Less Obvious Risks of High State Indebtedness

Luboš Smrčka*

Within the discussions on the growing indebtedness of developed countries and the threat of insolvency that some countries of the euro area are currently facing, a number of related factors seem to be omitted, although they do deserve their share of attention as well. One of these related factors is the link between the indebtedness of national governments and that of families in their respective countries which calls for further examination. However, the most pressing of the topics in this respect, one that may send shivers down our spines, is this simple question: "As the developed countries have already seen a large number of defaults of businesses and banks, with us now therefore perceiving this phenomenon as a standard part of the economy undergoing recession or stagnation while we also get used to countries on the brink of bankruptcy being bought out by extensive aid provided by other countries under non-market conditions, are we to expect future financial collapses to affect families or entire social strata and their budgets on a mass scale[1]?" As clear evidence exists that the key cause of defaults is the untamed debts[2], which get out of the control of businesses or governments, we should get alarmed by the fact that private loans, as opposed to business or government loans, have become the most dynamically growing debt type in developed countries over the recent years.

Key words: *state indebtedness, private loans, debt imbalance.*
JEL classification: *F34, H63.*

* Ing. **Luboš SMRČKA**, CSc, Senior Lecturer, Department of Business Economics, University of Economics, Prague, Czech Republic, ancaionescu2003@yahoo.com

[1] We will discuss the term „mass scale" later; for now, suffice to say that personal bankruptcy is relatively common in the U.S. as well as in a number of European countries.

[2] Insolvency does not necessarily mean that total liabilities exceed total assets of the government, net worth of a company or value of family property as insolvency is primarily a cash-flow problem; financial collapse may take place even without the accumulation of excessive debts.

Indebtedness as a fruit of modernity

In terms of economic history, indebtedness is actually a modern phenomenon, the massive proliferation of which has only taken place recently. This, however, does not mean loans did not exist before. But only over the last few decades, has the phenomenon truly grown into global proportions affecting entire societies. Before we examine some aspects of indebtedness, we should note that assessing economy in historical perspectives may be tricky. More than most other scientific areas, economic issues resist historical parallels, leaving us with little space for predicting future developments based on historic experience, which makes the assessment of any "current" phenomena an uneasy task. Collateralized debt obligations (CDO)[1], a type of financial derivatives, are a good example to support this statement.

The history of monetary and financial crises is filled with situations where events "that must have ended up in a mess" were happening right in front of the eyes of their observers, yet, as there was nothing to compare them to in history, they would only rarely stir the right reaction or trigger the alarm announcing that things had gone off the

[1] CDOs (Collateralized Debt Obligations) are an investment tool usually linked to a portfolio of underlying assets that may include loans, lease agreements and other financial products. Based on these underlying assets, securities that enable the trading of the associated risk portfolio are issued. The entire system was designed approximately in 1994 at JPMorgan in response to a set of rules called BASEL I that had been adopted in 1988 and implemented in 1992. Based on the rules, banks were actually required to hold capital corresponding to eight per cent of their risk-weighted assets (assets were divided into five categories) as a risk-eliminating measure. What they really did, though, was putting an excessive burden especially on major banks for which the measures were really harsh given the nature of their portfolio. In 1996, the Fed confirmed the legality of trading in derivatives and risks between JPMorgan and Exxon Oil. So, what originally began as a business in products linked to quality loans, which was to ease banks from the capital adequacy requirements, later turned into boom of derivatives linked to some very doubtful assets that eventually proved extremely risky; the securities nevertheless still scored high ratings. It is apparent that the original idea giving rise to a business with clear and definable risks eventually resulted in a hazardous undertaking. However, only a few people were able to notice the change that took place between 1994 and 1996, when the entire system was set up, and the period after 2001 when the same procedure was applied to underlying assets of sketchy quality.

right track[1]. By the same token, the fact that European states owe more than eighty per cent of their gross domestic product, European households more than ninety per cent of their disposable annual income and European business use more than sixty per cent of borrowed resources, has no historical parallels[2]. In other words, it is fair to say that we have no clue what social, economic and other consequences the situation may potentially have and what changes it may bring about. The fact that to us, debts are a natural and normal state of the modern world does not make debts really natural, with us potentially just ignoring their destructive side effects. The effort by the EU and the IMF to create a common fund of astronomical proportions to maintain the monetary stability within the euro area is a mere attempt at curing the effects caused by a development of unknown dynamics and heading.

Current state of indebtedness across the society

In assessing the current state of indebtedness of individual groups of economic units subject to our examination, i.e. governments, businesses and families, we need to take note of both the current situation as well as its dynamics.

First of all, we should direct our attention to the states that have behaved in a scandalous way, showing an unprecedented level of irresponsibility over the recent years. Naturally, government

[1] Using an example from the Czech economy, in retrospect we now clearly see that the symptoms of the 1997/98 monetary crises followed a text-book scenario; yet only very few people raised their voices to point out the fact that the economy was in for some serious trouble.

[2] We may find certain similarities in the situation of ancient Rome from the second half of the second century A.D. until the collapse of its western part. At that time, entire masses of people were enslaved due bein incapable to pay taxes and the state was permanently on the brink of insolvency since the army was using an extreme share of national product, forcing its inhabitants to pay an ever increasing number of taxes. In some regions, the example of lower nobility and free farmers could be used, although these are of marginal relevance. One disturbing fact is worth noting: both situations were linked to a period that immediately preceded the collapse of an entire branch of civilization and ushered a major shift in the social order.

insolvency is not a new occurrence and history offers quite a few examples (we have already seen the example of ancient Rome, but for example Spain became insolvent three times 1557 to 1592 under the reign of Philip II, with Austria and Denmark facing the same situation during Napoleonic wars), with more recent cases including the newly created Soviet Union in 1919, Germany 1923 and 1948. However, never before 1980 had the world seen an uninterrupted chain of bankruptcies of the relatively developed countries. It is alarming that while the last decades of the 20th century saw the bankruptcies of what may, from the U.S. or European perspective, appear somewhat "exotic" countries of Latin America, including Mexico, and South-East Asia, north African countries, Turkey etc., currently the most developed countries at the core of the global economy face similar problems, including the E.U., U.S.A. as well as Japan. The reason for that is their massive budget deficits.

Table 1: Budget deficits and surpluses in the EU states (% GDP)

	1998	**1999**	**2000**	**2001**	**2002**	**2003**	**2004**	**2005**	**2006**	**2007**	**2008**	**2009**
Euro area	-2.2	-1.3	0.1	-1.8	-2.5	-3.1	-2.9	-2.5	-1.3	-0.6	-2.0	-6.3
Euro area-16	-2.3	-1.4	0.0	-1.9	-2.6	-3.1	-2.9	-2.5	-1.3	-0.6	-2.0	-6.3
Euro area-15	-2.3	-1.4	0.0	-1.8	-2.5	-3.1	-2.9	-2.5	-1.3	-0.6	-2.0	-6.3
EU-27	-1.9	-1.0	0.6	-1.4	-2.5	-3.1	-2.9	-2.4	-1.4	-0.8	-2.3	-6.8
EU-25	-1.9	-0.9	0.6	-1.4	-2.5	-3.1	-2.9	-2.5	-1.4	-0.8	-2.3	-6.8
EU-15	-1.8	-0.8	0.8	-1.2	-2.3	-3.0	-2.8	-2.4	-1.3	-0.8	:	:
Belgium	-0.9	-0.6	0.0	0.4	-0.1	-0.1	-0.3	-2.7	0.3	-0.2	-1.2	-6.0
Bulgaria	:	0.2	-0.3	0.6	-0.8	-0.3	1.6	1.9	3.0	0.1	1.8	-3.9
Czech	-5.0	-3.7	-3.7	-5.6	-6.8	-6.6	-3.0	-3.6	-2.6	-0.7	-2.7	-5.9

Republic												
Denmark	0.1	1.5	2.4	1.5	0.3	0.1	2.0	5.2	5.2	4.8	3.4	-2.7
Germany	-2.2	-1.5	1.3	-2.8	-3.7	-4.0	-3.8	-3.3	-1.6	0.2	0.0	-3.3
Estonia	-0.7	-3.5	-0.2	-0.1	0.3	1.7	1.6	1.6	2.5	2.6	-2.7	-1.7
Ireland	2.4	2.7	4.8	0.9	-0.4	0.4	1.4	1.7	3.0	0.1	-7.3	-14.3
Greece	:	:	-3.7	-4.5	-4.8	-5.6	-7.5	-5.2	-3.6	-5.1	-7.7	-13.6
Spain	-3.2	-1.4	-1.0	-0.6	-0.5	-0.2	-0.3	1.0	2.0	1.9	-4.1	-11.2
France	-2.6	-1.8	-1.5	-1.5	-3.1	-4.1	-3.6	-2.9	-2.3	-2.7	-3.3	-7.5
Italy	-2.8	-1.7	-0.8	-3.1	-2.9	-3.5	-3.5	-4.3	-3.3	-1.5	-2.7	-5.3
Cyprus	-4.1	-4.3	-2.3	-2.2	-4.4	-6.5	-4.1	-2.4	-1.2	3.4	0.9	-6.1
Latvia	0.0	-3.9	-2.8	-2.1	-2.3	-1.6	-1.0	-0.4	-0.5	-0.3	-4.1	-9.0
Lithuania	-3.1	-2.8	-3.2	-3.6	-1.9	-1.3	-1.5	-0.5	-0.4	-1.0	-3.3	-8.9
Luxembourg	3.4	3.4	6.0	6.1	2.1	0.5	-1.1	0.0	1.4	3.6	2.9	-0.7
Hungary	-7.8	-5.4	-3.0	-4.0	-8.9	-7.2	-6.4	-7.9	-9.3	-5.0	-3.8	-4.0
Malta	-9.9	-7.7	-6.2	-6.4	-5.5	-9.9	-4.7	-2.9	-2.6	-2.2	-4.5	-3.8
Netherlands	-0.9	0.4	2.0	-0.2	-2.1	-3.1	-1.7	-0.3	0.5	0.2	0.7	-5.3
Austria	-2.4	-2.3	-1.7	0.0	-0.7	-1.4	-4.4	-1.6	-1.5	-0.4	-0.4	-3.4
Poland	-4.3	-2.3	-3.0	-5.1	-5.0	-6.3	-5.7	-4.1	-3.6	-1.9	-3.7	-7.1
Portugal	-3.4	-2.8	-2.9	-4.3	-2.8	-2.9	-3.4	-6.1	-3.9	-2.6	-2.8	-9.4
Romania	-3.2	-4.4	-4.7	-3.5	-2.0	-1.5	-1.2	-1.2	-2.2	-2.5	-5.4	-8.3
Slovenia	-2.4	-3.0	-3.7	-4.0	-2.5	-2.7	-2.2	-1.4	-1.3	0.0	-1.7	-5.5
Slovakia	-5.3	-7.4	-12.3	-6.5	-8.2	-2.8	-2.4	-2.8	-3.5	-1.9	-2.3	-6.8

Finland	1.6	1.6	6.9	5.0	4.1	2.6	2.4	2.8	4.0	5.2	4.2	-2.2
Sweden	1.1	1.3	3.7	1.6	-1.2	-0.9	0.8	2.3	2.5	3.8	2.5	-0.5
United Kingdom	-0.1	0.9	3.6	0.5	-2.0	-3.3	-3.4	-3.4	-2.7	-2.8	-4.9	-11.5
Croatia	:	:	:	:	-4.1	-4.5	-4.3	-4.0	-2.4	-1.6	:	:
Turkey	:	:	:	-33.0	-12.9	-11.3	-4.5	-0.6	-0.1	-1.2	:	:
Iceland	:	:	:	:	:	:	:	4.9	6.3	5.4	-13.5	-9.1
Norway	:	:	:	13.5	9.3	7.3	11.1	15.1	18.5	17.7	19.1	9.7

Source: Czech Statistical Office, http://apl.czso.cz/ode/tab/teina200.htm

As the table shows, the vast majority of E.U. states as well as some of the associated countries suffer from chronic budget deficits. While they may fit within the limits outlined by the "Maastricht criteria", they are by no means healthy symptoms. The Maastricht criteria were created artificially and, from the economic perspective, are more of a political proclamation rather than a valid argument, as the following data show:

Table 2: Total government debt (% GDP)

	1998	**1999**	**2000**	**2001**	**2002**	**2003**	**2004**	**2005**	**2006**	**2007**	**2008**	**2009**
Euro area	72.8	71.5	68.8	68.4	68.2	69.4	69.8	70.4	68.7	66.2	69.7	78.7
Euro area-16	72.9	71.7	69.2	68.2	68.0	69.1	69.5	70.1	68.3	66.0	69.4	78.7
Euro area-15	73.1	71.8	69.3	68.3	68.1	69.2	69.6	70.3	68.5	66.2	69.7	79.0
EU-27	66.4	65.8	61.9	61.0	60.4	61.8	62.2	62.7	61.4	58.8	61.6	73.6
EU-25	66.7	65.9	62.1	61.2	60.6	62.0	62.5	63.1	61.9	59.4	62.3	74.3
EU-15	68.0	67.1	63.2	62.2	61.6	63.0	63.3	64.1	62.8	60.4	:	:

Austria	64.8	67.2	66.5	67.1	66.5	65.5	64.8	63.9	62.2	59.5	62.6	66.5
Belgium	117.4	113.7	107.9	106.6	103.5	98.5	94.2	92.1	88.1	84.2	89.8	96.7
Bulgaria	79.6	79.3	74.3	67.3	53.6	45.9	37.9	29.2	22.7	18.2	14.1	14.8
Cyprus	51.2	51.8	48.7	52.1	64.6	68.9	70.2	69.1	64.6	58.3	48.4	56.2
Czech Republic	15.0	16.4	18.5	24.9	28.2	29.8	30.1	29.7	29.4	29.0	30.0	35.4
Denmark	60.8	57.4	51.5	48.7	48.3	45.8	44.5	37.1	32.1	27.4	34.2	41.6
Estonia	5.5	6.0	5.1	4.8	5.7	5.6	5.0	4.6	4.5	3.8	4.6	7.2
Finland	48.2	45.5	43.8	42.3	41.4	44.4	44.4	41.8	39.7	35.2	34.2	44.0
France	59.4	58.9	57.3	56.9	58.8	62.9	64.9	66.4	63.7	63.8	67.5	77.6
Germany	60.3	60.9	59.7	58.8	60.4	63.9	65.7	68.0	67.6	65.0	66.0	73.2
Greece	94.5	94.0	103.4	103.7	101.7	97.4	98.6	100.0	97.8	95.7	99.2	115.1
Hungary	59.9	59.8	55.0	52.0	55.6	58.4	59.1	61.8	65.6	65.9	72.9	78.3
Ireland	53.6	48.5	37.8	35.6	32.2	31.0	29.7	27.6	24.9	25.0	43.9	64.0
Italy	114.9	113.7	109.2	108.8	105.7	104.4	103.8	105.8	106.5	103.5	106.1	115.8
Latvia	9.6	12.5	12.3	14.0	13.5	14.6	14.9	12.4	10.7	9.0	19.5	36.1
Lithuania	16.6	22.8	23.7	23.1	22.3	21.1	19.4	18.4	18.0	16.9	15.6	29.3
Luxembourg	7.1	6.4	6.2	6.3	6.3	6.1	6.3	6.1	6.5	6.7	13.7	14.5
Malta	53.4	57.1	55.9	62.1	60.1	69.3	72.1	70.2	63.7	61.9	63.7	69.1
Netherlands	65.7	61.1	53.8	50.7	50.5	52.0	52.4	51.8	47.4	45.5	58.2	60.9
Poland	38.9	39.6	36.8	37.6	42.2	47.1	45.7	47.1	47.7	45.0	47.2	51.0
Portugal	52.1	51.4	50.5	52.9	55.6	56.9	58.3	63.6	64.7	63.6	66.3	76.8
Romania	16.6	21.7	22.5	25.7	24.9	21.5	18.7	15.8	12.4	12.6	13.3	23.7
Slovakia	34.5	47.9	50.3	48.9	43.4	42.4	41.5	34.2	30.5	29.3	27.7	35.7
Slovenia	:	:	:	26.8	28.0	27.5	27.2	27.0	26.7	23.4	22.6	35.9
Spain	64.1	62.3	59.3	55.5	52.5	48.7	46.2	43.0	39.6	36.2	39.7	53.2
Sweden	69.1	64.8	53.6	54.4	52.6	52.3	51.3	51.0	45.7	40.8	38.3	42.3

United Kingdom	46.7	43.7	41.0	37.7	37.5	38.7	40.6	42.2	43.5	44.7	52.0	68.1
Croatia	:	:	:	:	40.0	40.9	43.2	43.7	40.8	37.7	:	:
Turkey	:	:	:	104.4	93.0	85.1	59.2	52.3	46.1	38.8	:	:
Iceland	:	:	:	:	:	:	:	26.0	27.9	29.1	57.4	:
Norway	:	:	:	29.2	36.1	44.3	45.6	44.5	55.3	52.4	49.9	43.7

Source: Czech Statistical Office, http://apl.czso.cz/ode/tab/teina220.htm

Only very few EU countries may say that their current debt (end 2009) is lower than their debt eleven years ago (end 1998). This is particularly alarming as we realize that most of the countries went trough an economic boom during two thirds of the period in question. On the other hand, at least few of the countries have done "a good job" in respect to their deficits, including Bulgaria and Estonia. Sadly, they are lonely exceptions; others have done nothing but confirmed one dramatic trend: The states of the EU are not capable to keep their debts at bay. While they temporarily posted improved results, this was predominantly due to their increased GDP; the total debts have been rising.

Table 3: EU state debts (in EUR billion after 1 January 1999; in ECU billion until 31 December 1998)

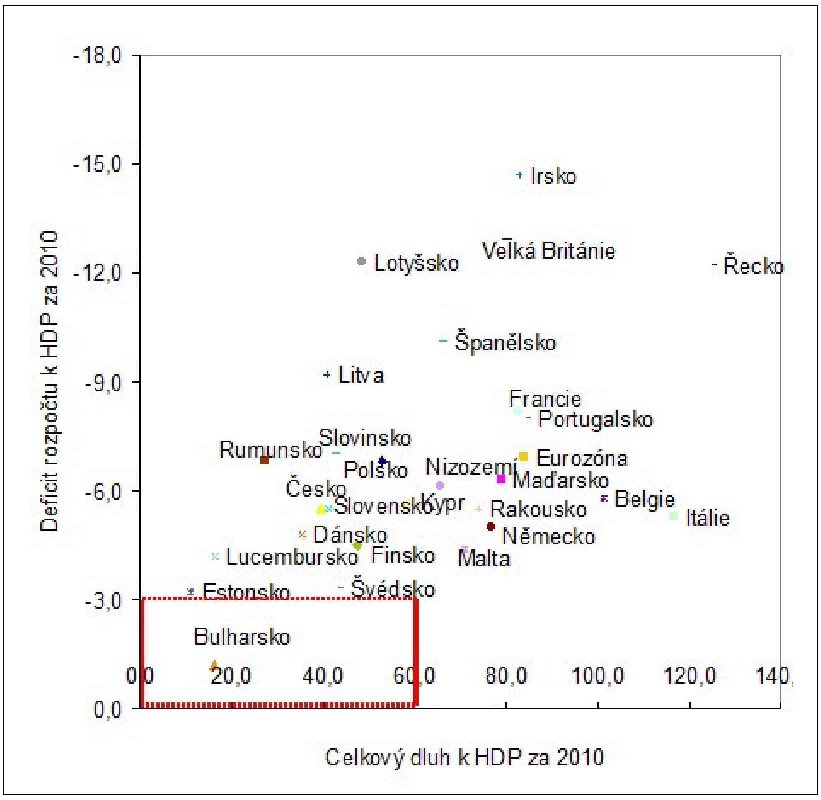
	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
Euro area	4,359	4,473	4,528	4,799	4,953	5,184	5,426	5,676	5,807	5,911	6,406	7,062
Euro area-16	4,492	4,618	4,694	4,825	4,981	5,215	5,460	5,710	5,842	5,940	6,424	7,062
Euro area- 15	4,486	4,609	4,683	4,814	4,970	5,202	5,446	5,697	5,828	5,924	6,406	7,040

EU-27	5,422	5,645	5,694	5,843	6,001	6,245	6,595	6,937	7,174	7,269	7,699	8,688
EU-25	5,408	5,629	5,676	5,822	5,981	6,227	6,576	6,918	7,156	7,249	7,677	8,655

Source: Czech Statistical Office, http://apl.czso.cz/ode/tab/teina220.htm

Speaking of the Maastricht criteria, currently none of the EU states complies with them, except for one – Bulgaria.

Figure 1: EU compliance with the Maastricht criteria



Graf: Deficit rozpočtu k HDP za rok 2010 – Budget deficit to GDP in 2010

Celkový dluh k HDP za 2010 – Total debt to GDP in 2010

Source: Michl A.: Way to Slavery in One Plot Chart, (note: the source for the 2010 data is the latest available forecast by the European Commission. The data for V4 are based on a prognosis by Raiffeisen Research) http://blog.aktualne.centrum.cz/blogy/ales-michl.php?itemid=9611

The red rectangle in the bottom left-hand corner outlines "Terra Maastricht" (budget deficit below 3% GDP, government debt below 60% GDP), with e.g. Ireland, Greece, U.K. or Italy being "light years away" from the safe haven of careful monetary policy. We may also broaden our horizons by looking at countries outside the EU:

Table 4: Public debt in selected countries (for 2009, % GDP)

Country	Public debt (% GDP)
Zimbabwe	304.30
Japan	192.10
Singapore	117.60
Iceland	95.10
Egypt	79.80
Israel	78.00
Canada	72.30
India	59.60
Uruguay	58.70
U.S.A.	52.90
Argentina	49.10
Turkey	48.50
United Arab Emirates	47.20

Finland	46.60
Switzerland	43.50
Mexico	42.60
New Zealand	29.30
Romania	20.00
Venezuela	19.40
Australia	18.60
China	18.20
Hong Kong	18.20
Chile	9.00
Qatar	7.10
Russia	6.90
Oman	2.80

Source: CIA – Central Intelligence Agency - The Word Factbook 2009

The table shows that the issue of indebtedness is far from being confined to the E.U. alone. There is one more important thing worth noting in respect to national debt: the financing method makes the key difference, not just the actual amount. Looking at Japan with a soaring debt that has exceeded 200% GDP based on the latest available data, we can see that 80% of the amount is financed locally. It is much safer than the method chosen by Greece that relies on foreign investors to finance a similar part of its debts[1].

So far, we have mostly compared individual states and their debts, arriving at an obvious conclusion: most modern countries are not

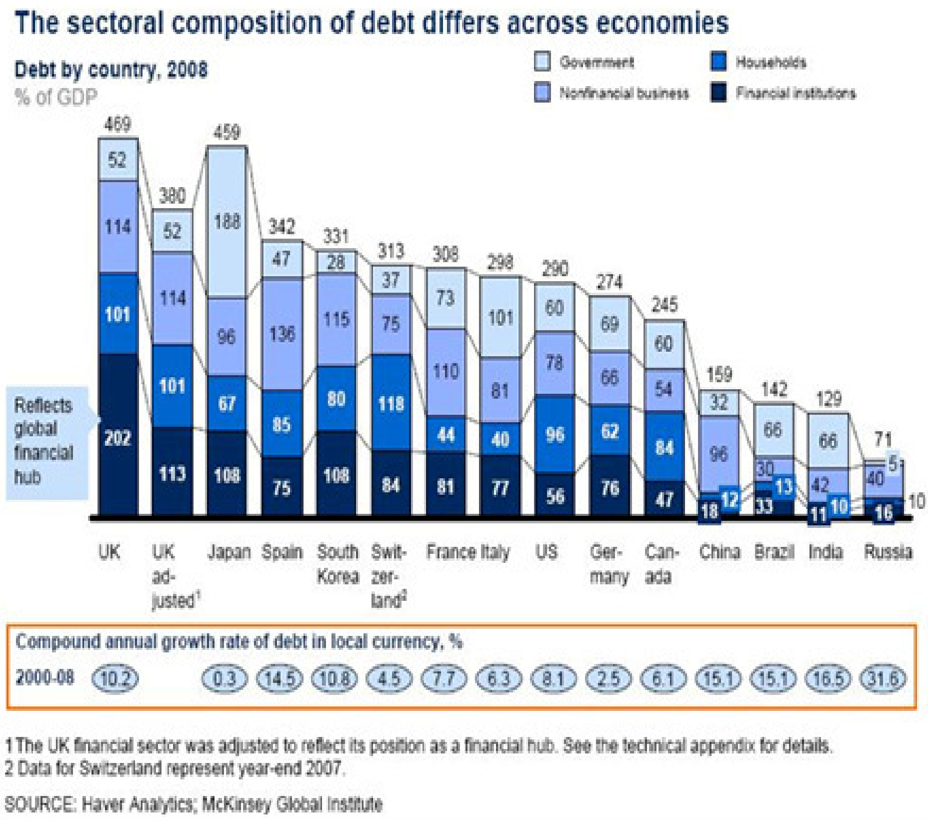
[1] To a certain degree, this explains why markets and bond holders target Greece, or potentially, Spain, Ireland or Portugal, while leaving Japan alone, although this explanation alone is just one part of the story. For example, the U.S. national debt and deficit have grown into astronomical proportions but somehow, the government still manages to attract investors; however, this brings us to a completely different issue.

capable to reduce their indebtedness. We could try to come up with a myriad of reasons behind the development, although without any further discussions we may generally call them political. While historically, debts accumulated as a result of wars and revolutions, the current national debts (over the last thirty years) have been primarily incurred via deficit financing in an attempt to "improve" the standard of living of inhabitants[1] of the respective countries above what they would otherwise be entitled to based on free economic forces. This leads to fatal economic errors, excessive exploitation of the economy within the redistribution of wealth, monetary and fiscal imbalance and the subsequent financial collapse.

The infection of debt has been proliferating to other areas as well and the seriousness of situation needs to be assessed not just in terms of national debt but also by looking at the debts incurred by households, non-financial corporations and the financial industry. The study by Mc Kinsey Global Institute *Debt and Develeraging: The Global Credit Bubble and its Economic Consequences* (2010) is a break-through comparative work on the topic.

[1] We may only speculate whether this is the result of the desire to maintain the governing position similarly to the Roman emperors financing their armies until completely exhausting the economic potential of their empires, thus destroying the economy and eventually losing both power and the empire itself, or whether this is an expression of charitable inclination, with equally dire consequences.

Figure 2: The sectoral composition of debt differs across economies



Source: Haver Analytics, McKinsey Global Institut,
http://www.mckinsey.com/mgi/reports/freepass_pdfs/debt_and_deleveraging/debt_and_deleveraging_full_report.pdf

This very informative plot chart reveals some new facts that, until recently, were mostly ignored in the economic literature across the globe; after the Greek crisis, however, they may emerge as a hot topic: what debt levels and what debt structure is the economy capable of bearing? With the developed countries breaking the debt "taboo" in the 1960s and with the advent of deficit financing, the overall perception of debt changed. Family indebtedness has been picking up its growth since the 1980s, however, in the post-communist countries debts started to grow at the beginning of the new millennium as the governments supported mortgage systems as a way of promoting proprietary housing. Solid evidence exists confirming the assumption that massive support of mortgage banking and the attempt of governments to resolve the housing issue by boosting housing development and housing ownership were the main causes of the 2007/8 crisis. The unrealistic derivatives issued predominantly in the U.S. only served as a mechanism that ushered in subsequent problems, with the development being possible due to the artificial real estate bubble which, due to government incentives worth hundreds of billions or even trillions of dollars, created a dynamically unbalanced state[1].

In 2009, the indebtedness level within the EU exceeded 90 per cent of family disposable income[2] as it had grown by twenty percentage points in just a decade. The total debts amounted to more than one trillion

[1] For more information on the topic, see Smrčka, L.: Finanční krizi roku 2008 vyvolaly (především) vládní zásahy. (The 2008 Crisis Was Caused (above all) by Government Interference) He notes that: *"This legitimately leads to the following conclusion: Overall, the imbalances arising from the financial economy were a strong impetus for the occurrence of problems, which the developed world was threatened by as a part of the natural economic cycle; the problems struck with full force and multiplied in their intensity. Had it not been for the crisis of financial institutions caused by government policies and their massive subsidies of "quality housing for all", the economic boom could have gradually turn into a period of stagnation or, potentially, a period of mild growth."*

[2] Caution is recommended when we compare certain figures. Family debt is sometimes compared to GDP (see the plot by McKinelsy Global Institute), family disposable income, financial assets, or with total family assets, including real property. This may be tricky as there is one important thing to remember: Inability to pay commitments is primarily linked to cash-flow and only secondarily to the notions such as excessive indebtedness. That is why e.g. comparing debt to total property makes no sense, as does comparing it to financial assets, since this does not reveal anything about the property liquidity or the possibility to use it for the payment of debts. The property in itself will not prevent any default from occurring. Equally the comparison of family debt to GDP is not completely unproblematic, as the actual result will be substantially different for a country with effective taxation amounting to 20% as opposed to a country where the same indicator goes up to 60%. All in all, disposable income seems to be the best choice.

crowns since 2002. (Table 5 shows debts held by banks and bank institutions but disregards non-bank debts, lease companies etc.) The Czech Republic is a good example of how dynamic may both government and family debt levels become. Note the family debt indices for the period 2002 to 2007 – they always exceeded the thirty per cent mark in the year-on-year comparison. The slow-down in the latest period was due to the economic downturn that, in return, fuelled family default[1]. Reverting to the description of the government debt in the Czech Republic, we see that it became more pronounced in 2000, i.e. just a short time before the actual family debts started to rise as well. This, in part, was the result of the Keynesian-oriented government of M. Zeman coming to power in 1998 as it decided to tackle the CZK crisis in 1997 and 1998 by increasing government spending, while also offering economic incentives. The strategy was indeed a successful one, with Czech GDP growing above 6% while the inflation remained very low. However, only a few people would have thought that so many families would eventually follow the government's spending example, with the following of similar "role models" throughout the E.U. being a common occurrence.

Table 5: Deposits and credits of households, total (end of period)

Period Year Quarter	*Deposits*				*Credits*			
	in CZK		*in foreign currency*		*in CZK*		*in foreign currency*	
	CZK mil.	*index*	*CZK mil.*	*Index*	*CZK mil.*	*Index*	*CZK mil.*	*Index*
1990	183,986	98.0	x	x	31,757	107.7	x	x
1991	220,718	120.0	23,997	x	63,009	198.4	x	x

[1] The same naturally applies to business defaults.

1992	260,172	117.9	39,468	164.5	72,979	115.8	x	x
1993	314,048	120.7	45,846	116.2	92,781	127.1	x	x
1994	375,928	119.7	42,217	92.1	107,837	116.2	x	x
1995	454,949	121.0	35,771	84.7	101,789	94.4	x	x
1996	521,174	114.6	40,125	112.2	103,395	101.6	x	x
1997	626,873	120.3	68,799	171.5	104,370	100.9	6,074	x
1998	693,544	110.6	73,555	106.9	103,603	99.3	3,483	57.3
1999	699,225	100.8	80,827	109.9	108,808	105.0	3,410	97.9
2000	743,576	106.3	83,731	103.6	120,209	110.5	2,310	67.7
2001	825,794	111.1	91,516	109.3	136,929	113.9	2,253	97.5
2002	837,796	101.5	79,376	86.7	177,365	129.5	1,257	55.8
2003	884,830	105.6	72,960	91.9	234,301	132.1	1,267	100.8
2004	951,043	107.5	68,263	93.6	310,794	132.6	1,043	82.3
2005	1,010,936	106.3	66,397	97.3	411,758	132.5	1,137	109.0
2006	1,113,203	110.1	61,174	92.1	529,925	128.7	880	77.4
2007	1,231,081	110.6	58,440	95.5	707,037	133.4	783	89.0
2008	1,373,830	111.6	66,000	112.9	850,678	120.3	792	101.1
2009	1,484,155	108.0	67,123	101.7	939,556	110.4	946	119.4

Source: Czech National Bank, http://www.czso.cz/csu/2009edicniplan.nsf/p/1403-09

Over the last three years (2008 – 2010), the number of family defaults and personal bankruptcies has been rising in all developed countries; while the growth rate has been different in various regions, the development has been dynamic in all of them. In 2009, the number of personal bankruptcies in the Czech Republic skyrocketed by 248%. A similar development has taken place in other European countries, and a real threat exists that the situation will reach the proportions of that in the U.S.A. where the annual number of personal bankruptcies shot above the one million mark, with the number of cases still growing.

Table 6: Insolvent businesses and personal bankruptcies in the U.S.A.

	2009	2008	Change 2008/2009 %
Total	1,481,600	1,117,771	+32.5
Insolvent businesses	60,600	43,546	+39.2
Personal bankruptcies	1,421,000	1,074,225	+32.3

Source: Creditreform

Over the first decade of the 21st century, businesses in developed countries (subject to regional differences based on historical development) have also reported an increasing tendency to borrow funds instead of increasing capital, using undistributed profits or issuing stock. After the financial economy significantly reduced its willingness to finance the business sector as a result of the crisis, the approach has caused an unprecedented level of defaults between companies as well as between companies and banks. Things have got so far that the E.U. is now contemplating increasing regulation of payment conditions, with proposals for introducing obligatory invoice maturity periods between 30 and 60 days depending on the industry. This is no surprise as the sums unpaid due to insolvency or unwillingness to pay within the E.U. have attained EUR 300 billion, which, just to give you an idea, is the total debt of Greece. However, the regulation of payment conditions will not change much because the real problem is that businesses with not very strong capital backing are incapable to pay when the economic downturn hits them and cash flow issues occur. This leads to proliferation of insolvency across the business world, with the virus of insolvency eventually affecting even relatively sound companies.

Table 7: Insolvent businesses in traditional EU states

	2009	**2008**	**Change 2008/2009 %**
Austria	7,050	6,500	+8.5
Belgium	9,430	8,476	+11.3
Denmark	5,600	3,709	+51.0
Finland	3,310	2,612	+26.7
France	55,800	49,723	+12.2
Germany	34,300	29,580	+16.0
Greece	360	359	+0.3
Ireland	1,400	773	+81.1
Italy	9,098	6,498	+40.0
Luxembourg	698	590	+18.3
Netherlands	10,500	6,847	+53.4
Norway	5,100	3,637	+40.2
Portugal	4,450	3,267	+36.2
Spain	4,900	2,528	+93.8
Sweden	7,600	6,298	+20.7
Switzerland	5,215	4,222	+23.5
U.K.	20,300	16,268	+24.8
Total	**185,111**	**151,887**	**+21.9**

Source: Creditreform

Table 8: Insolvent businesses in Central and Eastern Europe

	2009	2008	Change 2008/2009 %
Croatia	940	875	+7.4
Czech Republic	4,570	2,913	+56.9
Estonia	631	423	+49.2
Hungary	14,637	11,322	+29.3
Latvia	2,192	1,296	+69.1
Lithuania	1,168	731	+59.8
Poland	590	425	+38.8
Romania	20,800	14,483	+43.6
Slovakia	900	582	+54.6
Slovenia	749	657	+14.0
Total	47,177	33,707	**+40.0**

Source: Creditreform

Implications for economics as a science

This situation has caused confusion in a number of areas, including valuation of receivables where new, more flexible procedures are needed to reflect the effects of economic cycles[1]. The current dynamic

[1] In his article "*Nové možnosti oceňování pohledávek*" (New opportunities in the valuation of receivables), Jaroslav Schönfeld writes*: "I think it is desirable that the creditor obtains internal as well external valuation. While the internal value within the context of this work more or less corresponds to the value of the receivable prior to collection, i.e. when it is kept in the bank portfolio, the external price corresponds to an adequate price for its assigning when offered on the market of receivables. In order to adopt qualified decisions as to whether the receivable will be kept until collected or assigned in return for a payment, banks need to internally value the receivable. This is also important as the bank needs supporting "arguments" when negotiating the sale of the receivable with interested parties or when deciding on the most suitable collection method. As far as the valuation of assignment of receivables is con-*

global economy, which is dynamic in both the positive and negative sense, i.e. it is a positively evolving system as well as a sticky swamp of sudden falls, is quick to punish all imbalances in government, corporate and family finances. This presents a problem when receivables are valued, as the countless number of examples over the recent months and years document. The aforementioned CDOs are quite likely the most eloquent of them.

It has also become apparent that scientific exploration of financial fragility, a concept recently elaborated on by several major scientific teams across the globe, needs broadening in its focus. So far, the focal point was the relationship between the central bank and individual commercial banks, with attempts to create a model of defaults in bank portfolios based on changes in economic parameters. These include primarily the key interest rates as well as other indicators. Now the time has come to extend the research to include family finance as the default levels affecting families have been on a steady rise. Looking at debts of families, and assuming that families will not be able to reduce their debt levels, similarly to states failing in this respect, the logical conclusion is that family default will become much more common an occurrence, potentially reaching massive proportions in the near future.

While other examples would be relevant as well, it is clear that it is the issue of growing debt in general that will remain the main focal point of economics in the next decade. At this point, we are incapable to foresee the impacts of the indebtedness of societies, states and

cerned, sophisticated modifications of the two-phase method are likely to prevail in the future. While the method is a complex one, it may provide the assignor or assignee with valuable information on how to proceed with the collection. The use of risk parameters to calculate the value of receivables is a great opportunity area for banks, as these parameters are contained and assessed in bank statistics due to the implementation of Basel II. When used correctly, these parameters may prove a suitable tool for the valuation of receivables although this approach may have to be used in addition to other tools. Please note that valuation of receivables by the bank or investor is a unique creative process that has to consider specifics of each receivable subject to valuation and that usually requires cooperation of several experts, including lawyers, tax specialists, appraisers of movable and immovable property etc."

corporations being far greater than ever before in the history of our civilization.

Conclusion

We have seen that debts lead to defaults, with this being true for states, businesses as well as families. Trying to persuade ourselves that all this is due to the 2008-2010 economic downturn would be a mistake, although it may have acted as the trigger of a phenomenon that had been brewing for some time and would eventually become apparent one way or the other. Recession as such is not the main problem that the global economy is currently facing. The main problem is the dramatically growing imbalance in the realm of debt. In this sense, the economic downturn has proven a mixed blessing: While it has had a purification effect on businesses as well as families that have been going through a period of bankruptcies that have at least exposed losses that now can be dealt with, it also means that states have been increasing their indebtedness in an effort to aid the economy and prevent it from further collapses. This, however, means that the total imbalance caused by debts does not diminish.

References

Allen, F., Gale, D. (2000c): "Bubbles and Crises," The Economic Journal 110 (2000) 236-256.

Colibasanu Oana – Antonia, "South Eastern European Banking Industry – The Risks and Opportunities of a Speedy Transition", in *Nová doba, nové ekonomiky - Nová Teorie Ekonomiky*, Nov. 2008, pp. 45-54, ISBN 978-80-245-1403-1.

Craig, R. S., Sundararajan, V. (2003): Using Financial Soundness Indicators to Assess Risks to Financial Stability, in: Ugolini.

Davis. S. Landes: „The Wealth and Proverty of Nations“, W. W. Norton & Company, Inc., London, 1999

Dubská Drahomíra: „České domácnosti dluží bilion“ (krátká tématická analýza), Český statistický úřad, http://www.czso.cz/csu/csu.nsf/informace/ckta120310.doc

Goodhart, C. A. E., Sunirand P., and Tsomocos D. P. (2006): A Model to Analyse Financial Fragility. Economic Theory, v. 27, pp. 107-142.

Goodhart, C. A. E., P. Sunirand, and D. P. Tsomocos. (2004): A Model to Analyse Financial Fragility: Applications, Journal of Financial Stability, 1(1):1-30.

Lagunoff, R., Schreft, S. L., (2001): "A Model of Financial Fragility," Journal of Economic Theory, Elsevier, vol. 99(1-2), pages 220-264, July.

Roxburgh, Ch., Lund, S., Wimmer, T., Amar, E., Atkins, Ch., Kwek, J-H., Dobbs, R., Manyika, J (2010): *Debt and develeraging: The global credit bubble and its economic consequences*, Washington, McKinsey Global Institute 2010, http://www.mckinsey.com/mgi/reports/freepass_pdfs/debt_and_deleveraging/debt_and_deleveraging_full_report.pdf

Schönfeld, J. (2008): *Nové možnosti oceňování pohledávek*. Ekonomika a management, 2008, No. 04, Volume 02, p. 53 - 69

P. C., Schaechter, A., Stone, M. R. (eds): Challenges to Central Banking from Globalized Financial Systems (Papers presented at the ninth conference on central banking), IMF Washington, 2003.

Smrčka, L. (2009): *Finanční krizi roku 2008 vyvolaly (především) vládní zásahy*. Ekonomika a management, 2009, No. 01, Volume 03, p. 52-63, ISSN 1802-8470.

Tett G. (2009): *Fool's Gold: How the Bold Dream of a Small Tribe at J.P. Morgan Was Corrupted by Wall Street Greed and Unleashed a Catastrophe.* New York, Free Press 2009.

Tsomocos, D. P. (2003a): Equilibrium Analysis, Banking and Financial Instability. Journal of Mathematical Economics, 39(5-6):619-655.