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Terms of trade effects and Russian economic growth

BY PETER HAVLIK

The Russian economy has been booming in the past couple of years and most analysts have been busy repeatedly revising GDP growth forecasts upwards, largely owing to surging energy prices. GDP growth exceeded 8% in 2007, driven by a double-digit expansion of household consumption and even faster growth of investments. Since 2000, the Russian real GDP has increased by more than 56% (by 6.6% on annual average) and even more so in nominal euro terms (Figure 1). At purchasing power parity (PPP), Russia's GDP amounted to EUR 1750 billion in 2007 – about 80% more than in 2000 and 25% more than the aggregate GDP of the new EU member states from Central and Eastern Europe (NMS). In per capita terms, Russia's GDP exceeded EUR 12,300 in 2007 – reaching about 50% of the EU average – and the speed of catching up to the average per capita GDP level in the EU has been impressive: about 15 percentage points since the year 2000.[1]

Thanks to large windfall gains from high world market energy prices, the Russian government was able not only to repay nearly all outstanding public external debts, but to accumulate almost EUR 340 billion of foreign exchange reserves as of end-April 2008. Apart from the Stabilization Fund (recently renamed Reserve Fund), another part of windfall proceeds from oil and gas exports is being accumulated in the newly established National Welfare Fund (see Astrov, 2007). Moreover, several national development projects (targeting infrastructure, housing, the health sector, education, and agriculture) were launched and salaries in the public sector and pensions were raised.

[1] This was more than the NMS achieved during the same period – see Havlik, Holzner et al. (2008), Annex Table I.

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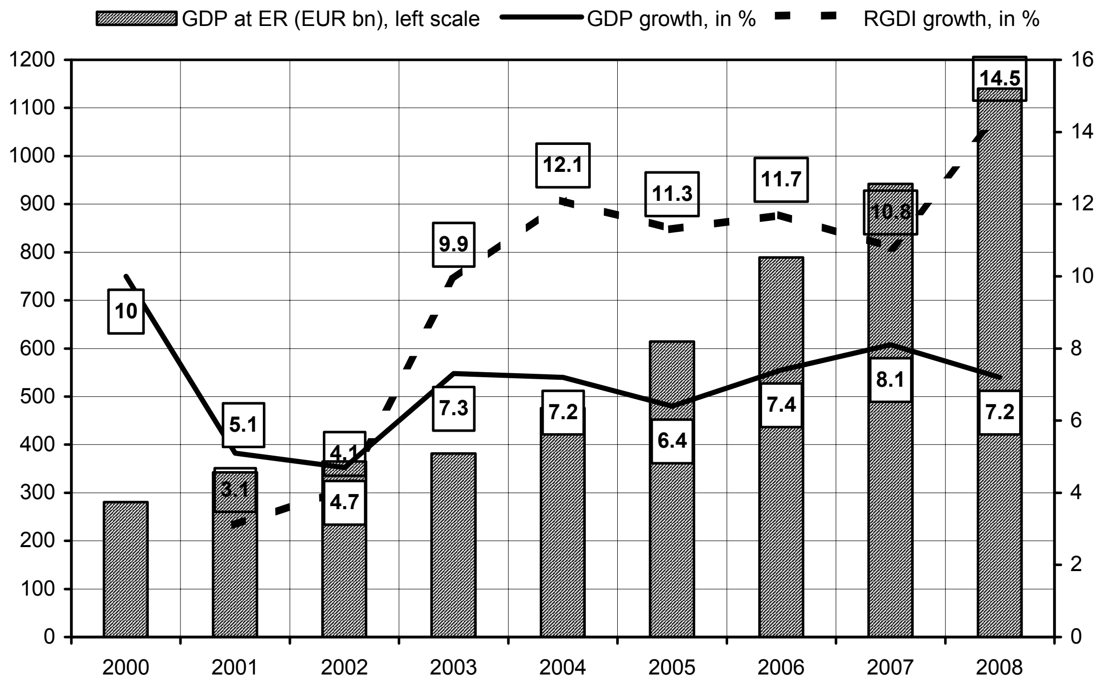
Figure 1

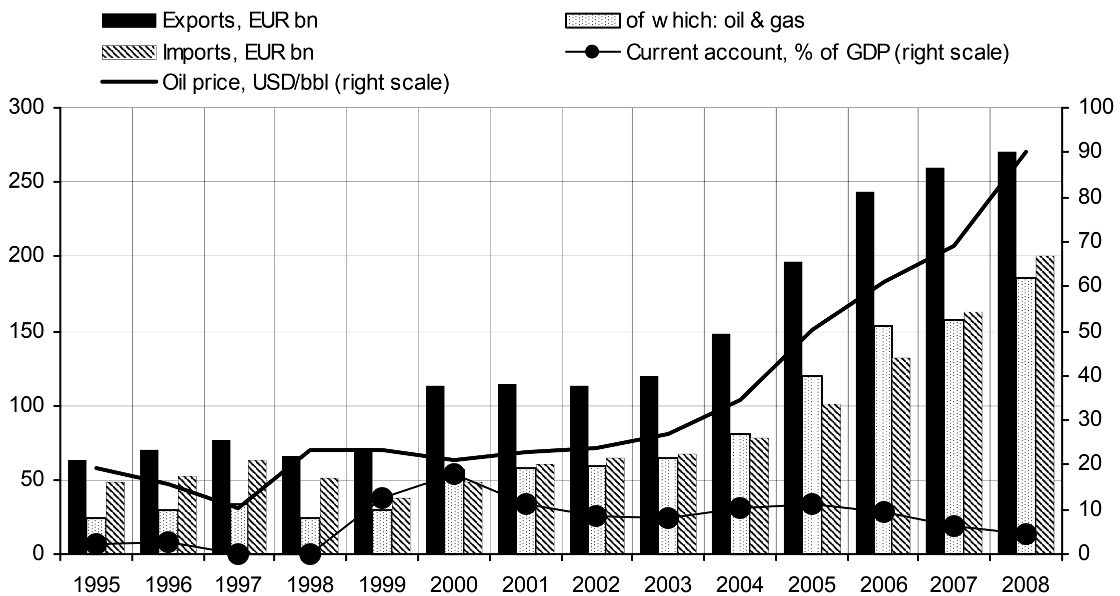
Russian economic growth: GDP and RGDI



Source: Goskomstat, Central Bank of Russia, own estimates.

Figure 2

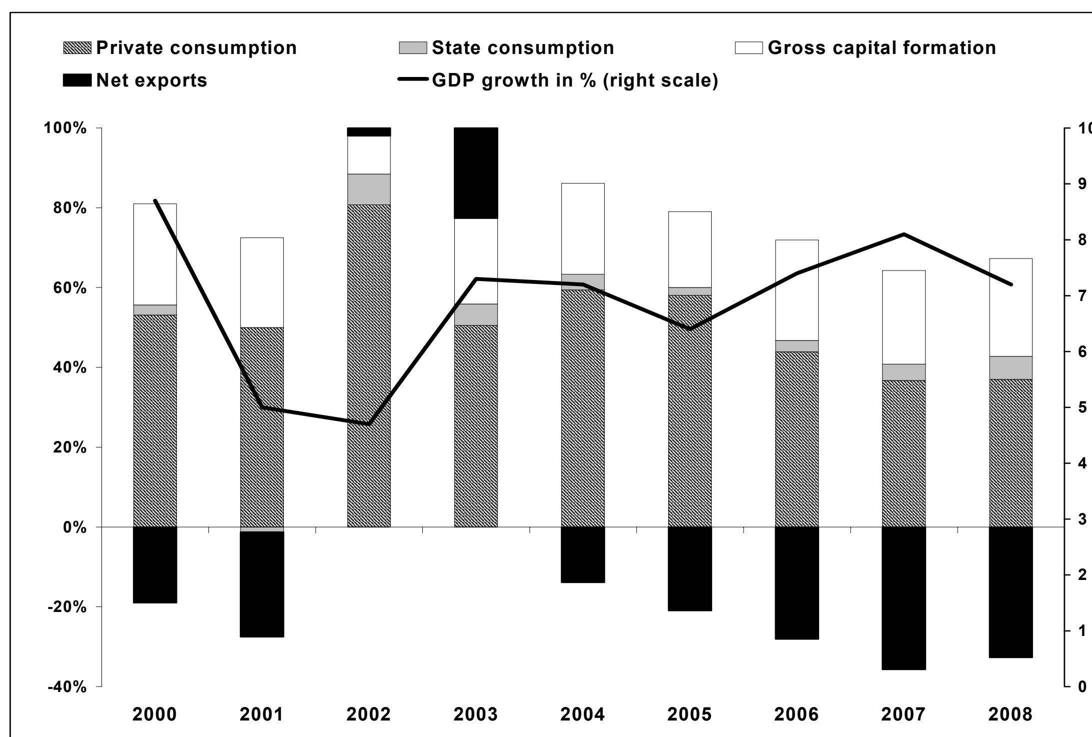
Russian external sector and oil prices



Source: Goskomstat, Central Bank of Russia, own estimates.

Figure 3

Drivers of Russian GDP growth (contributions of main components)*



* Sum of individual contributions = 100.

Source: Goskomstat, own calculations.

Table 1

Russian GDP and estimated Real Gross Domestic Income (RGDI), 2001-2008

Year	2001	2002	2003	2004	2005	2006	2007	2008*
GDP (RUB bn, 2003 prices)			13243	14197	15105	16223	17537	18800
GDP growth (%)	5.1	4.7	7.3	7.2	6.4	7.4	8.1	7.2
ToT (2003 = 100)			100.0	116.0	133.8	149.1	155.6	186.0
ToT (RUB bn, 2003 prices)			.	652.8	1423.5	2243.9	2931.6	4645.5
RGDI (RUB bn, 2003 prices)			13243.2	14849.5	16528.8	18467.0	20468.8	23440.5
RGDI growth (%)	3.1	4.1	9.9	12.1	11.3	11.7	10.8	14.5
ToT effect, pp.	-2.0	-0.6	2.6	4.9	4.9	4.3	2.7	7.3
ToT effect (EUR bn)				18.8	41.0	64.7	84.5	133.9

Source: Years 2001-2003: OECD (2006); own estimates and forecast based on ROSSTAT and Central Bank of Russia.

The effects of rising energy prices on the Russian economy have doubtlessly been substantial, in both nominal and real terms. Surging export revenues have generated large trade and current account surpluses which have been used partly for the above-mentioned debt repayment and accumulated in reserve funds, but also consumed and, more recently, invested as well. However, as a result of growing domestic spending, imports have been growing even faster than exports: already in 2007 the value of imports exceeded revenues from energy exports and the current account surplus diminished (Figure 2). The economy shows signs of overheating as domestic demand outpaces supply, and inflation has returned to double-digit figures recently.

What have been the effects of the surging energy prices on Russia's economic growth? In terms of GDP, real growth has been driven since 2004 by booming private consumption and investments. At the same time, the growth effect of real net exports (exports minus imports, both at constant prices) has been negative because the volume of exports is growing at a slower pace than that of imports (Figure 3). Per definition, the methodology used for the measurement of real GDP excludes price effects – not only of the domestic inflation, but the effects of export and import prices as well (the effect of the so-called terms of trade). The latter effect, highly relevant in the current Russian context, is captured by another indicator: the real gross domestic income (RGDI).

RGDI is defined as:[2]

$$RGDI = GDP + ToT \quad (1)$$

where:

$$ToT = (X-M)/P – (X/Px) – M/Pm) \quad (2)$$

and X(M) are nominal exports (imports), Px (Pm) are deflators of exports (imports), P is the average deflator of exports and imports. Positive (improving) terms of trade effect thus results in gross domestic income being higher than GDP.

The relation between RGDI and GDP was analysed by Vintrova (2005) and Mora (2006) for Central and East European countries, in particular for the Czech Republic, which reported rising terms of trade and thus higher RGDI than GDP in the period 1996-2004. For Russia, the relation was analysed in OECD (2006) and recently also by Kuboniwa (2007) who calculated various price deflators. Table 1 reproduces these results (for the years 2001-2003) and provides the author's own estimates of RGDI for the years 2004-2008 using the above expression (2) and implicit price deflators of exports and imports, based on the latest (April 2008) official Russian data from ROSSTAT.

As can be seen, the terms of trade effect has been positive since 2003 and RGDI has been growing faster than GDP. RGDI in 2007 was nearly 17% higher than the corresponding GDP. During 2004-2007, the cumulated terms of trade gains exceeded EUR 200 billion and Russia's economic growth (measured by RGDI) exceeded 10% per year – matching closely the Chinese results. Taking into account the current oil price developments,[3] it can be expected that another substantial terms of trade gain will be realized in 2008. The expected slowdown in real GDP growth notwithstanding (which will again result from a negative contribution of real net exports), RGDI growth may exceed 14% and the associated terms of trade gain EUR 130 billion – see Table 1.

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[2] The term 'real' does not refer here to constant prices, but the product that the country has at its disposal. It is sometimes referred to as 'command' GDP, reflecting the real purchasing power of domestic residents – see Kohli (2004). We use the same notation as Mora (2006).

[3] During the first quarter of 2008, the average price of Urals crude oil (USD 93.5 per bbl) increased by 73% compared to the first quarter of 2007. According to preliminary balance of payments data from the CBR, export revenues increased by 50% in nominal USD terms in the first quarter of 2008 (of which revenues from energy exports by almost 70%).

Poland: the national stock exchange game

AN INTERVIEW WITH ARTUR SIERANT

The stock exchange is ruled by greed and fear. When indices go up, greed wins over the fear. A talk with Artur Sierant, stock exchange analyst.*

For a couple of months already there has been a great uncertainty on the stock exchange. Those who should know frighten with a gigantic crash in China, stagflation in the United States and, consequently, the collapse of the financial markets around the globe.

Things are going to be OK. We chase Europe, and we do this, anyway, for Europe's own money, so there will be no big crash. I do not believe in a collapse resulting from the credit problems of the American economy. Things will get OK, but there will be, one day, a collapse. Every upward trend has to end some time, but this is not the end of the world.

Do you remember the very first session of the Warsaw stock exchange?

No. On 8 April 1991 my son was born, the stock exchange took off on 16 April. I preferred to applaud the newborn.

Who played then on the stock exchange?

The lead vocal was with the old socialist 'private initiative': the craftsmen, the vegetable and flower growers[1], producers of various kinds of animals, feather or fur, shopkeepers, street money changers, specialists in petty grey trade with Hungary, Bulgaria, Turkey, India and Thailand. Those people were always the first ones to look for the gaps in the system, searching through the regulations, finding all kinds of opportunities, in order to gain some money. No wonder they were the first to enter the stock exchange.

They knew what they were doing?

By no means! We did all pass only through the school of the socialist economy – some in theory, the other ones in practice. At that time nobody had access to the world literature on the subject of capital markets. And even if there had been access to such literature, there were truly very few among the stock exchange pioneers who could read English. And those who could would have understood nothing, anyway.

There was just one handbook on the stock exchanges, *Stock Exchanges of the World Economy*. I read it during my studies, but this was of no help in investing my own money.

I remember only one broader text on the stock exchange in the Polish press. It appeared yet under communism, in 1988, in *Res Publica*. Its author was Waldemar Kuczyński. He described, more or less, the functioning of the securities market. When I read it again many years later, I concluded that it was written with a definite bias; the intention was not to discourage the reader. But who of the Polish socialist 'private initiative' had been reading *Res Publica*?

How did investors, having no elementary knowledge, manage on the floor?

The stock exchange was not as it is nowadays: more than three hundred companies, continuous quotations, options and futures. The stock market started with just five companies. It seems that none of the private investors could at that time carry out a decent fundamental analysis of a company, assess how it managed its funds, what were its perspectives. They simply knew that the best company was Exbud. The Exbud quotations dramatically went up. The second company that investors assessed highly was Kable.

They invested by the ear.

The State Treasury would privatize one company more or less every two months. The second group

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* This interview, conducted by Włodzimierz Kalicki, originally appeared in the weekly supplement (Duzy format) to *Gazeta Wyborcza* on 14 January 2008. Translated from Polish by Jan W. Owsiński.

[1] This sentence is full of colloquial terms, originating from the socialist period, such as, very characteristically, 'stickers' or 'stalkers' (*badylarze*), denoting people growing vegetables, flowers and fruits, especially close to large urban agglomerations, who would often get really wealthy, even by western standards. The very term 'private initiative', officially used to denote private business, existing at the margin of the Polish socialist economy (except for farming, where it dominated), had an ambivalent undertone in terms of value judgment (*translator's note*).

of five companies on the floor was led by Swarzędz.[2] My first employer, anyway, bore acute losses in connection with investing in Swarzędz. Thus, the risk of painful losses was present on the floor from the very beginning. But then, the successive openings were those of the very strong companies. Wólczanka, Żywiec, Wedel brought investors decent profits.

In the initial period of the stock exchange functioning the sessions would take place only on Tuesdays. Investing on the stock exchange did not interfere, then, with professional occupations, it sufficed to think a bit on Monday on the orders to place. By the way, I would at that time be very much put off when after a day of sharp decreases on the floor the newspapers commented with headlines such as ‘Black Tuesday on stock exchange!’. What other day of the week could it be, since the shares were traded only on Tuesdays?

Players learned fast?

And how fast!

The first stock exchange fortunes originated from the discovery that there exists a kind of bearer bond that could be exchanged for the shares of the enterprises privatized through the stock exchange with a 20 per cent bonus.

These bonds had appeared long before the stock exchange was established.

If an enterprise paid the employees special remunerations with these bonds, then it was not obliged to pay the then existing tax on excess increase of wages (*popiwek*), a restrictive instrument, meant to harness inflation.

When the stock exchange started, the lawmakers, wanting to ensure the success of the first issues of privatization shares, decided that these bonds would gain extra 20 per cent for their owners in case of purchase of shares.

The mechanism of gaining a fortune with the bonds was simple. In provincial areas the employees who would get their bonuses paid in the form of bonds would sell them quickly and at very low prices. Those who carefully read the documents related to bonds ordered this knowledge into a logical whole and understood the possibilities that the bonds offered. They would then go to the provincial areas and buy the bonds for roughly 80 per cent of value. With the raging inflation of the period, the interest on bonds was capitalized every month. It sufficed to wait a month or two in order to cash 10 per cent of interest. Finally, one would purchase with the bonds the shares from the public issues with a 20 per cent discount. Altogether, within a short time and practically without any risk, out of, say, 80,000 Polish zlotys one could make 125,000 zlotys. What a nice exploit!

How big were the fortunes that arose from such operations?

I do not know. Certainly they were significant, given the then existing possibilities of the beginner players. I know, on the other hand, how big the problems were that resulted from these bonds.

They were the reason of the first plunge on the stock exchange. For the players who dealt with these bonds, it was most important to recover the capital before the new issues of shares of the privatized companies would take place. And they had their money frozen in the shares from the former issue, which they had purchased with a profit for bonds. Those players would, therefore, hastily sell the shares purchased from the previous issue. They would willingly accept a small loss of a couple of per cent, since altogether the profit, after having purchased the bonds and exchanged them for the shares of the successive company, was several times bigger than these few per cent lost. The successive waves of the share sales for lowered prices triggered a cycle of price decreases and the plunge took place on the floor.

The authorities of the stock exchange were not paying attention to this kind of manipulation?

They could do little, everything was legal. Players were making use of the gaps in the law.

Soon, though, the limits of law were trespassed. For the speculating players the value of the bonds depended upon the bank stamp on them. The bonds from December 1989 were worth for the players three times as much as those of 1990. False stamps appeared very soon. The date on the stamp would get changed in all kinds of ways from 1990 to 1989. In some cases this was done truly perfectly. Quite a number of companies having

[2] A furniture producing company, situated close to Poznań, largely exporting to Germany (*translator’s note*).

specialized in the brokerage on the bond market went into troubles when customers started to appear in mass, having purchased bonds with them, these bonds bearing perfectly forged stamps. The whole system was very well organized, the false documents were distributed by traders using also forged identity cards. As far as I know, the inquiry into this case was conducted quite lazily and has not explained anything.

The first big surge started in 1993. What was its cause?

This upward move was unavoidable, for two reasons. The State Treasury, because of political premises, stopped to push forward privatization, and so new issues stopped appearing on the stock exchange. On the other hand, the companies already on the floor missed the improved market situation and did not conduct new issues of shares.

New players could enter the stock exchange in just one way – by purchasing the shares already quoted. The prices, therefore, had to rise. There was so much money on the floor that prices of virtually all companies increased, irrespective of their economic standing.

At the opportunity of privatization of the Silesian Bank (Bank Śląski), hundreds of thousands of people opened investment accounts. A part of them, having seen how much one could earn with the shares of the Silesian, entered the market and yet drove the prices up a bit.

In the first days of January 1994 the TV and the press summed up the preceding year and all Poland learned how much and with what shares one could gain during that preceding year. It was then that the last wave of investors, lured by the easy and sure profits, brought their savings to the stock exchange. Even the money of plain pensioners and kiosk-keeping ladies arrived at the stock exchange. This sufficed to fuel the surge, for two months, until April.

The darling company of the players and speculators of all kinds in that period of upward move was Universal.

During the 1990s I wrote a lot about the practices of Universal, the company nicknamed 'The Emperor' by the players. It was exactly the Universal company, under the rule of Tytus Przywieczerski, today sought under warrant of arrest, which applied as the first one creative bookkeeping on the Polish stock exchange.

'The Emperor' sold its office building at the crossing of Jerozolimskie Avenue and Marszałkowska street[3] to the BIG bank. With the money from this transaction it paid back its debts and showed a gigantic profit, because the value of the estate, as it appeared in the company's papers, was miserable, while the transaction was, of course, carried out at market prices. The individual investors had at that time elementary gaps in their economic education and did not catch the way in which this gigantic profit was created. They crowded to purchase the shares, and the quotations skyrocketed. Then, Przywieczerski organized a rights issue. Investors bought everything out. Universal got from them a trillion of old Polish zlotys, at that time enormous money. At the end of this operation Universal bought back from BIG bank its office building, for a part of the money having flown in from the investors. Everything was as it had been before. With just one exception: in the cash box of Universal, billions of zlotys pulled out of the investors' pockets remained.

With time, though, 'The Emperor' did get into increasingly serious trouble.

And ventured even queerer financial practices. I wrote about it, because I thought that investors have the right to be informed about what they are actually getting into. I believe that in those years every investor had, at some point, shares of 'The Emperor' in his portfolio. I was, of course, public enemy number one for the board of Universal and for its employees.

Finally, bankruptcy came. Out of journalist's duty I decided to go to the general meeting of the shareholders of Universal, where the motion of bankruptcy was to be voted. Naturally, I would have never been allowed to enter the meeting with just a journalist's card. For this opportunity, then, I bought one share and registered one vote on the assembly. When only I arrived, the employees of Universal besieged me and covered me with injuries – what right do I have to destroy with my

[3] At the very heart of Warsaw downtown (*translator's note*).

texts their place of work, what right do I have to push them to joblessness?

For a while I was afraid I would be beaten up.

I still have this souvenir of Universal – this single share, already then just a paper, for the company had been kicked out of the stock exchange before.

That upward surge changed Poland. There were few stockbroker offices, the orders had to be placed in person, so that petty investors would line up to the offices at cool and grey dawn. In the lines people talked about shares all the time, when they got to work they talked about the stock exchange, after work one would go and talk with friends about shares.

A true lining-up madness ravaged the country on the occasion of sales of the privatized companies. The willing ones would form queues already several weeks before the selling day. The queue committees[4] stood at the door of the branches of stockbroker offices round the clock. The queues would employ bodyguard protection, but on the selling day the strong boys from the city[5] attacked the queues anyway.

The shares found their way under the straw roofs[6].

Small towns and villages took part in this madness not directly. Money was transferred to someone from the family or to a trusted person in town and this person was supposed to do the investing. The custom developed at that time of informally entrusting the stockbrokers with the money with, for them to invest the means. This was prohibited, but still went on, on a great scale. Stockbrokers would massively gain a lot on the side. They could place the orders without any problem and, in addition, had access to valuable information.

Worse even, at that period, exactly, a part of players left their original jobs and started to uniquely play on the stock exchange. Usually, those people were frustrated employees of the public ('budgetary') sphere. They would invest on the stock exchange all of their savings. Some of them would sell their cars, or change their apartments to smaller ones. On their jobs, they were getting miserable wages, almost just alms, while on the floor they could happen to earn more in one day. The share prices rose and rose, and they thought that the carnival of the dizzying profits would last forever.

After the great surge the great collapse came. It was the memorable day of 8th March 1994. For many days the quotations of virtually all shares were dropping by the maximum allowed rate of 10%, and even though no transactions were concluded. Investors could only powerlessly watch their capital melt down.

The culprit was partly also the transaction system functioning on the stock exchange at that time. The system of the ten per cent fork and the offers of sales and purchases in the case of a significant disequilibrium of orders turned the players into a crazy bison herd, running wild and blind, towards self-destruction.

After three days of uncontrolled maximum drops with practically null turnover, the stock exchange abolished the ten per cent fork, and freed prices. Every player, rather than automatically ordering a sale with the price ten per cent lower than the closing price of the preceding day, had to think for a while before putting his/her shares to sale how much they were really worth. And the hysterical plunges ended at once.

How many players lost their capital then?

I do not know. From the very beginning the stock exchange was ruled by a different style than that of everyday life. Poles adore grumbling about everything. Yet, the stock players always represented the American style: even if the indices drop, I am OK. Among many people I knew who invested seriously on the floor, only one admitted once that he bore large losses. And there are no miracles, every an investor has to go through hard times now and then. Those who lost everything just disappeared without a word. I remember one of those – who played, discussed with us, and then disappeared and no one knows now his fate.

[4] A socialist invention: a queue supposed to stand for a long time (several days at least) would organise itself and set up a 'committee', along with the 'roster' for the queue members, meant to ensure that the persons in the queue, written down on the list in their order of appearance, would get served precisely in that order (*translator's note*).

[5] To be 'from the city' – to be a member of the mob (*translator's note*).

[6] An expression coming from Polish classical literature, meaning nationwide popularity (*translator's note*).

I was afraid, then, that the breakdown on the stock exchange would end up with suicides. Those who entered the game at the end, sometimes investing all of their savings and getting deeply indebted, often remained with gigantic debts which they were not capable of paying back. I do not even want to think of those, who, in the wave of euphoria, left their jobs. But luckily, as far as I know, nobody committed suicide because of the stock exchange.

Many of the losers, though, got into depression, into family troubles. I know about some players who got into serious psychological trouble and had to go through medication.

Was it not possible to warn those unfortunate players?

No. How could this be done? Chairman Rozłucki should have given an ad that a speculative bubble was growing and that it would finally burst with a bang? This would have been be ridiculous. And even if he had done so, after such a warning the quotations would have fallen for a couple of days, after which everything would have moved up again. Until the memorable crash. Minister Osiatyński was the only one to dare saying in public that a speculative bubble was growing – and he is treated by the old investors as a public enemy until today. On the stock exchange, common sense has a low price, greed and fear rule. When indices go up, greed wins over the fear. Every upward move is to an important degree propelled by the money of the new players, who have never gone through the despair, humiliation and depression of a crash. That is how things were in 1993 and at the beginning of 1994, then during the web-based surge, and also until today, in the period of the last, longest upward move. No warnings, no advice will help. Only the loss of big money teaches humility with respect to the market, teaches carefulness and the principle that it is most important to protect one's own capital.

In the first years the players in Warsaw would come to the building of the stock exchange during sessions and watch quotations for hours.

This was called among the players to 'meet under the rope'. The authorities of the stock exchange divided the quotation room with a solid rope into two parts – one for the brokers working there, and the other one for the audience. After a session the groups of acquaintances would go to drink coffee, or beer, and discuss the companies and the stock movements. It was an important form of education for numerous investors.

And the breeding ground for the so-called cooperatives, the groups of players manipulating quotations.

Players can calculate. The dishonest ones as well. And they came to the conclusion that if they act together, they can, at a low cost, swing out the prices of shares of a selected company, causing that without any rational reason the price goes rapidly up. Assume that some company issued one million shares. Of these, 900,000 are at the disposal of the State Treasury, financial institutions and employees, in the framework of the employee share scheme. These shares are practically frozen, outside of the market. The players know about it. And if, of the remaining 100,000 shares, they buy, say, 30,000, they can sell during the successive sessions a part of them for increasing prices and thereby wind up the quotation – even by dozens of percentage points. Then, they can sell the rest of the shares for the artificially raised price and gain a lot. The profits of the 'cooperatives' are paid for by the greedy naïve players who, as this used to be said on the floor, would buy the 'pumped-up' shares at the peak of the speculative hump of prices.

It was especially easy to move upwards quotations of companies with limited capitalization and liquidity. And various kinds of 'cooperatives' took advantage of this mechanism many times over.

Usually the pretext for 'pumping up' the quotation was provided by insignificant, positive information on the company. But even if there was no such information, the 'cooperatives' would heat up the quotation without the slightest pretext.

This was illegal and prosecuted by law.

Of course, but, especially during the first years of the stock exchange, when the computer systems and databases were little sophisticated, proving that someone participated in a 'cooperative' was very difficult. The Securities Commission conducted inquiries concerning collusion and

'pumping up' of prices, but only few cases found their way to the courts.

In the majority of cases the abrupt increases of quotations of smaller companies smelled from far away the covert initiative of the 'cooperatives'. In the slang of the players such companies gained, anyway, the name of 'toasts'. Why could the naïve players for years be done in if almost everybody knew which company was a 'toast'?

The 'cooperatives' heat up the share prices only when the indices go up, because when the market goes down, nobody would catch the naked hook. When, however, the market goes up, greed wins over not only fear, but also over common sense. The greedy players would flock towards the 'toasts' like moths towards the candle. They imagined naïvely that they would outwit the 'cooperatives' and sell the shares for a profit before the prices would peak. Some of them succeeded, but the majority ultimately gave away their money to the 'cooperatives' who, after all, decided as to how long the increases were to last.

In 2000 another surge started, related to web-based companies. This one also ended with a speculative bubble. After it burst, a mass of players again lost a lot of money. Had they not learned anything from the catastrophic end of the preceding bull market?

First of all, in their majority these players were not the ones who could remember the beginnings of the stock market.

The long, tiring bear market which started with the crash of 1994 drove away from the market a significant part of investors with the longest period of experience. At the end of the 1990s new players appeared on the floor: well-educated, in their thirties, well earning, with faith in the web and in their own luck.

The managers of large companies also believed in the web, without any reservations. The biggest corporations would spend tens or hundreds of millions of zlotys on the internet-oriented projects. The venture capital funds were desperately running around the market in search for internet-oriented investment projects. This was a sea of very easy, demoralizing money. Whoever would establish a web-based company could be certain that in a while investors would start pushing millions into his/her pocket. Worse even, the faithful of the web believed that from that instant the economy would become completely different, and would be ruled by new laws. All of them had read about the successes of Microsoft, Amazon, Yahoo. This atmosphere influenced the majority of the stock players. They believed that in the epoch of the web, the previous experience from the stock exchange lost its value. Without any hesitation they would buy shares of internet companies that were bringing losses and, worse than that, had quite fishy business plans. Ariel, a company that produced shoes, threw the latter into the corner and went into the internet business; the quotations of Ariel shares went up quickly. Atlantis just declared it would be an internet company, and its share price flew up as a balloon; finally, Atlantis did not even touch the internet business.

This was true paranoia.

Nobody saw this?

For investors who walked on the ground, who invested only in companies having good fundamentals, it was obvious that the web madness had to end badly. This business was not bringing sufficient profits, the balance sheet could not be equilibrated. The very wealthy and imaginative players saw a chance for themselves in the turmoil of the internet bubble. Among the most effective ones was Roman Karkosik. During the internet surge the players, overwhelmed by the craze, would sell out the shares of the traditional, productive companies, in order to gain capital for investing into the web-based stars. The prices of companies in the traditional branches went down, very much. Nobody wanted them, as everybody crowded around the internet.

And it was just then that Karkosik started to buy out the shares of these unjustly underestimated firms. Underestimated so much, that in some cases he would buy for 0.4 zloty the worth of 1 zloty of their assets. He cleverly used persons apparently unrelated to him, and the businesses, to purchase several per cent packages of stock of the companies he aimed at. Finally, these securities would land in his hands and he took control of a number of companies. Thus, within a short time he built a realm of several valuable firms.

This is how the fortunes of the present-day stock exchange billionaires arose?

During the internet bull market a number of big investors applied a strategy similar to the one of Karkosik, but the vast majority of the wealth of the biggest stock exchange players emerged in the vicinity of the National Investment Funds (NIFs)[7]. If one searches through the stock exchange life stories of the biggest sharks on the floor, almost always an episode associated with the NIFs comes out.

The NIFs were established at the end of the 1990s. Every citizen who had taken before the Universal Share Certificate, had the right to one share of each of the 15 NIFs. Theoretically, they were meant to restructure and develop the enterprises brought to their portfolio by the State Treasury, but in practice they became a spoil for the managing institutions, the institutional shareholders and the deft financial players. For the average stock exchange investors the NIFs, with their not quite lucid portfolio of so-called ground-level companies, were almost entirely uninteresting. The trade in the shares of these funds was very slow, the profit rates could not be admired. But within the funds themselves, in the ownership transformations of the ground-level companies, in the shadow of those managing various financial portfolios, enormous fortunes would grow. There were, after all, close to 400 poorly controlled enterprises managed by the NIFs. The stakes were gigantic, and we know now very little about the behind-the-scenes of that game.

What changed on the Warsaw stock market after the internet bubble exploded?

Something important changed when the bubble was yet growing. The owners of the controlling share packages of the companies from the traditional, productive branches took advantage of their very low prices, purchased shares out from the floor and took away the companies from the stock market at a low cost. In such a way, in particular, companies such as Polifarb Dębica, Stomil Bełchatów and Viscoplast from Wrocław[8] were taken away from the Warsaw stock exchange. It lost, thus, a number of good, attractive companies.

The bursting of the bubble reminded investors of the laws of economy, which were still in force and had not been made void by the internet craze. Companies have to earn and maintain liquidity, even if they are web-based ones.

With time, paradoxically, it turned out that some of the internet companies cursed by the disappointed players were healthy businesses with good perspectives. Interia, or Onet, which grew out of Optimus, became interesting, attractive companies.

Even the negative hero of the first bull market period, Universal, had true jewels in its portfolio. The block of shares of Polsat was an exquisite investment.

Did this second speculative bubble and the crash that followed teach the stock market players anything?

Nothing. During the last upward move we encountered again all the sins known from the previous periods of the bull market.

'Cooperatives' and 'toasts'?

Sure, just as you like. An illusion of Polish insulin flooding half of Ukraine, half of Russia and entire China appeared and the quotation of the Bioton company jumped upward. A company meant to produce bio-fuels declared a gigantic increase in profits? Players rushed for its shares, whose prices abruptly rose, and did not even notice that in order to realize the company's financial declarations, one would have to use for the rapeseed more arable land than the whole area available in Poland. The news spread out that a producer of military shoes was to equip half of the Polish army – its price jumped like a kangaroo. Let alone the see-saw of the quotations of Elektrim, following the rhythm of the unclear announcements on an abrupt improvement of its legal and financial situation. Yet, a conscious investor ought not touch this particular company. A special prize should go to the one who knows the financial situation of Elektrim; auditors

7 National Investment Funds were established to manage the assets of the companies privatized through the public distribution of privatization bonds to all Polish citizens (*translator's note*).

8 All of them in chemical and related industries (*translator's note*).

decline giving an opinion on that company's annual report. The company will finally leave the floor. But the turmoil around it will last for many years from now.

Miraculous transformations of companies?

But of course. During the internet bull market, production companies turned into web-based ones, and now into construction developer companies. Whoever had an attractive plot of land in a bigger town, declared themselves to be a developer company and presented fabulous visions of constructing hundreds, thousands of apartments. And mountainous profits. Consequently, quotations would fly up, and the smarter companies would sell to investors the successive issues of shares for overestimated prices.

On the other hand, one should remember that the stock exchange is exactly meant to cheaply finance new, more profitable undertakings of the companies quoted already there.

The individual investors ought only to allocate their money in a more rational manner.

New speculative phenomena appeared during this bull market as well. Such a phenomenon is constituted by the magic of the names of investors with whom one can gain. The personalities who became idols are, for instance, the notorious Elisabeth Sjöblom, Krzysztof Moska, Leszek Czarnecki and also Roman Karkosik, mentioned already before. The petty investors with a speculative orientation very emotionally watched in which company the favourites start to invest, because after their involvement had been disclosed, the quotations of these companies would usually go up sharply.

Who plays nowadays on the stock exchange?

The small investors, poorly educated and not prepared in terms of subject matter, have largely disappeared. They have moved their savings to the investment funds. Yet, even so, Poland remains a worldwide phenomenon – on the Warsaw stock exchange we have many more individual investors than other markets in the world. There have been years during which the money of several hundred thousand of our individual investors accounted for 25 per cent of the stock market turnover. In Europe, individual investors account for less than 10 per cent of trade.

We are much better in our liking for the stock market than the Americans, who prefer to invest in funds.

Where does our inclination towards the stock exchange come from?

This, I think, is another proof that Poles are a nation prone to taking risks, inventive, not afraid of innovation, and readily taking responsibility. It is not by incidence that it was Poles who, yet under communism, did buy out goods from shops in the German Democratic Republic, traded in the streets of Budapest, Istanbul, Vienna and Berlin, travelled for commercial purposes to India, Thailand, Korea and Peru. The systemic transformation also exerted an influence. We saw, then, that it was possible to achieve something great by taking matters in one's own hands, by establishing a company, and not waiting for the others. The stock exchanges in other post-communist countries wither, while ours flourishes, and intends to expand beyond the boundaries of Poland.

Are our investors well educated, do they understand what they are doing on the floor?

Alas, in their majority they are poorly educated. Only few master the art of fundamental analysis, of reading and analysing company reports in a way to find out how a given company functions, how money flows through it. It is a very difficult art but it allows, first of all, for minimizing losses when some things start to go badly in the company.

The majority of players are more or less skilled in technical analysis.

Because this is much easier. Relying on technical analysis is equivalent to telling the future from the past behaviour of investors. No matter how refined and sophisticated the instruments of this analysis are, being directed by it will always be more risky than investing into company value on the basis of fundamental analysis.

In order to adequately invest in value, one must not necessarily be a graduate in economics. In France, great popularity was gained by circles of pensioner ladies who, out of boredom, started to invest on the stock market. During tea-time meetings the elderly ladies exchanged opinions on the quality and

prices of products they encountered in the shops. When they found something they liked a lot, they would buy the stock of the producer, if it was quoted on Paris exchange, naturally. And they had excellent results.

A peculiar phenomenon is constituted for me by the lightness, or carelessness, with which the average Polish player makes decisions concerning stock exchange investments. When he wants to buy a car for, say, 40-50 thousand, then for a month he keeps asking his friends, reads the automobile press, searches for offers on the web. Yet securities worth 40-50 thousand are often purchased without analysis, even without hesitation, under the influence of one discourse or talk, a lecture or an anonymous hint at a discussion forum on the internet, or an article in the daily press.

On the other hand, there is a growing group of wealthy and very well educated investors who treat their involvement on the stock market as a retirement investment. They watch their companies, read the reports of these companies, and rarely change the companies in their portfolios, only after a solid analysis.

Have the true virtuosos of financial engineering finally arrived on our stock market?

There are at least a dozen of them. One of the best is, without any doubt, Leszek Czarnecki. He showed his capacity as an outstanding financial engineer already several years ago, on the occasion of the sale of his European Leasing Fund (ELF). The ELF company was quoted on the stock exchange and if Czarnecki had just sold his controlling block of shares, he would have paid 40 per cent tax. How did he manage out of it? He organized an issue of shares in the mode of the rights issue. He issued six new shares per one old. This did not cost him much, since the new shares were priced nominally – just one zloty apiece. Since the issue was public, the shares he collected were free of tax. Thus, when he sold all of his ELF shares, the old and the new – meaning when he sold the entire company – he paid just the tax on the profit from the sale of the 'old' shares. That is, in reality, instead of paying tax on the sale of the entire company, he paid it on the sale of 15 per cent of its value.

Well, this was smart, but was this really already a financial mastery?

Then look at another masterpiece of his. First, out of all the pieces of the financial institutions he had under his hand, he glued together the Getin Bank. The result was a bank a bit atypical, but quite a decent one. Then, he sold the shares of the bank through the stock exchange. He did it in a straightforward manner, without any financial tricks. Investors bought, profited, and were delighted. Czarnecki is OK when he sells something, there is a sure and safe business in it for us. Then he entered the floor once again. At the beginning of the year, when the construction development craze ruled the exchange, where investors would buy with eyes closed any company announcing a construction development programme, he put together, of the remnants of the estates that he owned, a construction development company, LC Corp. He took over the shares of this company for one zloty apiece. Then, he would sell the shares of the company on the stock market, but at 6.50 zlotys per share. Since the magic of his name functioned along with the fashion for the construction developer firms, investors would subscribe for a lot more shares than Czarnecki offered. This subscription had to be supported by mighty short-term credits. Such credits were, of course, offered by Czarnecki's Getin Bank.

When putting LC Corp on sale, Czarnecki sold something that was worth one zloty, for 6.50. Nevertheless, none of the investors fighting for shares of LC Corp could complain about being done in. Czarnecki hid nothing, he described everything precisely in the issue prospectus of the company. He just perfectly knew the players on the Warsaw stock exchange, who do not want to make the effort of looking into the issue prospectus and buy shares from new issues by the ear – because a friend said it was an exquisite opportunity. The LC Corp shares are nowadays at 3 zlotys.

Since the very first years of the stock exchange the petty investors do ring a bell now and again that they are being tricked by the companies listed.

The information that large shareholders do something in the companies at the expense of the petty ones appeared in our media for the first time

in the middle of the 1990s. This happened in connection with the conflict in Wedel[9], concerning the dividend. At that time Pepsi Co. was already the main shareholder of Wedel, and significant profits could have been distributed. The small investors wanted to gain a solid dividend. Pepsi Co., though, showed them in an arrogant manner who rules the company. The dividend was not paid.

In my opinion, in that case the form of enforcing the decision on not paying the dividend was truly blameworthy. In terms of substance matter Pepsi Co. were right – Wedel needed money for the already started costly investment projects.

In the disputes between the petty players and thick investors over the dividends, a conflict of interests arises quite often. The petty ones go for quick profits, demand as high dividends as possible. The big ones often think in strategic terms about the future of a company, look several years ahead, prefer to reinvest profits.

A couple of years ago small investors raised alarm that some of the companies whose majority shareholders were foreign firms had tricked them, by hiding profits.

Companies taken over by western firms sometimes covertly transferred profits abroad. The most frequent case was to sign a licence agreement that was disadvantageous for the company listed on our stock exchange. The trouble is that it is very difficult to assess whether a licence agreement is meant to channel profits abroad, since a licence fee is a normal and popular thing in the world of business. It would be necessary to demonstrate without any doubt that this fee is too high. A good example for the problems with assessing the justifiability and value of the fee is provided by the famous sign for which Polish Telecom (Telekomunikacja Polska) pays France Télécom. The small investors of the Polish Telecom asked many times over in public what this particular fee was and whether the sign was at all necessary for the Polish company. This company, namely, functions on the local, Polish market and not abroad; therefore the question arises whether the logo of the French mother company, better known in the world, is at all needed or whether it constitutes rather a tremendously costly ornament.

About five, six years ago a popular method of draining Polish companies by some of the holding western firms was to structure the trade prices of raw materials, semi-products and final products in a smart manner. By purchasing the raw materials at very high prices from the mother company and selling cheaply the final products, the profits could be transferred abroad without any taxation.

Polish shareholders were suffering losses due to such practices and, because taxes were not paid, the State Treasury would lose as well.

How was an end put to this kind of manipulation?

The tax collection offices started to more accurately watch the transfer prices in the companies, but the best medicine turned out to be the lowering of the income tax on legal persons, in a number of stages, from 40 per cent down to 19 per cent. With the tax rate being so low the western mother companies no longer found it advantageous to fraudulently transfer profits, because the tax rates in their own countries were higher. It was better to show profits in Poland and pay taxes here.

Companies with dominating Polish capital are also capable of treating petty investors unfairly?

Sure, and how! Starting with the banal draining the pockets of the investors by winding up the wages and bonuses for the company board when the dominating investors of the company sit on the board. It happens that discrimination is effected by organizing a no rights issue, addressed not at all the shareholders but just at chosen ones. If such an issue is formally voted through by the dominating shareholders, then it can be carried out fully legally.

How can the small investors defend themselves?

By foot. One should avoid such companies.

Did it happen on the Warsaw floor that the boards of companies manipulated the share prices?

The best-known affair of this kind occurred four years ago. The Yawal company, listed on the Warsaw stock exchange, was preparing the

[9] Reputable Polish company with a long tradition, producing primarily chocolate and chocolate-based sweets (*translator's note*).

takeover of another stock market company, Paged. At that time already these two companies were associated in terms of capital – Paged was a member of the Yawal holding. By applying various principles of accounting, the profits and therefore also the market value of Paged were artificially lowered, while the profits and the value of Yawal were artificially increased. Yet, within the same capital group the same principles of bookkeeping should have been applied.

The gist of the matter was, naturally, to have the rate of exchange of the shares, established on the basis of stock market quotations, between the two companies as advantageous as possible for the main investors of Yawal.

This was an obvious manipulation to the detriment of the small investors of Paged. The Association of Individual Investors informed the Securities Commission about these abuses and ultimately the merger has not taken place.

How has the Warsaw stock market changed during these 16 years?

Notwithstanding everything, and despite the intellectual sloppiness and the collective, oftentimes scandalous failures, the education level of the individual investors has increased a lot. A good example of this phenomenon is provided by the unsuccessful issue of the ITI shares. Investors did not like the cumbersome organizational and ownership structure of the holding. From the most valuable assets – the TVN television – to the ITI Holding one would have to pass across seven floors of the structure, through the Cayman Islands, Dutch Antilles and other exotic archipelagos. The investors responded – put this structure in order, separate the TVN, and then we shall buy it. A year passed and that was what ITI did. Consequently, TVN stepped onto the floor and, as we can see now, it has used the money that investors entrusted it with exceptionally well. Today it is one of the flagships of the Warsaw stock exchange. Investors are glad as well, for they have earned a lot of money on the shares of TVN since the time of the stock market debut of the company.

Despite all the speculative crazes, investing in company shares becomes less and less risky because the players who adore high risks and extraordinarily high profits moved over to the futures market.

How big are the possibilities of the biggest individual investors today?

They play in a completely different league now. An average player buys the shares of companies, counting on an increase in their value. The biggest investors do not buy shares any more, they buy companies.

By owning 20 per cent of a company whose ownership is highly dispersed, they can already fully control the company, and hence its assets. For the time being they are capable of taking over the control of rather small companies. In a couple of years, perhaps in a decade, they will be able to threaten with taking over of the biggest companies listed on the Warsaw floor.

There has also been an interesting change in the way the ‘cooperatives’ function. There are still, of course, groups of players trying to speculatively wind up the prices of shares of small, little liquid companies, so as to have the new players purchase the shares for higher prices. But the biggest speculators, who have already managed to own large blocks of shares of the attacked companies, are confronted with the dilemma of how to get their money back. Selling such big quantities of shares would entail a dramatic drop in their quotations and – consequently – large losses. Out of necessity, therefore, the most pronounced members of ‘cooperatives’ remain in the companies. In order to look after their money, they enter the boards and the councils. And once they are there, they try to figure out how to reform the company so as to make their blocks of shares bring the highest profits. In this way, the most important members of the ‘cooperatives’ get civilized, become big entrepreneurs, managers. And, I must admit, they often do quite well in this role, the proof being provided by the companies of Wólczanka and Vistula[10], on the stock exchange for a long time already.

[10] Both well-known Polish garment companies (*translator’s note*).

Figure 1

Warsaw Stock Exchange Index (WIG), 16 April 1991 to 6 May 2008

Source: http://gospodarka.gazeta.pl/Gielda/0,83499,WIG.html.

And the companies themselves?

They got civilized as well. More and more of them take care of the corporate order, more and more try to cater for the trust from the individual investors, and fulfil increasingly well the duties related to information.

At the same time, though, more and more firms controlled by big individual investors such as, for instance, Michał Sołowow treat petty investors as partners, honestly dividing the profits, paying out the dividends and carrying out new issues only as rights issues.

This is quite a different stock exchange. Also because it turned from an ornament of the economy to a factor that changes the economy. For an increasing mass of entrepreneurs the stock exchange becomes an indispensable element of the development strategy of their firms. Everybody wants to go on the stock exchange, for owing to this they can make a gigantic leap. When the first leasing company went on the floor, the subsequent ones moved in immediately thereafter, because they knew that this first one had an edge over them in the form of 100 million zlotys gained from the issue of shares. Also when the LPP clothing network (that is, the network of shops of the garment company Reserved[11]) entered the floor, the subsequent companies from the branch moved in immediately thereafter, for the leader got an injection of capital allowing for the opening of several dozens of new company shops without getting indebted with the banks. The very same phenomenon was repeated in the construction development branch.

Owing to the stock exchange, Polish companies benefit from an injection of Polish capital and small investors get rich. Yet, they must always check carefully what shares they buy. There are still such cases as the one of Stormm, a construction company that used the money from the issue of shares to play on the futures market – and they lost. This is very much like a cook in an elegant restaurant in a casino who, rather than taking care of the pots in the restaurant, is playing blackjack during working hours.

[11] Another well-known Polish garment company, though of a much more recent origin (*translator's note*).

Some reflections on the current US financial markets meltdown

BY L. RANDALL WRAY*

Deep roots of the crisis

The seeds of the current financial crisis were sown long ago. The story begins with the Fed's increasingly aggressive use of interest rate changes in an effort to fine-tune the economy. Each rate hike intended to fight inflation caused problems for commercial banks and thrifts that were subject to interest rate ceilings and usury laws that limited interest on loans. The effect was 'disintermediation' (retail deposit withdrawals) when market rates rose above legislated deposit rates. Financial institutions responded to each tight-money episode by innovating and creating new practices and instruments, making the supply of credit ever more elastic – and ever less controllable. As time passed, the upside tendency towards speculative booms became correspondingly more difficult to contain. In addition, the Fed and the Congress gradually dismantled much of the regulatory framework dating back to the New Deal era. This allowed commercial banks to engage in a wider range of practices in order to better compete with their relatively unregulated Wall Street rivals. Still, deregulation and legal recognition of new practices were not sufficient to bring us to the present precipice.

The remarkable thing about the postwar period is the absence of depressions. Recessions occur with regularity, but are constrained. Financial crises arise from time to time but their fallout is contained. This is due in part to various reforms that date to the New Deal, but also to countercyclical movement of the 'big Government' budget, to lender-of-last-resort activity of the 'big Bank' Fed, and to periodical bailouts of insolvent financial institutions. By preventing a debt deflation on the order of the 1930 collapse from happening again, new practices and instruments were validated.

The 'irrational exuberance' periodically seizing the financial market is just the end result of long-term, policy-induced (and validated) innovation. Currently it has stretched liquidity and enabled prices of real estate and equity to reach unjustified and unsustainable levels. Just as the exuberance that developed in the 1990s was based on the belief that dot-com companies could only rise in value – validating exploding stock prices – the 2000s saw unprecedented real estate appreciation that validated increasingly risky Ponzi finance.

Banks undercutting their own business

Growth of managed money (i.e. funds that had accumulated wealth over decades) continually eroded banks' traditional lines of business. Pension funds, hedge funds, and so on provided an alternative source of finance in competition with bank loans. Initially, bank funding had an advantage because banks could diversify risks across a large number of borrowers with different income sources. Also, banks had access to insured deposits as well as Fed lender-of-last-resort intervention ensuring they could issue liabilities without facing much chance of a run. However, already by the early 1970s firms were turning to the commercial paper market for short-term borrowing, taking business away from banks. An early crisis in that market led to the practice of obtaining backup lines of credit with banks. Banks could earn fee income for provision of the backup facilities, but this undercut their direct funding of business. Other market innovations allowed for diversification of risk in the form of securities collateralized by pooled loans – apparently eliminating the advantage banks had previously held.

New instruments continually eroded the bank share of assets and liabilities which fell from 55% in 1960 to 23% by 2007. The securities market share of private non-financial sector debt rose from 27% in 1980 to 55% in Febrary 2008. Banks require

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higher spreads between interest earned on assets and that paid on liabilities. The spreads cover the normal return on capital, plus the required reserve 'tax' imposed on banks (mandatory reserves earn no interest) and the costs inherent in 'relationship banking' (such as servicing/screening the regular customers). By contrast, financial markets operate with lower spreads because they are exempt from required reserve ratios and regulated capital requirements, and much of the costs of relationship banking.

To restore profitability, banks would earn fee income for loan origination, but by moving loans such as mortgages off their books, they could escape reserve and capital requirements. There was no need to develop relationships with individual clients (to assess creditworthiness) because loan pools diversified risks, risk raters evaluated the risks of the overall pools, and insurers promised to protect against eventual losses. Banks then began themselves to take direct positions in the poolers, the securities, and the insurers. They also provided backup liquidity guarantees to those involved in packaging and selling securities, and even gave money-back guarantees to holders of securities if the underlying loans went back. Ironically, this meant that they were now exposed to default risk of borrowers they had never assessed. Indeed, as it turned out, no one had assessed those risks.

Securitization and leverage

While the troubled instruments and institutions are varied, many of today's problems can be traced back to securitization – the pooling of assets to serve as collateral against issued securities. Securitization is a market-oriented practice in contrast to bank-based transactions in which activities are financed by loans held on bank balance sheets against deposits held in the banking system. It has also been accurately called the 'originate and distribute' model. Seemingly innocuous, securitization has led a dizzying array of extremely complex instruments that only a handful – including in the leading credit rating agencies and the credit insurer firms – understand. The current financial crisis began in the market for mortgage-backed securities, especially in the subprime section of that market, and then quickly spread to securities backed by other types of loans and assets.

Securitization is part and parcel of the globalization of finance, as it creates financial paper that is freed from national boundaries. German investors with no access to US homeowners could buy a piece of action in US real estate markets. But the incentive structure in which mortgage originators operated was sure to create problems. As originators would not hold the mortgages, there was little reason to worry about borrowers' ability to pay. Since banks, thrifts, and mortgage brokers relied on fee income rather than interest, their incentive was to increase throughput, originating as many mortgages as possible, offering subprimes with ever lower underwriting standards. The new arrangements appeared to offer nearly infinite supply of impersonal credit with no need to evaluate borrowers' ability to repay. The irony of this development was that high demand for subprime mortgages, and for the securities backed by these mortgages, induced banks to become active purchasers of these securities – often the most riskiest of them. Apart from them, banks tended to keep the worst loans in hope of earning high returns and also retained an equity share in the securities ('skin money') to demonstrate to buyers that they had confidence in the underlying mortgages they had originated or packaged.

Asset-based securities (ABS) with high ratings would be purchased by hedge funds and others that would use them as collateral to raise funds for their purchases – much as in leveraged buyouts, where the firms to be purchased are used as collateral for the funds borrowed for their takeover. In many cases banks provided the loans that were used to buy the ABS collateral that contained the mortgages the banks tried to move off their balance sheets! The hedge funds could leverage by factors of 20, 30 or more to hold the ABSs. By contrast, due to capital requirements, banks could leverage by factors of perhaps 8, no more. This three-to-

fourfold increase of leverage is one of the reasons why markets based on securities could operate much more profitably than bank-based lending. As discussed, banks would live on origination and servicing fees, while with higher leverage ratios, hedge funds could be profitable at low interest rate spreads. But these low spreads required extremely low default rates as well as layers of insurance and backup lines of credit.

Greed trumps fear: the evolution to fragility and crisis

In the past few years a revised view of economic possibilities has been developed that goes by the name 'the Great Moderation'. The belief is that the world is now more stable, far less vulnerable to 'shocks'. Further, central banks have demonstrated willingness and capacity to quickly deal and isolate threats to financial stability. The Great Moderation allowed greed to trump fear. First, there are appraisers. Real estate appraisers across the US have complained that they were strong-armed to inflate real estate values. There is little doubt that inflated appraisals played a major role in fuelling the speculative boom.

The rating agencies were also complicit because their appraisals of the securities were essential to generating markets for risky assets. Rating agencies worked closely with the underwriters that were securitizing the mortgages, to ensure ratings that would guarantee marketability. They were richly awarded for helping to market mortgages, since fees in that area were about twice as high as those awarded to rating corporate bonds. Moody's got 44% of its 2006 revenue from rating 'structural finance' (securitized student loans, credit card debt, and mortgages). Mortgage securitizers relaxed their due diligence tests even as lenders relaxed loan standards[1]. Much of this development was based on the belief that real estate values could only go up. Sustained market tranquility allowed the market participants to ignore the downside potential and created optimism and euphoric belief in the ever-rising price of some asset class – in this case houses and condominiums – providing a surefire way for both lenders and borrowers to make money.

The new system based on proliferation of the 'originate and distribute' approach encouraged – as is now obvious – erosion of safety margins, ever riskier practices, collusion and misinterpretation in the belief (or at least hope) that nothing could go wrong. All these characteristics would have required totally different models for the appraisals of values of the underlying assets and accurate evaluation of the risks of the derivative securities. But such models have yet to be developed.

The models used to value the securities could not take into account structural changes to the economy; nor could they detect the rise in agents' 'optimism' and the induced levels of fraudulence and overall systemic fragility. The models were based on data derived from only a few years' experience that coincided with an unusually good period for house prices. Since similar models were widely used, they themselves drove the market, generating 'herding behaviour'. This had devastating effects when all simultaneously issued the 'sell out' recommendation.

Problem not confined to subprimes

The problem is not confined to subprimes or to the irrational real estate market. It is a systemic problem resulting from the notion that markets can properly assess risk based on complex, backward-looking models; that markets can hedge and shift risk to those best able to bear it; and that market forces will discipline decision making. Each of these presumptions proved woefully incorrect. The models were constructed based on data generated during an unusually stable period when losses were small, and required that the structure of the financial system remain constant. But prolonged stability encourages behaviour that changes the financial structure. This evolution makes the models increasingly useless even as they are used

[1] The subprime market blossomed with increasingly relaxed standards. The 'low doc' lending practice ('less documentation required') evolved to 'no doc' and 'liar doc' (borrowers were even encouraged to lie about income), and finally to 'Ninja' (no income, no job, no assets) loans.

to justify falling interest rate spreads that implied virtually no defaults would ever occur. Further, the models could not account for growing interrelations among debtors, increasing the risk that insolvency by some would generate a snowball of defaults. Further, as we now know, risk was not properly hedged, nor was it even necessarily shifted – as much of it came back directly to banks through buy-back guarantees, backup facilities and bank purchases of securities they themselves originated. Finally, markets did not discipline that behaviour, but in fact encouraged ever-riskier activities. Increased competition from managed money narrowed interest rate spreads. Because mangers of funds were in a desperate search for high returns, they ignored risk where it was underpriced. Competition forced taking on excessive risks. Many did not even pretend to understand the instruments purchased as they were content either to rely on rating agencies or simply follow the leader. As Keynes put it, 'Worldly wisdom teaches that it is better for reputation to fail conventionally than to succeed unconventionally'.

Retribution

The combination of low interest rates and rising real estate prices encouraged a speculative frenzy that had to end when rates rose or prices stopped rising. Of course, both events were inevitable, indeed, were dynamically linked because Fed rate hikes would slow speculation, attenuating rising property values, and increasing risk spreads. When losses on subprimes began to exceed expectations that had been based on historical experience, prices of securities began to fall. Problems spread to other markets, including money market mutual funds and commercial paper markets. Banks became reluctant to lend even for short periods. With big leverage ratios, owners faced huge losses, greatly exceeding their capital, and began to de-leverage by selling, thus putting more downward pressure on prices. By early 2008 some of the credit markets for municipalities had dried up as even specialized insurers faced problems.

Projections of losses on residential mortgage-backed securities range from about 200 to 500 billion USD, with some projections reaching 1 trillion USD. Given a projected 30% decline in the average house price, the total loss of household wealth is about 6 trillion USD.

Further problems are now showing up throughout the economy; for example, in the home equity loans used during the boom not only to remodel homes, but also to finance consumption. Delinquency rates on those loans doubled during 2007 and continue to climb. Total losses are hard to project, but some large lenders have 12% to 19% of their assets in home equity loans. Small and medium-sized banks that focused on funding construction and commercial real estate may not survive the losses over discontinued construction works. Further, total loses on collateralized debt obligations (mostly business loans) could approach another 400 billion. Losses suffered by banks over their specialized agencies set up to operate the off-balance activities could mean another 150 billion. Add to this losses on household credit card debts (perhaps 70 to 100 billion) and losses on other junk debt 'secured' by leveraged subprime securities (about 400 billion). Altogether, total losses are surely huge – even for a 13 trillion USD economy.

While some still deny that the crisis over the mortgage-based-securities will spill over into the real economy, it is clear that many policymakers, as well as many of Wall Street's elite, are no longer complacent.

In the postwar period the United States has not seen a nationwide real estate crisis. However, there have been regional crises in which house prices fell significantly. California had a fairly severe housing downturn in the 1990s, with prices falling by 15% over a period of five years. It took over eight years for home prices to fully recover, while foreclosure rates were still substantially higher even a decade after the downturn began. If the California case is relevant, the United States will be feeling the effects of the current crisis for a long time – perhaps a decade or more (also similar to the Japanese experience).

STATISTICAL ANNEX

Regional disparities and economic developments in the enlarged EU

Maps, Figures and Tables on:

GDP

Regional GDP per head at PPS, 2005

Growth of GDP per head 2000-2005: GDP per head at PPS in real terms, average annual growth rate

Labour market

Employment rate, 2006: total employed (25-64 years) over working-age population

Share of agriculture in total employment, 2006 (in per cent)

Share of market services in total employment, 2006 (in per cent)

Share of population with completed tertiary education, 2006 (in per cent)

Unemployment rate, 2006 (population aged 15 and older)

Changes in the unemployment rate, 2000-2006 (in percentage points)

Convergence

Regional convergence in GDP per head, 2000-2005

Regional inequality in GDP per head, 2000-2005 (mean logarithmic deviation)

Number of regions below 50% and 75% of the EU-25 average GDP

Number of regions below 75% of the EU-25 average GDP, by country

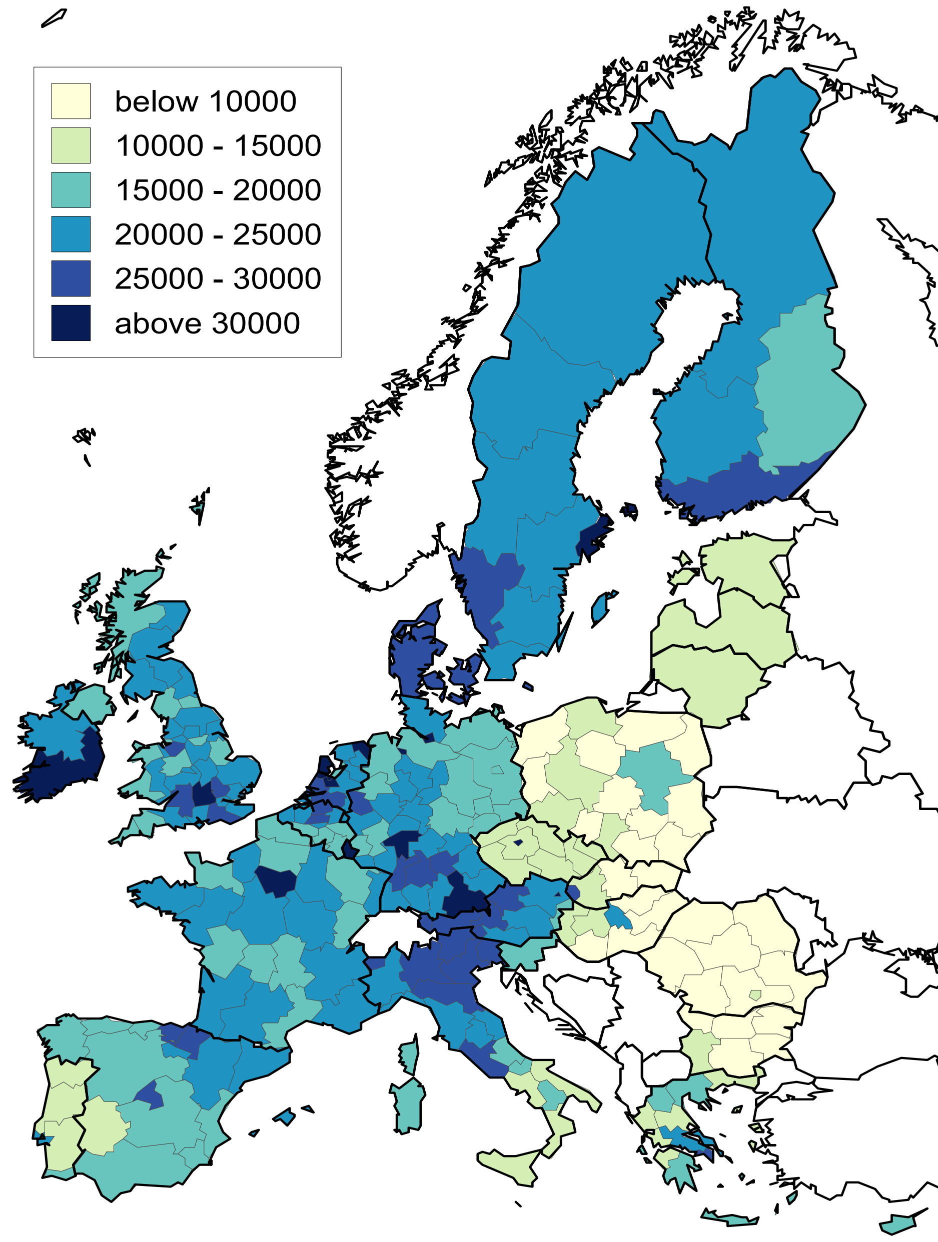
Number of regions by level of GDP at PPS and GDP growth (in real terms, 1995-2003)

Number of regions by GDP growth of countries and regional GDP growth rates (in real terms, 1995-2003)

Coefficient of Variation of regional GDP per head at PPS in EU-25 countries, 1995 and 2003

Map 1

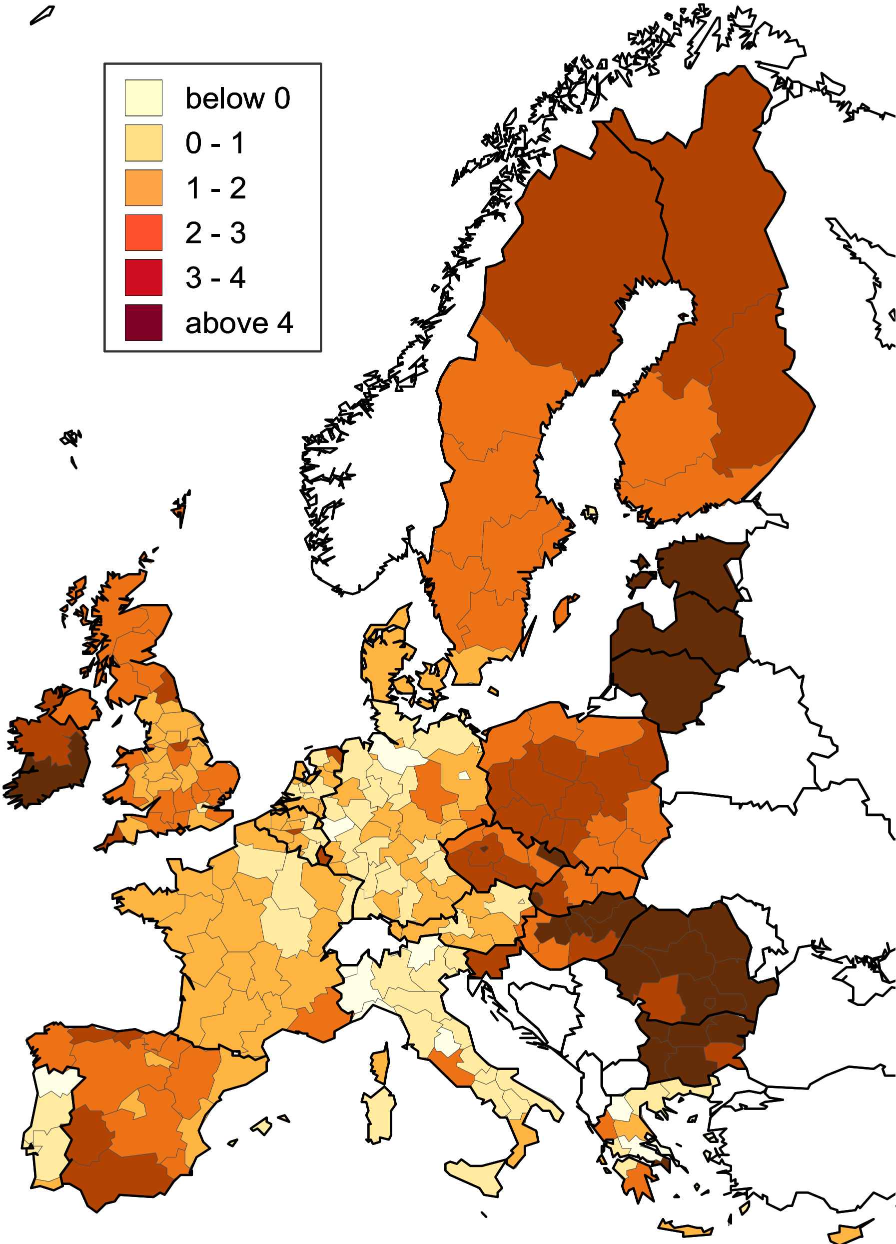
Regional GDP per head at PPS, 2005



Map 2

Growth of GDP per head 2000-2005

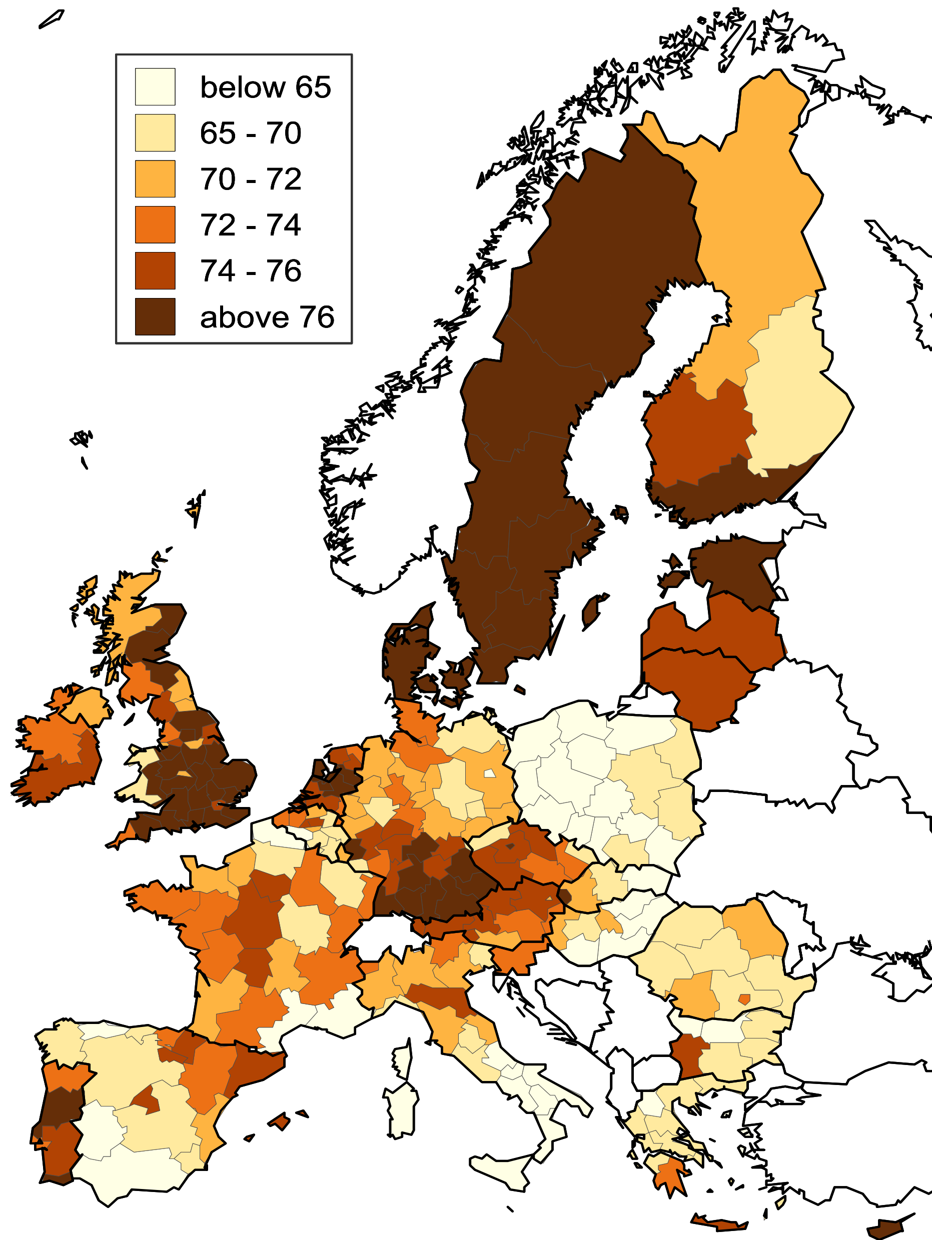
GDP per head at PPS in real terms, average annual growth rate



Map 3

Employment rate, 2006

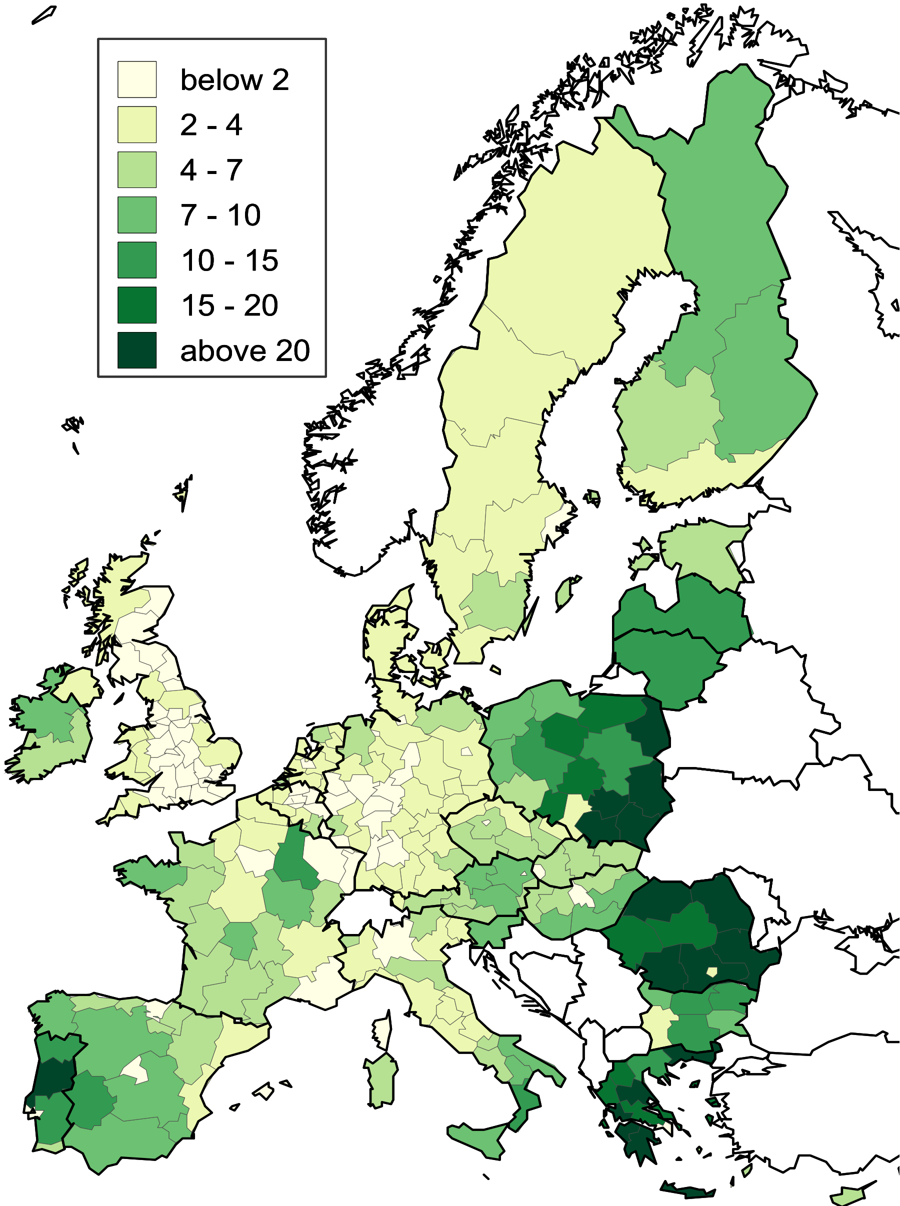
Total employed (25-64 years) over working-age population



Map 4

Share of agriculture in total employment, 2006

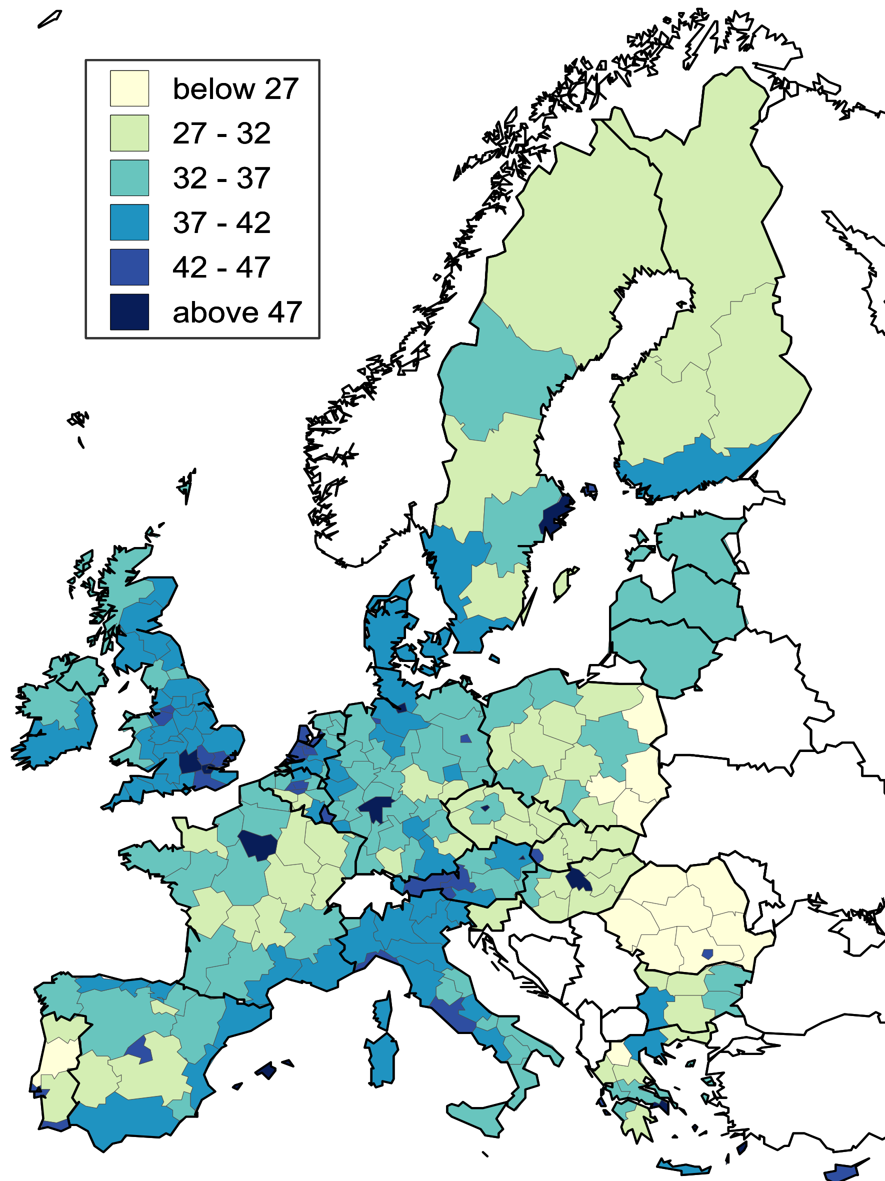
(in per cent)



Map 5

Share of market services in total employment, 2006

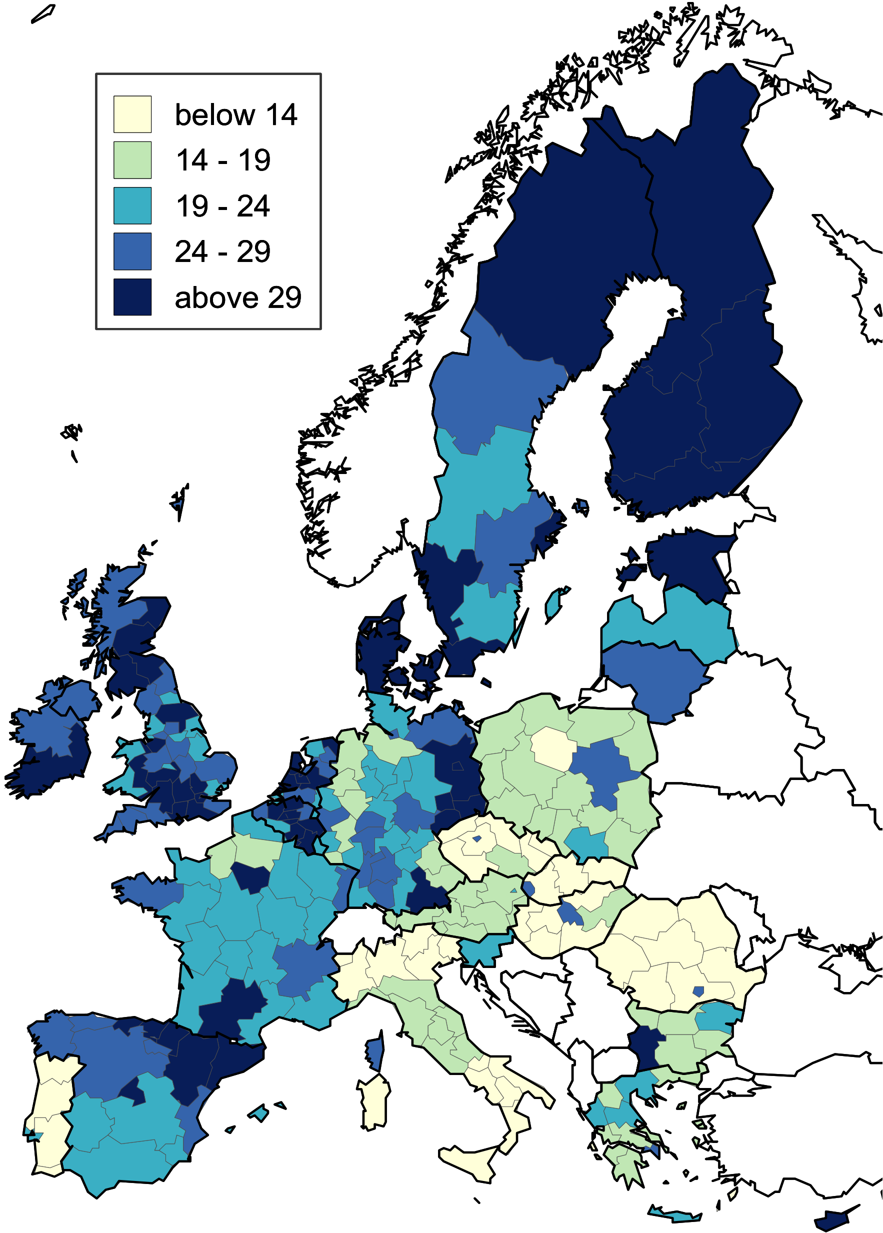
(in per cent)



Map 6

Share of population with completed tertiary education, 2006

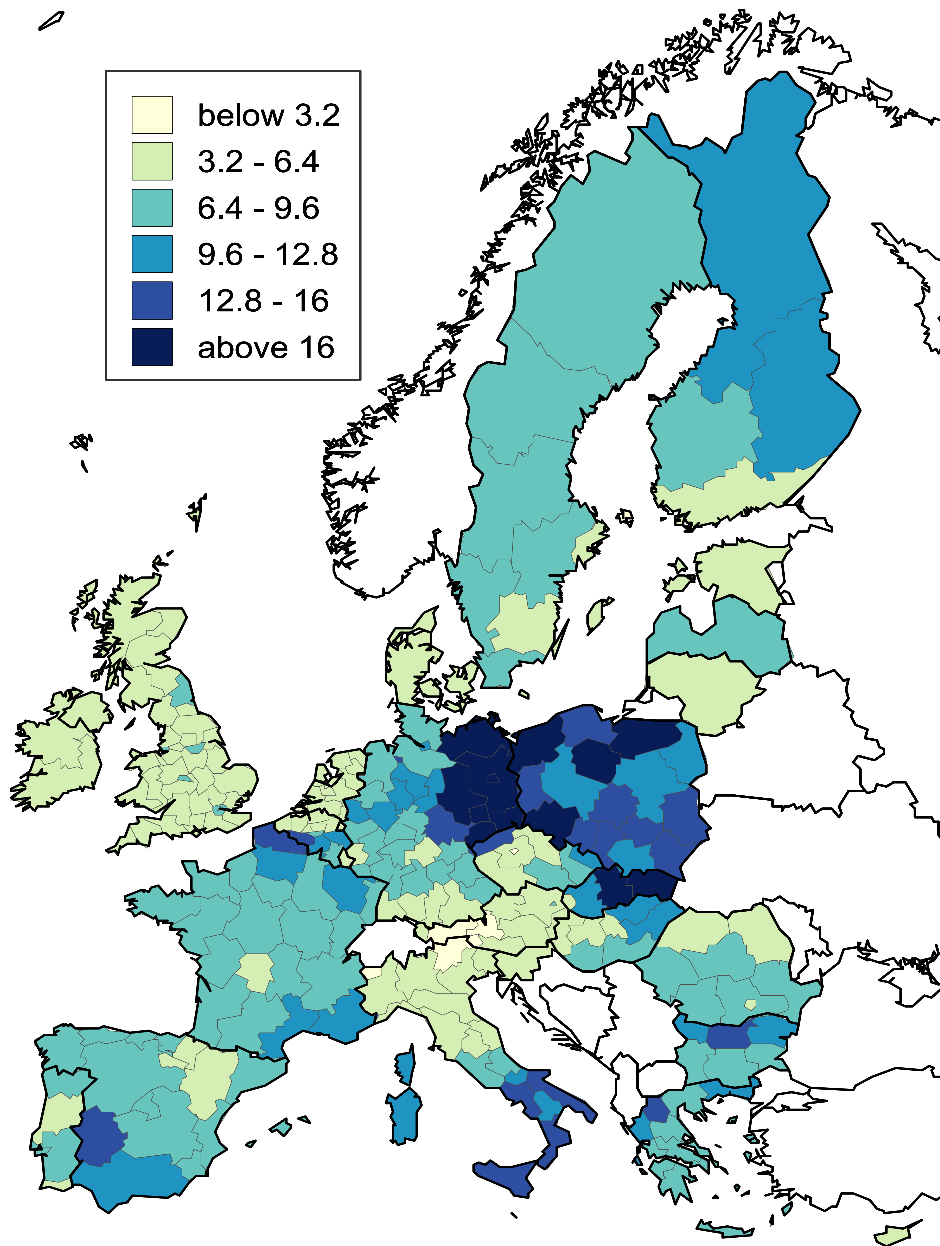
(in per cent)



Map 7

Unemployment rate, 2006

(population aged 15 and older)



Map 8

Changes in the unemployment rate, 2000-2006

(in percentage points)

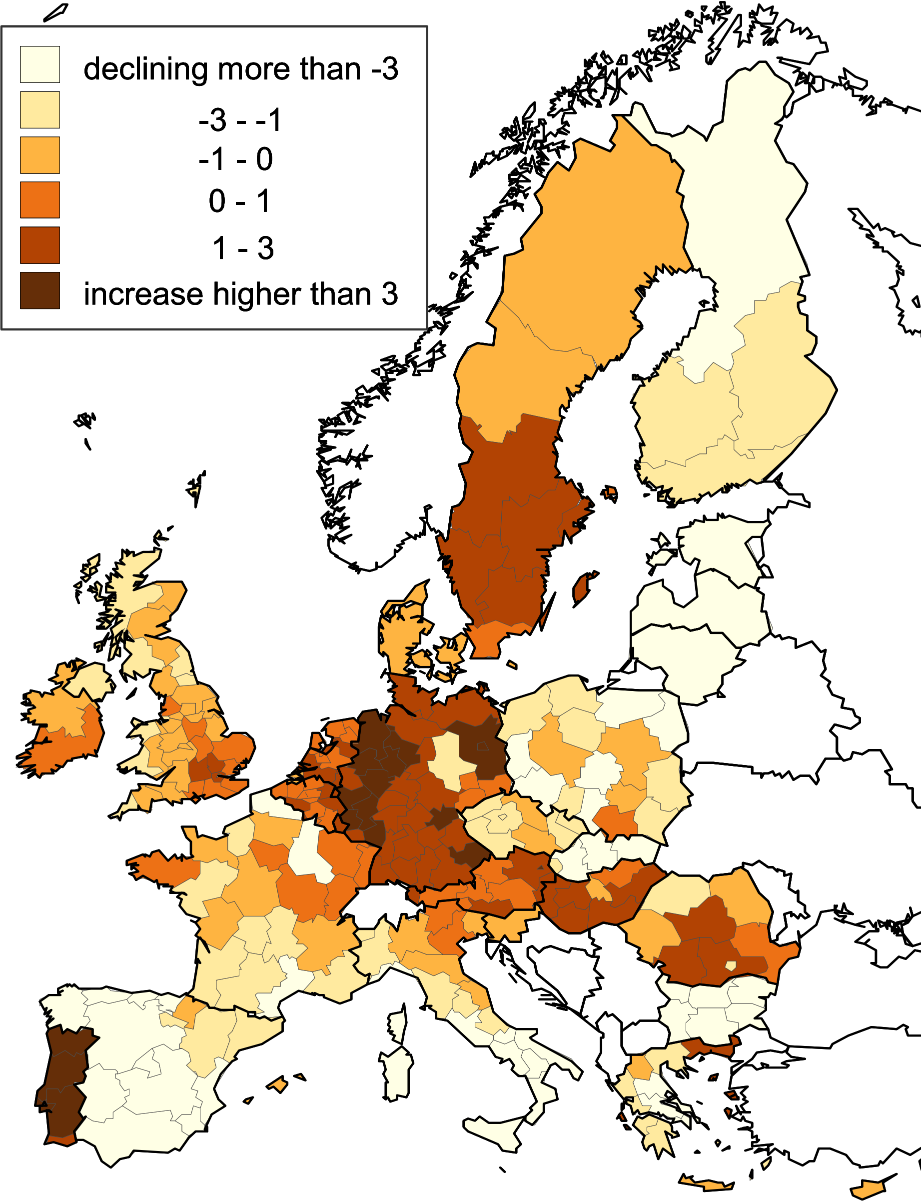


Figure 1

Regional convergence in GDP per head, 2000-2005

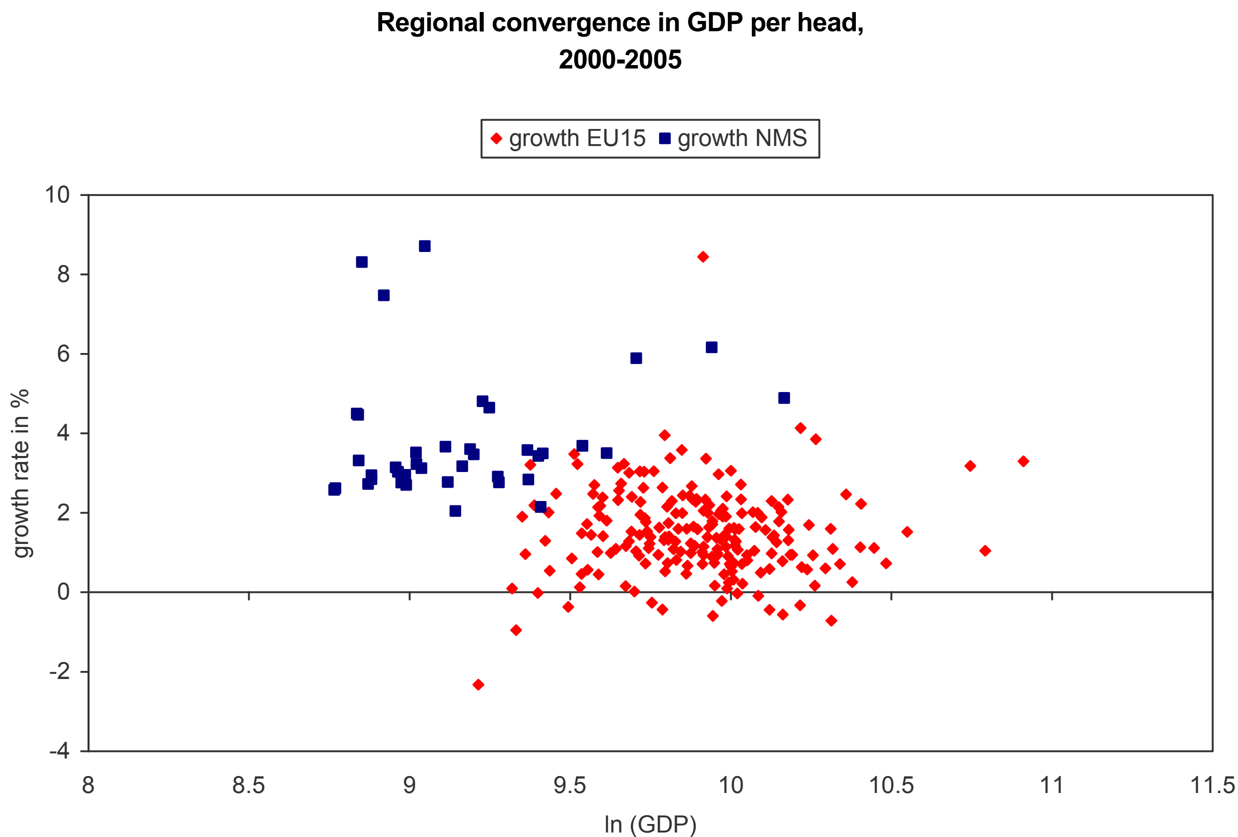


Figure 2

Regional inequality in GDP per head, 2000-2005

(mean logarithmic deviation)

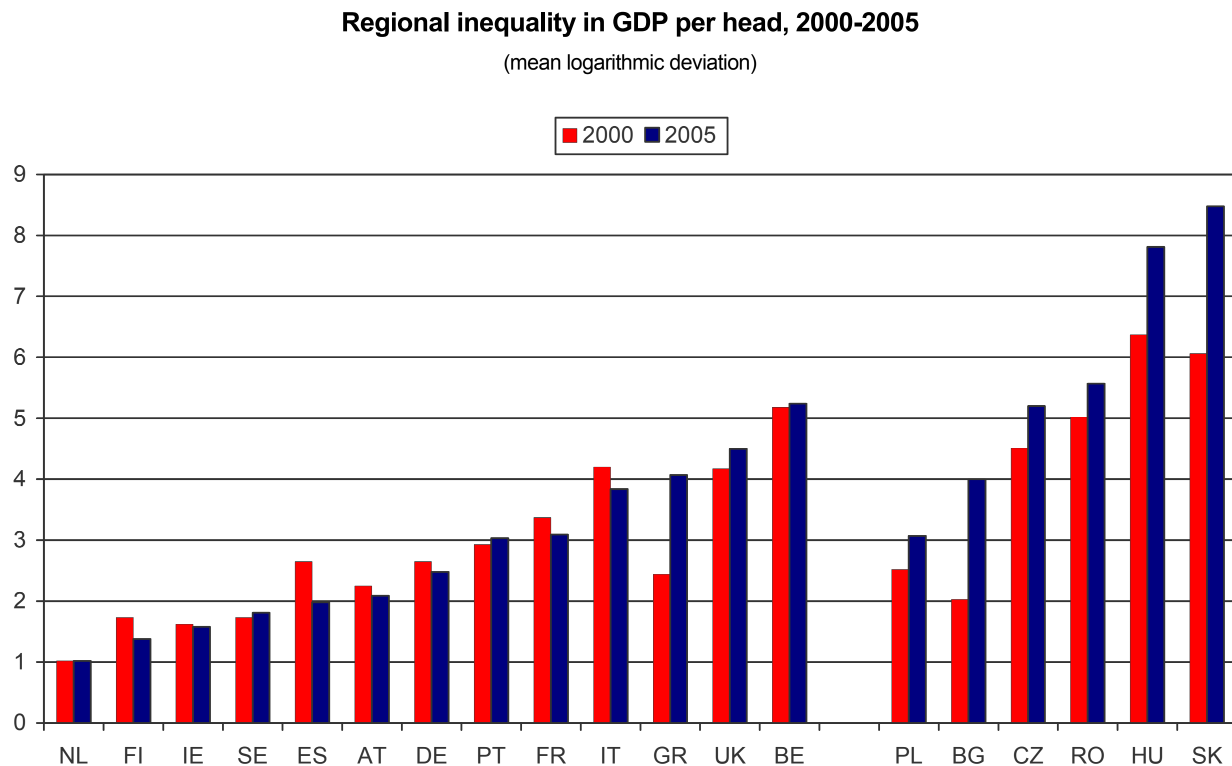


Figure 3

Number of regions below 50% and 75% of the EU-25 average GDP

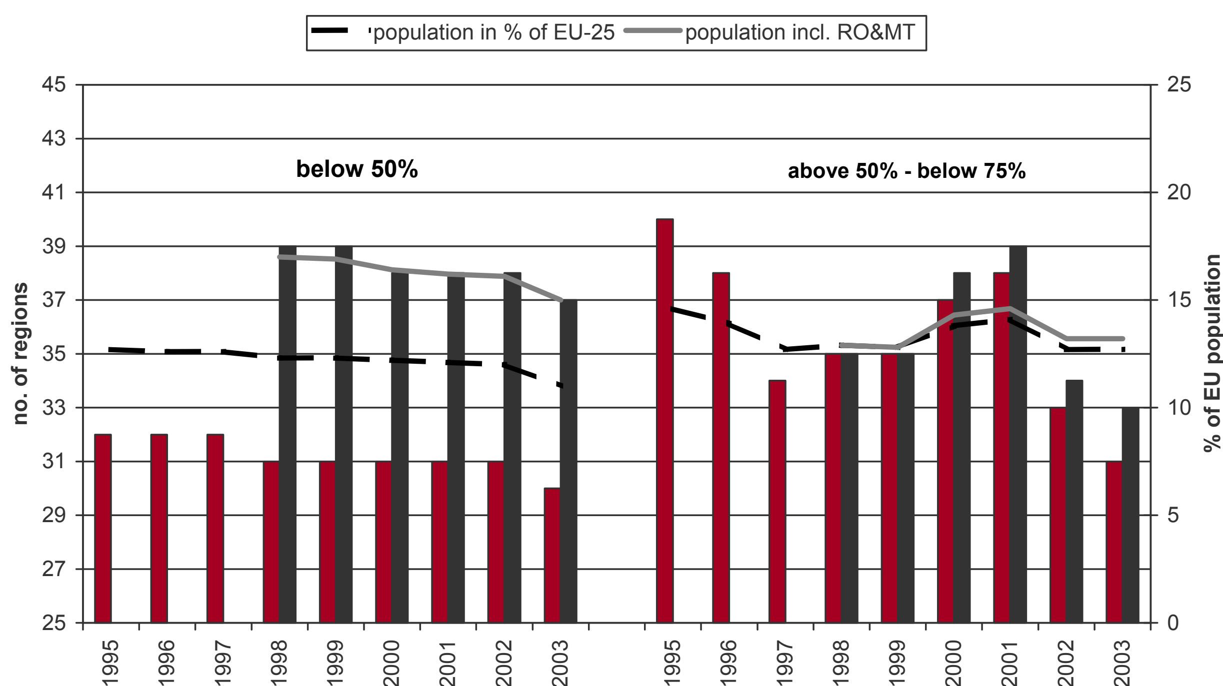


Table 1

Number of regions below 75% of the EU-25 average GDP, by country

	1995	2003	Total no of regions
IE	1	0	2
SI	1	0	1
UK	1	0	37
MT	.	1	1
EE	1	1	1
LT	1	1	1
LV	1	1	1
ES	3	2	19
SK	3	3	4
DE	5	4	41
PT	6	4	7
IT	4	5	21
EL	9	5	13
BG	6	6	6
HU	7	6	7
CZ	7	7	8
RO	.	8	8
PL	16	16	16

Figure 4

Number of regions by level of GDP at PPS and GDP growth

(in real terms, 1995-2003)

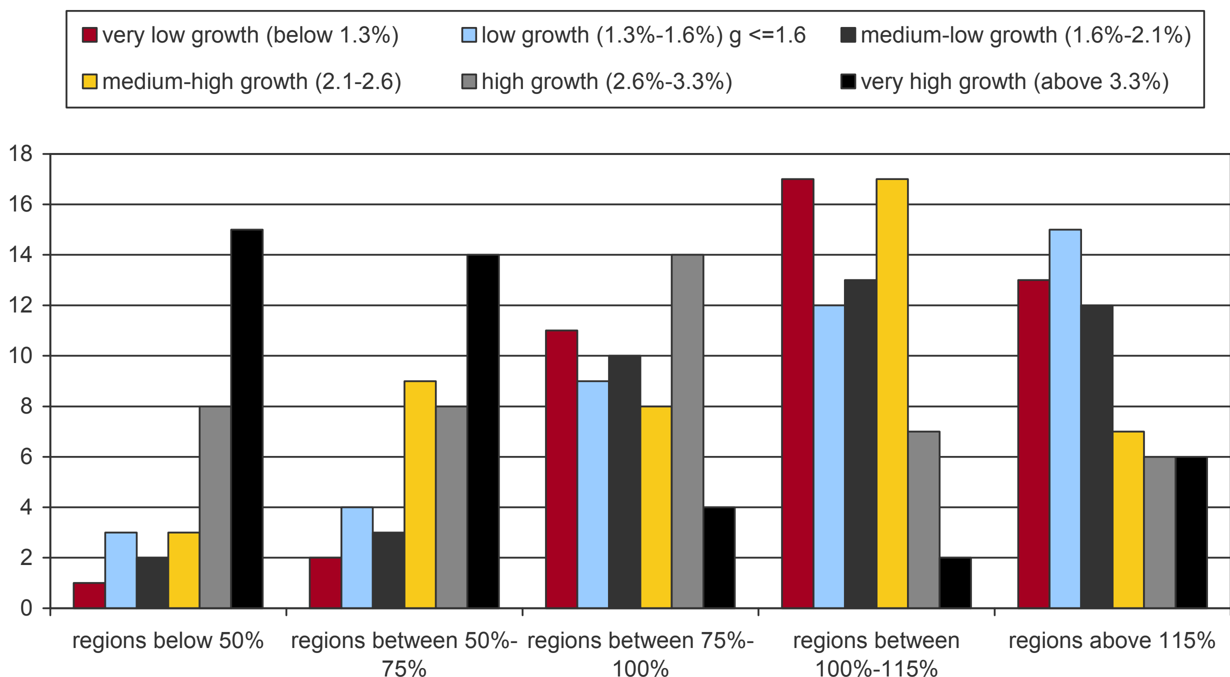


Figure 5

Number of regions by GDP growth of countries and regional GDP growth rates

(in real terms, 1995-2003)

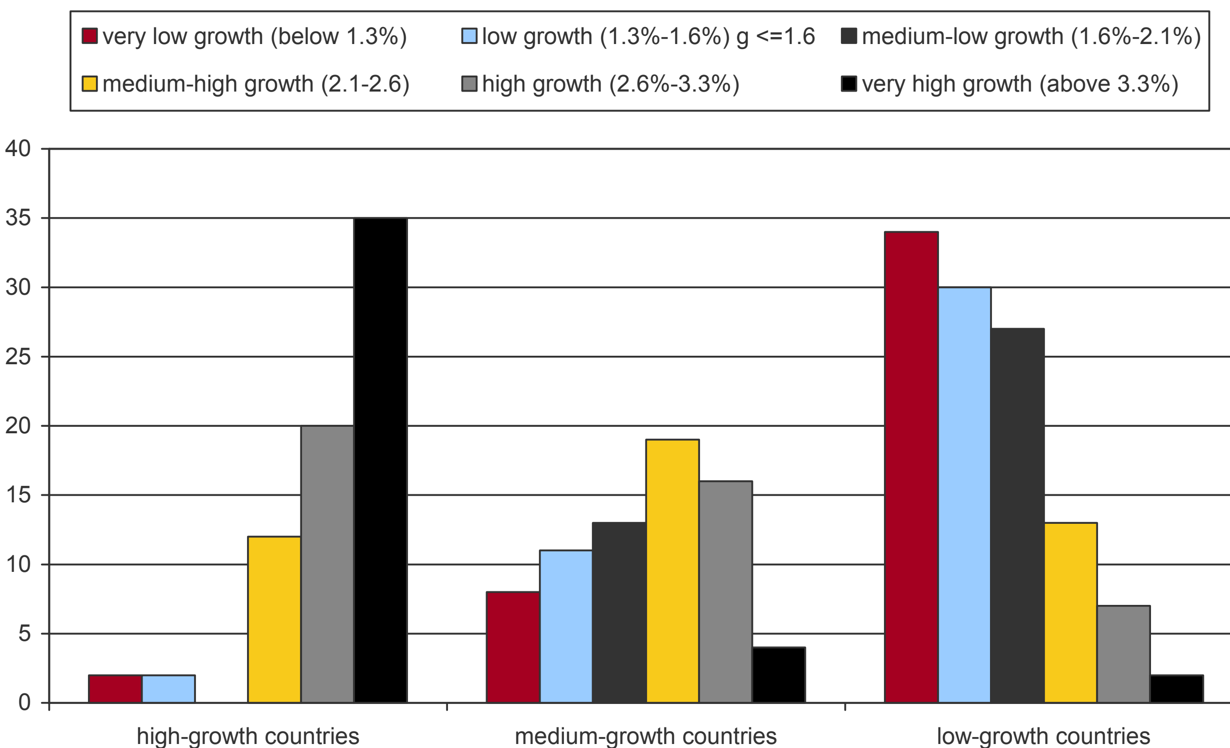


Table 2

Coefficient of Variation of regional GDP per head at PPS in EU-25 countries, 1995 and 2003

	country growth group	1995	2003	changes 1995-2003
EL	high growth	19.4	16.7	-2.7
AT	low growth	22.7	20.5	-2.1
IT	low growth	26.4	24.6	-1.8
DE	low growth	24.4	23.9	-0.5
FR	low growth	17.3	16.9	-0.4
BE	low growth	38	37.8	-0.2
ES	high growth	19	19.1	0.2
PT	medium growth	20.6	22	1.4
NL	medium growth	14.8	17	2.2
SK	high growth	48.4	51.1	2.7
UK	medium growth	26.8	30.6	3.8
SE	medium growth	12.4	16.3	3.9
FI	high growth	17.9	22	4.1
BG	medium growth	19.3	24.1	4.7
IE	high growth	18.3	23.5	5.2
PL	high growth	15.4	21.7	6.3
CZ	low growth	31.6	38.7	7.1
HU	high growth	25.4	35.9	10.5
EU-25	Total regions	38.1	36.8	-1.3

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