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# ACTA VŠFS

Ekonomické studie a analýzy  
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## ARTICLES / STATĚ

- **Bojka HAMERNÍKOVÁ | Alena MAAYTOVÁ,  
Jaroslav VOSTATEK | Stanislav KLAZAR:**  
Impact of Selected Types of Public Spending  
on Economic Growth  
Vliv vybraných typů veřejných výdajů na ekonomický růst
- **Květa KUBÁTOVÁ:**  
Issues of Tax Burden Measuring Using Tax Quota  
Problematika měření daňové zátěže pomocí daňové kvóty
- **Juraj NEMEC | Miroslav NEMEC:**  
Public Challenges for Sports Management in Slovakia:  
How to Select the Optimum Legal Form of a Sport Club?  
Právní problematika managementu sportu na Slovensku:  
jak vybrat optimální právní formu sportovního klubu?
- **Ladislav PRŮŠA:**  
Solidarity and Equivalence in the State Benefits System  
Solidarita a ekvivalence v systému státních dávek
- **Miroslav HRNČÍŘ:**  
Monetary Policy and Central Banking in the Wake of the World  
Financial Crisis  
Měnová politika a centrální bankovníctví v podmínkách světové  
finanční krize



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**EDITORIAL**

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**BOHUSLAVA ŠENKÝŘOVÁ:****| 088 |**

We Respond to Actual Economic Subjects  
Reagujeme na aktuální ekonomická témata

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**ARTICLES / STATĚ:**

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**BOJKA HAMERNÍKOVÁ | ALENA MAAYTOVÁ,  
JAROSLAV VOSTATEK | STANISLAV KLAZAR:****| 090 |**

Impact of Selected Types of Public Spending on Economic Growth  
Vliv vybraných typů veřejných výdajů na ekonomický růst

**KVĚTA KUBÁTOVÁ:****| 106 |**

Issues of Tax Burden Measuring Using Tax Quota  
Problematika měření daňové zátěže pomocí daňové kvóty

**JURAJ NEMEC | MIROSLAV NEMEC:****| 116 |**

Public Challenges for Sports Management in Slovakia:  
How to Select the Optimum Legal Form of a Sport Club?  
Právní problematika managementu sportu na Slovensku:  
jak vybrat optimální právní formu sportovního klubu?

**LADISLAV PRŮŠA:****| 124 |**

Solidarity and Equivalence in the State Benefits System  
Solidarita a ekvivalence v systému státních dávek

**MIROSLAV HRNČÍŘ:****| 137 |**

Monetary Policy and Central Banking in the Wake of the World Financial Crisis  
Měnová politika a centrální bankovnictví v podmínkách světové finanční krize

# *We Respond to Actual Economic Subjects*

## *Reagujeme na aktuální ekonomická témata*

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BOHUSLAVA ŠENKÝŘOVÁ

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Dear readers,

This autumn issue of ACTA VŠFS journal comes to you at a time rich in economic and political events. The discussions over national budget and its deficit, public debt growth rate, necessity of public finance and social and health care reforms are connected with the legitimacy and capability of the current interim caretaker government to tackle these issues.

Any evaluation would be premature and, most importantly, this government has still a lot of tasks to fulfill. Viewing the situation from the perspective of an ordinary citizen and taxpayer I can only wish more of such governments and competent "rulers" to all of us.

Our journal publishes scientific essays and professional articles. This issue contains also articles reflecting the actual or long-term economic issues in our country and abroad. The university management regards this approach as appropriate also in the light of the fact the University of Finance and Administration became the first private university specializing in economy in the Czech Republic and obtained the accreditation for doctoral study in the finance branch. The accomplishment of these goals obliges us to keep our reputation.

Because our university hosted two important international professional conferences attended by renowned experts in the last two months, the editorial board intends to publish the presentations of the experts in the next ACTA VŠFS issue. The conference titles are **Human Capital** and **Social Europe – Problems and Perspectives**.

Let's wish success to all important autumn activities, whether in the academic sphere or in the economic policy domain, contributing to the improvement of the quality of our academic and social reality.



**Dr. Bohuslava Šenkýřová**

*Editor in-Chief*

University of Finance and Administration, *Rector*

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Vážení čtenáři,

dostáváte do rukou podzimní číslo časopisu ACTA VŠFS v období velmi rušném ekonomicky i politicky. Diskuse o státním rozpočtu a jeho deficitu, o tempu růstu veřejného dluhu, o potřebě reformy v oblasti veřejných financí, sociální a zdravotní jsou spojeny s legitimitou a schopností současné vlády odborníků tyto otázky řešit.

Je velmi brzy na hodnocení, a hlavně tato vláda má před sebou ještě mnoho úkolů. Z pohledu řadového občana a daňového poplatníka se mi však chce popřát nám všem více takových vlád a zodpovědných „vládců“.

Náš časopis dává prostor vědeckým statím a odborným článkům. I v tomto čísle jsou obsažena témata reagující na aktuální anebo déle trvající ekonomické problémy doma i v zahraničí. Vedení školy považuje tento přístup za správný i s ohledem na skutečnost, že Vysoká škola finanční a správní se stala první soukromou univerzitou s ekonomickým zaměřením v České republice a získala akreditaci k doktorskému studiu v oboru Finance. Dosažení těchto cílů zavazuje.

Vzhledem k tomu, že v uplynulých dvou měsících proběhly na naší univerzitě dvě významné odborné konference s mezinárodní účastí významných odborníků, plánuje redakční rada v příštím čísle ACTA VŠFS vydání příspěvků těchto expertů. Jde o konference **Lidský kapitál** a **Sociální Evropa – problémy a perspektivy**.

Popřejme úspěch všem důležitým podzimním počínům, ať už na akademické půdě či v oblasti hospodářské politiky, směřujícím ke zvýšení kvality naší akademické a společenské reality.



**Dr. Bohuslava Šenkýřová**

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rektorka Vysoké školy finanční a správní, o.p.s.

# *Impact of Selected Types of Public Spending on Economic Growth*

## *Vliv vybraných typů veřejných výdajů na ekonomický růst*

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BOJKA HAMERNÍKOVÁ, ALENA MAAYTOVÁ, JAROSLAV VOSTATEK, STANISLAV KLAZAR

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### **Abstract**

At present as the financial crisis impacts most countries and sectors – the question of the effect of fiscal policy is arguably of paramount importance. Public finance influences on growth could be assessed via relations between public expenditures, taxation and growth; via the effectiveness of the institutional framework; or via their contribution to macro economic stability.

We were specialized on analysis of influence of selected types of public expenditures on economic growth. We have used Czech Republic, Ireland, Sweden and Finland data for the comparison. This selection was made according to specific results in the area of the economic growth, support of research and development, structure and amount of public expenditure.

Data comparison of selected countries could show the presence or absence of impacts of these types of public expenditures. The other types of public expenditures, as for example government investments, will be involved in the next phase of the research.

In the contribution, the causality between the development of public spending (with the use of COFOG classification) and the development of GDP with various time delays was being determined. The performed analysis points to certain trends in the given area and to certain macro-economic links. It seems the GDP per capita is positively related to the per capita expenditures on Education and Defense. Number of population has also positive impact on GDP. The only positive effect of relative public expenditure variables have relative share of economics affairs, social protection and health variable. The effect of explanatory variables on GDP annual growth is in most cases negative. Only the per capita expenditures on Recreation, culture and religion and Health have positive effect on GDP growth.

Similar objectives could be also found by public expenditures.

### **Keywords**

public spending, economic growth, Granger causality, GFS methodology

### **JEL classification**

H5, E6

## Abstrakt

V současné době, kdy finanční krize ovlivňuje většinu zemí a odvětví – má pravděpodobně zásadní význam otázka vlivu fiskální politiky. Dopady veřejných výdajů na růst by mohly být hodnoceny prostřednictvím vztahů mezi veřejnými výdaji, zdaněním a růstem, prostřednictvím efektivnosti institucionálního rámce nebo prostřednictvím jejich přínosu k makroekonomické stabilitě.

Zaměřili jsme se na analýzu vlivu vybraných typů veřejných výdajů na hospodářský růst. Pro porovnání jsme použili údaje za Českou republiku, Irsko, Švédsko a Finsko. Tento výběr byl proveden podle specifických výsledků v oblasti hospodářského růstu, podpory výzkumu a vývoje, struktury a výše veřejných výdajů.

Porovnání údajů vybraných zemí by mohlo prokázat přítomnost nebo nepřítomnost vlivů těchto typů veřejných výdajů. Ostatní typy veřejných výdajů, jako například vládní investice, budou zahrnuty do další fáze výzkumu.

V příspěvku byla zjišťována příčinná souvislost mezi vývojem veřejných výdajů (s použitím klasifikace COFOG) a vývojem HDP s různými časovými prodlevami. Provedená analýza poukazuje na některé trendy v dané oblasti a na určité makroekonomické vazby. Zdá se, že HDP na hlavu pozitivně souvisí s výdaji na hlavu v oblasti vzdělání a obrany. Na HDP má rovněž pozitivní vliv množství obyvatelstva. Jediný pozitivní vliv relativních proměnných veřejných výdajů mají relativní proměnné podíly hospodářských záležitostí, sociální ochrany a zdraví. Vliv vysvětlujících proměnných na roční růst HDP je ve většině případů negativní. Pouze výdaje na hlavu v oblasti rekreace, kultury a náboženství a v oblasti zdravotnictví mají pozitivní vliv na růst HDP.

Obdobné cíle mohly být zajištěny rovněž veřejnými výdaji.

## Klíčová slova

veřejné výdaje, ekonomický růst, Grangerova příčinnost, metodologie GFS

## Introduction

At present as the financial crisis impacts most countries and sectors – the question of the effect of fiscal policy is arguably of paramount importance. Practical problems of economic policy and the strategic intentions of the EU amplify the importance of the economic analysis of the potential and actual effects of fiscal policy on the economy and especially on growth.

Although a high degree of coordination and harmonization across the EU has been achieved in many areas, fiscal policy is still in the sphere of action of national governments. Therefore the issue of the influence of fiscal instruments on growth, employment, and competitiveness involves a question of relations among European integrative goals and national fiscal strategies.

Fiscal politics influences could be denoted as direct (influences on employment rate, savings, investments and innovations) and indirect, via institutional framework. Public finance influences on growth could be assessed via relations between public expendi-

tures, taxation and growth; via the effectiveness of the institutional framework; or via their contribution to macro economic stability.

Similar objectives could be also found by public expenditures. Authors emphasize the significance of public investment spending, public consumption spending and social welfare or redistributive spending. Some of this literature has also considered public spending that increases human capital and spending that contributes to innovation, such as that for research and development, as core spending, as it enhances the human capital base and so technological progress.

In our research, that is the part of project: New approaches to an optimization of budgetary and fiscal policy with emphasis on the fiscal discipline (supported by Czech Science Foundation), we were specialized on analysis of influence of selected types of public expenditures on economic growth. We have used Czech Republic, Ireland, Sweden and Finland data for the comparison. This selection was made according to specific results in the area of the economic growth, support of research and development, structure and amount of public expenditure. We supposed that results of this comparison could be contributing also in the Czech Republic.

The aim of this paper is the analysis of selected types of public expenditures (final consumption of the government) on economic growth. Data comparison of selected countries could show the presence or absence of impacts of these types of public expenditures. The other types of public expenditures and government investments will be involved in the next phase of the research.

For a more detailed analysis of the relationship between public spending (by COFOG) and the development of GDP, the so called Granger causality and multiple regression with controls for time and country characteristics was applied in our study.

## **1 Progress of the state-of-the-art**

An interesting contribution to the analysis of the relationship between the composition of the expenditure and revenue and economic growth is a paper by Afonso and Alegre (2008). They analyzed these links for a sample of 27 EU members from 1971 to 2006, and concluded that:

- There was a negative influence of public consumption and social security contributions on growth,
- There was a positive impact from public investment.

Regression results show an existence of differences between EU members (in comparison to new and older member states). Conclusions about the channels through which the composition of the public budget affects growth are really suggestive.

How are public expenditures related to economic growth? In the 19th century A. Wagner formulated a "law" on the expansion of government. Based on empirical evidence he argued that government size increases with wealth. Public expenditures are endogenous,



in contrast to the short-run Keynesian approach that treats public expenditure as an exogenous (Afonso and Furceri, 2008).

Lucas (1998) pointed out the role of public investment in education in human capital growth and eventually in long-run economic growth. Similarly Barro (1990) and Romer (1990) referred to the role of government expenditure in public infrastructure and expenditures on research and development in achieving growth.

Public expenditures play a significant role in economic growth. In an analysis of government size and fiscal volatility on growth for a sample OECD and EU member states from 1970 to 2004, Afonso and Furceri (2008) conclude that both factors tend to hamper growth for both samples of countries.<sup>1</sup>

Understanding the effects of government expenditures on the growth mechanism is very important. Mo (2007) follows the view that public expenditures affect growth through three channels – total factor productivity, investment and aggregate demand. The results show that public expenditures have negative marginal effects on productivity and GDP growth. When relocation of government investment occurs, it influences productivity growth and GDP growth. Mo (2007) emphasizes that all government expenditures have positive aggregate demand effects.

Ghosh and Gregoriou (2008) analyzed panel data for 15 developing countries for 28 years and using GMM techniques they showed that current (capital) spending has positive (negative) effects on growth.

Endogenous growth models analyzing the growth effects of public spending divide public spending into productive and consumption. The proportion of productive public spending differs across countries. Using IMF data and CEPD (2001) Chen (2006) shows a higher proportion in Eastern Asia while in North America and Europe it is lower. For Latin America it is much lower. For example in the 1980s and early 1990s the share was above 15 % in Korea and above 20 % in Taiwan, a little more than 5 % in the US and nearly 5 % in the UK and France. Brazil was less than 5 % (Chen, 2006).

The following questions naturally arise:

- Why do governments select particular ranges?
- How can optimal composition be determined?
- What relationships exist between public expenditure structure and growth?

Researchers into these questions explore various factors that influence the division between public expenditures and the determinants of growth. See Lee (1992) Baier and Glomm (2001), Cazzavillan (1996), Raurich (2003), and Park and Philippopoulos (2004).

Chen (2006) offers a one-sector endogenous growth model to study these questions, and he confirms the significance of the structure of public expenditure on growth.

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<sup>1</sup> António Afonso & Davide Furceri, 2008. "Government size, composition, volatility and economic growth," Working Paper Series 849, European Central Bank, January.

There are interesting links between public expenditure, growth and the source of funds. Palivos and Yip (1993) believe that income tax financing is more detrimental to growth than seigniorage financing. But De Gregorio (1993) holds the opposite view, while Pecorino (1997) prefers a mixture of both ways. Bose, Holman and Neanidis (2007) use a sample of 40 developing and 21 developed countries to assess the influence of both ways. They conclude that for the high-income economies, an expansion in government expenditures financed through taxes retards growth more than if it were financed through seigniorage. For low-income countries the opposite conclusion is valid.

Carboni and Medda (2007) build a model, with empirical applications, that determines optimal government size, the optimal mix of government expenditures, maximizes the rate of growth and the level of per capita income.

Devarajan et al. (1996) emphasize the significance of the composition of government expenditure for economic growth, and in the theoretical model they consider two productive services. They try to determine which type of public expenditure is more productive. In developing countries this is current expenditure.

Monteiro et al. (2008) has introduced two types of public investment (in infrastructure and in education) into a two sector endogenous growth model. The authors find that "the welfare-maximizing rate of expenditure is less than the growth-maximizing rate, with the opposite being the case with regard to their allocation".<sup>2</sup>

Analysis of public finance influence on growth also comprises the problem of the relationship between government (or fiscal) size and economic growth. See Afonso et al. (2005, 2006), Greene (2005), Angelopoulos, and Philippopoulos and Tsionas (2008).

Afonso et al. (2005, 2006) concentrate on the analysis of public sector effectiveness using help of indicators of public sector performance (PSP) and efficiency (PSE) respectively for OECD member states and for new EU member states and emerging markets. Angelopoulos et al. (2008) begin from Afonso et al. methodology, but finally they incorporate PSE into the economic model. They conclude that "when fiscal size is measured by the government consumption share in GDP, the size-efficiency mix is significant in explaining the size-growth relationship."

A high number of scientific papers about the relationship between government size and economic growth can be found, but there are few examples of the significance of public finance influence on lower than central level administrative units. Schaltegger and Torgler (2006) have performed that analysis for Switzerland from 1981 to 2001. Their results show the negative relationship between government size and economic growth. They also find that an increase in current expenditure reduces economic growth but a significant influence on capital expenditure was not confirmed.

Based on an analysis of seven fast-growing economies from 1970 to 2006 Moreno-Dodson (2008) tries to find an answer to the question of under what conditions public expendi-

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<sup>2</sup> Monteiro et al. 2008, pp. 77.

tures positively influence growth, and what kinds of expenditures cause that. The public expenditures are for analysis needs divided into the following three criteria:

- by functional criterion GFS classification with resolution on economic and social criteria,<sup>3</sup>
- by their degree of productivity,<sup>4</sup>
- by sectoral classification.

The results of the analysis confirm the influence of public expenditures on GDP per capita growth, especially by selected types of expenditures.

Afonso, Nickel, and Rother (2005) performed a consolidation process analysis in Central and Eastern Europe countries (8 EU members from CEE and two candidate countries: Bulgaria and Romania) from 1991 to 2003 in comparison to 15 EU countries. The results of the study indicate that the higher the share of expenditure reduction relative to the change (improvement) in the budget balance, the higher is the probability of a fiscal consolidation being successful (Afonso, Nickel and Rother 2005).

Gray et al. (2007) analyze in their wide-ranging study of public finance policies in so-called ECA countries 15 years after the start of transition.<sup>5</sup> The authors also used seven non-ECA countries – Chile, Ireland, the Republic of Korea, Spain, Thailand, Uganda and Vietnam, because they think that their public finance policies hold useful lessons for ECA because these seven countries have had higher than average growth rates for the past decade. The study facilitates the understanding of not just basic trends and specific problems of public finance in ECA countries, but also how these trends and problems affect economic growth. The comparison with seven non-ECA rapidly-growing emerging market countries produces many interesting findings and themes.

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3 *Economic public spending includes: fuel and energy; agriculture, forestry, fishing, and hunting; mining, mineral resources, manufacturing, and construction; transportation and communication etc. (for central government).*

*Social public spending includes: education; health; social security and welfare; housing and community amenities; and recreational, cultural, and religious affairs (for the central government).*

4 *This categorization, based on an a priori judgment regarding their expected impact on Growth was introduced by Bleaney, Gammel and Kneller in 2001.*

5 *Central and Eastern Europe and Asia (ECA) countries (group of countries created just for this analysis needs) comprising:*

- *a subset of 10 ECA: Albania, Armenia, Croatia, Georgia, the Kyrgyz Republic, Poland, Romania, the Slovak Republic, Turkey, and Ukraine (these countries vary markedly in size, per capita income etc.),*
- *EU-5, comprising the Czech Republic, Hungary, Poland, the Slovak Republic, and Slovenia,*
- *EU-8, comprising EU-5 and the Baltics; Southeast Europe (SEE), comprising Albania, Bosnia and Herzegovina, Bulgaria, Croatia, the former Yugoslav Republic of Macedonia, Romania, and Serbia and Montenegro,*
- *low-income members of the Commonwealth of Independent States (CIS), comprising Armenia, Azerbaijan, Georgia, the Kyrgyz Republic, Moldova, Tajikistan, and Uzbekistan;*
- *and middle-income CIS, comprising Belarus, Kazakhstan, the Russian Federation, and Ukraine.*

Under planning CEECs had similar histories due to their shared ideologies, economic management and development strategies. Their present situation is different, and Schadler et al. (2006) argue that there is a possibility of a two-speed catch-up: growth in the three Baltic countries having pulled substantially ahead of that in the five Central European countries (CE-5) – the Czech Republic, Slovak Republic, Hungary, Poland and Slovenia.

Comparisons of CEECs with emerging market countries are also very interesting, even if the CEECs' growth experience during the past decade was unusual by emerging market country standards (Schadler et al., 2006).

## 2 Analyze of impact of selected types of public spending on economic growth

Together with public income (especially taxes), public spending forms the "front and back of the same coin". The conflict between pressure on the growth of public spending on one hand, and the pressure on the decreasing of the tax burden on the other is a constant problem of budget policy. An analysis of the development of public spending (in total, as well as according to individual components and factors of their dynamics) can be considered as key from the perspective of fiscal discipline.

An analysis of the development of public spending and factors of their dynamics is a current problem of a number of countries. The main reason are these trends: growth of the volume of public spending, growing weight of public spending of GDP, increasing share of transfers on total public spending and, last but not least, also the growth of the share of the so called debt servicing.

For a more detailed analysis of the relationship between public spending and the development of GDP, the so called Granger causality was applied in this text. It concerns the monitoring of the relationship between the development of individual services of public spending and GDP (or possibly in reverse), where one variable is monitored in a different time period. The stated procedure makes it possible to search for answers to the following questions:

- [1] Does the development of individual components of public spending in year  $t$  depend on the development of GDP in year  $t-j$ ?
- [2] Does the development of GDP in year  $t$  depend on the development of individual components of public spending in year  $t-j$ ?

Statistical data do not make it possible to monitor a different causality than time causality. This means that the determination of causes and effects can only be deduced from the perspective of time succession. Granger's approach to causality (resolution of the dependence relationship) is as follows:

$$VV_t = f(HDP_{t-j}), \text{ where} \tag{1}$$

$VV_t$  – are public spending in period  $t$

$HDP_{t-j}$  – is GDP in period  $t-j$

If this relationship is of a higher quality (more stable in time, measured via a coefficient of variation) than reverse causality

$$\text{HDP}_t = f(VV_{t-j}), \text{ where} \quad (2)$$

j – is delay

t – is time

Then according to Granger's approach to causality we say that public spending is the consequence of the development of GDP in the previous period. The causality was monitored:

1) in period t-1,

2) in period t-2.

We have used Czech Republic, Ireland, Sweden and Finland data for the comparison. This selection was made according to specific results in the area of the economic growth, support of research and development, structure and amount of public expenditure. We supposed that results of this comparison could be contributing also in the Czech Republic.

Our aim is the analysis of selected types of public expenditures (final consumption of the government) on economic growth. Data comparison of selected countries could show the presence or absence of impacts of these types of public expenditures. The other types of public expenditures, as for example government investments, will be involved in the next phase of the research:

**Table 1:** Granger's causality in terms of coefficient of variation (dependence of selected parts of public expenditures by COFOG in period t on GDP development in period t-j)

Ireland	t-1	t-2
General public services	0,703283	0,4603217
Defence	0,6121548	0,6870159
Public order and safety	0,3201892	0,450811
Economic affairs	0,7593352	0,8042787
Housing and community amenities	1,129558	1,2205796
Health	0,3459577	0,1888437
Recreation, culture and religion	0,7555267	0,7023723
Education	0,3911302	0,3037478
Social protection	0,3673047	0,3523094
Equals: General government final consumption expenditure	0,3173756	0,2435935

<b>Finland</b>		
General public services	1,0706049	0,8107405
Defence	1,435768	4,9901914
Public order and safety	0,5918182	1,5871056
Economic affairs	1,3154085	2,9576458
Environment protection	1,8081732	6,8391749
Housing and community amenities	48,356827	3,1698962
Health	0,5197588	1,7440781
Recreation, culture and religion	0,4116329	1,276059
Education	0,7152615	1,6836157
Social protection	0,5402746	2,0486315
Equals: General government final consumption expenditure	0,4735734	1,8313146
<b>Sweden</b>		
General public services	1,3550239	3,5043502
Defence	8,3401975	4,5274221
Public order and safety	1,7735198	4,5173576
Economic affairs	1,537436	2,7578469
Environment protection	14,506988	1,8640763
Housing and community amenities	2,9659982	1,3874314
Health	1,7217375	1,3050575
Recreation, culture and religion	-4,6517078	23,122268
Education	1,7242459	1,4746454
Social protection	1,614947	1,4644981
Equals: General government final consumption expenditure	1,7309822	1,4057589
<b>Czech Republic</b>		
General public services	1,5246294	1,7398518
Defence	4,0664121	4,9765867
Public order and safety	1,2405365	1,2076971
Economic affairs	1,256914	1,384364
Environment protection	0,8157651	0,848537
Housing and community amenities	1,611553	2,0043142
Health	0,5123059	0,543175
Recreation, culture and religion	1,0320391	1,0062217
Education	0,8602209	0,6522281
Social protection	1,0427968	1,1680369
Equals: General government final consumption expenditure	0,632579	0,421095

**Table 2:** Granger's causality in terms of coefficient of variation (dependence of GDP development in period t on development of selected parts of expenditures by COFOG in period t-j)

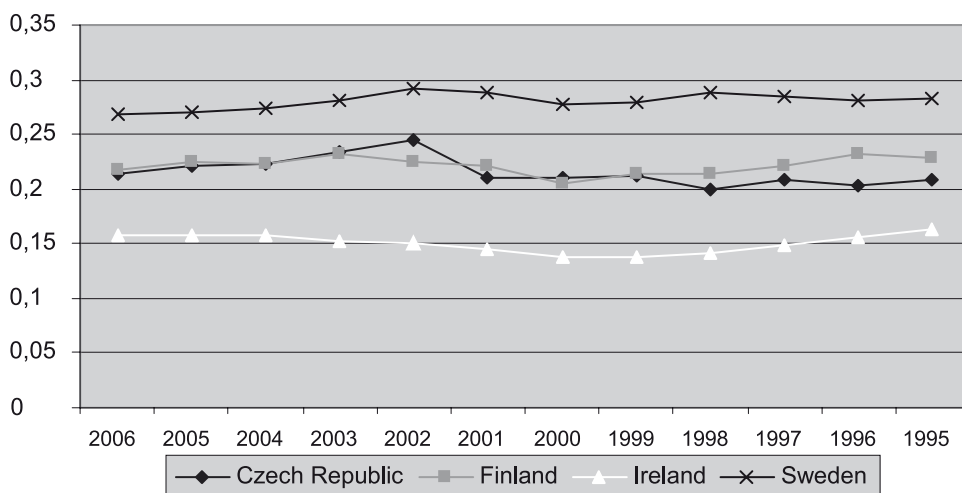
<b>Ireland</b>	<b>t-1</b>	<b>t-2</b>
General public services	1,714832	2,118593
Defence	0,361793	1,045821
Public order and safety	18,41486	0,870923
Economic affairs	0,562991	2,804791
Housing and community amenities	4,228136	0,962571
Health	1,02438	0,818066
Recreation, culture and religion	-0,76391	-6,90903
Education	0,837358	0,813358
Social protection	9,130909	0,487092
Equals: General government final consumption expenditure	1,180578	0,597483
<b>Finland</b>		
General public services	3,786624	-5,85332
Defence	4,842333	4,825793
Public order and safety	14,81544	-6,349
Economic affairs	-2,63966	-2,83093
Environment protection	-4,42023	-6,08475
Housing and community amenities	14,00671	19,52785
Health	1,000505	0,46127
Recreation, culture and religion	0,714718	0,773259
Education	-3,82887	-5,25862
Social protection	1,111048	1,886205
Equals: General government final consumption expenditure	0,591426	0,418614
<b>Sweden</b>		
General public services	3,633548	3,368015
Defence	3,571368	-4,36401
Public order and safety	-2,99533	-2,11259
Economic affairs	27,11867	-3,27198
Environment protection	3,059549	-6,20223
Housing and community amenities	8,171914	1,771996
Health	1,796575	2,524053
Recreation, culture and religion	-8,14197	3,70288
Education	1,919153	2,722457
Social protection	-7,81119	3,687949
Equals: General government final consumption expenditure	1,769487	2,60583

Czech Republic		
General public services	3,180377	1,669693
Defence	-2,80558	-2,57081
Public order and safety	3,468877	3,47467
Economic affairs	1,165106	1,177177
Environment protection	0,502627	0,60588
Housing and community amenities	2,640099	2,504908
Health	0,452192	0,383848
Recreation, culture and religion	1,293215	1,159881
Education	-23,5957	0,624115
Social protection	-5,19951	-7,65218
Equals: General government final consumption expenditure	0,476967	0,736078

From the previous tables it follows, that the relationship

a)  $VV_t = f(HDP_{t-j})$  and b)  $HDP_t = f(VV_{t-j})$  is not really significant in selected countries and in the evaluating period. (measured with the use of the coefficient of variation) According to Granger's approach to causality it thus holds that public spending classified according to COFOG methodology is not a consequence of the development of GDP in the previous period and GDP is not consequence of the development of public spending classified according to COFOG.

**Graph 1:** Government final consumption expenditure by function at current prices/GDP



We also employed multiple regression approach (for final models see Appendix) to test the relationship between GDP (in two forms, 1) GDP per capita and 2) GDP annual growth) and a set of variables containing structure of public expenditure (relative and per capita form of



variable). We also tried to control for country specific characteristics (dummy variables for 4 (3) countries), time trends and population. For a full set of variables see Appendix.

To avoid problem of multi co-linearity of explanatory variables (including all variables leads inevitably to a linear combination of variables.), we have selected from variables that express the ratio of specific public expenditures parts on total expenditures (variables beginning with r) only those that have the highest variability between countries (DEF, POS, EA, HEA, EDU and SOC).

It seems the effect of explanatory variables on GDP annual growth is in most cases negative. Only the per capita expenditures on Recreation, culture and religion and Health have positive statistically significant effect on GDP growth. So unfortunately we were not able in this time derived some clear recommendation for policymakers concerning the pro-growth effects of selected public expenditures.

On the other hand the GDP per capita is positively related to the per capita expenditures on Education and Defense. Number of population has also positive impact on GDP. The only positive effect of relative public expenditure variables have relative share of economics affairs, social protection and health variable. These findings indicate that country economic power is correlated with composition of public expenditure but the link to economic growth is not significant. There is possible the opposite direction of influence – from the economic power to the composition of expenditure. Again we were not able to derive any suitable policy recommendation.

The testing of dependence direction is planned for future because from upper mentioned results is not really clear that for example GDP is a result of higher expenditures into education or at the opposite wealthy countries (countries with higher GDP) are able to spend more money into education.

## **Conclusion**

The contribution being presented comes out of the first period of the work on the project within the scope of GA ČR no. 402/08/1134 *“New approaches to the optimization of budget and fiscal policy on the strengthening of fiscal discipline”* and especially from the analysis of the impact of public spending on fiscal discipline.

In the contribution, the causality between the development of public spending (with the use of COFOG classification) and the development of GDP with various time delays was being determined. The performed analysis points to certain trends in the given area and to certain macro-economic links.

It seems the effect of explanatory variables on GDP annual growth is in most cases negative. Only the per capita expenditures on Recreation, culture and religion and Health have positive statistically significant effect on GDP growth.

On the other hand the GDP per capita is positively related to the per capita expenditures on Education and Defense. Number of population has also positive impact on GDP. The

only positive effect of relative public expenditure variables have relative share of economic affairs, social protection and health variable.

In the next part of the research, the testing of the statistical significance of selected linkages on a file of OECD countries data will be performed. The testing of dependence direction is planned for future because from upper mentioned results is not really clear that for example GDP is a result of higher expenditures into education or at the opposite wealthy countries (countries with higher GDP) are able to spend more money into education. The objective will be to verify whether the discovered linkages have a more general validity.

## Annex

Variables:

Description of variable	Variable per capita	Variable as a share on all public expenditure
General public services	GPS	rGPS
Defence	DEF	rDEF
Public order and safety	POS	rPOS
Economic affairs	EA	rEA
Environment protection	ENV	rENV
Housing and community amenities	HOU	rHOU
Health	HEA	rHEA
Recreation, culture and religion	CUL	rCUL
Education	EDU	rEDU
Social protection	SOC	rSOC
1996 – 2006	Year	-
Dummy for Ireland	Ireland	-
Dummy for Sweden	Sweden	-
Dummy for Finland	Finland	-
Dummy for Czech Republic	CR	-
Population	-	-

*Note: Data retrieved from United Nations Statistics, Government final consumption expenditure by function (<http://data.un.org>).*

Final regression model for variable GDPperCAP  
Multiple Regression Analysis

Dependent variable: GDPperCAP

Parameter	Estimate	Standard Error	T Statistic	P-Value
CONSTANT	-56,7032	14,1414	-4,00974	0,0004
DEF	0,00000509743	4,8063E-7	10,6057	0,0000
ENV	-0,00000460702	0,00000180055	-2,55868	0,0160
HEA	-0,00000320498	5,074E-7	-6,31647	0,0000
EDU	0,00000319621	5,35297E-7	5,9709	0,0000
popul	0,0255649	0,00166657	15,3398	0,0000
Sweden	-141,262	9,90107	-14,2674	0,0000
Finland	-30,6384	4,12626	-7,42523	0,0000
CR	-166,329	11,966	-13,9001	0,0000
rDEF	-254,318	24,543	-10,3621	0,0000
rPOS	-121,14	31,8195	-3,80712	0,0007
rEA	45,0327	14,6869	3,06618	0,0047
rHEA	60,03	18,5411	3,23768	0,0030
rEDU	-120,78	21,9649	-5,49876	0,0000
rSOC	51,8611	19,71	2,6312	0,0135

R-squared = 99,862 percent

R-squared (adjusted for d.f.) = 99,7953 percent

Standard Error of Est. = 0,477705

Mean absolute error = 0,303965

Durbin-Watson statistic = 2,38652

Final regression model for variable annual change of GDP (dGDP)  
Multiple Regression Analysis

Dependent variable: dGDP

Parameter	Estimate	Standard Error	T Statistic	P-Value
CONSTANT	6,19117	1,09112	5,67416	0,0000
SFS	-1,23219E-7	2,65476E-8	-4,64143	0,0001
ENV	-6,21758E-7	1,57022E-7	-3,9597	0,0004
FOU	-7,19885E-7	2,07707E-7	-3,46587	0,0017
HEA	1,3727E-7	3,37872E-8	4,06279	0,0003
CUL	5,9898E-8	2,91813E-8	2,05261	0,0492
SOC	-7,01058E-8	3,25509E-8	-2,15373	0,0397
popul	-0,000287467	0,0000499522	-5,75484	0,0000
Finland	-0,704782	0,139775	-5,04227	0,0000
CR	1,81732	0,417825	4,34946	0,0002
rDEF	-3,72977	1,2535	-2,97549	0,0058
rPOS	-11,3336	2,65285	-4,27225	0,0002
rEA	-4,51348	1,19786	-3,76795	0,0007
rHEA	-6,936	1,27769	-5,42857	0,0000
rEDU	-4,43481	1,2964	-3,42088	0,0019

R-squared = 80,4636 percent

R-squared (adjusted for d.f.) = 71,0322 percent

Standard Error of Est. = 0,0290428

Mean absolute error = 0,0183756

Durbin-Watson statistic = 2,19552

Note:

Since the DW values are greater than 1.4, there is probably not any serious autocorrelation in the residuals.

Since the P-value is less than 0,05, the terms are statistically significant at the 95% confidence level.

The backward stepwise regression procedure was employed to eliminate those variables which are not statistically significant.

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# *Issues of Tax Burden Measuring Using Tax Quota*

## *Problematika měření daňové zátěže pomocí daňové kvóty*

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KVĚTA KUBÁTOVÁ<sup>1</sup>

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### **Abstract**

In spite of the existence of internationally applied tax quota calculation methodologies there are certain factors which can cause incomparability of the tax quota indicator among countries, and at some circumstances even within a country in time. The inconsistencies in the reported tax quotas are negligible sometimes but in some cases they are likely to be very significant. The inconsistencies in tax quotas due to methodical inaccuracies can, at certain circumstances, be expected to represent a difference on the order of percent points or even tens of percent points. This paper is intended to analyse the main causes of the imperfect comparability of tax quotas and their quantitative impacts. The method applied to this end was the comparative analysis of various techniques used to measure the tax quotas and factors determining the quota level.

### **Keywords**

tax quota, tax expenditures, government regulations, tax quota methodology

### **JEL classification**

H20

### **Abstrakt**

Přesto, že existují mezinárodně používané metodiky pro výpočet daňové kvóty, jsou zde určité faktory, které mohou způsobit nesrovnatelnost ukazatele mezi státy, ale za určitých okolností i u jedné země v čase. Tyto rozdíly ve vykázané daňové kvótě jsou někdy zanedbatelné, jindy mohou být pravděpodobně velmi významné. Můžeme předpokládat, že v jistých situacích se bude daňová kvóta v důsledku metodických nepřesností lišit v řádu procentních bodů a možná i desítek procentních bodů. V tomto článku se pokusíme analyzovat hlavní příčiny nedokonalé srovnatelnosti daňových kvót a jejich kvantitativní dopady.

### **Klíčová slova**

daňová kvóta, daňové výdaje, vládní regulace, metodologie daňové kvóty

### **Introduction**

The best way to measure the tax burden of national economy is the application of tax quota indicator which is tax revenue ratio to GDP. This dimensionless indicator is compa-

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nable in time and space and is not affected by inflation (or does not need to be refined). As far as the comparability is concerned, a detailed methodology has been prepared by IMF and OECD and adopted to compare the tax quota in many countries. Eurostat has also its methodology which is very similar to that of OECD and the calculated tax quotas differ on the order of tens of percent points.

The tax quota is understood as tax ratio to GDP in certain period (typically a calendar year).

This implies the tax quota is calculated using the following formula:

$$\frac{\text{tax revenue}}{\text{GDP}}$$

The result will depend on what will be covered by the "tax" term and on the quality of the gross domestic product estimate made in the concerned country. We shall focus on the analysis of methodological problems with the numerator in the formula above, i.e. "tax revenue". We shall handle also the nominator – GDP – but only with respect to the calculation problem in terms of the tax quota, otherwise this article would exceed the space allocated to it.

The "tax revenue" includes all taxes which are defined as obligatory payments to a public authority without any entitlement to consideration (James, Nobes, 2006, p. 10).

The OECD methodology drawn up for statistical purposes offers almost the same definition (OECD, 2008, p. 310): "In the OECD classification the term "taxes" is confined to compulsory, unrequited payments to general government. Taxes are unrequited in the sense that benefits provided by government to taxpayers are not normally in proportion to their payments."

The definitions above indicate the obligatory contributions to social security are classified as taxes and will influence the tax quota level. However, this approach to the contributions is not applied by all authors and institutions. The difference in quotas including and excluding the contributions is very high in some countries; in case of OECD countries it averages at 25 % of the tax quota amount, i.e. 9 percent points with the highest value in the Czech Republic – 40 % the tax quota amount, i.e. 14 percent points.

For example, in past the Ministry of Finance of the Czech Republic published also so-called tax quota I which excluded both the social and health insurance contributions and tax quota II which included the social insurance contributions and not included the health insurance contributions. Tax quota III (also known as aggregate tax quota) includes all taxes plus both insurance contributions.

## **1 Causes of imperfect comparability of tax quotas**

### **1.1 Causes of imperfect international comparability according to Messere**

Messere (1993) states several reasons for which the international comparison of tax quotas is not accurate. The reasons are as follows:

- 1) Different government intervention tools. The government can intervene through direct government expenditures, or support certain activities by way of tax expenditures. The tax expenditures are taxes which have not been paid because the taxpayer obtained a tax relief for certain activity. In this case, if the tax expenditures are not added, the tax quota is lower although the taxpayer's burden is the same. Messere notes the tax expenditures are apparently the most important element of the international incomparability of tax quotas.  
Other interventions of this kind are government guarantees for loans which make the loans cheaper, obligation of the private sector to collect contributions for certain social benefits, government regulations due to which the private sector incurs costs or saves costs (environmental control, bank regulations, etc.). The government can also collect revenues from certain activities which are not classified as taxes such as revenues from lotteries which can be both tax income and non-tax income (government lottery).
- 2) Taxes paid by the government to the government. In other words, taxes paid between governments at different levels such as local real estate tax paid by the central government or payment by a government level to the same government level such as VAT included in the government purchases. According to the OECD statistics such payments are not excluded but they are enumerated, if possible. This is normally done in case of the contributions to social security paid by government officials but not in case of excise taxes.
- 3) Shadow economy. No taxes are paid from the shadow economy but its value is not reflected in the GDP estimation. The GDP reported by countries with a high share of non-market economy (i.e. illegal economy elements such as tax evasions as well as legal economy elements such as mutual assistance, values created at home, etc.) is underestimated which implies these countries report a higher tax quota than corresponding to the actual tax burden of the economy.
- 4) International comparability in tax quota measurement. This category includes a question whether the tax quota formula nominator should be GDP or GNP. In many countries the difference is negligible but in some it is considerable.  
Messere also points out that if the GDP as the nominator is replaced by company profits for corporate tax, private consumption for excise taxes, etc. it would be more apposite expression of the tax burden. At present, so-called effective or implicit tax rates are recorded in the statistics for this purpose (European Union, 2009).  
Although there is an international methodology for the measurement of indicators it is clear some incomparability caused by differing application of the methodology cannot be avoided. In addition, the data is not available in the same disaggregation for all countries.

## 1.2 Cash and accrual principle

The gross domestic product is reported based on the accrual principle according to ESA95 methodology, i.e. the items are recorded on accrual & deferral basis where each item is allocated to a calendar year to which it is related in terms of time and subject (a principle



known from the double-entry accounting), and not to a year when the related income/ expenditure was accrued/incurred.

By contrast, the tax revenues can be set also on the cash basis. Under the cash approach the tax revenues are determined according to the amount which is recorded on the government accounts in the respective year and this recording does not depend directly on the time when the entity incurred the liability to pay the tax. The application of cash principle to determine the government tax revenues is easier than the application of accrual principle but it is inconsistent with the determination of GDP to which the taxes are measured. In the Czech Republic the cash principle is used for the state budget and state financial statement purposes because of the easy availability of the indicator.

OECD, IMF and Eurostat use the accrual methodology. This principle requires a good tax revenue estimation method because some taxes are often paid only after many years from the time when the taxpayer incurred the payment liability and other are not paid at all. If the accrual principle is applied the actual government revenues for a year can be determined only many years later which would be inefficient for the government. This is commented by Leoš Vitek: "The accrual reporting is fictitious and unverifiable to high extent. Any movements up to some 10 billion CZK are de facto unverifiable and dependent on the expert estimation of those preparing the data." (Vitek, 2006, p. 1). The methods applied include, for example, adjusted cash income. (For the estimation of government tax revenues based on the accrual principle see also OECD, 2004).

## **2 What are the quantitative implications of imperfect comparability of tax quotas?**

It has already been mentioned the contributions to social security account for 40 % of the total tax quota in the Czech Republic. The issue of tax quotas I, II and III will not be handled in this paper any more and we shall stick to the tax definition according to OECD. However, we shall try to define an approximate range within which the tax quotas can differ as a result of other inconsistencies, as listed above.

The actual differences caused by differing methodologies or impossibility to cover certain tax quota sections in various countries and years by the methodology cannot all be detected. In a favourable case, which is quite probable, the incomparabilities will be largely set off while in the worse, less probable, case they will be cumulated so that the "distorted" tax quota will be incomparable with any other quota.

The most serious tax quota distortion will be caused by the tax expenditures and the shadow economy not included in the GDP calculation. In both cases ten of percents are involved according to the available estimates.

As indicated in the previous section, the tax expenditures are understood as amounts which reduce the tax paid as a result of a tax relief granted (deduction, credit, tax holiday, etc.). The tax expenditures are reported explicitly by some countries which makes the tax quota a more transparent indicator. For example, the inclusion of tax credits is handled by the OECD classification methodology (OECD, 2004, p. 28) in the following way:

- a) Wastable tax credits – included up to the tax liability amount.
- b) “Non-wastable tax credits are tax credits that can give rise to a payment to taxpayers when the credit exceeds their liability for that tax. They are sometimes referred to as “payable” or “refundable” tax credits.” They must be recognized as an expenditure item and not deducted from the tax revenues.

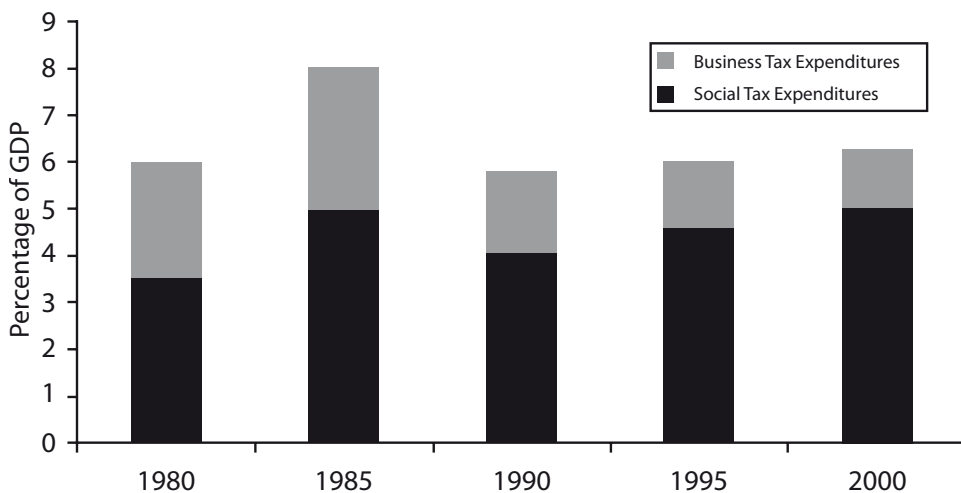
This information, i.e. tax expenditures for some taxes (personal income tax, corporate income tax) is reported only by some (predominantly Anglo-Saxon) OECD countries.

**Annex 1** shows the tax levels in the United Kingdom. For instance, in 2006 the “tax expenditure component” of “non-wastable tax credits” accounted for about 1 % of the taxes.

**Annex 2** indicates the Czech Republic does not publish this information (does not record this information in statistical reports).

Figure 1 illustrates the tax expenditure levels in USA between 1980 and 2000. In this case they amount to 6 – 8 percent points of the tax quota depending on the period.

**Figure 1:** Trends in tax expenditures 1980-2000 (as percent of GDP)



Sources: U.S. Office of Management and Budget (2000), Toder (1999)

Source: Burman (2003, p. 16).

According to the Figure 1, the highest tax expenditure level in USA was 8 % of GDP; in other countries it can be even higher. The tax expenditures in the amount of 8 % of GDP reduce the tax quota by 8 percent points.

As far as the shadow economy is concerned, there are various methods to estimate its value (for the discussion on the shadow economy value estimation see e.g. Schneider and Enste, 2002 or Orviská et al., 2006) and it is notorious that its size differs according to the regions. For instance according to Rettmen (2009) the shadow economy accounts for 10 – 18 % of

the official GDP in North Europe and Scandinavia and 20 – 25 % in the Mediterranean. Many post-communistic countries have the same size of shadow economy as the Mediterranean states while the shadow economy estimates for Estonia, Latvia, Romania and Bulgaria range from 36 – 39 %. And in Belarus, Moldova and Ukraine, the EU neighbours, more than half of the economic activities is not subject to taxation. The inclusion of shadow economy into the nominator when calculating the tax quota reduces the reported tax burden. (On this topic Rettmen notes in 2006 Greece included also the estimate of relatively high shadow economy value into its GDP aiming to circumvent the European fiscal discipline rules. This calculation was rejected by the Commission.) If, for example, Orviská et al. (2006) estimate the shadow economy value in the Czech Republic in 2002 at about 22 %, this means that the reported tax quota for 2002 would be reduced from 36.3 % (estimate by OECD) to 29.7 %, i.e. about 6 percent points, after the inclusion of grey economy into the GDP.

Based on the experience in the crisis which emerged in the autumn of 2008, it can be expected the cost of government regulations and guarantees as well as government non-tax revenues from activities carried out on the government account (such as lotteries) will represent a considerable item in many countries. This involves high sums with a strong redistribution function which are, unlike the taxes, hard to estimate. Therefore in USA, for example, there is the Regulatory Right-to-Know Act of 2001 which requires that the Federal Government submits to the Congress an annual report on costs of and benefits from the federal regulations. During fiscal year 2008 the benefits and costs for 14 major rules were quantified and monetized. These rules yielded from 8.6 to 39.5 billion USD of yearly benefits and represented from 8 to 9.3 billion USD of yearly costs. The main items are regulation of environmental protection, health care and humanity services, and transport (Draft 2009 Report, 2009).

The taxes paid by government are represented mostly by the contributions to social security. In the Czech Republic these taxes, which, in fact, should not be regarded as taxes because they result only in redistribution between budgets, amounted to about 51 billion CZK (see OECD, 2008, p. 235), equal to 4 % of the tax revenues and 1.5 percent points of the tax quota. In other countries it will be less since in the Czech Republic the level of the contributions to social security is one of the highest in the world (in relation to the GDP).

Minor differences can be found in case of the tax revenues calculated on the accrual or cash basis. The application of the two different principles may cause certain small differences in the tax quota level. The differences in a stable system will be smaller than in a system subject to frequent tax modifications or big year-by-year fluctuations in the GDP. Nevertheless the OECD statistical reports show not only accrual but also cash tax revenues of the individual member countries, if available (see OECD, 2008). The differences are on the order of p.p.m. to percents; in the Czech Republic, for instance, the yearly difference was 1.5 % of the tax revenues, i.e. also of the quota, which represents tenths of p.p.m. points on the tax quota as such (see Annex 1)!

## Conclusion

Although detailed international methodologies for the tax revenue and tax quota calculation are used in the long term (IMF, OECD) the tax quota indicator is not fully com-

parable in space and time. This is caused by the nature of the indicator which cannot encompass some factors both in the numerator (quantifying the tax revenues) and nominator (GDP but also GNP). The biggest inconsistencies, not to mention the contributions to social and health insurance which can be included or not, are caused by the existence of tax expenditures, shadow economy and government interventions, regulations and guarantees. Minor inconsistencies can arise due to the application of accrual or cash data on the selected taxes, taxes paid by a government to other government and in case of some countries also differences between the GDP and GNP. (In the global world the differences between the GDP and GNP are likely to grow also in other countries.)

The differences in the calculation arising for the reasons above are either set off or cumulated; in the worst case the difference in the tax quota can rise up to tens of percent points.

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## Annex 1

### Supplementary tax revenue data according to OECD for the Czech Republic (2003-6)

Pro-memory				
Customs duties paid to the EU			5 586	5 516
Total tax revenue on cash basis	553 499	772 272	1 127 973	1 168 195
Conciliation with National Accounts				
Total tax revenue on accrual basis (including EU custom duties)	550 230	773 422	1 121 600	1 193 117
Additional taxes included in National Accounts	-	-	5 024	5 384
Compulsory injury insurance			5 024	5 384
Driving licence fees			-	-
Tax excluded from National Accounts	- 21 762	- 37 207	- 19 209	- 17 245
Tax on use of public space	- 702	- 645	- 611	- 615
Waste deposit fee	- 1 123	- 454	- 5 179	- 5 163
Misc licence and permit fees	- 1 907	- 2 301	- 3 411	- 3 699
Radioactive waste fee	-	- 642	- 1 256	- 1 306
Health insurance: non-employed	- 144	- 483	- 1 607	- 1 848
Health insurance: government	- 13 302	- 27 464	-	-
Soc Security contr employers: Penalties	- 3 400	- 3 293	- 3 858	- 1 280
Soc Security contr Self-employed or non-employed:	- 229	- 172	- 211	- 130
Licence for lorry transport	-	-	-	-
Highway fee	- 955	- 1 753	- 3 076	- 3 204
Difference in treatment of tax credits	-	-	-	-
Capital transfer for uncollected revenue	-	-	-	-
Voluntary Social security	757	1 112	895	915
Miscellaneous differences	1 309	2 162	-	-
Compulsory social security contributions	-	-	-	-
VAT Own Resource	-	-	-	-
Other	1 309	2 162	-	-
National Accounts: Taxes and Actual social contributions	530 534	739 489	1 160 310	1 182 171
Imputed social contributions	123	423	397	423
National Accounts: Taxes and all Social contributions	530 657	739 912	1 108 707	1 182 594

*From 1995 data are on accrual basis.*

*Source: Ministry of Finance, Economic Department.*

## Annex 2

Pro-memory																				
Custom duties paid to the EU																				
Non-wastable tax credits against 11101																				
Tax expenditure component																				
Transfer component																				
Non-wastable tax credits against 12101																				
Tax expenditure component																				
Transfer component																				
Total tax revenue on cash basis	10945	19080	37343	81153	133701	202400	245706	351779	446161	479109										
Conciliation with National Accounts																				
Total tax revenue on accrual basis (including customs duties)																				
Additional taxes included in National Accounts																				
Tax excluded from National Accounts																				
Difference in treatment of tax credits																				
Capital transfer for uncollected revenue																				
Voluntary Social security contributions																				
Miscellaneous differences																				
National Accounts: Taxes and Actual social contributions																				
Imputed social contributions																				
National accounts: taxes and all social contributions																				

*Year ending 31st December.*

*From 1990 data are on accrual basis.*

*The community charge replaced domestic rates in Scotland in April 1989 and was extended to England and Wales in April 1990. Since the tax is lump-sum levied on each adult in a household, it has been classified in heading 6200 (domestic rates classified in heading 4100).*

*Heading 1210: The corporate tax figures include company income tax from 1990 onwards. Heading 2000 includes some voluntary contributions which cannot be separately identified.*

*1. The treatment of these figures in the data are consistent with the guidelines. The following method is adopted separately for Working Families "Tax Credit and Disabled Persons Tax Credit" paid from 1999 to 2009. For each calendar, a random sample of awards over-lapping the quarter is taken. Each recipient family's income tax liability for the fiscal year within which the quarter falls is calculated, based on the earned income reported for the award (updated to the middle of the overlap period). And the result multiplied by the number of days in the overlap period divided by 365. The tax expenditure component is defined as the minimum of this amount and the total amount of award paid in the overlap period. The total amount of award paid and the tax expenditure component are each summed over the sample cases, and the ratio is taken as the tax expenditure ration for the quarter. From 2003, the equivalent breakdown for Child and Working tax credits is based on household survey data.*

*Survey data is used to estimate the breakdown into the tax expenditure and the transfer components for the smaller tax credits.*

*Source: National Income and Expenditure, Central Statistical Office, Annual reports of the In-land Revenue and Customs Excise Department.*

*Source: OECD (2008, p. 219).*

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# *Public Challenges for Sports Management in Slovakia: How to Select the Optimum Legal Form of a Sport Club?*

## *Právní problematika managementu sportu na Slovensku: jak vybrat optimální právní formu sportovního klubu?*

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JURAJ NEMEC, MIROSLAV NEMEC

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### **Abstract**

There are many issues to be addressed by the manager of a sports organization/club who wishes to optimize its functioning. There are also many ways the "state" influences all entities in a society, including the sports sector. In our paper we focus on how tax and accounting rules and other public legislation influences the choice of legal form for a sports club. The data come from our own experiences and research in three sport branches – football, triathlon and orienteering. The research results are self-evident and it was unnecessary to validate them with statistical analysis – the size of the budget and probably also the structure of revenues are the main factors influencing the decision on the legal form of a sports club.

### **Keywords**

public finance, sports, football, triathlon, orienteering, legal form of a sport club

### **Abstrakt**

Manažer, který chce optimalizovat fungování své sportovní organizace/klubu, musí řešit řadu problémů. Je také celá řada způsobů, jak „stát“ ovlivňuje veškeré společenské subjekty, sportovní sektor nevyjímaje. V naší práci se soustředíme na to, jak daňové a účetní předpisy a další veřejná legislativa ovlivňují volbu právní formy sportovního klubu. Údaje pocházejí z našich vlastních zkušeností a z výzkumu ve třech sportovních odvětvích – fotbalu, triatlonu a orientačním běhu. Výsledky výzkumu hovoří samy za sebe a nebylo třeba je ověřovat statistickou analýzou – velikost rozpočtu a patrně také struktura výnosů jsou tím hlavním faktorem, který ovlivňuje volbu právní formy sportovního klubu.

### **Klíčová slova**

veřejné finance, sporty, fotbal, triatlon, orientační běh, legální forma sportovních klubů

### **Introduction**

There are many issues to be addressed by the manager of a sports organization/club who wishes to optimize its functioning. There are also many ways the "state" influences all entities in a society, including the sports sector. In our paper we focus on how tax and accounting rules and other public legislation influences the choice of legal form for a sports club.



The data come from our own experiences and research in three sport branches – football, triathlon and orienteering.

The topic is infrequently dealt with in the sports or economics literature. Much more has been written about the impact of taxation on the management of sport clubs. For example there is Clark and Miller's book (2000), and the more general Duquette (2002), and Mahony and Howard (2001). There are also specialized articles, focusing mainly on the football industry (Cant, 2006; Mitchie, 2005; Rowbottom, 2002; Ealey, 1997; Cheffins, 1997; Thorpe, 1996).

Important research in the area of public financing of non-profit organizations was undertaken by the team led by the Johns Hopkins University in Baltimore (see for example Salamon, 1999). The research covered countries from all over the world. According to this source, public support to the non-profit sector differs significantly across areas and between countries. In most new European Union members from the Central Europe state support to non-profit sport and other sectors is very important and represents about 50 % of total incomes (Raguseo, 2008).

## **1 Taxation and accounting rules: What is the optimum legal form for a Slovak sports club?**

The first and not so simple task for managers of any sports club in Slovakia is to decide about the best suitable legal form for their organization. In the current general environment (<http://www.statistics.sk/pls/wregis/ciselniky?kc=0056>), three basic options are available:

- public body
- non-profit body
- company

We assume that the decision for the concrete legal form should be based on an analysis of the following factors:

- concrete local conditions,
- popularity of a sport, and
- the chief characteristics of the club – especially structure and size of revenues in relation to valid tax legislation.

In the following sections we provide basic information about possible options. Then we will test to see if there is any link between the above mentioned factors and the concrete structure of legal forms of sport clubs in selected Slovak sports.

## **2 Sports clubs as public bodies**

This case is a relatively rare solution, but in some special cases (football, ice hockey and some other popular sports) the sports club may be established as a public organization (net budgetary organization) usually connected to a municipal budget.

A net budgetary organization (NBO) is a legal body and subject to the public law. The main law defining its status is the Law 303/1995 on budgetary rules. This organization can be established by the state administration and self-government body or by a specific law.

An NBO is connected to the budget of its establisher on the net principle – revenues and expenditures are not interconnected (all expenditures are financed from the budget of the establisher, all revenues flow to the budget of the establisher). An NBO does not have its own property, it only administers state property. An NBO cannot accept credits or establish other legal bodies, and cannot undertake entrepreneurial activities. NBOs are controlled by the Ministry of Finance, the Supreme Audit Office, the Office of Government and the establisher (Sivák, 2007).

There are some advantages, but many disadvantages in choosing this legal form for a Slovak sports club. The main advantage is short term stability of revenues, as the level of subsidy from the municipal budget is normally stable across an election period (4 years). However, there is no long term stability, for the political structure of a municipal assembly may change, and there are cases where a new mayor endangers the continued existence of a club. Municipal budgets may also have problems providing enough finance to balance top clubs in important sports<sup>1</sup>, especially recently when the allocation system has switched from subjective to program allocation.<sup>2</sup>

From the viewpoint of taxation, this legal form is simple. The budget is balanced. Any surplus has to be returned to the municipal budget, and except for employees there are no tax obligations for the club. Current accounting rules also allow for simplified cash accounting, but for all public bodies a change to accrual accounting is expected.

Clearly this legal form of sports club would only work in local environments where the mayor or municipal assembly was ready to provide resources.

### 3 Sports clubs as non-profit organizations

According to the relevant legislation, the (formal) third sector in Slovakia comprises the following types of organization (Kuvikova, 2006):

**A:** Associations – legal persons with physical or legal persons as their members. Associations are established by the decision of the founding group and are registered by the Ministry of the Interior.

**B:** Foundations – purpose based funds, based on monetary and non-monetary activities that are for the public interest. The existing legislation defines possible areas for the use of foundation resources, such as protection of human rights, humanitarian activities, environmental activities, health, and education.

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1 *There are many examples of very successful municipal sports clubs facing big problems because of insufficient subsidies from the municipal budget – for example the ice hockey clubs in Zilina and in Banska Bystrica, and the women's basketball club in Ruzomberok.*

2 *From 2008 all municipalities are obliged to use program budgeting, the implementation of this rule is realised in several phases.*

**C:** Non-investment funds – nonprofit legal persons whose associated financial funds that shall be used for public interest activities- namely activities in areas of cultural and human heritage and values; environment; maintenance of natural and cultural values and protection and development of health and education.

**D:** Non profit organizations delivering public services – legal persons that deliver public services in the following areas – cultural and human heritage and values, environment, humanitarian activities, education of children and youth, social and health care.

From this list it is obvious that sports clubs can choose only one legal non-profit form – an association. This form has several advantages, as associations are not subject to any specific state regulation and have free use of their own funds. Their business activities are not limited. The following main general legislative rules are important for associations (Kuvikova, 2006):

- a) Associations are free to realize business activities, but must keep separate accounts of their own and business activities.
- b) Surpluses from business activities are first subject to income tax, and the subsequent net revenue can be used for financing their own activities. The income tax exemption for organizations with net incomes below 300 000 Slovak crowns (Sk) was abolished in 2007.
- c) Associations without business activities and with turnover below a defined level<sup>3</sup> can keep simplified cash accounting books.
- d) Associations can be registered to benefit from the system of tax assignation (originally 1 % for physical persons; but from 2004 2 % from the tax obligations of legal and physical persons). In 2005 almost 1 billion Slovak crowns were transferred to the third sector via this channel (<http://www.rozhodni.sk>), and 12 % of legal and physical persons elected to allocate their contributions for associations in sport.
- e) Associations can receive tax exempted donations, but from 2007 donations cannot be deducted by donors from their tax base or their tax obligations.

The list of main legal rules for associations indicates that especially before 2007<sup>4</sup>, this legal form was potentially effective for smaller clubs with limited turnover and only small business type revenues.

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<sup>3</sup> 3 mil. Sk in 2008.

<sup>4</sup> *The new social democratic Slovak government elected in 2006 decided to abolish some tax exemptions and tax advantages for associations, using the argument that such special rules provide too many opportunities for the shadow economy. It also attempted to abolish the system of tax assignation, but had to abandon this goal after large scale protests from the civil society.*

## 4 Sports clubs as companies

Sports clubs can be also established with the legal form of companies, on the basis of the Business Code 513/1991. Companies are legal bodies of a business character with their own property and are fully financially independent. The main advantage of this legal form in sport is the possibility to cover the costs of sporting activities out of the business revenues. Only the final economic outcome of the company is subject to income taxation, so clearly the main task for the financial manager of such a club is to balance the budget to avoid income tax. On the other hand, sport clubs as companies (limited or shareholder) have to fulfill the same duties as any other business person, including using accrual accounting books, and paying VAT if their turnover is the limit.

It is apparent that a company form may work for large clubs in popular sports with many sponsors<sup>5</sup> and other large business incomes.

## 5 Testing reality: what determines the legal form of Slovak sports clubs?

To test our conjecture that sports managers choose the legal form of their clubs on the basis of identifiable criteria, we examined some representative sports. Football was chosen as representative of "big" sport. Orienteering and triathlon represent "small to medium" sports. The selection of sports was mainly based on the authors' opportunities to gather data through personal contacts, as sport clubs have no obligation to provide public information. All data were obtained by direct field research undertaken in 2007 and 2008.

### Football

There are a plethora of football clubs, so we selected representative samples. The first sample is all clubs belonging to the First/Premier League in the 2007/2008 season. The second sample is all clubs from the highest regional level: III. League in the Banska Bystrica region and the final sample is all clubs from the highest local level: "First class" level in Banska Bystrica district.

### First/Premier League

All Slovak first league football clubs are companies. Their annual turnover is between 40 – 100 mil. Sk<sup>6</sup>. Revenues are predominantly from commercial activities. The assumption that clubs in popular sports with large turnovers and a prevalence of "business type" revenues will decide to function as private companies is reflected in this sample.

### Third League in the Banska Bystrica region

Table 1 provides all the basic data about the legal status and budgets of clubs at this level. The financial data are still very approximate. All but one club are associations, and there are no municipal clubs in this sample, though one such club does play one level lower, in the IV. League of the district.

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5 We distinguish between donors (providing donations from income net of tax) and sponsors (ordering – advertisement – services paid from running costs before income tax has been reduced).

6 These clubs were not willing to provide any more concrete information.

**Table 1:** Football clubs in the Third League in the Banska Bystrica region

Name	Legal form	Budget (estimated in SKK)
FK Rakytovce 85	Association	1 mil. – 5 mil.
MFK Lokomotíva Zvolen	Association	1 mil. – 5 mil.
ŠK Kremnička	Association	1 mil. – 5 mil.
Kinex Bytča	Association	1 mil. – 5 mil.
Družstevník Lipt. Štiavnica	Association	1 mil. – 5 mil.
MFK Nová Baňa	Association	1 mil. – 5 mil.
Sokol Dolná Ždaňa	Limited company	1 mil. – 5 mil.
Družstevník Valča	Association	1 mil. – 5 mil.
Baník Veľký Krtíš	Association	1 mil. – 5 mil.
METAL SERVIS Králiky	Association	1 mil. – 5 mil.
MŠK Námestovo	Association	1 mil. – 5 mil.
FTC Filakovo	Association	1 mil. – 5 mil.
Tatran Krasno nad Kysucou	Association	1 mil. – 5 mil.
Cementáreň Lietavska Lúčka	Association	1 mil. – 5 mil.
ŠK Javorník Makov	Association	1 mil. – 5 mil.
MŠK Kysucké Nové Mesto	Association	1 mil. – 5 mil.

Source: own research.

**Table 2:** Football clubs in the “Fist Class” level in Banska Bystrica district

Name	Legal form	Budget (estimated in SKK)
OFK Slovenská Ľupča	Association	bellow 500 000,-
Družstevník Priechod	Association	400 000,-
ŠK Hronec	Association	bellow 200 000,-
Družstevník Jasenie	Association	bellow 300 000,-
Tatran Čierny Balog	Association	bellow 200 000,-
MIER Mýto pod Ďumbierom	Association	400 000,-
Družstevník Baláže	Association	bellow 150 000,-
ŠK OPL Poniky	Association	bellow 300 000,-
Mladosť Lučatín	Association	120 000,-
Slovan Beňuš	Association	bellow 150 000,-
ŠK Helpa	Association	bellow 200 000,-
Partizán Osrbľie	Association	120 000,-
Sokol Braváčovo	Association	250 000,-
Tatran Harmanec	Association	bellow 200 000,-

Source: own research.

## **“First class” level in the Banska Bystrica district**

Table 2 provides comparative data for the lowest district level clubs. The club budgets are relatively very modest, and all clubs` legal form is that of an association.

### **Triathlon**

There are 64 registered clubs in the triathlon federation ([www.triathlon.sk](http://www.triathlon.sk)). All of them have the legal form of an association. The clubs` annual budgets are mostly below 1 mil. Sk. The exceptions – up to 2 mil. Sk. in special years – are due to good sponsors or significant income from tax assignments. The proportion of commercial revenues in all clubs is small to almost zero. This sample is consistent with our conjecture that sports with limited popularity, small budgets and limited “business type” revenues would choose the legal form of association.

### **Orienteering**

There are 24 registered clubs in the triathlon federation ([www.orienteeing.sk](http://www.orienteeing.sk)). All of them have the legal form of association. The annual budget of all clubs is normally bellow 1 mil. Sk., and there is only one club that may slightly exceed this sum in “good” years. Most clubs do not have important sponsors or commercial activities. Again this sample is consistent with our conjecture that sport with limited popularity, low range budgets and limited “business type” revenues would decide for the legal form of association.

## **Conclusions**

Our paper investigated interesting issue where sports management and public finance intersect. It focused on the impact of tax and accounting rules and other public legislation on the choice of the legal form of sports clubs. Three sports were included in the research sample – football, triathlon and orienteering. The research results are self-evident and it was unnecessary to validate them with statistical analysis – the size of the budget and probably also the structure of revenues are the main factors influencing the decision on the legal form of a sports club.

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# *Solidarity and Equivalence in the State Benefits System*

## *Solidarita a ekvivalence v systému státních dávek*

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LADISLAV PRŮŠA

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### **Abstract**

Solidarity and equivalence are a long-term issue of all social systems in advanced countries. At first glance it may appear that these two principles act against one another, but in reality there are a number of very close relationships between these principles – whereas in the degree to which social systems are constructed as universal, the principle of solidarity is applied, in the degree to which social systems are constructed based on the level of income from economic activities, the principle of equivalence is applied. It is this issue of to what extent the specific principles are to be applied that is the fundamental question in making decisions on modifications of specific social systems.

Within this article attention is paid to the evaluation of the relationship of these principles in the social benefits system in our country.

### **Keywords**

solidarity, equivalence, state benefits, state social security, social security benefits, social need, unemployment benefits

### **Abstrakt**

Solidarita a ekvivalence jsou dlouhodobým tématem všech sociálních systémů ve vyspělých zemích. Na první pohled se může jevit, že oba tyto principy působí proti sobě, ve skutečnosti však mezi těmito principy působí řada velmi úzkých vazeb – zatímco v míře, v níž jsou konstruovány sociální systémy jako univerzální, se uplatňuje princip solidarity, v míře, v níž jsou sociální systémy konstruovány v závislosti na výši příjmů z ekonomické aktivity, se uplatňuje princip ekvivalence. Právě to, v jaké míře mají být jednotlivé principy uplatňovány, je zásadní otázkou rozhodování o úpravách jednotlivých sociálních systémů.

V rámci tohoto příspěvku je pozornost věnována hodnocení vztahu těchto principů v systému státních dávek v naší zemi.

### **Klíčová slova**

solidarita, ekvivalence, státní dávky, státní sociální podpora, dávky sociální péče, sociální potřebnost, podpora v nezaměstnanosti

### **Introduction**

Solidarity and equivalence are a long-term issue of all social systems in advanced countries. At first glance it may appear that these two principles act against one another, but in reality there are a number of very close relationships between these principles – whereas in the degree to which social systems are constructed as universal, the principle



of solidarity is applied, in the degree to which social systems are constructed based on the level of income from economic activities, the principle of equivalence is applied. It is this issue of to what extent the specific principles are to be applied that is the fundamental question in making decisions on modifications of specific social systems. Within this article attention is paid to the evaluation of the relationship of these principles in systems of state benefits (state social benefits, social security benefits, unemployment benefits).

## 1 Brief overview of the state benefits system<sup>1</sup>

The first modifications of the state benefits systems were drafted at the beginning of the 1990's in connection with the adoption of the rescue social network concept. The following modifications were adopted:

- Act no. 1/1991 Coll., on Employment, which regulates the conditions for the provision of so called material security of candidates for employment, the predecessor of today's unemployment benefits,
- Act no. 463/1991 Coll., on the Substinence Minimum, which established the limit for material poverty,
- Act no. 482/1991 Coll., on Social Need, which established the conditions for the provision of assistance to citizens in the event of material poverty (social care benefits on account of social needs were drafted).

In the next years the conditions for the provision of these benefits were repeatedly modified, their levels were valorized several times (among the most significant changes in this sense is the adoption of the new Employment Act no. 435/2004 Coll., which became effective in 2005, Act no. 110/2006 Coll., on Life and Existential minimum and Act no. 111/2006 Coll., on Assistance in Material Poverty – both acts came into force on January 1, 2007). At the same time the conditions as well as levels of benefits that were incorporated into the state social benefits system (Act no. 117/1995 Coll., on State Social Benefits, came into force on October 1, 1995) as well as social care benefits provided on account of a health handicap (their comprehensive conceptual regulation has not been adopted yet) were repeatedly modified.

The state social benefit system is defined as the state program of the support of income of an important group of citizens – especially families with children – with the goal of preventing these groups of citizens from falling under the poverty limit<sup>2</sup>. In this regard it was designed as a system of state benefits, which have as their task

- supplement income of families with low income from paid activities (have a preventive effect against poverty),

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1 For purposes of this article, state benefits are viewed as benefits paid out of the state budget and that are not financed on the principle of insurance.

2 See: DLOUHÝ, J. Co ukázala analýza adresnosti systému sociálních dávek [What was shown by an analysis of the targeting of the social benefits system]. Sociální politika no. 11/1996.

- provide for families in selected social situations and events<sup>3</sup>.

Benefits designed in this manner contribute to the resolution of social situations that are considered on the basis of a certain social consensus as situations that 'need to be addressed', i.e., social situations where it is sensible to support a family with children are concerned.

The benefits are financed out of the state budget, from October 1, 1995 until December 31, 2002 these benefits were paid out by the former district offices, after these were cancelled the benefits were paid out until March 31, 2003 by municipal offices in the seats of the former district offices, since April 1, 2004 they are paid out by unemployment offices.

The system of assistance in material poverty is linked to the system of social care benefits provided on account of social need, which was split into a number of legal regulations. The individual benefits were frequently not linked and in some cases they were completely unsuitable.<sup>4</sup> The fundamental legal regulation that governed the provision of these benefits was Act no. 482/1991 Coll., on Social Need, as amended. The biggest problem of this system was the fact that in some cases it created a social trap by guaranteeing – under conditions that were relatively easy to meet – a permanent income at a level that especially persons with multiple children and a low qualification could not realistically attain from employment, which lead to disinterest in the acceptance of work that paid less.

Based on the Act on Social Need, social care benefits (with the exception of the benefit for the subsistence of a child and benefits provided in exceptional cases to minors that did not have permanent residence on the territory of the Czech Republic), were provided by authorized municipal offices in their transferred competencies. All benefits were financed out of the state budget, the authorized municipal offices were not motivated in any way in the effective handling of these funds.

In addition to these benefits, also benefits on account of an unfavorable health condition are paid out in the social care benefits system. The fundamental legal regulation governing their provision is still regulation of the Ministry of Labour and Social Affairs no. 182/1991 Coll., via which the Social Security Act and Act of the Czech National Council on the competency of Czech authorities in social security, as amended, are implemented. If we ignore the fact that the system of these benefits is probably regulated in contradiction with the Charter of Fundamental Rights and Freedoms, the biggest problem of this system is the fact that a number of these benefits have hypertrophied (especially benefits provided in connection with the securing of the mobility of physically disabled persons), the conditions for their provision are established very benevolently, the system has so far not undergone its transformation, a number of social situations could be handled more effectively through

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3 See: VÍŠEK, P. *Analýza stávajících a návrhy nových situací (událostí), které jsou a případně by měly být předmětem intervence státu v systému státní sociální podpory [Analysis of existing and proposals of new situations (events) that are and eventually should be the subject of intervention by the state in the system of state social benefits]. SOCIOKLUB, Prague 2006.*

4 See: BENEŠOVÁ, L. *Typologie (popis) sociálních situací, při nichž dochází k postupnému a později souběžnému čerpání všech systémů (SSP, HN, podpora v nezaměstnanosti) [Typology (description) of social situations in which the gradual, and later parallel, utilization of all systems (Social benefits, material poverty, unemployment benefits) occurs]. SOCIOKLUB, Prague 2006.*

social services (such as the securing of transportation services instead of benefits that are provided on account of the securing of the mobility of physically disabled persons) <sup>5</sup>.

Social care benefits provided on account of an unfavorable health condition are provided by municipal offices with extended competencies. All benefits are financed out of the state budget, municipalities with extended competencies are not motivated in any way in the effective handling of these funds.

In January 2007, Act no. 111/2006 Coll., on Assistance in Material Need came into force, which creates a systematically completely new solution of assistance in material poverty and secures a unified performance of this agenda on the entire territory of the state. An advantage of this system is the fact that it limits long-term dependency on social benefits and as a result prevents social exclusion. The system interconnects the provision of assistance to persons with the evaluation of their activity level in the increasing of income through own effort. Through the use of social work methods, the system creates conditions for the securing of individual work with recipients of assistance in material poverty with the goal of ensuring the necessary integration of these persons into society. In this sense the system reacts to new trends in the social sphere, which started to be used in the second half of the 1990's in European countries ("so that working is worthwhile").

The state employment policy system can be divided into two basic segments: an active and a passive employment policy. Active employment policy supports the increasing of the employability of the labor force by favoring active preventive measures ahead of the provision of social benefits, which in a number of cases maintain the recipient in passivity if activation impulses are not applied. The main measures in this sense include the creation and securing of socially useful jobs, public service work and re-qualification.

By contrast, passive employment policy focuses on the payout of unemployment benefits and requalification benefits. Unemployment benefits are thus designed for people that lost their jobs and worked at least for one year prior to that, that are on record at the employment authority as an employment candidate, i.e., they are actively trying to find work or are participating in requalification courses.

Citizens and employers pay a contribution to the state employment policy for the financing of the employment policy. This contribution is a revenue of the state budget, out of which all active and passive measures are financed. The employment authorities are the guarantors of the implementation of all employment policy measures.

The characterization of the current problems of specific social systems in our country must be based on an analysis of factors impacting the character of individual social transfers. In this regard, the following must be taken into account:

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5 See: KREBS, V. et al. *Analýza sociálně ekonomické situace osob se zdravotním postižením a návrhy na další postup v této oblasti [Analysis of the socio-economic situation of physically handicapped persons and suggestions for next steps in this area]*. SOCIOKLUB, Prague 2003.

- impact of demographic development,
- impact of economic and social factors,
- impact of socio-political determinants (including international influence) <sup>6</sup>.

The entire social system of today is based on the fact that it is especially the citizen who is responsible for his/her social position and the family and municipality form the basic social space in which the citizen's existential background is created. In this regard especially the Act on Social Benefits changed the previous across-the-board approach to the provision of state benefits to a differentiated system with the taking into account of the income situation of the citizen and his/her family<sup>7</sup>.

By reflecting the new philosophical approaches into the resolution of the social situations of citizens, a foundation was put in place in the mid 1990's for a principally new direction to continue expanding – for the development of human resources as one of the conditions of the economic development of society. In this regard, an important role is played by the family, and intervention of the state in its favor should thus be an important part of socio-political factors impacting the character of the social policy in our country also in the next period. This program could also include, for example, evaluation of the possibility of greater state intervention in the development of talents, in the securing of free time activities, language preparation of children, etc.<sup>8</sup>

It is apparent that also the regions, cities and municipalities must participate in the implementation of this program according to the subsidiarity principle. But some of the investigations up until now are showing that these entities do not have much interest in participating financially in the handling of these questions<sup>9</sup>. Social policy is not a priority for the absolute majority of municipalities and regions; it is often still a residual category in their budgets.

In the implementation of the above described modifications in the past as well as in the possible reflecting of the above suggested principles in the following years, it is necessary to pay attention also to the mutual relations between the principles of solidarity and equivalence since it is in the degree to which these principles are applied where the fundamental question in the deciding on the modifications of social systems lies.

6 For further details see: PRŮŠA L. *Možnosti řešení současných disproporcí v oblasti sociálních transferů [Possibilities for resolving the current disproportions in the area of social transfers]*, Study of the Economics Institute of Josef Hlávka no. 1/2001.

7 For further details see: KREBS, V., PRŮŠA, L. *Státní sociální podpora [State social benefits]*. Grada Publishing, Prague 2002.

8 See: *Sociální doktrína České republiky [Social doctrine of the Czech Republic]*, SOCIOKLUB, Prague 2000.

9 See: PRŮŠA, L. *Obce (města) a výdaje na sociální a zdravotní služby v r. 2001 [Municipalities (cities) and expenditures on social and health services in 2001]*. VÚPSV, Prague 2002.

## 2 Basic macroeconomic overview of the development of expenditures on state benefits

The following tendencies can be detected within the system of state social benefits and other state benefits that were paid out before the creation of this system, or that are paid out as a one-time payment, or over the short-term via this system for the coverage of defined social situations:

- at the beginning of the 1990's there was a sharp growth of the expenditures on these benefits as a result of the implementation of the state settlement contribution as a compensation measure as a result of the cancellation of the negative tax on turnover, the share of expenditures on these benefits of GDP grew considerably,
- afterwards, after the state social benefits system was implemented, there was a decline in the share of expenditures on these benefits even despite the fact that in 1993 a one-time benefit was paid out to unprovided for children and in 1994 a fundamental conceptual regulation of children's allowance was adopted (departure from differentiation based on the number of children in a family to differentiation based on the child's age),
- after implementation of the state social benefits system, there is a long-term growth in the absolute expenditures on these benefits, while the share of expenditures on these benefits of GDP drops over the long-term (the only exception in this case is 2004, when a one time benefit to senior citizens and unprovided for children was paid out in connection with tax reforms).

Certain changes in these trends occur in 2007. After a fundamental change in the construction of the subsistence minimum, there was a change in the approach to the housing allowance (the actually incurred housing expenditures are reflected in its construction, which creates the foundation for certain inflationary tendencies in the development of costs on this benefit) and based on a parliamentary initiative, where the approach to the family allowance (it is tied to the level of the average wage in the non-commercial sector) was changed, in 2007 there was a considerable increase in the expenditures on state social benefits and their share of the Gross Domestic Product also increased.

Since the beginning of the 1990's, there was a considerable increase in the benefits within the system of social care benefits provided on account of factors such as social need as well as unfavorable health condition. This increase ensued:

- for benefits provided on account of social need, especially from the development of the unemployment level since as a result of the level of unemployment benefits, basically the vast majority of recipients (mainly from the ranks of families with multiple children) immediately become recipients of these benefits,
- for benefits provided on account of an unfavorable health condition, mainly from the benevolently set conditions for the granting of the vast majority of them.

A decrease in expenditures on social care benefits provided on account of social need occurs from 2003, which is caused mainly by the decline of the unemployment level during this period. Another considerable decline in expenditures on these benefits can be dated

since 2007 in connection with a change of the approach to the subsistence minimum and adoption of the Act on Assistance in Material Poverty.

Within the state employment policy, basically for the entire period between 1993 – 2005 there was an increase in the expenditures on the payout of unemployment benefits (formerly material security in unemployment), with the greatest increase occurring in 1996 – 1999 and subsequently in 2001 – 2003. This development is a reflection of the development of unemployment in our country during the monitored period.

A somewhat different development can be identified in the development of costs on active employment policy. During 1993 – 1997 there was a steady slight decline in the expenditures on this part of state employment policy mainly as a result of the very favorable situation on the job market. Subsequently until 2001 expenditures on active employment policy increased every year, after a short-term decline in 2002 – 2003 they once again increased and in 2005 they reached the historically highest level.

### **3 Solidarity and equivalence in the state benefits system**

When evaluating the relationship between solidarity and equivalence in individual systems of state benefits, it is necessary to focus on the comparison of the amount of money paid by a citizen or household into a specific system and the amount of social benefits that this citizen or household would receive in social benefits if a social situation that is defined in the system occurred. It is apparent that the relationships between these characteristics are also impacted by the character of social solidarity among individual social groups and construction of social benefits, especially from the perspective in which the amount of paid taxes is reflected in their amount<sup>10</sup>.

In this sense solidarity is applied mainly in the following directions in the state benefits system:

- solidarity of childless families with families with children,
- solidarity of higher income families with low-income families,
- solidarity of economically active persons with unemployed persons,
- solidarity of healthy persons with physically handicapped persons.

In this system of these benefits, equivalence is also applied in different extents especially depending on the character of the social situations that are being dealt with in the individual systems:

- in the full degree in the area of state social benefits that are provided without regard for the income level of persons that are assessed together and in the system of social care benefits provided on account of social need and on account of a health handicap, since benefits in these systems are provided on the basis of the formation of social situations that are defined in the systems,

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<sup>10</sup> Considering that the contribution to the employment policy is not defined as an "insurance premium for employment policy", for the purposes of this study it is also considered to be a tax.

- in a limited degree in the area of state social benefits that are provided based on the income level of persons that are assessed together and in the area of passive unemployment policy where the level of benefits is limited by the maximum level of income and when it is exceeded the amount of benefits is not increased, despite the fact that taxes – respectively contribution to state employment policy, which are the source for the payout of these benefits – are collected from the full income.

### 3.1 Solidarity and equivalence in the state social benefits system

Within the state social benefits system, solidarity is applied in two directions:

- solidarity of childless families with families with children (mainly this concerns benefits that are provided without regard for the amount of income of the persons being assessed together – family allowance, foster care benefits, birth benefit, funeral benefit)
- solidarity of higher income families with low-income families (this concerns mainly benefits that are provided based on the amount of income of the persons being assessed together – child allowance, social supplement, housing allowance)<sup>11</sup>.

Taxes, which are the source for the financing of these benefits, are paid by all economically active citizens, and families with children have the option, within the scope of the tax system, to take advantage of relief in the form of deductible items from the tax on individuals' income (until 2004), respectively in the form of discounts on an unprovided for child (since 2005). From this angle it is suitable to judge the character of solidarity and equivalence in the state social benefits system also in connection with the income that families with children receive within the scope of the tax system.

But the functioning of both of these systems is fundamentally different. Whereas within the state social benefits system the amount of the so called tested benefits decreases with the growing net income of the family, with the system of tax on income of individuals the formerly used so called non-taxable amounts in combination with the progressive growth of the tax burden had the result that with the growing income of a person also the support of the state to families with children also increased progressively. Moreover, social transfers to all social groups cannot be executed via the tax system. Advantages ensuing from this transfer can only be used by tax payers, meaning that these benefits do not apply to households of senior citizens with children, unemployed persons, student marriages, incomplete marriages where the mother cares for the child, families with children with below average income and resulting zero tax obligation. As a result, these types of households were thus disadvantaged in a certain way until 2004 in comparison with other groups, since they could not take advantage of all benefits offered by the tax system.

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<sup>11</sup> See KEPKOVÁ, M. *Státní sociální podpora: vznik a vývoj systému [State social benefits: creation and development of the system]*. SOCIOKLUB, Prague 1997 or DLOUHÝ, J. *Vzájemné vazby systému daní a dávek v České republice [Relationships between the tax system and benefits system in the Czech Republic]*. SOCIOKLUB, Prague 1997.

In order to soften the impact of some social transfers via the tax system, since 2005 the deductible items from the tax on income of individuals were replaced by a discount on unprovided for children. A disadvantage of this solution is the fact that this discount has an across the board (and thus also a non-motivational) character and the above described social groups still cannot use this discount.

### **3.2 Solidarity and equivalence in the passive employment policy system**

Within the scope of the payout of unemployment benefits (including requalification benefits), solidarity is applied in the employment policy system mainly between economically active persons and unemployed persons. The provision of unemployment benefits is determined by the age of the unemployed person and limited by the maximum amount, which is stipulated based on the level of the average wage.

For unemployed persons under the age of 50, unemployment benefits are paid out for 6 months, for persons between 50 and 55 for a total of 9 months and for persons older than 55 for twelve months. For the period of the first 3 months, the benefits are 50% of the previous average net monthly income and for the remaining period they are 45% of this income (requalification benefits are paid out for the entire duration of the requalification at the level of 60% of this income). But the maximum amount of unemployment benefits is limited to 58% of the average wage in the national economy for the first three quarters of the previous calendar year. In this sense the equivalency principle is breached considerably within this system, since the citizen (but also the employer and self-employed person) pay the state employment policy contribution from their full wage (respectively the volume of the paid out wages, or the tax base), but in the event of a loss of employment the citizen receives unemployment benefits (requalification benefits) in an amount that absolutely does not reflect income above the average wage level described above. As a result, the benefits recipient, respectively his/her household frequently basically automatically becomes a recipient of assistance in material poverty benefits, since this income level does not make it possible for the citizen to meet his/her basic life needs at the level of the socially acknowledged minimum standard of living with regard for the typical problem of Czech social policy (global prices vs. "Czech" wages).

This situation leads to the consequence that with the growing amount of the previous income the relation between the amount of unemployment benefits (requalification benefits) and the amount of the previous wage decreases when the above described limit is exceeded, meaning that the role of the equivalence principle is decreased at the expense of the strengthening of the solidarity principle, which is thus also applied within this system at the expense of persons with higher income.

In this sense a general trend appears within this system, which is applied in insurance systems in our country, where the benefit amount is influenced, or even completely limited, by income limits in the calculation of a payout in the event of a formation of a legally defined insurance situation. It is apparent that in this sense it is necessary to open a general discussion about what character a benefit should have if a situation that is financed on insurance principles occurs:



- whether this concerns a benefit that has the character of wage replacement and especially the equivalence principle is applied in its amount,
- whether this concerns a benefit that has the character of “pension”, the amount of which is established at a certain level making it possible for its recipient to secure his/her basic life essential at a defined level (for example, solidarity could be based on the principle where if a person worked for his/her entire life for compensation in the amount of the minimum wage and paid taxes and insurance contributions properly, this person would receive a benefit at the level of an individual's subsistence minimum if an insurance situation occurs)
- whether this concerns a benefit in the calculation of which both principles are applied.

### **3.3 Solidarity and equivalence in the assistance in material poverty system and social care benefits provided on account of social need**

Within the system of social care benefits provided on account of social need (since 2007 in the assistance in material poverty benefits system), solidarity of higher income persons with persons whose income does not reach the life minimum level is applied. This solidarity is based on the Charter of Fundamental Rights and Freedoms (based on which everyone has the right to assistance in material poverty) and other international commitments by which the CR is bound (e.g., European Social Charter).

The source for the financing of these benefits is taxes, which are paid by all individuals and legal entities. Equivalence within this system is applied in the maximum extent, the amount of the life minimum is not determined by the amount of taxes paid previously and the length of time for which these benefits may be collected is not restricted.

The only exception – which is not directly related to this system of benefits, but which ensues from the conditions of the rights to benefits in other systems – is the situation where the citizen does not have the right to benefits provided from the system of social care benefits on account of social need despite the fact that he/she paid taxes regularly, because within the sickness insurance system, if this citizen is a self-employed person, he/she did not pay sickness insurance because this system is a voluntary system for this group of persons. Considering that the citizen as a self-employed person had the option to be insured for the event of sickness and pay sickness insurance premiums, it is completely logical that if he/she did not do so voluntarily he/she does not have the right to benefits from either the sickness insurance system or from the system of social care benefits provided on account of social need if this citizen becomes sick.

### **3.4 Solidarity and equivalence in the system of social care benefits provided on account of physical handicap**

Within the system of social care benefits provided on account of a physical handicap, solidarity of healthy citizens with physically handicapped persons is applied. The source for the financing of these benefits is taxes, which are paid by all individuals and legal entities. Within this system of benefits – similarly as in the system of benefits in material poverty – equivalency is applied in the maximum extent, the provision of benefits within this sys-

tem is not determined by the amount of previously paid taxes, the benefits are provided if health handicaps defined in legal regulations occur, the length of time for which these benefits may be collected is not restricted.

Changes within this system probably cannot be expected even in the case of the transformation of this system that is being prepared for several years. This is a system in which the conditions for the right to some of the benefits are set very benevolently, which leads to their frequent abuse<sup>12</sup>.

## Conclusion

The objective of this article was to characterize the interaction of the principles of solidarity and equivalence in state benefits systems (state social benefits, social care benefits, unemployment benefits). Based on an overview of the most important development trends in the past period in these systems, attention was subsequently paid to the specification of the relationships of these principles in individual systems of state benefits. The principal part of the attention was paid to the characteristics of these relationships in the state social benefits system and in the payout of unemployment benefits.

In the state benefits system, solidarity is applied mainly in these directions:

- solidarity of childless families with families with children,
- solidarity of higher income families with low-income families,
- solidarity of economically active persons with unemployed persons,
- solidarity of healthy persons with physically handicapped persons.

In this system of these benefits, equivalence is applied also in a different extent mainly depending on the character of the social situations that are being dealt with in the individual systems:

- in the full degree in the area of state social benefits that are provided without regard for the income level of persons that are assessed together and in the system of social care benefits provided on account of social need and on account of a health handicap, since benefits in these systems are provided on the basis of the formation of social situations that are defined in the systems,
- in a limited degree in the area of state social benefits that are provided based on the income level of persons that are assessed together and in the area of passive unemployment policy where the amount of benefits is limited by the maximum level of income and when it is exceeded the amount of benefits is not increased, despite the fact that the extent of equivalence depends on the character of the social situation that the individual social benefits are dealing with.

The principle of equivalence is considerably breached in the passive employment policy system, where the citizen, employers as well as self-employed persons pay a contribution to the employment policy from the full wage, but the unemployment benefits as well as

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12 See: PRŮŠA, L. *K transformaci dávek pro zdravotně postižené občany [On the transformation of benefits for physically handicapped citizens]*. *Sociální politika* no. 7-8/2001, ISSN 0049-0962.

requalification benefits are limited by the maximum amount, which is established based on the average wage in the national economy. With the growing amount of previous income, the decrease of the relation between the unemployment benefits (requalification benefits) and the amount of the previous wage is occurring, which leads to the strengthening of the principle of solidarity, in this case the solidarity of higher income persons with low-income persons. This fact triggers a question about the general character of the benefits that are provided on the principle of insurance.

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# *Monetary Policy and Central Banking in the Wake of the World Financial Crisis*

## *Měnová politika a centrální bankovníctví v podmínkách světové finanční krize*

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MIROSLAV HRNČÍŘ

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### **Abstract**

The article identifies causes of the world financial crisis and its impact on monetary policy and central banking. Under the pressure of crisis, the standard monetary policy of previous periods shifted to unconventional instruments of "quantitative easing". This change represents move away from technical monetary policy towards a more activist approach. Will this shift be only temporary and monetary policy will return to traditional standards as the crisis subsides? Or will its impact be of a more permanent character? The article examines the applied unconventional monetary policy measures, their consequences and risk involved. For the past decades central banking has been dominated by consensus which holds the view that central bankers' prime task is to keep inflation low and stable. Learning the lesson from the current crisis the article discusses the arguments whether monetary policy should be and could be more oriented to the broader issues of financial stability, not just price stability.

### **Keywords**

monetary policy, central banking, financial crisis, price stability, global imbalances, savings glut, liquidity glut, interest rates, quantitative easing, unconventional instruments balance sheets, asset market bubble, inflation expectations

### **Abstrakt**

Stať identifikuje příčiny světové finanční krize a její vliv na měnovou politiku a centrální bankovníctví. Pod tlakem krize došlo k posunu od standardní měnové politiky předchozího období k nekonvenčním nástrojům "kvantitativního uvolňování". Tato změna představuje odklon od technické měnové politiky k více aktivistickému přístupu. Bude tento posun pouze dočasný a měnová politika se po odeznění krize vrátí k tradičním standardům? Nebo bude mít dopad krize trvalejší charakter? Stať analyzuje uplatněné nekonvenční nástroje měnové politiky, jejich důsledky a existující rizika. V uplynulých desetiletích dominoval v centrálním bankovníctví konsensus podle něhož je primárním úkolem centrálních bankéřů udržovat nízkou a stabilní inflaci. Zkušenosti ze současné finanční krize vyúsťují ve stati v diskusi argumentů zda by měnová politika měla být a mohla být více orientována na širší problematiku finanční stability, a nejen pouze cenové stability.

## Klíčová slova

měnová politika, centrální bankovníctví, finanční krize, cenová stabilita, globální nerovnováhy, nadměrné úspory, nadměrná likvidita, úrokové míry, kvantitativní uvolňování, nekonvenční nástroje, bilance, bublina na trhu aktiv, inflační očekávání.

## Introduction

The world financial crisis caused substantial changes in the policies and instruments of many central banks. In this article those changes are addressed and evaluated and the implied risk discussed. Questions are raised regarding the future consequences of central banks' reactions to the challenges of the financial crisis.

Under the pressure of crisis, the standard monetary policy of previous periods shifted to unconventional instruments of "quantitative easing". Will this shift be only temporary and monetary policy will return to traditional standards as the crisis subsides? Or will its impact be of a more permanent character?

In searching for the answers to those issues the article identifies causes of the current financial crisis. Their examination highlights the dominant role of the profound, systemic causes on the backdrop of changed environment in the world economy. Are unconventional monetary policy instruments introduced in response to the crisis capable to cope with those causes? The article points to their inherent risk and to lot of uncertainty how monetary policy works in a world of near-zero interest rates.

For the past decades central banking has been dominated by consensus which held the view that central bankers' prime task is to keep inflation low and stable. Now, in the wake of the financial crisis, it seems to be commonplace to demand that central bankers must care about the health of the financial system, not just price stability.

Should monetary policy "lean against" asset bubbles and focus more on the broader financial stability? The article surveys "pros" and "cons" of alternative approaches and concludes with the challenges which monetary policy and central banking are likely to face given their broader domain and responsibility.

## 1 Central banks and monetary policy in the "golden" decade before the outbreak of the world financial crisis

From the macroeconomic point of view, the decade preceding the first signs of the financial crisis in 2007 and its massive spread in 2008 seemed an extremely favourable period in modern history of the world economy. Stable and relatively dynamic economic growth coexisted with low and non-volatile inflation.<sup>1</sup> The outbreak of the financial crisis brought that "golden decade"<sup>2</sup> to an end. With the benefit of hindsight it is clear, however, that the primary causes of the crisis were already built into the "golden" period. More precisely, the long-running successful macroeconomic situation fostered

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1 Economists spoke of a "Great Moderation", i.e. a period in which the traditional cycle was largely dampened.

2 Referred to in the literature as the "Nice (Non-Inflationary Consistently Expansory) Decade".

undue satisfaction with the existing trends and led to underestimation of the arising imbalances and implied risks. An environment prone to bubbles was thus created.

This period was simultaneously one of consolidation of changes in monetary policy orientation and in the concept of central banking in general. In that respect, profound changes had been taking place since the late 1970s and early 1980s. The key feature of those changes was an orientation towards **price stability** as the principal, if not exclusive, goal of monetary policy. The conviction gained ground that price level stability is the most important way in which central banks and monetary policy can contribute to economic development and sustainable growth.<sup>3</sup>

In this period, both central bankers and academic economists seemed to reach a consensus regarding the concept of modern monetary policy – the goal: price stability; the instrument: short-term interest rates. Although short-term interest rates alone have only a modest impact on economic activity, there is a standard assumption that their transmission affects medium- and long-term interest rates, which do have a substantial impact on the economy.

When trying to achieve price level stability, central banks follow a specific monetary policy strategy. Up to the 1990s, the monetary policy strategies applied led to price stability only indirectly, through the use of intermediate targets such as the targeted value of a monetary aggregate or exchange rate. In the last decade, however, an increasing number of central banks have switched to achieving price stability directly, i.e. without intermediate targets, under a monetary policy strategy of inflation targeting. This direct orientation of monetary policy on its final goal, price stability, can be considered a culmination of the growing role that price stability has been playing in the monetary policy of contemporary central banks.

A comparison of central banking and monetary policy during the recent “golden” decade with the 1960s and 1970s reveals that the changes that have taken place are profound indeed. The shift towards price stability as the dominant goal of monetary policy has been accompanied by substantial changes in the role, activities and monetary policy of central banks.

### **“Technical” versus “activist” monetary policy, rules versus discretion**

Monetary policy in the 1960s and 1970s was viewed primarily as a means of stimulating economic activity and reducing unemployment. This approach was based on the assumption that monetary policy instruments can at least dampen, if not eliminate, the cycle. As a result, monetary policy at this time aimed at smoothing cyclical fluctuations was dubbed “**activist**” or “**fine-tuning**”. This monetary policy orientation on the short term neither required, nor made possible, the use of fixed rules. On the contrary, the decision-making was of a discretionary character.

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3 Cf. Fischer S., *Why Are Central Banks Pursuing Long-Run Price Stability*, in: *Achieving Price Stability*, Jackson Hole, August 1996.

With the shift in the orientation of monetary policy towards price stability, and with the lesson learned that monetary policy effects occur after a considerable and variable time lag, the arguments in favour of the adoption and use of **monetary policy rules** prevailed. Instead of the discretionary approaches aimed at fine-tuning to correct cyclical fluctuations which had characterised the monetary policy of the previous period, the substance of monetary policy-making became (putting it simply) setting one instrument (short-term interest rates) so as to achieve one goal (price stability). In this changed environment, monetary policy increasingly went into **technical mode**<sup>4</sup>.

### Central bank independence

The transformation of monetary policy into a technical issue was accompanied by increasing **independence of central banks**. Empirical studies proved a correlation between the degree of central bank independence from the government executive and the inflation figures achieved: as a rule, the higher the degree of central bank independence the lower the level of inflation. With the move to inflation targeting, central bank independence has increasingly been applied even in the formulation of monetary policy goals, and not only in the selection and setting of monetary policy instruments. This means not only “operational” or “instrumental” independence, but also “goal” independence<sup>5</sup>.

### Monetary policy transparency and predictability

Within the activist policy framework, monetary policy-making was veiled in secrecy. Central banks had to try to more or less “surprise” economic agents (a consequence of the time-inconsistency of monetary policy). By contrast, the reorientation of monetary policy towards the goal of price stability generated a need to influence and **stabilise the inflation expectations** of economic players. To that end, various types of nominal anchor are applied.<sup>6</sup> These include a money supply target, an exchange rate target, or an inflation target directly (usually in the form of a year-on-year increase in the consumer price index). As a result, monetary policy has become more **transparent and predictable**.

### Central bank credibility

A comparison of inflation in the recent decade with that in the 1970s and 1980s leads to the conclusion that the world economy’s “golden” growth decade was simultaneously an exceptionally successful period of central banking. Inflation was relatively low and stable worldwide. The maintenance of a low inflation environment amid relatively dy-

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4 Cf. King M., *Challenges for Monetary Policy: New and Old*, in: *New Challenges for Monetary Policy*, Jackson Hole, August 1999.

5 This „goal” independence means that central bankers themselves set a concrete target for monetary policy implementation in the given period. Within the regime of inflation targeting it does usually mean the numerical increase of consumer price index y/y. Such a concrete goal must be distinguished, however, from the “ultimate goal” which represents price level stability. “Ultimate goals” are imposed on central bankers, mostly through a legal act. In the case of the Czech National Bank the goal of price level stability is fixed in the National Constitution.

6 Cf. *Key Issues in the Choice of Monetary Policy Framework*, in: Mahadeva L., Stern G., eds.: *Monetary Policy Frameworks in a Global Context*, Routledge, London 2000.



dynamic economic growth and dampened cyclical fluctuations lent increasing **credibility** to the anti-inflationary monetary policy of central banks.

### **The outbreak of the world financial crisis: an unexpected discontinuity?**

The outbreak of the financial crisis shook confidence in the existing schemes and policies. Despite the low and stable inflation and dampened cyclical fluctuations there was suddenly a worldwide financial crisis, a deep recession and an imminent risk of deflation, but with swollen inflation threatening in the longer run, implying the loss of the previously standard, i.e. low-inflation, environment.

With the benefit of hindsight it can be argued that undesirable (excessive) inflation (measured as the increase in the consumer price level) was not the main monetary policy challenge of the past decade. The “structural” risk was the imbalances that had grown under the veil of the success of exceptionally sustained and relatively dynamic economic growth in the world economy. It was proved that financial imbalances and various “bubbles” in the markets for financial and real assets (especially housing) can be generated even at a time of low and stable inflation. Their subsequent bursting or deflation tends to result in considerable losses, as the current financial crisis has shown.

## **2 The causes of the world financial crisis**

Long before the outbreak of the world financial crisis in 2007 and 2008, a discussion on the risks and controversial issues of current developments and changes in the financial world had been developing. A whole range of proposals had been formulated to improve the international financial architecture. Nevertheless, the lesson that the collapse of the sub-prime mortgage market, i.e. a relatively limited segment of the financial market, could result in the deepest world financial crisis since the 1930s was entirely unexpected.

After the crisis erupted, the search for its underlying causes concentrated on individual, relatively immediate and visible weak points in the financial market itself. Apart from the massive spread of non-standard loans, mortgages in particular, the criticism concentrated on the low transparency of derivatives markets, on lapses in the regulatory framework and on the failures of rating agencies.

These specific factors no doubt played a negative role. Yet the nature and depth of the world financial crisis suggest the existence of **systemic, structural causes**. There is a strong argument that only given such fundamental causes could failures on the US sub-prime market have triggered a worldwide avalanche of crisis in most financial markets and, subsequently, in the real economy. Simplifying somewhat, it can be claimed that the collapse of the US sub-prime market turned out to be **the trigger of the financial crisis by chance**. In a different situation, another market segment might have played this role.

As for a more specific identification of the fundamental causes of the world financial crisis and their relative importance and implied causality (causes and effects) no clear

consensus has been reached as yet. The individual approaches and strands of argumentation in the literature differ significantly.

Allowing for some simplification, there are two alternative explanations of the fundamental causes of the financial crisis:

- i) growth of global imbalances in the world economy
- ii) profound changes in the character and activities of financial sector institutions

## **2.1 The financial crisis viewed as a consequence of global imbalances in the world economy**

Though formulated in various ways, the unifying postulate of this approach is the impact of increasing global imbalances in the world economy. These imbalances manifested themselves in various bubbles in the markets for both financial and real assets, in particular housing. They gave rise to an environment that compromised and ultimately imperilled the very functioning of the financial system. In the identification of the specific causal factors, two different streams of opinion can be distinguished. The first one sees the problem in a "savings glut" and the other in a "liquidity glut" in the world economy.

### **2.2 "Savings glut"?**

According to this approach the primary causes of the imbalances were discontinuities and shock-like changes in the formation, distribution and use of savings in the individual regions of the world economy, particularly between the developing and developed countries, which resulted in deepening global imbalances.

Two parallel factors coincided:

- a number of developing countries, especially in Asia, generated big current account surpluses. After the painful lessons of the 1990s crisis in Latin America, Asia and Russia, these countries followed a policy of an undervalued exchange rate (with respect to USD in particular) and accumulated foreign exchange reserves as a "protective shield" against the re-appearance of balance of payments crises. In quantitative terms, the Chinese current account surplus was dominant. In 2007 it amounted to 11% of GDP and the official Chinese foreign exchange reserves climbed to USD 2 trillion. This was mirrored in the US current account deficit, which increased to 6% of GDP in 2006.
- the second source of the savings glut was the oil-exporting countries and – to a lesser extent – some other commodity exporters as well. The price of oil increased from USD 25 to USD 150 per barrel between 2000 and mid-2008. As a result, the

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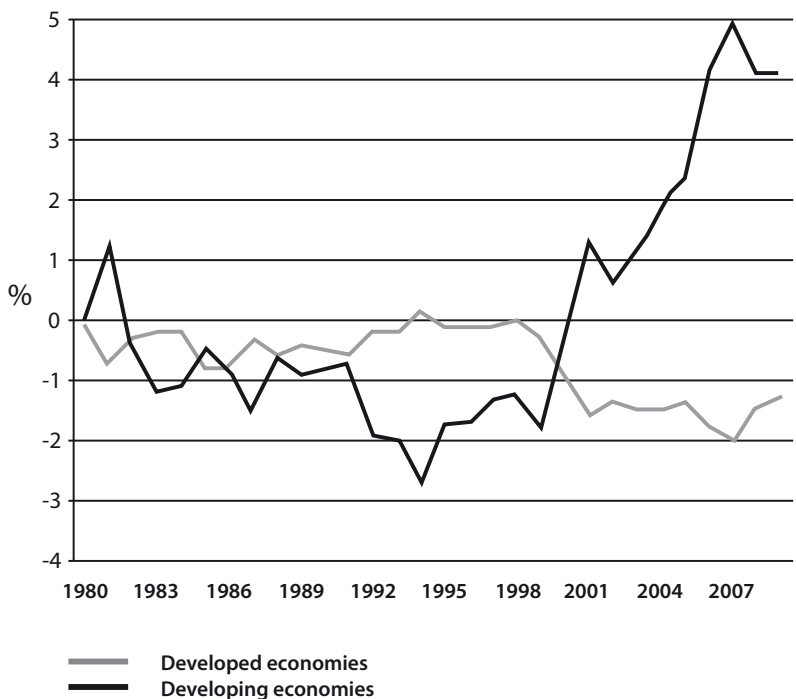
7 In the literature, the savings issue in the financial crisis is dubbed a "savings glut". The term was coined by the chairman of the Federal Reserve System, Ben Bernanke, in 2005 in his lecture "The Global Saving Glut and the U.S. Current Account Deficit" (see [www.federalreserve.gov/boarddocs/speeches](http://www.federalreserve.gov/boarddocs/speeches)).

income of the oil-producing countries soared, and thanks to those “petrodollars” their foreign exchange reserves rose as well.

The internal economies and domestic capital markets of these developing countries were not able to absorb such a shock-like increase in disposable savings in the short run, i.e. to invest them within the national economy, in infrastructure, health care and education. Consequently, investment opportunities were sought for the accumulated savings on the markets of developed countries, especially the US.

These savings flows were reflected in a widening gap between the current account surpluses of the developing countries and their mirror counterparts in the form of increasing current account deficits in many developed economies (see Chart 1).

**Chart 1:** Current account to GDP ratios of selected developed and developing countries (in %)



Data: IMF.

The aforementioned direction of the savings flows contradicts the standard reasoning of economic theory.<sup>8</sup> According to it, the domestic savings of developing countries as

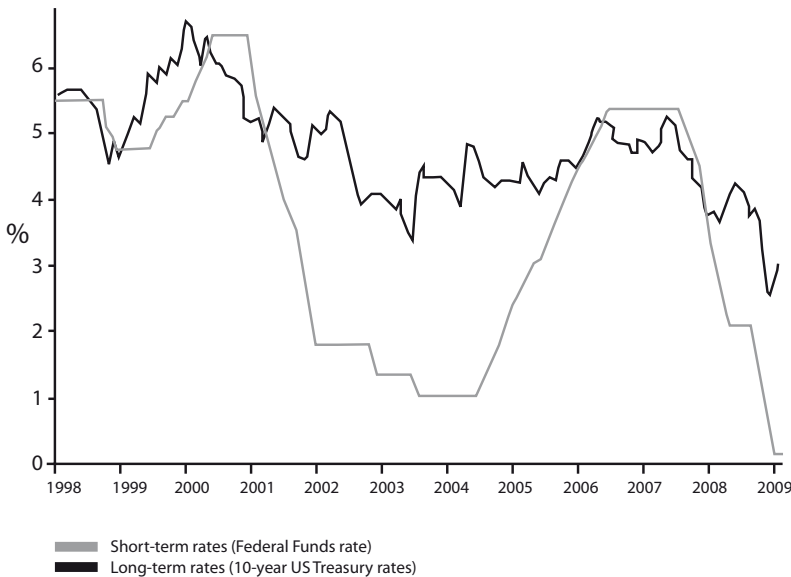
<sup>8</sup> This refers primarily to the dominant neoclassical model, which assumes a decreasing marginal yield of capital.

a rule are not sufficient to cover the available investment opportunities, which – as confirmed by empirical data – provide higher yields on capital than in developed countries. As a result, developing countries are therefore usually importers of capital, which leads to deficits on their current accounts. The situation in developed economies should usually be just the opposite, with savings exceeding profitable investment opportunities.

When one compares the situation in the world economy before the outbreak of the financial crisis with these postulates of economic theory, the anomaly of the recent savings flows and their deviation from the “standard” seems obvious. Massive savings flows went from China and other developing countries to the developed countries, generating increasing demand for their financial assets, especially US government bonds (Treasuries).

These specific conditions and their consequences seem to explain the “conundrum”<sup>9</sup> of why long-term interest rates (and, consequently, real interest rates) remained low in the US economy despite a substantial hike in short-term monetary policy interest rates (Federal Funds rates) by the Fed from 1% to 5.25% between mid-2004 and 2006 (see Chart 2).

**Chart 2:** Short-term and long-term interest rates in the US economy



Data: Federal Reserve Board, Goldman Sachs.

<sup>9</sup> The term “bond conundrum” was used in 2005 by the then chairman of the Federal Reserve System Alan Greenspan when discussing why long-term interest rates had deviated substantially from short-term rates (Federal Funds rates). See “Testimony of Chairman Alan Greenspan” ([www.federalreserve.gov/boarddocs](http://www.federalreserve.gov/boarddocs)).

## 2.3 Higher risk aversion?

The postulate of excessive savings being the primary cause of the imbalances in the world economy has been further refined and tested in various guises. Analyses conducted by Goldman Sachs<sup>10</sup> suggest that, consistent with the savings glut hypothesis, there was a fall in yields on all debt securities, including government bonds, corporate bonds and securitised debt, but that the same does not apply for the return on physical capital, which conversely increased over the past decade.

This means there were two contrary trends: a rise in yields on risky (physical) capital and a concurrent decline in risk-free interest rates. If a savings glut did not lead to the decline in yields on all assets, what were the causes?

The hypothesis relevant to explaining these contrary trends is that a substantial rise in the importance of the developing economies<sup>11</sup> and their deeper integration into the global economy resulted in a sharp increase in the effective labour supply on a global scale. This shift boosted the growth rates achieved by the world economy in recent years and also fostered an increase in the return on physical capital. As a result, the consequences of the savings glut did not pass through to physical capital or were outweighed by shifts in the labour supply and faster economic growth.

According to finance theory, this means that there had to be a sharp rise in the global equity risk premium (i.e. the premium on risky capital).<sup>12</sup> What were the possible reasons for this shift? It seems to be linked with the fact that investors from developing countries (China, other Asian nations, oil producers and exporters) gained significantly in importance. As a result, major investors turned to be sovereign funds and central banks. One can speculate that they were generally more risk averse. Acting in parallel with this were various institutional and other constraints both on investors and on the recipients of investment. The available evidence suggests that in practice these constraints (formalised and implicit) primarily affected the investments of sovereign wealth funds and other public funds. These two factors together generated a strong preference for fixed-income products.

## 2.4 Too loose monetary policy, “liquidity glut”?

According to this line of argument, the monetary policy of certain major central banks in the recent period was too expansionary or remained too loose too long.<sup>13</sup> This misguided **monetary policy was the primary cause of the liquidity glut** and the subse-

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<sup>10</sup> cf. “The Savings Glut, the Return on Capital and the Rise in Risk Aversion”, Goldman Sachs, Global Economics Paper No. 185, May 2009.

<sup>11</sup> This refers primarily to a group of four countries with high growth potential: Brazil, Russia, India, and China (the BRICs).

<sup>12</sup> The relationship between equity yields and bond yields operates through the equity risk premium (ERP). The ERP is the additional return that investors expect over the risk free rate in return for investing in equities. A rise in equity yields together with a decline in real bond yields implies a sharp rise in the ERP.

<sup>13</sup> For the role of monetary regime in the development of financial imbalances cf. Borio, C., White, W. (2004), „It is hard to imagine that financial imbalances could build up without some form of monetary accommodation“.

quent uncontrollable boom, bubbles and bust. According to this argument, too-easy monetary policy led to commodity and credit bubbles. Producer countries, particularly in Asia and the Middle East, were flooded with dollars as a result. Given the limited domestic consumption in these countries, these dollars were recycled into dollar-denominated assets, in particular Treasuries and real estate-related securities. In this way the Fed created a glut of dollar liquidity that pushed long-term rates down to low levels and for a long time neutralised the belated attempts to tighten monetary policy. According to this approach, other factors were less significant or were merely accompanying or derived phenomena.

This line of criticism has been directed mainly at the Fed. The aforementioned conclusions are shared by John Taylor<sup>14</sup> and other critics of Alan Greenspan's monetary policy. In Taylor's view, in 2002–2004 the Fed deviated from its previous rule, lowering rates further even though the rule was signalling a need for them to move in the opposite direction, i.e. to rise.<sup>15</sup>

The report of the de Larosière Group, which was tasked with identifying the lessons of the financial crisis for financial regulation and supervision in the EU, sees ample liquidity and low interest rates as the major underlying factor behind the crisis.<sup>16</sup>

Nevertheless, the hypothesis that a liquidity glut was the primary cause of the financial crisis raises a number of questions, in particular:

- Why, in an environment of excessive liquidity, did inflation (i.e. the change in the level of prices of consumer goods and services) remain under control at low levels?
- How come asset price growth was not seen across the board, as might have been expected in the case of too-easy monetary policy?

## 2.5 An alternative explanation: financial sector itself?

Unlike the aforementioned approaches, which identify deepening global imbalances – i.e. the macroeconomic dimension – as the fundamental cause of the financial crisis, this approach emphasises the area from where the crisis tendencies spread, i.e. the

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14 John Taylor is the "father" of the widely applied Taylor rule of monetary policy. His answers to the questions what caused the financial crisis, what prolonged it, why did it worsen so dramatically more than a year after it began are exposed in his paper "The financial crisis and the policy responses: an empirical analysis of what went wrong", Working Paper 14631, National Bureau of Economic Research, January 2009.

15 Timothy Geithner, Treasury Secretary in the Obama administration and former president of the Federal Reserve Bank of New York, has also conceded that the monetary policy of the Fed (and in his view in the global economy generally) was too easy in the past. "I would say there were three types of broad errors of policy and policy both here and around the world. One was that monetary policy around the world was too loose too long. And that created this just huge boom in asset prices, money chasing risk. People trying to get a higher return." Quoted from *Wall Street Journal*, 13 May 2009.

16 cf. de Larosière Group, *The Report*, p. 7, 2009.

financial sector itself. According to this argumentation, it was primarily the changed dimensions and characteristics of the financial sector that led to the financial crisis.

Data show that in the past decade the financial sector broke loose from the real economy and its trends. Institutions of the shadow (parallel) financial system – investment funds, investment banks, hedge funds and special-purpose vehicles – gained in importance alongside traditional banking intermediation institutions. Growth in derivatives (particularly CDOs and CDSs)<sup>17</sup> far exceeded growth in their underlying assets. Under intense competitive pressure, financial institutions tried to compensate for the low interest rates and low returns by developing and distributing new structured products. Loans were thus converted into securities backed by mortgages and other assets and further packaged into structured products, namely CDOs. The path to higher returns – for both banks and investors – ran via growth in leverage<sup>18</sup> and investment in riskier products.

The process of **securitisation**<sup>19</sup> is in principle undoubtedly a major step forward in risk management. Before it was developed, loans and their associated risk remained solely in banks' balance sheets. By contrast, securitisation enables risk to be distributed across the wider financial system. This general advantage of securitisation, however, was largely undermined in the specific conditions of the past decade by non-transparency and by the virtual impossibility of identifying the size of the risk contained in individual products. It was unclear whether the risk had been truly distributed or just relocated to the less regulated, or "shadow", parallel financial system.

Securitisation enabled many financial institutions to create large positions in very risky assets, usually accompanied by growing leverage and thus reduced capital needs. It seemed a useful way for individual financial institutions to reduce their immediate risk and free up capital for lending. This, however, reduced the transparency of financial flows and complicated the process of monitoring them and overseeing the financial system as a whole. Combined with the failures of rating agencies and totally unrealistic evaluation (usually undervaluation) of the risks of financial innovation, it set the stage for extremely adverse consequences for the functioning of the financial system as a whole. In these specific conditions, financial innovation and securitisation, i.e. tools intended to help institutions in the financial market and in the real economy mitigate, distribute and manage their risks more effectively, conversely made the global financial system far more vulnerable and risky.

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17 A collateralised debt obligation, CDO, is a structured debt instrument derived from a portfolio of diversified securities, loans or CDSs. A credit default swap, CDS, is an instrument for transferring credit exposure between parties for fixed-income products. The buyer of the CDS acquires credit insurance, while the seller vouches for the credit product. The risk of default is thus transferred from the owner of the fixed-income security to the seller of the swap.

18 Leverage is the ratio of a company's debt financing to its equity, i.e. the part of its total capital owned by shareholders. A high degree of leverage means a high degree of reliance on debt financing. The higher is a company's leverage, the higher is the proportion of its total revenues absorbed by interest payments.

19 Securitisation is a process whereby new marketable securities backed by existing assets such as loans, mortgages and other assets are issued.

### **3 Did the world financial crisis erupt and spread in spite of, or because of, the exceptionally successful decade of macroeconomic development?**

With the benefit of hindsight we can identify how the past decade differed from previous periods in macroeconomic terms:

- it was a relatively long period of uninterrupted and relatively dynamic economic growth;
- the cycle, at least in its traditional form, seemed to have been suppressed, as if modern capitalism had rid itself of large cyclical fluctuations;
- unlike in the past, the rapid growth pertained not just to some regions, but to practically the entire world economy;
- despite the rapid global growth, inflation was kept under control and a low-inflation environment prevailed.

#### **3.1 What shaped the characteristics of the past decade?**

It is clear that the world economic environment changed. New driving forces – in particular the processes of financial liberalisation and advancing globalisation – emerged. Globalisation expanded massively in both the financial and real sectors. China, India and other fast-growing developing economies were drawn into these processes and gave them new stimuli. As a result, production capacity and technological and productivity levels rose, as did supply on world markets and competition throughout the global economy. These shifts provided the extra impulse underlying the “golden decade”. Not only did they create conditions for a longer-than-usual period of constant economic growth, but they also enabled the rapid growth to be accompanied by low inflation. This situation was aided by effective anti-inflationary central bank policies oriented towards stabilising inflation expectations. It seemed that central bankers had finally found and applied the right policies for taming inflation in the post Breton-Woods environment, i.e. in the environment lacking the rules of the gold standard.

All these factors acted in the same direction, creating an environment of optimism, success and risk neglect. This environment was therefore unprepared for a fundamental discontinuity and reversal. The fact is that even academic economists, with a few exceptions, failed to identify the growing problems and risks. And even when concerns were expressed<sup>20</sup>, it was all too tempting and easy to ignore the signals in the midst of an outwardly smooth expansion.

Globalisation and financial liberalisation greatly increased the interdependence, integration and correlation of conditions in individual regions, economic sectors and financial market segments on a worldwide scale. The accumulation of savings and foreign exchange reserves in China and other countries was correlated with growth in the US current account deficit and a decline in the savings of US households into negative fig-

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<sup>20</sup> For example in a series of studies produced by the Bank for International Settlements (BIS) in Basel. Cf. e.g. White W. (2006).



ures. Despite the sustained low savings rate in the USA, foreign investors were willing to finance the US government and household consumption.

The massive expansion of globalisation, financial liberalisation and financial innovation, which on the one hand stimulated dynamic growth and development, simultaneously increased the global economy's sensitivity to negative factors, shocks and risks.

- The long-running growth, and expectations that it would continue, coupled with low interest rates and low rates of return on capital, motivated investors to seek higher returns and take on greater risks.
- The liquidity glut spilled over into a credit expansion, growth in prices of property and other assets, and underestimation and undervaluation of risk.
- Amid low inflation, low interest rates and a huge amount of free liquidity, there was growth in long-term financing using short cheap sources.
- There was an uncontrolled expansion in financial innovation and securitisation, yet it was not clear how much risk this actually contained and where it was specifically located.
- Thanks to the successful growth in the world economy, the property market, asset price and lending bubbles expanded, coalesced and complemented and fed each other.

The favourable macroeconomic situation thus in fact not only contained incipient imbalances, but also contributed to their inception and spread. Once again it was demonstrated that the causes and sources of crises emerge during growth phases, in good times.

### **3.2 The course of the world financial crisis and its interactions with the real sector**

The current world crisis is dubbed a financial crisis because it started in the financial sector, specifically in the sub-prime mortgage segment, then spread to other segments of the financial markets and on into the real sector.

Unlike most crises in previous decades, which had arisen in less developed parts of the world economy, the current crisis erupted in the bastion of advanced capitalism, the USA, and chiefly affected the developed part of the world economy and its financial system.<sup>21</sup>

The first wave of serious signs of a crisis dates back to 2006 and 2007 and was set off by a slump in prices in the US real estate market. This was a reversal of the previous trend of soaring property prices not only in the USA, but also in the UK, Spain, Ireland

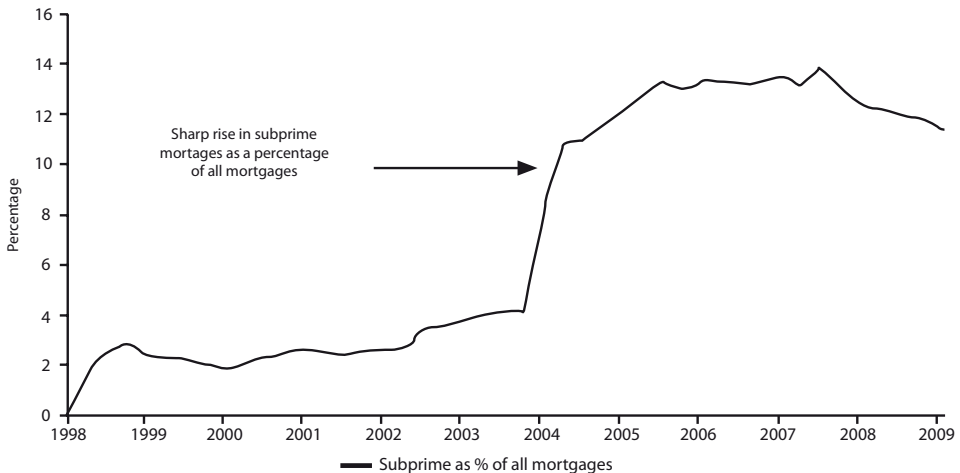
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*21 Although the financial crisis is a global one, mainly affecting the developed part of the world economy and its financial system, the fact is that some advanced countries and their financial institutions have been little affected by it. This is particularly noteworthy in the case of Canada, not only given its geographical location, but also in the light of its close links with the US economy in both the real and financial sectors.*

and many other countries. Property prices had been far outpacing living standards in these countries.

This bubble was made possible by an environment of low interest rates and “unlimited” liquidity. But there were also institutional and political factors, for instance a previously declared intention to achieve the broadest possible home ownership. This led to a surge in the share of sub-prime mortgages in the overall mortgage market.<sup>22</sup> When the property market collapsed, it was from this segment that the crisis spread. Defaults on sub-prime mortgages led to defaults by mortgage institutions and to liquidity problems in other banks and financial institutions. Ratings fell, balance sheets deteriorated and assets had to be sold.

**Chart 3:** The percentage of subprime mortgages soared to record levels



Source: *Global Markets Institute*.

The next phase of the crisis was triggered by the collapse of investment bank Lehman Brothers. With the benefit of hindsight it is clear that this was indeed a milestone<sup>23</sup>. The bank's collapse sparked a crisis of confidence throughout the financial world. What had, until then, been quite a normal and limited crisis turned into an event threatening the

<sup>22</sup> The share of sub-prime mortgages in total mortgages jumped from around 4% to 14% between 2004 and 2008.

<sup>23</sup> While that conclusion seems to be generally accepted both within the financial community and media, the arguments have been raised that such an interpretation of the crisis evolution was flawed. Those arguments run as follows: the Lehman failure was not an isolated event, the main risk indicators only took off after the announcement of TARP (Troubled Asset Relief Program) when concern turned to panic. cf. Cochrane, J. H., Zingales, L. "Lehman and the Financial Crisis" *The Wall Street Journal*, September 16, 2009.

very functioning of the financial system, not just regionally but on a global scale. Financial institutions were overwhelmed by uncertainty about where the next collapses would occur. Banks stopped lending to each other and, to a large extent, to the real economy as well. The liquidity glut had turned into a liquidity trap and a flight to cash. Liquid markets had suddenly turned illiquid.

The crisis spread from the financial sector to the real economy. With demand falling, sectors dependent on credit financing were forced to offload inventories and rein in production. World trade slowed sharply and the world economy fell into a deep recession.

The risk of the recession feeding back into the financial sector remains an open issue. How real this risk is depends not only on the depth of the recession, but also on its duration and the synchronisation/differentiation of economic developments in various parts of the world economy. The “green shoots” observed in mid-2009 suggest that the recession may not last as long as predicted a few months ago. Some parts of the world economy, specifically East Asia (China and India), are not really experiencing a recession and are assuming the role of drivers of demand. The hypothesis of decoupling from the US economy is thus proving to be true.

### **3.3 The causes of the crisis seen from the perspective of its phases**

As well as recapitulating the individual phases of the world financial crisis, it is useful to return to the issue of its causal factors. How could the bursting of a bubble in the real estate and mortgage segment in the US economy have triggered such a deep global crisis?

Fed monetary policy was undoubtedly very easy in the run-up to the crisis, fostering a glut of liquidity. In this context, the monetary policy response to different shocks was asymmetric. The Fed tended to react to negative shocks with an immediate and aggressive monetary policy easing, but the same did not apply in the opposite situation. Interest rates were raised in response to expansionary shocks usually with a lag and to a limited extent. The hypothetical question, therefore, is: Had the Fed tightened monetary policy sooner and more sharply, could the property market bubble have been prevented or at least contained?

When considering this, one needs to take into account the environment in which Fed monetary policy developed. It was an environment of growing imbalances, with a persistently low and falling US household savings rate, massive inflows of foreign savings into the US capital markets, and corresponding growth in the US current account deficit to unsustainable proportions. Price stability in goods and services markets, however, remained the monetary policy objective. The consequences of the imbalances accumulated in asset prices, in particular property prices.

## 4 Motives to use unconventional monetary policy instruments

Before the world financial crisis erupted, conventional monetary policy methods – based on the regulation of short-term interest rates (prices of short-term money) – clearly dominated. By managing this price (short-term monetary policy rates), central banks affect the money market directly and prices of other assets indirectly in combination with other influences on the financial markets. In normal conditions, monetary policy rates are a “proxy” for the monetary policy settings in the pursuit of the primary goal of price stability.

Compared to this standard set-up, the approaches of many central banks and the structure of the instruments they use have seen major changes in the course of the world financial crisis. Besides widening the range of conventional instruments they apply, numerous central banks, including major ones such as the Federal Reserve System (Fed), the European Central Bank (ECB) and the Bank of England (BoE), have resorted to **quantitative easing**.<sup>24</sup>

There are basically three kinds of situations where conventional monetary policy fails, or at least runs into significant barriers to effectiveness, and where scope and stimuli therefore arise for the application of unconventional instruments. They are **(i)** where interest rates can go no lower (zero rates), **(ii)** where the standard monetary policy transmission channels get “jammed”, and **(iii)** where significant barriers to financing and lending to the real sector arise in financial and banking institutions. All three have occurred during the world financial crisis.

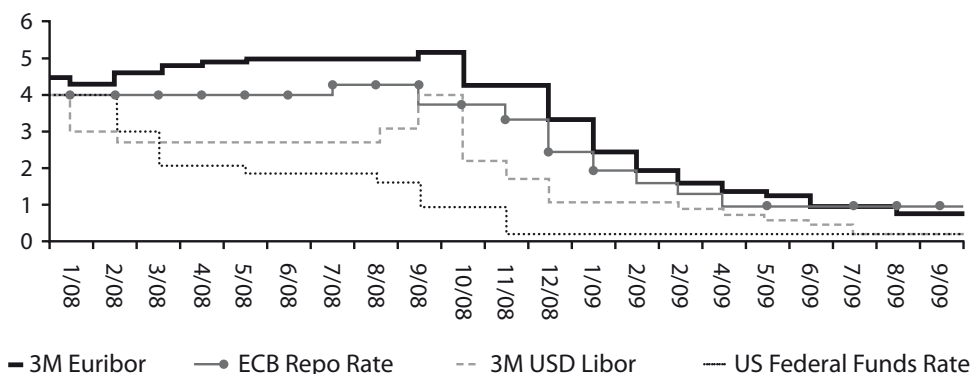
### i) Zero-rate limit

The radical cuts in nominal monetary policy rates in response to the crisis have taken many central banks' rates down to unusually low – even zero – levels. Chart 4 demonstrates that development for the US economy and eurozone. Both monetary policy rates and money market rates decreased dramatically from autumn 2008 and converged to almost zero level.

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<sup>24</sup> Quantitative easing can be regarded as the essence of unconventional monetary policy, i.e. the sort of monetary policy that pursues its goals not by setting monetary policy interest rates and conducting open market operations, but through other channels. The common feature of unconventional instruments is that they tend to result in growth in the central bank's balance sheet. Besides quantitative easing, they include (i) qualitative easing, i.e. the situation where the central bank's operations change its balance sheet structure towards a higher proportion of riskier and less liquid assets, and (ii) credit easing, where, in an effort to substitute for insufficient commercial bank lending, the central bank's operations cause an increase in the liquidity and a decrease in the riskiness of its assets in addition to growth in its balance sheet. In the text that follows, however, when referring to unconventional monetary policy we basically mean quantitative easing.

**Chart 4: Central Bank and Money market Rates**



Source: ECB Monthly Bulletin, World Interest Rates Table.

The Bank of Japan's previously almost unique (albeit 10-year-long) episode of quantitative easing and near-zero rates – the “lost decade” – has thus become a more general tendency. The radical decline in monetary policy rates has occurred in parallel with various anti-crisis measures and domestic demand stimuli that have substantially increased individual economies’ fiscal deficits.

**Table 1: Monetary policy rates of selected central banks**

Central bank	Interest rate	Most recent change
Federal Reserve	0.25%	16 Dec. 2008
European Central Bank	1.0%	7 May 2009
Bank of Canada	0.25%	21 Apr. 2009
Bank of England	0.5%	5 Mar. 2009
Bank of Japan	0.1%	19 Dec. 2008
Riksbank (Sweden)	0.25%	2 Jul. 2009
Swiss National Bank	0.25%	12 Mar. 2009
Czech National Bank	1.25%	6 Aug. 2009

Source: World Interest Rates Table.  
As of 11 August 2009

## ii) “Jamming” of monetary policy transmission channels

As the collapse of the sub-prime market in the USA spilled over into a world financial crisis, a crisis of confidence hit the banking and financial world, especially after the fall of Lehman Brothers in 2008. In a climate of distrust, banks stop lending to each other and to their clients in the real sector. Spreads between monetary policy rates and market rates widen extremely. Standard monetary policy transmission channels thus lose their effectiveness.

### iii) Reduction in bank lending activity

A credit crunch arose after the financial crisis broke out, as a result of both supply- and demand-side factors. Unlike in the past, banks increasingly started reflecting and evaluating risk appropriately. Despite the very low monetary policy rates, rates on loans to the private sector remained relatively high and the availability of credit remained limited. There were parallel factors on the demand side: non-financial corporations mostly lost their incentives to undertake new investments. Consequently, the quantitative easing policy was implemented largely as a **credit easing**.

## 4.1 Kinds of unconventional response by central banks to the financial crisis

Alongside the “untraditional” willingness of central banks to lower interest rates to near-zero levels, a whole raft of unconventional monetary policy instruments were increasingly applied. These mainly took the form of exposure of central banks’ balance sheets to interbank transactions on the money market. They included:

- expansion of credit channels and their maturities, collateral and counterparties,
- provision of liquidity and foreign exchange to banks essentially on request,
- direct lending to the private sector, investment banks and non-bank institutions,
- outright purchases of various types of public and private sector assets and government and corporate debt,
- the application of various forms of moral suasion by central banks.

Examples of the specific forms of response of individual central banks included:

- more frequent central bank operations – more specific types of fine-tuning used in addition to standard operations,
- provision of more favourable price and maturity conditions for standard lending facilities,
- a wider range of long-term funds in the form of discretionary operations,<sup>25</sup>
- a wider range of eligible collateral to improve access to and use of central bank funds,<sup>26</sup>
- extension of the list of eligible counterparties, again to improve access to and distribution of central bank funds,<sup>27</sup>
- the introduction/expansion of loans for securities to support the liquidity of the banking and financial system,
- increases in the reserve buffer to dampen swings in demand for reserves,
- the development of international cooperation to promote cross-border liquidity sharing.<sup>28</sup>

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<sup>25</sup> For example, the ECB additionally performed 3-month operations and in April 2008 started to offer funds for 6 months as well.

<sup>26</sup> In some cases this expansion also included crisis-hit securities (e.g. mortgage-backed securities).

<sup>27</sup> The Fed extended the discount window – previously accessible only to commercial banks – to investment banks and non-bank institutions.

<sup>28</sup> One example was the limited swap lines established between the Fed, the ECB and the Swiss central bank.

## 4.2 Shifts in the characteristics of central banks and monetary policy

Central banks used quantitative easing to try to overcome the barriers impeding standard approaches (near-zero monetary policy rates) and to push liquidity into the financial and banking system and into growth in loans in order to offset the decline in credit growth caused by banks' reduced willingness to lend and the lack of investment stimuli for non-financial corporations.

The trend towards unconventional monetary policy instruments implies a shift from standard "technical monetary policy" **to activist behaviour** by central banks.<sup>29</sup> If, in the past decade, monetary policy had been targeted at managing inflation, during the financial crisis many central banks started to focus more on maintaining financial stability and on real economic variables, and in particular on shoring up economic activity and employment.

Central banks were making decisions on individual credit auctions and – in a situation where banks were refusing to lend to each other and credit flows were drying up – changed from being lenders of last resort to being **lenders of first resort**. Direct lending to government, which had previously been viewed as a grave breach of modern central banking "etiquette"<sup>30</sup> and had been practised in various guises only in less developed economies, became to various extents an overt part of the operations of the central banks of some advanced nations.

Although changes were recorded in the operating frameworks and instruments of the majority of central banks under the pressure of the financial crisis, the extent and intensity of these changes differed substantially from one central bank to the next.

In the developed part of the world economy there was a striking difference between the Anglo-Saxon countries and continental Europe. As regards the major central banks, the extent and intensity of the switch to activist policy and to forms of quantitative easing was significantly higher in the Fed and the Bank of England than in the ECB.

What factors led to this differentiation and dividing line? One can argue that there were two differentiating factors acting in parallel.

The first was a clear difference in the scale of the problems and hence in the urgency to tackle the effects of the crisis. The intensity of the slump in economic activity and of the risks of the crisis, especially in its early phases, seemed far more acute in the US and UK economies than in continental Europe. There was a corresponding difference

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<sup>29</sup> *This has some parallels – albeit in different conditions and with a different aim – with the post-WWII activist policies of central banks typical of the 1960s and 1970s. At that time, monetary policy tried to be anti-cyclical by applying fine-tuning instruments. In the current financial crisis, unconventional monetary policy instruments are being directed at keeping the financial system functioning and maintaining financial stability and thereby preserving employment and economic activity. Like then, the present activist policy has faced calibration and timing problems (time inconsistency).*

<sup>30</sup> *In the Czech Republic, the CNB is expressly forbidden to do so by law.*

in economic policy responses. Figuratively speaking, the Anglo-Saxon world became strongly Keynesian again.

The second factor was a difference between the mainly “market” nature of the financial system in Anglo-Saxon countries and the still predominantly “banking” financial system in continental Europe. The Anglo-Saxon market system, dominated by financial institutions, investment banks and hedge and other funds, was far more sensitive to the shocks, uncertainty and loss of confidence that occurred. This gave rise not only to a more acute need for unconventional monetary policy instruments, but also to greater scope for applying them.<sup>31</sup>

## 5 A consequence of quantitative easing: extreme growth in central bank balance sheets

Quantitative monetary policy actions are supply-side measures. They affect the asset side of the central bank’s balance sheet. By definition, a corresponding liability must be generated for every balance-sheet asset, in this case an increase in the monetary base (also known as central bank money, high-powered money, M0), which is made up of cash and banks’ reserves (required and voluntary) with the central bank.

Between 2007 and 2008, the balance sheets of the central banks that made significant use of quantitative easing grew substantially – exceptionally so compared to the preceding period.

**Table 2:** Growth in central banks’ balance sheets during the quantitative easing process\*

Central bank	Balance sheet growth	Percentage of GDP	
		June 2009	Initially
Federal Reserve	1.5x	14.6%	October 2008 9.8%
European Central Bank	1.4x	21.9%	July 2008 15.5%
Bank of England	1.3x	15.4%	March 2009 11.6%
Swiss National Bank	1.2x	44.2%	March 2009 37.7%
Bank of Japan	5.0%	23.5%	July 2008 21.0%

\* Growth in balance sheet between introduction of quantitative easing due to financial crisis and July 2009

Source: Calculation based on Goldman Sachs, *Global Economics Weekly*, July 2009.

<sup>31</sup> The existing operational framework also played a role. The ECB had already in the past permitted a comparatively wide range of eligible collateral, whereas the Fed’s operational framework had been much more restrictive. Consequently, the Fed had greater scope for easing.



Central banks' balance sheets can grow for the following reasons:

- i) the central bank supplies liquidity to the banking and financial sector this usually takes the form of open market operations (sales and purchases of short-term debt, especially government securities); other forms include direct loans to financial institutions and swap lines between central banks (used mainly to ensure smooth foreign exchange financing)
- ii) the central bank provides short-term loans a central bank resorts to direct lending when commercial banks are reluctant to lend for various reasons even though they have sufficient liquidity. The usual reason is increased risk that loans will not be duly repaid, but the intention may also be to reduce leverage
- iii) the central bank buys assets outright in the financial market<sup>32</sup> such assets are usually long-term government bonds, securities or derivatives of various underlying assets (e.g. CDOs)

Although unconventional quantitative-easing instruments lead to growth in central banks' balance sheets, that is not the point of them. The point is to bring lending rates down and ease the credit conditions. In this sense, even unconventional monetary policy is still targeted at the price aspects of credit activity. In contrast to the standard approach, i.e. influencing the credit conditions and their time structure via steering short-term interest rates, with unconventional policy central banks attempt to influence interest rates and the credit conditions using their balance sheets.

## **6 Risks of the changes in the nature of central banking and monetary policy**

The pressure of the world financial crisis has brought about substantial changes in the competences of central banks and in the nature and instruments of monetary policy. The quantitative easing policy, the dramatic growth in central banks' balance sheets and the growth in their credit exposures, including to the non-banking sector, to previously unimaginable proportions represents a departure from standard central banking and monetary policy. A number of questions regarding the possible risks thus arise:

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<sup>32</sup> Such asset purchases became a central part of Fed policy in particular. The Fed bought Treasuries and private sector bonds, while the Bank of England focused on government and corporate bonds and the Bank of Japan purchased government bonds and commercial paper. The ECB was more reticent in this regard and did not buy government bonds. Opinions on the right approach were not entirely unanimous. The Germans, primarily in statements made by the Bundesbank president Axel Weber, argued that the ECB should continue to operate primarily through banks, while the other alternatives, including outright purchases of private sector debt securities, should remain limited. On the other hand, some other members of the ECB's 22-person Governing Council said they supported outright purchases of assets, including corporate debt securities. In May 2009, under a programme to make credit more accessible, the ECB announced a plan to buy €60 billion in covered bonds (a relatively modest figure compared to Fed and Bank of England practice). From *Wall Street Journal*, June 3, 2009.

- The activist tendencies in central banks' policies may have positive effects in the short run, but is there not a risk they will reduce the pressure on the financial markets, with economic agents relying more on central bank operations than on the effectiveness of market mechanisms?
- Won't the efforts by central banks to manage the crisis and support economic activity generate inflation tendencies?
- Won't the large purchases of financial assets have an undesirable effect on the status and credibility of central banks, given that they are now exposed to credit and interest rate risk just like commercial banks?
- Will central banks be able to optimally time and manage the reduction in their balance sheets when the economy stabilises and the financial conditions return to normal, i.e. when it becomes desirable to offload the accumulated assets?

## 6.1 The risk of an inflation wave

The balance sheets and credit exposures of the major central banks and the size of the monetary base are significantly larger than before the crisis. Does this not imply the generation of an inflation wave in the world economy?

This risk has been limited to date (mid-2009) by the fact that the huge growth in the monetary base has not been accompanied by corresponding growth in the money supply and bank lending. The data show a steady decline in the money multiplier so far during the crisis.

The explanation for the trend illustrated above is that most of the liquidity central banks have pumped into the financial system has been deposited back with central banks as free reserves.

**Table 3:** Change in the money multiplier in selected countries between 2008 and 2009

USA	from 9.1 to 5.2
Euro area	from 10.4 to 7.8
Switzerland	from 13.8 to 8.2

Source: *Goldman Sachs, Global Economics Weekly, No. 9, 2009.*

A greater volume of disposable liquidity does not itself directly generate inflation. It has inflationary consequences if it leads to imbalances. Standard inflation, i.e. growth in prices of goods and services, generally occurs if disposable liquidity is effectively financing aggregate demand for goods and services to such an extent that it outpaces aggregate supply.

In the present phase of the financial crisis (2009), the aggregate data do not suggest any problem with excess demand in the world economy. The various estimates of the

output gap for the major economies are as high as 5–6%. It would seem, therefore, that central banks' "swollen" balance sheets do not pose inflation risks directly.

However, the expansion of the monetary base could become an inflation generator if commercial banks start using the free liquidity for new lending. Maintaining price stability is thus contingent on central banks correcting this expansion in time. As soon as the signs of recovery in the real sector gain in significance, central banks will have to reduce their swollen balance sheets to an appropriate size if price stability is to be maintained.

## 6.2 The problem of timing balance-sheet "exits"

The optimum timing of balance-sheet exits depends on the specific conditions in each economy. A premature exit would pose a risk of the stimulation not having the desired effect and of the economy sliding back into recession. A belated exit would pose a risk to price stability.

A key factor will be the extent to which the recovery proceeds **in parallel** in the various parts of the world economy. In this regard, the degree of decoupling of the Asian and European economies from the US economy is regarded as particularly important. Contrary to prevailing expectations, 2009 is already signalling that the large Asian economies in particular have largely decoupled from the US economy (thanks mainly to a rising share of domestic consumption) and their growth is by contrast being seen as an important driver of the upswing in consumption in the world economy.

The process of downsizing central banks' swollen balance sheets will also depend on the structure of those balance sheets. For the various types of short-term loans (liquidity swaps, short-term securities), the process should not be problematic, i.e. it should not have negative effects on the financial markets. Central banks can automatically stop rolling them over.

The situation seems more complicated for long-term assets such as corporate bonds. However, such bonds can be expected to become tradable on secondary markets as usual once things get back to normal. Alternatively, central banks will be able to issue and sell their own securities to correct markets' liquidity or to implement such corrections through the fiscal area.

## 6.3 Intentional "cultivation" of inflation as a way out of the financial crisis?

Besides an inflation wave as a potential **side effect** of the emergency anti-crisis programmes implemented in the fiscal and monetary areas, thought has been given (in the banking sector and by some US economists) to intentionally leaving room for higher inflation (albeit temporarily) as **a way out of the financial crisis**. The argument runs as follows: higher inflation will reduce the real debt level and enable households and banks to reduce their reliance on debt financing more quickly and less painfully (i.e. deleveraging will occur).

Despite the potential short-term benefits, there are several negative consequences of this line of reasoning:

- i) inflation is predetermined by inflation expectations; once the latter start going up it is difficult to bring them back down without implementing strongly restrictive policy. The potential short-term effect of reducing the debt level would thus be outweighed by longer-term losses in economic performance;
- ii) inflation entails a transfer of wealth from creditors to debtors. Higher inflation would lead to redistribution of wealth and have adverse financial, economic and social consequences for the “losers” from inflation;
- iii) in international terms, rising inflation implies bond market losses for creditor countries. In the present situation, this means a redistribution of wealth primarily from China, which owns large volumes of dollar-denominated US Treasury bonds, to the US economy. Intentionally tolerated higher inflation is likely to generate a risk of a massive exodus of global investors from the US bond market with a considerable knock-on effect on the dollar exchange rate. This would, in turn, mean a further increase in inflationary pressures.

#### **6.4 The risk to the credibility and financial stability of central banks themselves**

The switch to activist policy by many central banks and their considerable exposure to operations with financial institutions have generated a potential threat to the credibility and financial soundness of central banks themselves. The high costs of bailing out banks and other financial institutions, the acceptance of lower quality collateral, and the reduced quality of the assets in central banks’ balance sheets are regarded as a risk. There is a related question of whether the potential large losses would force central banks to monetise debt. This could also arise in a situation of rising fiscal dominance amid political pressure to continue buying government bonds.

Despite the increase in central banks’ exposures, the risk described above seems highly marginal and improbable, especially in the case of the developed countries’ banks, because:

- central bank liabilities consist mainly of cash and banks’ reserves deposited with the central bank, with cash representing a permanent loan for the central bank;
- banks’ reserves are currently mostly remunerated, but at the discretion of the central bank. The rate of remuneration has gradually been falling and is generally relatively low, so the related costs for central banks are not all that high;
- central banks are still enjoying significant benefits from their asset holdings; quality collateral still predominates in their balances despite some shift in the structure of loans to the private sector.

## 7 Will central banking return to its pre-crisis form?

The shock caused by the financial crisis, its growth to global proportions, and the resulting economic recession of unusual depth has led to substantial changes in central banking and to efforts to apply anything that might help avert or at least mitigate its adverse effects. As a result, non-standard instruments and policies have been used, including some previously regarded as taboo.

This change raises a number of questions:

- Is it a one-off or a longer-term shift? Is it a **“blip”** due to extreme conditions, with central banking returning to its pre-crisis form as things return to normal? Or will the changes be **more permanent**, accompanied by a rethink of both the instruments and goals of monetary policy?
- Will the activist tendencies in monetary policy retreat again, with the latter returning to its previous “technical” mode?
- Doesn't the attainment of near-zero monetary policy rates (or convergence to this level) necessitate some upward revision of inflation targets?

The discussion of these questions is linked with the appraisal of the previous phase. Were the previous central banking concepts and monetary policy practices and instruments commensurate with the conditions and needs of that phase?

There is no doubt that unprecedented price stability was achieved in the case of goods and services. This positive outcome is particularly remarkable given that low inflation coexisted with high economic growth across most of the world economy. This positive aspect is particularly impressive compared to previous phases.

On the other hand, even the phenomenally and unambiguously successful monetary policy and low-inflation environment failed to prevent the re-emergence of asset market bubbles. The lesson learned is that their impacts can be more devastating than high inflation. The evidence is that few asset price bubbles have not been accompanied, if not preceded, by high growth in lending activity or the money supply.

In this regard, criticism can be levelled at monetary policy-making over the past “golden” decade and at the regulatory and supervisory practices applied in the banking and financial sectors:

- monetary policy-making was asymmetric: the easing of monetary policy to accommodate the consequences of bursting asset market bubbles was not suitably counterbalanced by restrictive policy when those bubbles formed and spread;
- the monetary policy of the Fed and other central banks was too easy, or was not adjusted upwards in sufficient time;
- credit and liquidity risks were significantly underestimated;
- in financial market supervision the micro-prudential approach unilaterally dominated the macro-prudential approach;

- the principles of financial market regulation and the incentive system applied were largely procyclical.

## **8 Is it possible to act more effectively ex ante against the spread of global imbalances and asset market bubbles?**

Capitalism is a dynamic system with a built-in tendency to rise and fall in cycles. These fluctuations can be dampened but not eliminated. With growing liberalisation of the financial sector and deepening globalisation of the world economy, the tendency of imbalances and bubbles to form in financial markets has grown. This is a built-in cost of the unquestionable benefits of liberalisation and globalisation. The liberalisation of the global financial system has increased the competitive pressures in the financial services sector and thus also the incentives to take on greater risks. It is the interaction between the changing structure of the financial markets and the changing behaviour of financial market entities that is leading to greater and more frequent financial imbalances.

It is generally true that price stability and financial stability complement and support each other. Yet experience shows that financial crises and asset price bubbles have happened repeatedly in environments of low and stable inflation. So, low inflation does not guarantee financial stability. The current financial crisis and property market bubbles confirm this experience. In this context, new impetus has been given to the debate on the orientation of monetary policy, or more specifically on how it might contribute to stabilising asset markets. Is it the job of monetary policy to prevent such bubbles from forming?

### **8.1 Monetary policy and asset market bubbles**

There used to be a consensus among central bankers that central banks should not try to “deflate” asset market bubbles. They should step in only after bubbles burst, as by supplying the necessary liquidity they can subsequently mitigate the adverse effects on the macroeconomic situation<sup>33</sup>.

The main arguments for this approach were the following:

- asset market bubbles are hard to identify before they burst;
- monetary policy deflation of such bubbles carries a risk of major negative effects on the economy;
- monetary policy instruments are too “coarse” for such operations;
- central banks should react to bubbles only if they pose a direct threat to price stability;

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<sup>33</sup> This is the principle of the Jackson Hole Consensus (named after the location of an annual conference of leading world bankers and economists), cf. Mishkin, F. “Will Monetary Policy Become More of a Science?” NBER Working Paper Series, No. 13566.

- in other cases they should react only after the bubble bursts and mitigate the consequences<sup>34</sup>.

There are basically two approaches in the ongoing debate on what role asset prices and financial imbalances could and should play in monetary policy-making in the future. The first, in line with the aforementioned consensus, considers it rational for central banks to take into account information from asset price movements and the evolution of financial imbalances only insofar as they have a direct effect on inflation and the standard monetary policy goals.

The second approach assumes that central banks should react to such imbalances while they are still growing, even if the outlook for inflation (in the short run) and growth does not yet seem to be under threat. The main argument is that an asymmetric monetary policy approach, i.e. only subsequent accommodation of the consequences of bubbles and an orientation solely on subsequent mitigation of the risks of recession, leads to an environment where interest rates are too low. In that environment, banks and their customers are stimulated to take on excessive risk, with adverse consequences for financial stability. If growing imbalances are left uncorrected, they can expand and deepen until their consequences in the form of burst bubbles and crisis events become extremely costly to the real economy. Central banks' approach to such risks should therefore be more symmetric – not only should they deal with the effects of imbalances and bubbles ex post, but they should also slow and limit their growth ex ante<sup>35</sup>.

The argumentation of this second approach thus leads to the concept of a central bank that leans **against the wind**, and is an expression of dissatisfaction at how financial imbalances are reflected in standard monetary policy and its basic models.

Although this approach has some justification, there is a whole range of open issues and barriers to its implementation. For such a monetary policy to work, **its time horizon would have to be extended**.<sup>36</sup> The standard horizon of the forecasts prepared as

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34 The above cited consensus seemed to prevail even after the outbreak of the world financial crisis. E.g. Fed's Vice Chairman Donald L. Kohn addressing 26th Cato Institute's Annual Monetary Policy Conference in November, 2008 underlined he was not convinced that "the current crisis demonstrate that central banks should switch to trying to check speculative activity through tighter monetary policy whenever they perceive a bubble forming" cf. Kohn D. L. "Monetary Policy and Asset Prices Revisited", Board of Governors of the Federal Reserve System, [www.federalreserve.gov/newsevents/speech/kohn](http://www.federalreserve.gov/newsevents/speech/kohn)

35 Such a stance is held in the recent IMF's World Economic Outlook. In its chapter 3 the authors argue that monetary policymakers should put more emphasis on macrofinancial risks. This would imply tightening monetary conditions earlier and more vigorously to try to prevent excesses from building up in asset and credit markets, even if inflation appears to be largely under control. Nevertheless, the authors are aware that taking a broader approach to monetary policy would be challenging as it is inherently difficult to distinguish between unsustainable and sustainable asset price movements. cf. World Economic Outlook, IMF Washington D.C., October 2009.

36 The aforementioned approaches are discussed in a series of papers produced by the Bank for International Settlements (BIS) in Basel. See Borio C., Lowe P. "Asset Prices, Monetary and Financial Stability: Exploring the Nexus", BIS Working Paper No. 114, July 2002, and White, W. "Is Price Stability Enough?", BIS Working Paper No. 205, 2006.

source materials for monetary policy-making in the inflation-targeting regime is usually two years at most. An even more forward-looking monetary policy would be faced with a substantially higher level of uncertainty and other complicating factors. These include the fact that timely identification of emerging financial imbalances is itself highly uncertain and distinguishing bubbles from natural price movements *ex ante* is equivocal. Besides this, the long time lag of the monetary policy transmission mechanism plays a role. The calibration of monetary policy interventions is also a tricky issue. In this regard, changes in interest rates seem to be too “coarse” an instrument – they can be totally ineffective, yet in the opposite case they can generate the situation they are supposed to be preventing.

In this context, Otmar Issing<sup>37</sup> regards it as an advantage that the ECB’s monetary policy strategy includes a monetary pillar (a money supply criterion) based on relevant monetary aggregate analyses. He believes that focusing this criterion and these analyses on the medium to long term represents a type of “integrated risk management”, since it leans “against the wind” symmetrically, i.e. against asset price declines and increases in equal measure.

## **8.2 Is financial market supervision a promising option for more effective bubble prevention?**

If monetary policy is not the answer, can financial market regulation and supervision be an effective way of preventing financial imbalances and bubbles?

Financial market supervision has two dimensions – micro and macro. The micro-prudential approach focuses on the soundness of individual financial institutions, while the macro-prudential approach concentrates on the functioning and soundness of the financial system as a whole. The conclusions emanating from the micro and macro approaches may be not only different, but contradictory. For instance, a specific risk may be acceptable if undertaken by a single institution, but not if it becomes widespread. Likewise, credit limits may be desirable for specific institutions, but would be counter-productive in the macro-dimension.

The fact is that the micro-prudential approach has so far dominated supervisory practice. Experience meanwhile shows that financial crises occur neither as a result of problems in individual institutions nor because of the transmission of problems from one institution to another. They are usually caused by common risks and more widespread shocks. A greater accent on the macro approach to supervision compared to present practice therefore has some justification in terms of more effective prevention of imbalances and bubbles.<sup>38</sup>

That said the development and application of the functions of the macro-prudential approach to constrain and suppress bubbles and financial imbalances runs into the

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<sup>37</sup> cf. Issing, O. “In Search of Monetary Stability: The Evolution of Monetary Policy”, BIS Working Paper No. 273, March 2009.

<sup>38</sup> The proposals of the de Larosière Group for a European Systemic Risk Council (ESRC) reflect this thinking.



same barriers as monetary policy. The open issues include the difficulty of identifying bubbles as they form, the timing of corrections, and the choice of the criteria to use ex ante to determine the appropriate intensity of corrections.

## Conclusion

The changes in central banking in response to the world financial crisis and the related move away from technical monetary policy towards a more activist policy represent a major turning point and departure from the conditions and tendencies of the past decade, albeit with varying intensities across central banks.

These changes occurred under the pressure of a crisis, in an environment where standard monetary policy approaches and instruments had failed or were far less effective. In the framework of this causal relationship, it can be argued that this shift will be only temporary and that we will return to traditional standards in the monetary arena as the crisis subsides.

At present, however, the fact is that neither successful monetary policy nor the attainment of a low-inflation environment in the past decade, however conducive to growth, prevented the onset of imbalances and high volatility in financial asset prices. One can even speak of a credibility and success paradox for the central bank: the more successful and credible it is, the longer the signs of growing imbalances remain hidden below the surface, and the more intense is the negative impact of bubbles when they burst.

It might have seemed for a while that the traditional cycle had largely been overcome, but the world financial crisis provided a strong reminder that this is not the case. Capitalism is a dynamic system with a built-in tendency towards swings and imbalances. With growing liberalisation and globalisation, the environment has become even more sensitive in this regard and the frequency of such swings has further increased. The lesson learned from crises, and especially from the current world financial crisis, is that large movements in financial asset prices can have more devastating impacts than standard goods and services inflation.

The question is, then, whether the world financial crisis will provide an impetus for central banking and monetary policy to find a framework and approaches that will help to limit the uncontrolled growth and spread of financial bubbles **simultaneously** with achieving price stability. In such case, the aforementioned discontinuity in the approaches and orientation of monetary policy caused by the financial crisis will have more lasting consequences. Some pointers in this direction are provided by the arguments for extending the monetary policy time horizon, for introducing greater monetary policy symmetry and focusing on the balance of risks, for developing types of "flexible" inflation targeting, and for including information from the financial markets in decision-making, at least in the form of expert adjustments.

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## PREVIEW /PŘIPRAVUJEME:

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Next issue of our scientific journal will contain speeches of notable Czech and foreign economists such as **Nicholas Barr** from London School of Economics, **Jiří Rusnok**, Pension Director & Executive Advisor to the Management Committee of ING Czech and Slovak Republics or **Jaroslav Vostatek**, Head of Department of Budget Policy and Management of Public Sector of University of finance and administration. Their papers - focused on pension reform, problems of social security and the sustainability of public finance - were presented at the scientific conference Social Europe – Problems and Perspectives on **27th November 2009**.

V příštím čísle našeho vědeckého časopisu budou mimo jiné publikována vystoupení předních českých a zahraničních ekonomů, jako např. **Nicholase Barra** z London School of Economics, **Jiřího Rusnoka**, předsedy představenstva akciové společnosti ING Penzijní fond či **Jaroslava Vostatka**, vedoucího KRMPVS VŠFS, která zazněla na vědecké konferenci Sociální Evropa – problémy a perspektivy **27. listopadu 2009**, zaměřené na penzijní reformu, problémy sociálního zabezpečení a udržitelnost veřejných financí.

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