapid growth, and the troughs, when the economy declines). It fulfils this key role largely by maintaining the pace of economic growth during periods of high employment and low inflation. The principal instruments that governments may use to establish equilibrium in the economy are *taxes and expenditure of the State Budget*. The setting of taxes and the implementation of budgetary and subsidy programmes are now at the centre of attention and also economic practice, and we generally refer to them as fiscal stimulus.

Today, many discussions centre on the income side of the State Budget, particularly in the form of taxes. Current financial theory, based on long-term statistical data, clearly demonstrates that a higher tax burden reduces the real income of firms and thus forces them to cut dividend payments. This is in turn is negatively reflected in the stock market through declining share prices. High taxes do not encourage investors to invest in stock markets, and ultimately, at the level of households, they lead to a reduction in consumption, which has a negative feedback effect on manufacturing and therefore in the real economy, too. This is why there are now calls for a reduction in the tax burden, but, as this article will show, such stimulus will put upward pressure on government debt. In this area, we see various forms of tax relief, such as cuts in the tax rate, increases in the minimum tax allowance, and an expansion in the number of tax-exempt items, and tax holidays (particularly for firms), and others. The mounting pressure to reduce taxes is expected, eventually, to result in tax savings that firms can then reinvest, thereby raising the value of their assets. This will have a positive effect on the amount of dividends paid to investors. In the case of households, too, tax savings may feed through to higher consumption, which in turn will stimulate manufacturing and ultimately lead to an increase in share prices. It should be noted, however, that lowering the tax burden reduces state budget income in both the short-term and long-term horizons.

In the EU today, the tax burden issue is often understood in terms of certain countries having a comparative or competitive advantage. Therefore the extent to which those countries with the lowest tax burden may further cut their tax rates is a bone of contention.

Countries with the lowest corporate tax rates, including Hungary, Ireland, Poland, and Iceland, are facing serious economic difficulties in the current global economic crisis. Indeed, the public finances of Hungary and Iceland had to be saved from looming collapse by financial injections from the International Monetary Fund.

The second, expenditure component of fiscal policy may take the form of government orders for firms' goods and services. This may be through specific grants and subsidies for the private sec-

Table 1 Decline in major global indices

Period	DJIA	S&P	FTSE	DAX	NIKKEI
2007 max.	14,015 (11.10.2007)	1,565 (9.10.2007)	6,724 (11.10.2007)	8,105 (16.7.2007)	18,238 (18.7.2007)
2009 min.	6,547 (9.3.2009)	683 (6.3.2009)	3,512 (3.3.2009)	3,695 (5.3.2009)	7,137 (2.3.2009)

Source: Own processing from www.yahoo.com.

Table 2 The effect of fiscal stimulus

Type of fiscal policy	Number of observations in downturn	GDP growth in %				
		Three-year average before downturn	One year before downturn	Year of downturn	One year after downturn	Four-year average after downturn
Fiscal stimulus						
Revenue-based impulse	5	4.4	2.8	-0.7	3.6	4.1
Expenditure-based impulse	31	3.1	2.0	-0.4	2.9	3.0
Both expenditure and revenue impulses	15	3.0	1.6	0.6	4.1	3.5
Fiscal tightening						
Revenue-based impulse	31	2.4	-0.2	-0.2	3.3	3.1
Expenditure-based impulse	17	2.8	1.2	1.2	5.0	4.3
Both expenditure and revenue impulses	35	2.7	1.1	1.1	4.3	4.2

Source: International Monetary Fund (2008) – World Economic Outlook, October 2008, Chapter 5: Fiscal Policy as a Countercyclical Tool.

tor and selected strata of the population, but also development programmes focused on infrastructure construction, support for foreign investment inflows, etc. Such measures focused on boosting economic growth also have a positive effect on growth in stock markets and in the real economy.

A number of economists are now attempting to evaluate and measure the size of fiscal stimulus measures and their effectiveness in reviving economic growth. As certain studies show, the results are very contradictory. Of note in this regard is an IMF study (World Economic Outlook, October 2008) which analyses the effect of fiscal stimulus and takes as its basis the primary fiscal balance – i.e. the difference between total general government revenues and expenditure net of government debt servicing costs. The analysis assumes that the balance changes as a result of primary developments, i.e. when the economy declines, tax revenues also fall and unemployment payments rise. In this study, a fiscal stimulus is defined as a negative change in the primary balance of more than 0.25%, and contraction (an increase in revenues or cut in expenditure) as a change of less than 0.25%. In other words, fiscal stimulus contributed to an increase in the general government deficit, and financial contraction to its reduction. When the change is in the range -0.25% to +0.25%, the fiscal stance is neutral.

Table 2 shows the relationship between GDP and fiscal impulses by composition.

The IMF study shows that monetary stimulus is employed far more frequently to tackle the problems of downturns, which is explained by fact that the economy reacts more slowly to fiscal stimulus than to monetary stimulus. According to V. Balaž[1], a number of conclusions show that:

- it is more efficient to use a combination of revenue and expenditure impulses, which is more effective in fighting the downturn;
- revenue impulses contributed to faster recovery and a higher rate of post-downturn growth;
- countries that applied fiscal tightening (a higher tax take or reduction in general government expenditure) experienced a less severe downturn and faster recovery, and saw higher economic growth in the years following the year of the downturn;
- restricting expenditure had a better effect on GDP growth – before, during and after the downturn – than did revenue impulses based on increasing the tax take;
- revenue impulses added 0.01% to economic growth at the time of the downturn, and 0.40% in the three years after the downturn, while expenditure impulses added 0.15% during the recession and 0.52% in the next three years;
- by contrast, in the case of fiscal tightening by 1%, the fiscal impulse added 0.11% to GDP during the recession and 0.51% in the three years after the recession.

The IMF study pays special attention to economies with a higher rate of debt in relation to the fiscal stimulus and rate of economic growth. The study demonstrates that where countries with a high debt ratio used fiscal stimulus, they had a low rate of growth both before and after the downturn. By contrast, those countries that applied fiscal tightening did better.

The Japanese economy offers a warning example of the use of fiscal stimulus. Following

1 *Vladimir Baláž: Dokáže vláda reštartovať ekonomický rast? [Can the Government Revive Economic Growth?]; Investor no. 12/2008, p. 28.*

the bursting of the bubble in 1989, the Japanese economy fell into a deep recession. During the 1990s, the Japanese government put forward 10 fiscal stimulus packages worth in total more than 100 billion yen, but all of these programmes failed. The Japanese share index slumped by almost a half and its level is now back to where it was in the early 1980s. While these stances were being taken, the general government debt ballooned above 100% of GDP.

Fiscal impulses and indebtedness in the United States

The enormous increase in government expenditure on economic stimulus measures has resulted in the current problem of rising government deficits and government debt. Looking at the longer-term development of US public finances, there is now a question over the capacity for any future stimulus measures to support the economy and stock markets.

The IMF study also notes that U.S. government expenditure will be rising in future and thereby increasing the budget deficit. Furthermore, the government will have to tackle crisis issues by raising government debt. As the needs of the state increase, the conditions will be created where private investors are "squeezed out" of capital markets.

It follows from this scenario that the amount of government bonds will also climb, and U.S. government debt will be refinanced to a large extent also by foreign investors.

At the beginning of 2009, the following countries participated in the refinancing of U.S. government debt and were the largest holders of it: China (with a share of 24.7%), Japan (20.66%), oil-exporting countries (6.06%), Caribbean banking centres (5.75%), Brazil (4.35%), the United Kingdom (4.04%), Russian (3.89%), Luxembourg (2.84%), Taiwan (2.39%), Hong Kong (2.33%), Switzerland (2.02%), Germany (1.84%), and other countries.[2] It should be noted that some of these countries will in the near future have a problem in funding their own government deficits and probably will not be able to finance the U.S. deficit to the same extent as before.

Japan and government debt

In the 1970s, the Japanese economy was labeled the most dynamically developing in the world. In the 1980s, Japan earned the description of the most high-tech economy, and global capital began to accumulate there to a huge extent. The Japanese economy started to be seen as a serious rival not only to Europe, but to the United States itself. Domestic and foreign capital combined with highly productive Japanese technologies led to the build-up of a bubble in the Japanese economy. After the stock markets plunged, the Ministry of Finance came up with a revival plan that represented more than 60 billion yen and climbed to 12% of GDP.

Following the bursting of the bubble in 1989, Japan's real economy and capital market went into a deep stagnation that persists to this day. The principal causes of this situation were extensive government interventions, state control, weak competition in the market, large barriers to the entry of foreign financial institutions, unrealistic asset prices,[3] and liquidity problems. Nor was the capital market helped by the policy of low interest rates pursued in the 1990s, when the Bank of Japan attempted to kick-start the economy and capital market by setting interest rates at close to zero percent. The country had previously seen an enormous rise in the government deficit.

As the IMF forecast shows, the rising deficit in public finances and mounting government debt may also in the future cause long-term stagnation of the economy and serious economic problems for the whole region.

Expectations in Europe

In Europe, the process of building a unified capital market is not complete. The euro area, which can be said to be current basis of this market, includes certain countries in which the capital market has dried up. The European capital market, and particularly the stock market, is driven mainly by the economies of Germany, the United Kingdom, France, the Benelux countries, and Italy. Like other regions of the world, Europe is currently struggling to deal with the repercussions of the global economic crisis on different national economies and on the bloc as a whole.

2 Source: http//www.trears.gov/tic/mfh.txt.

3 This problem was reflected particularly in the property price bubble in 1989 and its subsequent bursting. Japanese financial institutions suffered extensive losses and some banks had to be rescued through nationalization.

Table 3 Projected fiscal deficit and government debt in the United States

	2006	2007	2008	2009	2010	2014
Fiscal deficit (% of GDP)	-2.2	-2.9	-6.1	-13.6	-9.7	-4.7
Total government debt (% of GDP)	61.9	63.1	70.5	87.0	97.5	106.7

Source: Fiscal Implications of the Global Economic and Financial Crisis; IMF, 9 June 2009.

Table 4 Projected fiscal deficit and government debt in Japan

	2006	2007	2008	2009	2010	2014
Fiscal deficit (% GDP)	-4.0	-2.5	-5.6	-9.9	-9.8	-7.1
Total government debt (% of GDP)	191.3	187.7	196.3	217.2	227.4	234.2

Source: Fiscal Implications of the Global Economic and Financial Crisis; IMF, 9 June 2009.

Table 5 Projected fiscal deficit and government debt in selected EU countries

	Country	2006	2007	2008	2009	2010	2014
Fiscal deficit (% GDP)	United Kingdom	-2.6	-2.6	-5.4	-9.8	-10.9	-6.4
	Germany	-1.5	-0.5	-0.1	-4.7	-6.1	-1.4
	France	-2.4	-2.7	-3.4	-6.2	-6.5	-4.6
	Italy	-3.3	-1.5	-2.7	-5.4	-5.9	-4.5
Total government debt (% of GDP)	United Kingdom	43.3	44.1	51.9	62.7	72.7	87.8
	Germany	66.0	63.6	67.2	79.4	86.6	76.8
	France	63.6	63.9	67.3	74.9	80.3	89.7
	Italy	106.5	103.5	105.8	115.3	121.1	120.4

Source: Fiscal Implications of the Global Economic and Financial Crisis; IMF, 9 June 2009.

In Europe, too, there is a rising tendency in deficit financing and government debt. The ratios for selected countries are given in Table 5 and clearly show that countries are increasing deficit financing. Indeed, not one of the advanced European countries is managing to meet the original Maastricht criteria – a government deficit to GDP ratio of not more than 3 percent and a maximum public debt to GDP ratio of 60 percent. It is becoming clear that government bonds will also in the future have a privileged position in the bond market and, provided that governments follow the path of fiscal stimulus, these sources of funding will also cover the needs of the private sector.

THE BRIC COUNTRIES IN GLOBAL STOCK MARKETS AND THEIR INDEBTEDNESS

After 2000, the attention of financial markets was drawn to certain emerging countries that had begun to report rapid growth and macroeconomic stability. Of particular interest were Brazil, Russia, India and China, the so-called BRIC countries.[4] These four countries are now beginning to be ranked with the most developed countries and have huge potential in resources that are needed for the development of the global economy. These countries have also recorded a large capital market booms and their losses in 2008 were not so serious, given the considerable reserves and funds[5] that they had amassed in the previous period. IMF studies and many analysts are speaking particularly about China as a prospective leader of the world economy. In this regard, many investors are directing considerable investments to these countries. It should also be considered, however, whether these countries will be able to use public finances to stimulate their economic growth and stock markets. As the following table shows, the ratios are widely varied and not all the countries in this group have a favourable outlook for the future.

A common feature of these countries is that their stock markets have accelerated sharply, especially since 2003. However, a persisting weakness of their capital markets is the relatively high interest rates and high inflation compared with those of advanced countries. They also have a problem with the instability of their exchange rates against world currencies. On the other hand, there are marked differences in fiscal policy between these countries. In Brazil and India, the impact of the global crisis has been reflected in the government deficits and debt rising above an appropriate level, but Russia and China will clearly have no problems in this regard. Russia and China will, even in the near future, clearly have sufficient

4 *The abbreviation BRIC was coined on 1 October 2003 by Jim O´Neil, an economist with the investment bank Goldman Sachs. B*

5 *In particular, oil-exporting countries began to create so-called sovereign funds that they will use also as a buffer in the event of adverse economic developments.*

Table 6 Projected fiscal deficit and government debt in BRIC countries

	Country	2006	2007	2008	2009	2010	2014
Fiscal deficit (% GDP)	Brazil	-2.9	- 2.2	-1.5	-1.9	-0.8	-0.6
Total government debt (% of GDP)		63.7	67.7	64.5	65.4	64.0	54.1
Fiscal deficit (% GDP)	Russia	8.3	6.8	4.3	-6.2	- 5.0	-4.4
Total government debt (% of GDP)		9.1	7.3	5.8	6.9	7.0	7.4
Fiscal deficit (% GDP)	India	-5.7	-5.2	-8.4	-10.2	-8.7	-4.7
Total government debt (% of GDP)		82.2	80.4	81.9	86.8	88.9	76.8
Fiscal deficit (% GDP)	China	-0.7	0.9	-0.3	-3.6	-3.6	-0.2
Total government debt (% of GDP)		16.5	20.2	17.7	19.8	21.6	17.9

Source: Fiscal Implications of the Global Economic and Financial Crisis; IMF, 9 June 2009.

funds to use for fiscal stimulus in support of their economies and stock markets, the more so in China, where the stock market is largely regulated by the state. Evidence for this may be found in their very low indebtedness in comparison with other countries.

Conclusion

As events in stock markets are now showing, the relationship between fiscal stimulus and the markets is positive. Where governments are deploying certain fiscal impulses, whether through taxes or expenditure, the stock markets and real economy are growing. It should be noted, and as current developments prove, the benefits from such stimulus measures arrive with a certain time lag. The stock market, however, is always the quicker to react, usually around several months before the real economy. At the same time, however, stock market developments (tracked by, for example, the Dow Jones Industrial Average) are based on "excessive expectations", or heavy speculative trading. The index reports a strong pace of growth that does not match the projected pace of developments in the real economy. This could lead to the build-up of another share price bubble in the near future. It is therefore very important that fiscal impulses are well-judged, particularly in their scope and in how they are targeted on particular areas of the economy.

References:

1. Jílek, J.: Finanční rizika [Financial Risks]. Prague: Grada Publishing 2000, pp. 633, ISBN 80-7169-579-3.
2. Musílek, Petr.: Trhy cenných papíru [Securities Markets]. Prague: Ecopress 2002, pp. 460, ISBN 80-86119-55-4.
3. BALÁŽ, V.: Dokáže vláda reštartovať ekonomický rast? [Can the Government Revive Economic Growth?]. In: Investor, December 2008.
4. GRZNÁR, S.: Vysvetlenie japonskej recesie [An Explanation of the Japanese Recession]. In: www.iness.sk.
5. International Monetary Fund: Fiscal Policy as a Countercyclical Tool. World Economic Outlook, Chapter 5, October 2008.
6. IMF: Fiscal Implications of the Global Economic and Financial Crisis. June 9, 2009.
7. www.ecb.int.
8. www.federalreserve.co.us.
9. www.econstats.com.

The fourth quantitative impact study of new regulation in the insurance sector[1]

Peter Paluš, Andrea Gondová
Národná banka Slovenska

The Committee of European Insurance and Occupational Pensions Supervisors (CEIOPS) has undertaken to submit to the European Commission draft of implementation measures for Solvency II at the turn of the years 2009 and 2010. The results of a fourth quantitative impact study are being currently used in the preparation of those proposals, particularly for the specification of quantitative requirements and calibration the calculation of regulatory capital. Public comment procedures to these drafts currently take place at the CEIOPS. The article is subdivided into two parts; the first part focuses on the valuation of assets and liabilities and the second part deals with own funds and regulatory capital requirements.

The current system of regulation, hereinafter referred to as „Solvency I", in the Slovak insurance sector is based on European directives adopted in the European Union in the early 1970s and it does not reflect new techniques and methods used in the management of insurance undertakings. The directives are designed in the form of minimum harmonization, i.e. they leave the decision on more strict national regulation to the member states. That creates a relatively inhomogeneous regulatory environment in the European Union as well as it provides potential platform for regulatory arbitrage between the member states.

The regulatory capital requirement calculation for insurance undertakings, the so-called required solvency margin, is a simple factor formula. The formula implicitly takes into account the insurance risk by means of the level of insurance liabilities expressed primarily by means of technical provisions and claims incurred. Other risks, to which insurance undertakings are exposed, are not covered by current legislation in a comprehensive way and the set rules are not sufficiently risk-sensitive.

The aim of the Solvency II project is the introduction of a harmonized risk-oriented regime of regulation and supervision in all member states of the European Union and the unification of the 14 currently existing directives regulating the activities of insurance undertakings and reinsurance undertakings. The main objective[2] of supervision under Solvency II is to protect policyholders and beneficiaries and other objectives are financial stability and objective and stable markets. The term Solvency II sometimes refers only to new elements within the Solvency II project, which can be subdivided into quantitative requirements (also referred to as "Pillar I"), qualitative requirements (referred to "Pillar II") and transparency requirements (referred to as "Pillar III").

On 22 April 2009, the European Parliament approved in the first reading the Directive of the European Parliament and of the Council on the taking-up and pursuit of the business of direct insurance and reinsurance (hereinafter referred to as „the Solvency II directive"), by which the Solvency II project entered the last stage of preparations for its implementation, i.e. the preparation of technical regulations, also referred to as implementing measures of the European Commission, and the transposition of European legal norms into national legislations.

For the purposes of testing Solvency II, the European Commission has asked the CEIOPS to carry out a fourth quantitative impact study (QIS 4) particularly with respect to the applicability of Solvency II and its financial impact on insurance undertakings and reinsurance undertakings. The QIS 4 quantitative impact study took place from April to July 2008 and the summary results were published by the CEIOPS in November 2008.

The QIS 4 quantitative impact study

The objectives and areas of particular relevance[3] within the QIS 4 were above all:

- to obtain the data to support the preparation of implementing measures
- to ascertain the preparedness of insurance undertakings for the possibility to use internal models and to compare the results of using the standard formula and the internal model for the calculation of solvency capital requirements,
- to verify the applicability and adequacy of the calculation of capital requirements,

1 *The article only deals with insurance undertakings, because no reinsurance undertaking was under the supervision of the National Bank of Slovakia when the fourth quantitative impact study was being carried out. To maintain anonymity, values are indicated at their aggregate and/or median level in the article. Opinions presented in the article are opinions of the authors and might not express the position of the National Bank of Slovakia.*

2 *Recital 13 and Article 27 of the taking-up and pursuit of the business of direct insurance and reinsurance, Version adopted in the first reading by the European Parliament*

3 *Call of the European Commission for a fourth Quantitative Impact Study – Call for Advice from CEIOPS (Fourth Quantitative Impact Study) MARKT/2504/08.*

- to verify the proposed simplified calculations for technical provisions, the risk margin and capital requirements,
- to ascertain the impact of the quantitative requirements of Solvency II on insurance undertakings and reinsurance undertakings, particularly on a possible capital insufficiency and its quantification.

In Slovakia, 7 insurance undertakings participated in the QIS 4, of which 6 are composite insurance undertakings and 1 a life insurance undertakings. Compared to the third quantitative impact study (QIS 3), the participation increased by 2 composite insurance undertakings. Out of the participating insurance undertakings, 5 insurance undertakings have sent completely filled-in questionnaires and 2 insurance undertakings have sent only the quantitative part. Two insurance undertakings have also sent information regarding a prepared internal model, which they intend to start to apply for regulatory purposes after the new regulation has been put into practice. No insurance undertaking from Slovakia had participated in the first and second quantitative impact study.

The ratio of participating insurance undertakings to the total number of insurance undertakings supervised by the National Bank of Slovakia at the time of carrying out the QIS 4 was 30%. The market share of participating insurance undertakings measured by total technical provisions was 81% in life insurance and 79% in non-life insurance.

The participation in QIS 4 within the entire European Union was 33.6% measured by the number of insurance undertakings and average participation measured by technical provisions was 75% in life insurance and 69% in non-life insurance. The participation can be evaluated positively from the point of view of Slovakia due to the market share of participating insurance undertakings on total technical provisions, as well as due to the hitherto participation of Slovak insurance undertakings in quantitative impact studies. In terms of the number of participating insurance undertakings, Slovakia has been placed among member states with lower participation.

Valuation of assets and liabilities

For the purpose of setting the own funds, which are primarily calculated as the difference between the assets[4] and the liabilities, all items of the balance sheet have to be taken into account[5]. Solvency II is based on the market value principle, meaning that it is in accordance with realistic valuation according to the current market valuation of assets and liabilities. The QIS 4 quantitative impact study uses the term "economic value" for this purpose, by which, in our opinion, Solvency II attempts to use a term differing from the term "fair value" as used by the IAS/IFRS international accounting standards. The reason is the fact that despite a de facto identical definition and the aim to harmonize valuation under Solvency II with valuation under the IAS/IFRS international accounting standards as much as possible those value do not have to be always identical[6].

In the valuation of assets and liabilities, Solvency II issues from the current definition of fair value under the IAS/IFRS international accounting standards, i.e. assets and liabilities are valued at the value, for which they could be exchanged between knowledgeable willing parties in an arm's length transaction (Article 74 of the Solvency II directive). However, as opposed to the IAS/IFRS international accounting standards, the own credit standing of the insurance undertaking should not be taken into account in the valuation of liabilities. According to the document CEIOPS-CP-35/09[7], however, some member states do not agree with the full application of this principle.

The European Commission will issue implementing measures, probably in the form of regulations, which will prescribe how to calculate the economic value of particular balance sheet items with the aim of ensuring that those items be valued in a uniform way in all European Union member states (Article 74 Section 2 of the Solvency II directive).

The QIS 4 quantitative impact study sets the following hierarchy of methods[8] for the valuation of assets and liabilities (except technical provisions):

1) the value is set based on market prices (mark to market),
2) the value is set based on a model (mark to model) with the parameters supposed to stem from the market,
3) approximation, by which the values are set based on IAS/IFRS international accounting standards. However, this approximation can be applied only in the case of accounting valuation at fair value.
4) local accounting standards (irrelevant in Slovakia).

The technical specification – except for the identification of IAS/IFRS approaches that can be used as approximations for the purposes of QIS 4 – provides only minimum guidance for insurance undertakings as to how they are supposed to proceed in the application of individual methods. The QIS 4 quantitative impact study is the first of quantitative impact studies carried out so far to complexly test the valuation of assets and liabilities (liabilities except for technical provisions) for the purposes of Solvency II.

In Slovakia, insurance undertakings have not had considerable problems with the revaluation of accounting values to the economic value. The main reason is the application of the IAS/IFRS international accounting standards in Slovakia. That has probably been also the main argument why insurance undertakings have expressed their general support for the proposed methodology. In our opinion, the possibility to use the fair value under the IAS/IFRS international accounting standards for the purposes of Solvency II could have a favorable impact on the quality of reporting for the purposes of supervision without creating further administrative costs.

4 The quantitative impact study QIS 4 uses the term „assets" as opposed to the IAS/IFRS international accounting standards using the term „property".
5 This approach is referred to as the „comprehensive balance sheet approach" at times.
6 Relatively large differences could arise, if within stage II of the „Insurance Contract" project the International Accounting Standards Board (IASB) sets other rules for the valuation of technical provisions than Solvency II.
7 CEIOPS Consultation Paper No. 35, Draft CEIOPS „Advice for Level 2 Implementing Measures on Solvency II: Valuation of Assets and Other Liabilities", CEIOP CP 35/09.
8 Section TS.I.A.2 of the Technical specification for QIS 4, QIS4 Technical Specifications (MARKT/2502/08).

Table 1 Total impact on the balance sheet by the ratio of individual components to the balance sheet value

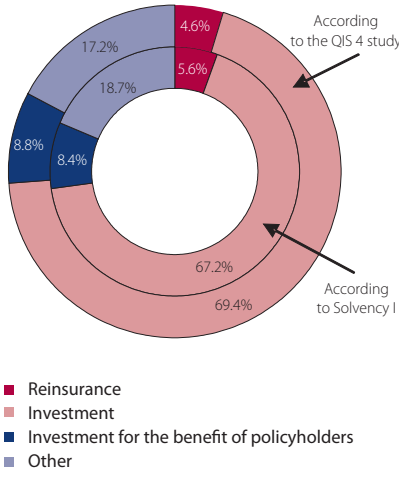
	According to Solvency I/ according to IAS/IFRS	According to QIS 4
Assets		
Reinsurance	5.6%	4.6%
Investment	67.2%	69.4%
Investment for the benefit of policyholders	8.4%	8.8%
Other	18.7%	17.2%
Liabilities		
Shareholders' equity	19.6%	29.7%
Technical provisions	61.6%	41.1%
of which: best estimate		37.4%
of which: risk margin		3.7%
Provisions for policies where the investment risk is borne by the policyholders	8.4%	6.7%
Other liabilities	10.4%	22.4%

Source: NBS.

There have not been large differences between the values under the accounting standards and the values for QIS 4 in the revaluation of assets and liabilities (liabilities except technical provisions) to the economic value. Where possible insurance undertakings have used the valuation under IAS/IFRS. Values for the purposes of QIS 4 have differed from the accounting values only in cases where the value under the IAS/IFRS international accounting standards could not have been considered a proxy of the economic value. One insurance undertaking has stated that it uses fair-value-based valuation for the purposes of internal risk management, the methodology being, apart from some aspects of technical provisions valuation, consistent with valuation under QIS 4. In this connection, it has to be pointed out that within groups internal risk management is directed in a centralized way and does not have to take into account potential local specificities, such as the social and economic environment, in which the subsidiary exists, and this can have an impact on the setting of some assumptions and starting points. Therefore in our opinion, it will be very important to set very prudent requirements for the management of the undertaking (Pillar II within Solvency II).

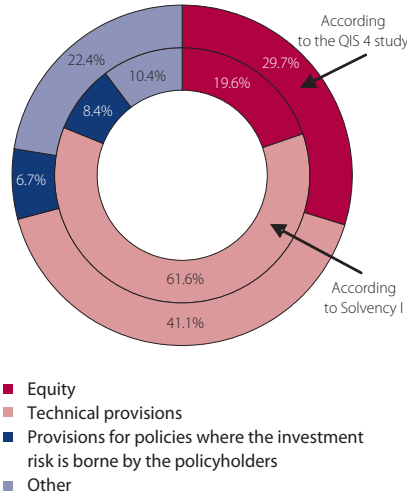
In most cases, insurance undertakings have used a value based on market prices. When a value based on market prices was not available, the insurance undertakings used the method of projecting discounted cash-flows (especially in the

Chart 1 Comparison of the ratio of the individual asset components to the balance sheet value between QIS 4 and Solvency I



Source: NBS.

Chart 2 Comparison of the ratio of the individual liability components to the balance sheet value between QIS 4 and Solvency I



Source: NBS.

valuation of technical provisions). The discounting depended on interest rate swaps. In some cases, the insurance undertakings have used directly the accounting value, for example in the valuation of short-term receivables and liabilities. A revaluation would not make much sense in such cases, because the differences would not be material. The adequacy principle is a key principle for the application of the Solvency II regime and therefore it is possible that such an approach could be accepted in the future in some cases. Particularly the revaluation of reinsurance receivables and intra-group loans to the economic value as well as the revaluation of deferred tax receivables and liabilities has been identified as problematic.

In the European context, some insurance undertakings (particularly life insurance undertakings) have expressed their fear that revaluation under the IAS/IFRS international accounting standards might increase the volatility in assets and liabilities, which might increase the volatility of own funds subsequently. However, the aim of the QIS 4 quantitative impact study has not been to open a discussion on the correctness of fair-value-based valuation.

The total impact on the balance sheet[9]

In general, it can be stated that there has been no change in the relative representation of individual items on the assets side. On the liabilities side, by contrast, the technical provisions have been reduced significantly, which has caused an increase in the equity of insurance undertakings. The median of the ratio of balance sheet values under QIS 4 to the accounting balance sheets has been between 90 and 120%. In absolute terms, the balance sheet value has decreased by 165 million EUR, i.e. by 4.05%.

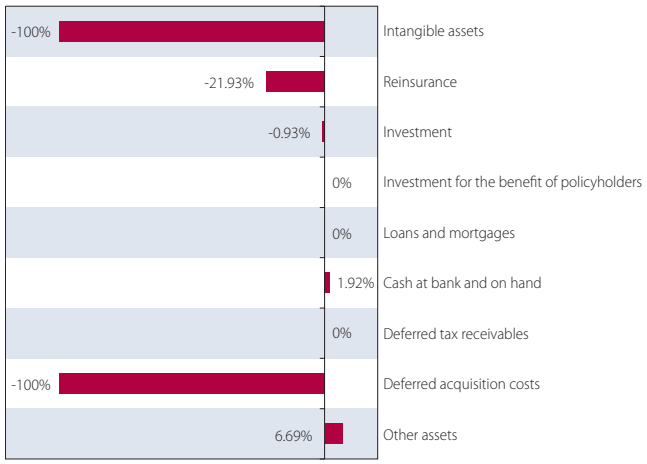
Assets

The largest differences have arisen in the revaluation of investments in land and buildings and in participations to the economic value, because insurance undertakings mostly value these items at historical cost for accounting purposes. The highest decrease as a result of revaluation has been recorded in reinsurance receivables and it was due to the revaluation of technical provisions; the highest increase in value, by contrast, has been identified in the case of land and buildings. Intangible assets have been valued at zero, which is in line with our opinion that intangible assets do not have to be liquidable, when the insurance undertaking is in troubles. The economic value has been available to the insurance undertakings for most financial instruments and the insurance undertakings value these instruments at the fair value for accounting purposes, as well.

Other liabilities (liabilities other than technical provisions)

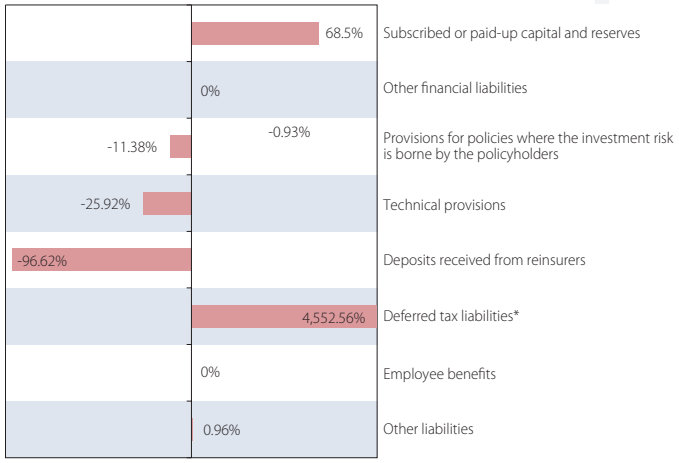
The largest change has been identified in the case of deferred tax liabilities and deposits received from reinsurers, which however has not had a large impact on the total result. The reason has been particularly the fact that within other liabilities (liabilities other than technical provisions), insurance undertaking have used accounting values for QIS 4 valuation.

Chart 3 Changes in the valuation of individual asset items



Source: NBS.

Chart 4 Changes in the valuation of individual liability items



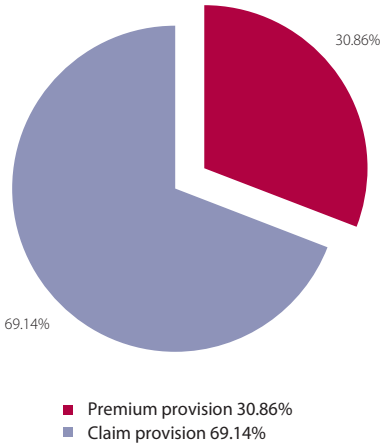
Source: NBS.
**For practical reasons, we have the shortened the scale of changes, so that the total change of deferred tax liabilities cannot be seen.*

Technical provisions

The methodology for the valuation of technical provisions is an area that has undergone fundamental changes compared to the current regulation. The value of technical provisions should correspond to the amount, at which the insurance undertaking would transfer the insurance portfolio, i.e. the rights and obligations from insurance contracts, to another insurance undertaking. The technical provisions are calculated as the sum of a best estimate and a risk margin with the exception of hedgeable risks, i.e. risks whose cash-flows can be replicated by the cash-flows of financial instruments. The value of the technical provisions of hedgeable risks is to be set at the level of the

9 QIS 4 uses the term „balance sheet" as opposed to the IAS/IFRS international accounting standards, which use the term „statement of financial position".

Chart 5 Comparison of the best estimate of the technical premium provisions and of the technical claims outstanding provisions



Source: NBS.

market value of those financial instruments. The best estimate corresponds to the value of expected future cash-flows from insurance contracts over their lifetime, taking into account the time value of money by means of the relevant "risk-free interest rate"[10]. In the cash-flow projection, it is necessary to identify and take into account all sources of uncertainty of future cash-flows, for example the fluctuation in the timing, frequency and amount of the claim of insured events, a change in the behavior of the insured persons and the interdependence of two or more sources of uncertainty.

The valuation method applied by the insurance undertaking and the assumptions used should be realistic and reflect the nature of portfolio and of the corresponding cash-flows. The insurance undertaking should use all relevant and available data from internal and external sources to determine the assumptions fitting best to the characteristics of the insurance contract portfolio.

The valuation of technical provisions in life insurance should be based on a projection of future cash-flows for the individual insurance contracts. A certain approximation by means of suitably selected groups of contracts is possible within the application of the proportionality principle. The valuation technique can generate negative values in specific situations (for example for a "young" portfolio). Such a situation is acceptable and it is not necessary to replace the value of the technical provisions by zero.

The selection of the valuation technique depends on the nature of the liabilities and risks, which influence the cash-flow, and does not depend on the formal inclusion of the insurance contract in life or non-life insurance. For example an annuity resulting from a liability insurance should be valued by means of the life insurance technique.

Besides others the European Commission can adopt an implementing measure, which will set simplified methods and techniques for the calculation of technical provisions.

In non-life insurance, premium provision and claims provision have to be valued separately. The premium provision largely corresponds to the current unearned premium provision (UPP). The ratio of this provision valued under QIP 4 to the UPP was 94.7% at a median value.

The premium provisions relate to insured events that occur after the valuation date during the period covered by insurance. The future cash-flows projection should include all future claim payments, claims settlement expenses, cost of portfolio management and future premiums of existing insurance contracts. The claims outstanding provisions relates to insured events that occurred before the valuation date irrespective of the fact whether the claim was notified or not. The cash-flow projection should include all premium payments and claims settlement expenses.

According to Solvency II, the risk margin has to be calculated by means of the cost of providing an amount of own funds equal to the level of the solvency capital requirement (SCR) over the lifetime of the insurance contract portfolio. This concept is accepted by the market, but some insurance undertakings have considered the rate[11] determining the cost of holding own funds to be too high. The risk margin calculation is based on the concept of an "empty" acquiring insurance company and the assumption of a transfer of the insurance contract portfolio of the individual lines of business carried out separately. The influence of diversification between the groups of insurance contracts is not taken into account in the determination of the risk margin.

The fundamental changes in the valuation of technical provisions under QIS 4 as compared to the present have caused a significant change in the value of technical provisions.

The ratio of technical provisions to the current value of technical provisions has been 74.8% in life insurance and 85.9% in non-life insurance. The risk margin's participation in the technical provision has been 12.9% in life-insurance and 2.9% in non-life insurance. The difference in the risk margin has resulted from the longer-term character of liabilities in life insurance. The decrease in the value of technical provisions in life insurance was mainly due to the following reasons:

- cancellation of implicitly included margins in the modeling of expected future flows,
- non-existence of a minimum amount of technical provisions set by the sum of surrender values,
- the possibility of changes in assumptions.

In non-life insurance, the decrease in value has been due to taking into account the time value of cash-flows. Apart from one insurance undertaking, which has used the stochastic approach, the insurance undertakings have applied the deterministic approach for the purposes of calculating the technical provisions. In non-life insurance, for the claim provision, the insurance undertakings

10 A risk-free interest rate is an interest rate, which does not take into account the credit risk.
11 The cost of capital rate has been set at 6% in the QIS 4.

have used the proxy of the sum of individual reported insured events supplemented with triangle methods for incurred but not reported claims. In the calculation of technical provisions, there have been complications particularly regarding the valuation of options and guarantees and the projection of required capital for the calculation of the risk margin. The text of the technical specification did not indicate precise way of valuing the technical provisions for policies where the investment risk is borne by the policyholders. Two approaches have been chosen: technical provisions determined by the value of the fund and technical provisions determined by a projection of the best estimate and the risk margin. In connection with the publication of the consultation document CEIOPS-CP-41/099, it can be stated today already that their value should have been determined by the value of the fund minus the current value of future profits[12].

To be continued in the next issue.

12 *Consultation Paper No. 41, Draft CEIOPS's Advice for Level 2 Implementing Measures on Solvency II: Technical Provisions – Article 85 c Circumstances in which technical provisions shall be calculated as a whole, CEIOPS-CP-41/09.*

Teamwork and innovations in the credit relationship

Ing. Nikoleta Puchá, PhD.
The Technical University of Košice

Introduction

Because of their position and objectives, credit institutions (banks) place great stress on taking a team approach to the mediation and sale of products to their customers. Teamwork is way of work organization based on the common involvement, collaboration and responsibility of all team members. Team company is an organizational arrangement where all activities are based on work in teams and on their common collaboration when achieving the goals of the bank. In a team, the capacity for innovations[1] is generally high. Teamwork is most often developed within the bank, between different units or individuals.

Another possibility for teamwork is in cooperation between the bank and its customers (clients). This article examines teamwork in the credit relationship between the bank and the client, particularly the positive synergetic effect arising from this connection. Although such a "team" does not have all the characteristic features of teamwork, even teamwork in this form can bring benefits. The respective effect supports the emergence of innovations, which are now the main way in which banking companies[2] stay ahead of rivals. Through innovations, a banking company can be competitive in the market in the long-term horizon, too. Under the outlined model, I see how clients may benefit from having an idea financially recognized.

Teamwork and the positive synergetic effect

The essence of 'teamwork' is examined in a number of professional publications by both domestic and foreign authors. Bieliková [3] shows that a team needs to have members who reinforce each other's efforts and thereby achieve a synergetic effect. The results of a team's work are such that could not be achieved independently even by one of its most capable members, nor could they be achieved by the sum of its individual members. Evangelu–Fridrich [4] notes that each person may be a team player provided that there is a common goal and that this is broken down as far as possible into goals for each individual. Vokorokosová [5] highlights electronic competitiveness linked with teamwork in virtual teams, which are often also multicultural in composition. Plamínek [6] writes that where synergies emerge (as a permanent and significant phenomenon), the group has become a team. Synergy is not only an accompanying feature of a functioning team, often it also is the reason for and purpose of establishing the team. Bělohlávek [7] stresses that people in a team are connected by certain links, as a result of which the shortcomings of each person are compensated for by the strengths of others – that the ideas of one stimulate the thoughts of others – and thus generate value added, i.e. synergy. It is synergy that makes teamwork more than the work of all the individuals. Krauszová [8] points out that teamwork is now gaining in importance and is, for a variety of reasons, seen as one of the key factors in enterprise competitiveness. It should result not only in time and money savings but also in perceptible quality improvement.

The credit relationship at national level

In the highly competitive environment of today's banking sector, each lender is seeking to adapt to the requirements of its clients. Where loans are arranged, the contracting parties enter into a credit agreement in accordance with the law of the Slovak Republic.

Substance of a credit agreement

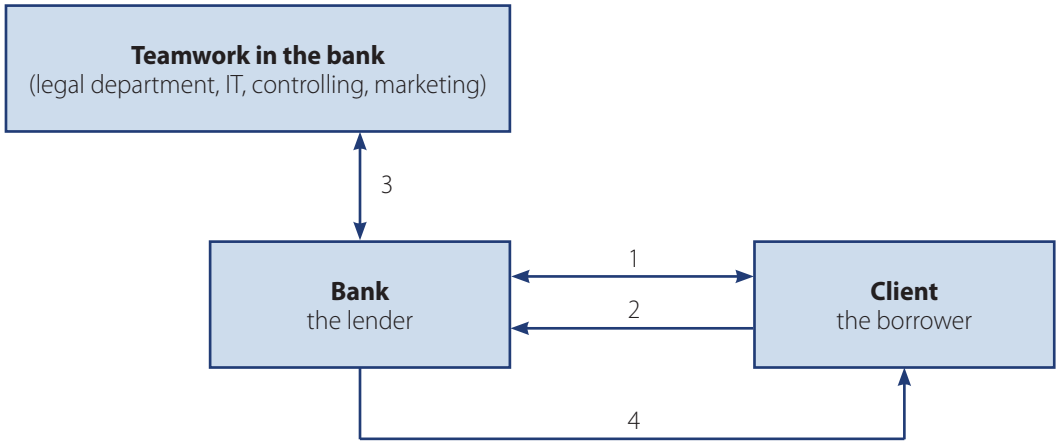
A credit agreement establishes between the contracting parties a contractual relationship which, regardless of the nature of the parties, will always be governed by the provisions of the Commercial Code (i.e. an absolute commercial transaction – Section 261(1)(d)). Since the credit agreement is a consensual contract, the establishment of a contractual relationship thereunder requires only the agreement of the contracting parties on the material parts of the agreement.

The obligations arising under a credit agreement are based on the parties' agreement with the material elements therein. These elements comprise:

- the lender's obligation to lend funds to the borrower on request,
- the determination of the amount (limit) of these funds (the credit limit),
- the borrower's obligation to repay the borrowed funds and the interest charged thereon.

Although a credit agreement does not have to be made in writing in order to be valid, in practice credit agreements generally are in writing [9].

1 *An innovation is the practical transmission of ideas into new products (manufactures and services), processes, systems, and social relations [1].*
2 *There are two basic approaches to developing the competitiveness of a company. Cost-cutting represents a short-term immediate effect without substantial restructuring. Continuous innovations represent fundamental changes with a long-term benefit [2].*



Innovation capacity in the credit agreement through using the positive synergies arising from teamwork

The credit relationship is generally based on the credit agreement, which is the focus of this article. The capacity for establishing teamwork and for its positive benefits within the credit relationship is represented in the following scheme.

1. The client is interested in the banking product (loan). On the basis of agreed terms and conditions, the contracting parties sign (in writing or by electronic signature) the credit agreement. In order to ensure that the credit agreement[3] itself provides for teamwork potential in relation to the emergence of innovations, the agreement should contain a clause on innovation capacity. This clause stresses that where the client proposes an innovation and this proposal is approved by the bank, the innovator will receive stipulated financial recognition.
2. The client delivers the innovation proposal to the bank.[4]
3. The innovation then goes through the process of standard teamwork in the bank. The innovation is generally evaluated from a number of aspects. For example, the legal department assesses the innovation in regard to legislation and the IT department in regard to software development and technical implementation. The controlling department then calculates the price of the product and, in the final stage, the marketing department assesses the marketability of the proposed innovation.
4. If the innovation receives a positive evaluation, the financial amount stipulated in the credit agreement will be paid.

As regards the structure of the outlined model, point number 1 appears to be very important – where the credit agreement contains an innovation clause, the client may begin to think about it in terms of its further practical application. If he comes up with an innovation, he may sell it to the producer, as presented in the scheme, or handle it in another way.

Under this model, banking institutions would manage both to maintain their existing customers and at the same time to keep innovating their products. In this way, they would be able to stay competitive over the long term.

Conclusion

Organizing work on a team basis could be a solution to certain complex tasks that require the involvement of specialists from different fields, tasks of a creative nature where the client may come up with an idea that stimulates the further search for solutions. Thus there is scope for common seeking of the best way to meet an objective. This requires people to show high awareness and work commitment, so that everyone contributes to the production of schedules and adopts procedures in line with the object of the innovator's proposal. The benefits of such teamwork include, for example, process optimization, cost reduction, streamlining of task performance, increased motivation and personal growth. In the context of the credit relationship, teamwork may bring innovations that would partly be derived from the Lisbon Strategy, which emphasizes the goal of making the European Union "the most dynamic and competitive knowledge-based economy".

This article is part of the implementation of grant task KEGA no. 3/5208/07.

3 Innovations may be stressed in a credit agreement, as presented in this article, but I also see opportunities to provide for them in other agreements entered into within the banking sector.

4 See also Act no. 618/2003 Coll. on Copyright as amended.

References:

1. Košábková, L. – Kolenčík, J.: Manažment inovácií [Innovation Management]. http://www.law.muni.cz/edicni/sborniky/cofola2008/ files/pdf/ekonom/kosabkova_lucia_kolencik_juraj.pdf
2. Kováč, M.: Inovácie výroby komponentov pre automobilový priemysel [Innovations in Component Production in the Automobile Industry]. http://www.sjf.tuke. sk/kvtar/1/files/saatar/Kovac.pdf
3. Bieliková, M.: Ako úspešne vyriešiť project [How to Implement a Project Successfully]. Published by Vydavateľstvo STU, Bratislava.
4. Evangelu, J. – Fridrich, O.: 111 her pro motivaci a rozvoj týmu [111 Games for Motivating and Developing a Team]. Published by Grada 2009.
5. Vokorokosová, R.: Minimálna mzda a konkurencieschopnosť [The Minimum Wage and Competitiveness]. Published by Vydavateľstvo elfa, Košice.
6. Plamínek, J.: Týmová spolupráce a hodnocení lidí [Cooperation and Evaluation of People]. Published by Grada 2009.
7. Bělohlávek, F.: Jak vést svůj tým [How to Lead Your Team]. Published by Grada 2008.
8. Krauszová, A.: Faktory ovplyvňujúce efektívnosť tímovej práce [Factors Determining the Efficiency of Teamwork]. In: Trendy v systémoch riadenia podnikov [Trends in Corporate Management Systems]. 10th International Science Conference, Košice, TU SjF 2007.
9. Collective authors: Vzory právnych podaní a zmlúv s komentárom II [Annotated Samples of Legal Submissions and Contracts]. Žilina SEPI, 9/2006.

HORVÁTOVÁ, E.: BANKOVNÍCTVO BANKING

Published by Georg, Žilina, 2009.
318 pages
ISBN 978-80-89401-03-1

What actually is a bank and what are the basic rules and contexts under which it conducts business? How does a high-quality banking system work? Can banks produce money? Are banks responsible for the current crisis and what mistakes did they make in the past? Is the securitization of assets a brilliant contrivance or a scam?

The attentive and perceptive reader can find answers to these and similar questions in the monograph *"Bankovnictvo"*, written by doc. Ing. Eva Horvatova, CSc., head of the Banking and International Finance Department at the University of Economics in Bratislava.

First the author defines the banking system and presents the position, objectives, functions, and instruments of the central bank and commercial banks within the banking system.

According to her, a bank is a business entity that has many specific features not found in other business entities. Having defined banks as specific business entities, the author sees regulation of the industry as a means of preserving the stability and efficiency of the banking sector.

The importance and role of equity capital along with the capital adequacy ratio of commercial banks is covered in Chapter 5. A bank's equity capital serves as a buffer against insolvency, says the Author, and equity capital is crucial to the bank even though, as a rule, it represents only a small share of the bank's balance sheet.

This chapter examines how the introduction of the Basel II rules has affected banks' activities in practice. *"A serious factor worth noting is the potential procyclical orientation of regulation under Basel II principles. In an economic downturn, lending may contract in response to the deteriorating solvency of clients, while a period of growth sees a boost to overheating of the boom and to credit multiplication,"* she observes *(page 94)*.

The next chapter is devoted to the liquidity and solvency of commercial banks, examines these concepts and their interrelations, and shows the reader the methodology that banks have at their disposal for addressing possible financial problems. The definitions of liquidity as the ability to repay customer deposits and solvency as the ability to pay current liabilities to third parties are grounded in the fact that commercial banks do business with borrowed funds and use their equity capital as a buffer against financial risks.

In Chapter 8, the author analyses the deposit business of commercial banks. From the view of banks, deposit transactions represent the acquisition of borrowed funds for business purposes, while for customers they are a simple way of investing money.

The author uses the next chapters to look at the payment system and the ancillary business of commercial banks.

Chapter 12 covers investment banking, which the author understands as commercial bank activities focused on the execution of transactions in the financial market. In section 12.5, she offers a detailed analysis of issues surrounding the securitization of assets, including the risks that this process entails for both the banking sector and the economy. She sees a significant risk particularly in the potential for avoidance of bank capital requirements, which essentially means a decline in the security of the banking sector. *"While the securitization of assets has its advantages, it also carries large risks. These processes gave rise to the mortgage crisis in the United States and its subsequent spillover to other regions,"* she says (page 254).

The general characteristics and basic forms of electronic banking are dealt with in Chapter 13. In Chapter 14, the now familiar rigour is brought to the issue of mortgage banking. The author describes in steps the main features of mortgage banking, its risks, the rules for safe trading under which mortgage banks operate, mortgage bond systems, the characteristics of mortgage transactions, the breakdown of mortgage lending, and mortgage repayment methods. After perusing this chapter, the reader may say, with a touch of exaggeration, that if U.S. politicians and bankers had got a grip on this matter and had behaved in the mortgage market in compliance with safe trading rules, we may have still been floating happily on a wave of economic prosperity.

Chapter 15 briefly outlines prospective trends for the development of commercial banking in the global economy. The author's aim is to examine the subject of banking through an approach which elucidates the major contexts, logical links and concepts in this field, and which while not making serious demands for a grounding of knowledge in banking and financial practice, may still provide inspiration and enrichment for professionals in the field.

The monograph reads logically from the simple to the complex, and allows the reader to gradually get his bearings on the subject in hand and to grasp the basic building blocks of the banking systems and the relations between them, as well as the core aspects of banking management and commercial bank transactions.

This is a high-quality, methodical work containing a high level of expertise, well-arranged content, and much thought-provoking and interesting information, such as considerations on the position of banking sector amid the financial crisis, an analysis of the multiplication of bank deposits, and an analysis of bank sector regulation in the context of BASEL I and BASEL II, etc.

Some of the examples in regard to the methods and systems of interest-charging may be stimulating for general readers, too, since they give a better understanding of what prices are paid to commercial banks or how to select the most favourable product in terms of price.

Although this publication is aimed mainly at students at the University of Economics in Bratislava, it can be expected to find readers also among the ranks of professionals and the general public and will represent a significant source of inspiration for learning about fundamental rules and relations in the world of money, banks and banking products.

Ing. Jaroslav Belás, PhD.

10th International Symposium of Medals at Kremnica

In October 2009, the 10th International Symposium of Medals will take place at Kremnica. Held on a biennial basis since 1988, these symposia are organized by the Museum of Coins and Medals at Kremnica, and this event will be attended by five medal makers from different countries, including one from Slovakia.

The main idea of the International Symposium of Medals (ISM) at Kremnica is to create favourable conditions in which the participants can produce works and exchange information and creative ideas at an international level. The event is an opportunity for medal makers from different countries to experience present-day life and cultural activities in Slovakia and to get acquainted with the rich history of Kremnica town and particularly with its medal-making tradition. It also offers an opportunity to find out about future developments in medal-making at the Kremnica Mint, which has been in continuous operation for more than 680 years.

In the pleasant setting of Kremnica, numerous symposium meetings have been held – and new contacts established – in the peaceful atmosphere of a house that used to be home to the Angyal family of artists. The symposia have become inseparable from the creative life of Kremnica – the centre of Slovak coin and medal-making.

This year's symposium is being attended by five medal makers: Ligita Franckeviča, from Latvia, Marie Šeborová, from the Czech Republic, Teodora Draganova, from Bulgaria, Wieslaw Jelonek, from Poland, and Ivan Řehák, from Slovakia. During their four week stay in Kremnica, each will produce designs for one struck medal and five cast medals. The event will culminate at the museum on Friday 30 October with the gala opening of an exhibition of the medals produced at the symposium. The event begins at 15.00 and the medals will be on view in the Exhibition Rooms of the Numismatic Exposition until the end of 2009.

House of the Angyal family, where the artists–medal makers will be living and working during the symposium.

Sándor Tóth (Hungary): House of the Angyal Family – medal cast at the 1st International Symposium of Medals in 1988.

Josef Šafařík (Czech Republic): Opening of the New Numismatic-Historical Expositions of the NBS–Museum of Coins and Medals at Kremnica – medal struck at the 7th ISM in 2002 for the 2003 opening of the exposition: „Two Sides of Money – Money and Medals in the History of Slovakia".

From the exhibition in the Exhibition Rooms of the Numismatic Exposition of the NBS–Museum of Coins and Medals at Kremnica in 2007.

Photo: archive of the Museum of Coins and Medals at Kremnica

B I A T E C