Economic Crises in the Results of the Non-Financial Corporations Sector in the Czech Republic[1]

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Abstract

In connection with the financial and subsequent economic crisis, the role of non-financial corporations is often discussed and the causes and effects of the crisis are analysed. Viewing two critical periods of economic development in the Czech Republic – the first in 1997–1998, and the second in 2009–2010 – we can see that non-financial corporations generated a high level of net borrowing in the first instance and, on the contrary, a high level of net lending in the second instance. Regardless of the different causes of the crises in the above-mentioned periods, a natural question arises: what kind of transformation took place in the economic behaviour of non-financial corporations between 1998 and 2008? Consequently, what was the source of their overall (and in a time of crisis, surprising) profit in the crisis years of 2009 and 2010. When analysing the economic behaviour of the non-financial corporations sector in the Czech Republic we will, naturally, base our considerations on the data from national accounts of the Czech Republic as published by the Czech Statistical Office and will also utilise the usual relative indices immediately implied by the national account ones, as well as indices whose construction is closer to the evaluation usual in corporate practice.

Keywords	JEL code
Non-financial corporations, economic crisis, sector analysis	*E22, C43*

INTRODUCTION

In connection with financial and subsequent economic crisis, the role of non-financial corporations is often discussed and the causes and effects of the crisis are analysed. It is certain that findings based on investigation of individual enterprises' problems will be different from those implied by macroeconomic analysis of non-financial corporations' data. Viewing two critical periods of economic development in

the Czech Republic (namely, the first in 1997–1998, and the second in 2009–2010) we can see the non-financial corporations sector as the loser in the first instance and the winner in the second one if we measure their success in terms of net lending/net borrowing, as a summary indicator of their trade in both financial and non-financial transactions. Regardless of different causes of the crises in the above-mentioned periods, a natural question arises: what kind of transformation took place in the economic behaviour of non-financial corporations between 1998 and 2008? Consequently, what was the source of their overall (and in a time of crisis, surprising) profit in the crisis years of 2009 and 2010. When analysing the economic behaviour of the non-financial corporations sector in the Czech Republic we will, naturally, base our considerations on the data from national accounts of the Czech Republic as published by the Czech Statistical Office and will also utilise the usual relative indices immediately implied by the national account ones, as well as indices whose construction is closer to the evaluation usual in corporate practice. Both these groups of indices are complementary to each other within the description and analysis of the non-financial corporations' behaviour and enable us to get a better insight into the substance of the problem on which the present article is focused, namely: to identify, on the basis of the national account data, causes of the different economic position of Czech non-financial corporations in two critical periods of the Czech economy.

Before analysing the economic behaviour of the non-financial corporations sector on the basis of the national account data in the period from 1995 to 2010, let us recall important milestones of macroeconomic development in the Czech Republic.

1 DEVELOPMENT OF THE CZECH ECONOMY – ANNUAL DATA

There was a decrease of economic activity caused by the beginning of the economic transformation in the Czech Republic in the period after 1990. After this short (1991–1993) period, economic growth took place with a peak in 1995–1996, immediately followed by an economic crisis with decreasing GDP in 1997–1998. The causes of that crisis can be predominantly found in unsolved or unresolved problems of privatisation, slow restructuring of industry, uncertainty in the banking sector and, last but not least, strongly restrictive anti-inflation policies. In 2000, the economic development turned to growth, and the most successful years in the Czech Republic's economic development came.

Nevertheless, the gain in 2001–2004 and the subsequent boom in 2005–2007 were stages different from each other. The period 2001–2004 was distinguished by stable economic growth supported by a high rate of growth in industrial and constructional production, consumption by households and the general government, as well as gradual improvement of foreign-trade relationships including the terms of trade, significant strengthening of the Czech Crown and a stable or even slightly decreasing unemployment rate, lower inflation rate, and decreasing prices of industrial products. This positive development was, however, accompanied by a growing deficit of the state budget, doubling of the government debt, growing government deficit, and worsening of the yield balance. In the period of years 2005–2006, key factors of the growth were changed: foreign trade became the main factor of the year-to-year growth of the economy, amounting to six per cent growth of GDP, the Czech Crown continued to grow stronger, the government debt was stabilised, the government deficit was reduced, and the unemployment rate was decreasing. On the other hand, the loss on the current account of the balance of payments was getting higher, the terms of trade were getting worse, and households' indebtedness and consumption were growing.

In the beginning seven years of the 21st century, the Czech economy achieved a very favourable rate of growth, not only in comparison with the 1990s but also with the EU member countries. A characteristic feature distinguishing the economic development in the Czech Republic after 2000 from that in the 1990s was, specifically, the gradual improvement of foreign-trade relationships, which became the motor of the economic growth and replaced the traditional factors, i.e., households' consumption and investments. When characterising the evolution in that period, we must not forget the high rate of growth in the in-

dustrial and constructional production, the related domestic investments, an influx of export-oriented investments from abroad, and – last but not least – a certain degree of saturation by modern investments and technologies in 2000–2001.

The favourable results of the Czech Republic's economy were, however, injured by the signs of the worldwide financial crisis and later the economic recession in 2008–2010. In consequence of decreasing industrial and constructional production, investments into fixed capital were significantly reduced and both exports and imports went down. The Czech economy was able to maintain a positive trade balance despite the falling volume and rate of exchange of goods and services with foreign countries, and the Czech Crown was even slightly further strengthened. Negative results of production industries were only weakly reflected in the slowdown and subsequent stagnancy of the final consumption expenditure by households and the slowdown of the growth of households' indebtedness. An increase of the government deficit, a low level of economic activities and growing unemployment rate led to growth of the government debt rather high above the long-term level of about 30%, which was valid from 2003 to 2008.[4] Table 1 shows the year-to-year GDP growth in the Czech Republic in the relevant time period.

Table 1 GDP growth in the Czech Republic (in %)

	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Year-to-year GDP growth (%)	6.2	4.5	−0.9	−0.2	1.7	4.2	3.1	2.1	3.8	4.7	6.8	7.0	5.7	3.1	−4.7	2.7

Note: GDP – gross domestic product.
Source: Czech Statistical Office (www.czso.cz)

Viewing the national economy of the Czech Republic via the data of institutional sectors it is obvious that, while the 1997–1998 crisis adversely affected non-financial corporations almost exclusively (with a net borrowing of 141.4 bln. CZK, while the general government's deficit was moderate: 68.2 bln. CZK, i.e., 3.6% GDP), the 2009 crisis made non-financial corporations "victorious" with a net lending of 95.8 bln. CZK. The largest value of deficit (measured as net borrowing) was suffered by the general government in 2009 (namely, 217.7 bln. CZK); all other sectors achieved net lending (even households got to a value of net lending five times higher than that of 2008), thus being able to compensate the public deficit to the total indebtedness of the national economy with respect to abroad amounting to 47.8 bln. CZK. The positive economic result achieved by the non-financial corporations in 2009 and then in 2010 (amounting to 50.7 bln. CZK) is surprising from two viewpoints: first, the Czech non-financial corporations thus achieved net lending for the first time after 1995 and, second, it was in a year of crisis[5] (with a 4.7% year-to-year drop of GDP in the Czech Republic).

2 ANALYSIS OF NON-FINANCIAL CORPORATIONS SECTOR

The non-financial corporations sector includes units – producers on the market whose main function is the production of goods and non-financial market services. From the national-economy point of view, it is the most important sector covering both public and private enterprises, cooperatives, etc., from all branches of the national economy except for financial, insurance and non-market services.[6] Proportion of this sector in GDP is dominant – its long-term value in the Czech Republic is about 55%.

For analysis of the non-financial corporations' behaviour, relative indices are especially significant, since they eliminate the problem of current prices on the time scale and different currencies regard-

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[4] For more detail see HINDLS et al, 2011.
[5] Figure 1 shows net lending / borrowing values of the non-financial corporations in the Czech Republic.
[6] For more detail see HRONOVÁ et al, 2009.

ing territorial comparisons. Apart from a number of structural indices, others are also used that can, to a certain extent, be understood as analogies of indices usual in corporate practice.[7] Such indices enable us to get a better insight into the specific features of the non-financial corporations sector, which cannot be identified in terms of the aggregate indices provided by the national accounts data due to their general definitions.

As already stated above, the evolution of economic results achieved by the non-financial corporations sector significantly reflected the general economic development of the Czech Republic as a whole, even more so in the period of the late 1990s crisis, brought about by exclusively domestic causes related to the uneven transformation process, as well as the 2009–2010 recession, which was caused by the worldwide financial and subsequent economic crisis. These economic-cycle stages were in a most pronounced way expressed in the balance of current transactions (net saving), and the non-financial corporations' economic result (net lending or net borrowing). Their development is shown in Figure 1.

Figure 1 Evolution of the net saving and net lending/net borrowing of the non-financial corporations in the Czech Republic (mil. CZK)
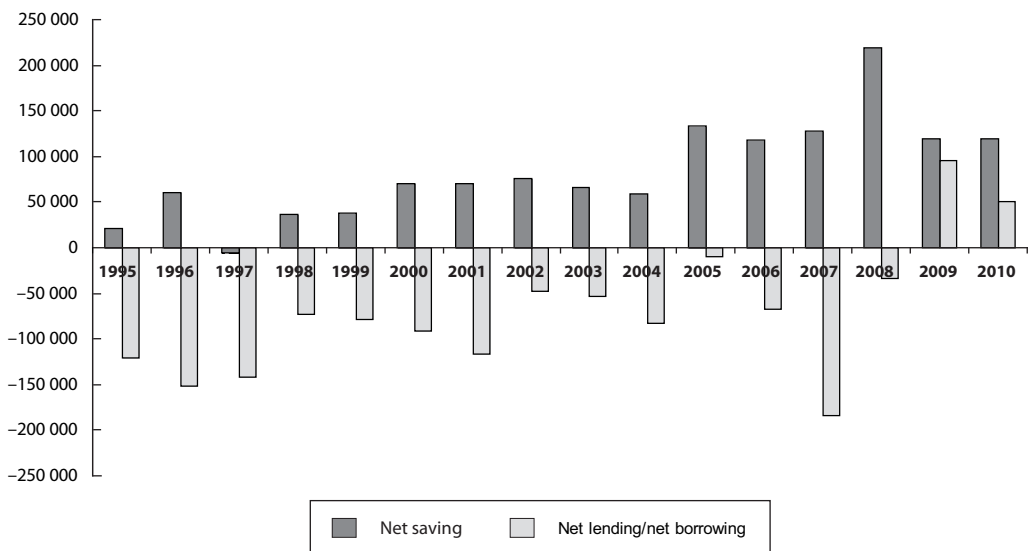
Source: Czech Statistical Office (www.czso.cz)

The data seen in Figure 1 imply that, in the growth years before the crisis the non-financial corporations reached the highest value of net borrowing (–151.2 bln. CZK in 1996, or –184.1 bln. CZK in 2007); this aspect was mainly caused by a high level of year-to-year investment growth (gross capital formation in the current prices), which was 23% in both instances. However, the response to signals indicating the approaching crisis was different in each such instance. At the end of the first decade of the 21st century, the non-financial corporations' response was relatively fast and flexible. They were able to create a high value of saving in 2008 (218.9 bln. CZK at a year-to-year increase of the gross saving rate by 4 percentage points); and, at a lower investment rate (by one percentage point) they achieved a decrease of the net bor-

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[7] Cf., e.g., <http://epp.eurostat.ec.europa.eu/portal/page/portal/sector_accounts/detailed_charts/non-financial_corporations>.

rowing value to –33.6 bln. CZK (i.e., by 150 bln. CZK). On the other hand, the main reason for the high value of net borrowing (–141.4 bln. CZK) in the late 1990s was the current transaction balance (negative net saving) at a lower investment rate (with a year-to-year decrease of 4 percentage points). The principal difference in the non-financial corporations' behaviour was shown in the balance of current transactions as a response to the indication of the approaching crisis. Let us now have a closer look, from the viewpoint of the non-financial corporations' current transactions, at the dominant features of the above-mentioned difference between the two key periods of economic development in the Czech Republic.[8]

2.1 Value Added and Its Structure

For the non-financial corporations sector, the decisive data are given by the production account (creation of value added), and the generation of income account (the value structure of value added). The gross value added is a dominant index, which is also a logical basis for constructing most relative indices valid for the non-financial corporations sector. Let us first view the value structure – cf. Table 2.

Table 2 Value structure of GVA for the non-financial corporations in the Czech Republic (as percentages of GVA)

GVA compo-nents	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
CE	54.9	54.8	56.2	54.3	53.5	52.7	52.0	52.7	53.2	53.2	53.0	51.9	52.0	53.3	54.0	54.3
NTPI	–0.5	–0.4	–0.5	–1.3	–1.3	–1.4	–1.7	–1.2	–1.3	–1.0	–1.3	–1.2	–1.3	–1.3	–1.7	–1.4
GOS	45.6	45.6	44.3	47.0	47.9	48.7	49.7	48.5	48.0	47.8	48.4	49.3	49.3	48.0	47.7	47.1
GVA	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Note: GVA – gross value added, GOS – gross operating surplus, CE – compensation to employees, NTPI – net taxes on production and imports.
Source: Czech Statistical Office (www.czso.cz), our own calculations

The data shown in Table 2 imply that the proportion of compensation to employees in the gross value added was going down – from about 55% in the late 1990s to 52% in 2006 and 2007. In the years of the crisis, the compensation to employees grew faster than the value added. The periods under assessment are different from each other in this respect as well. While both net and gross value added of the non-financial corporations in current prices were growing in 1997 (with a year-to-year increase in the compensation to employees, which was even higher than the value added), both net and gross value added of the non-financial corporations showed a year-to-year decrease in 2009 (the net value added by 8.9% and the gross added value by 5.8%, both in current prices and at the average inflation rate of 2.8%) and the compensation to employees also went down (by 4.6% in current prices). In 2010 there was a stagnation of both net and gross value added while the compensation to employees grew moderately. However, the proportion of the compensation to employees in the gross value added did not get to the level of the

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[8] A fast response by the non-financial corporations to the 2008 crisis and the subsequent improvement of their economic results is not specific only for the Czech non-financial corporations. A similar trend, i.e., net borrowing or its high value in 2008 and a changeover to net lending (even though the non-financial corporations always created net borrowing in the previous years) can be documented in other countries as well. Let us mention, for example, Slovakia, Austria or the Eurozone as a whole. In FRG, the non-financial corporations had been achieving net lending continuously since 2004; only in 2008 they got to net borrowing and then, in 2009, they created a value of net lending that was significantly higher than that of 2007. French non-financial corporations, which show a long term prevalence of net borrowing with its highest value in 2008, were only able to reduce that balance of non-financial operations in 2009 and 2010.
[9] For analyse of wages development see MAREK, 2010; for impact of the current economic crisis on employment see DUSPIVOVÁ, 2010.

late 1990s because of a higher profit share and a faster growth of received subsidies than the paid taxes on production and imports.

The proportion of the gross operational surplus in the gross value added, i.e., the profit share, is a dominant index for assessment of the non-financial corporations performance and ability to generate profit from the production, i.e., the capital income. The highest value of the profit share was achieved by the Czech non-financial corporations in 2001, and then in 2006 and 2007, i.e., always accompanied by a drop in the proportion of the compensation to employees to 52% due to the significant increase of the gross value added. In the crisis year, the profit share was falling due to the drop in the created (both gross and net) operational surplus; however this decrease was only seen in 1997 (and the profit share was growing after that), while the operational surplus stagnated in 2008 and then showed a year-to-year decrease (in the current prices) both in 2009 and in 2010. A natural consequence was the drop in the profit share. The years of recession or crisis are thus reflected in the decreasing profitability of the Czech non-financial corporations. However, the same conclusions may be drawn about the profit share in other EU countries – cf. Figure 2, even though the level of this index is different in the Czech Republic from the EU developed countries on a long-term basis.

Figure 2 Profit share (as percentage of GVA) in selected countries
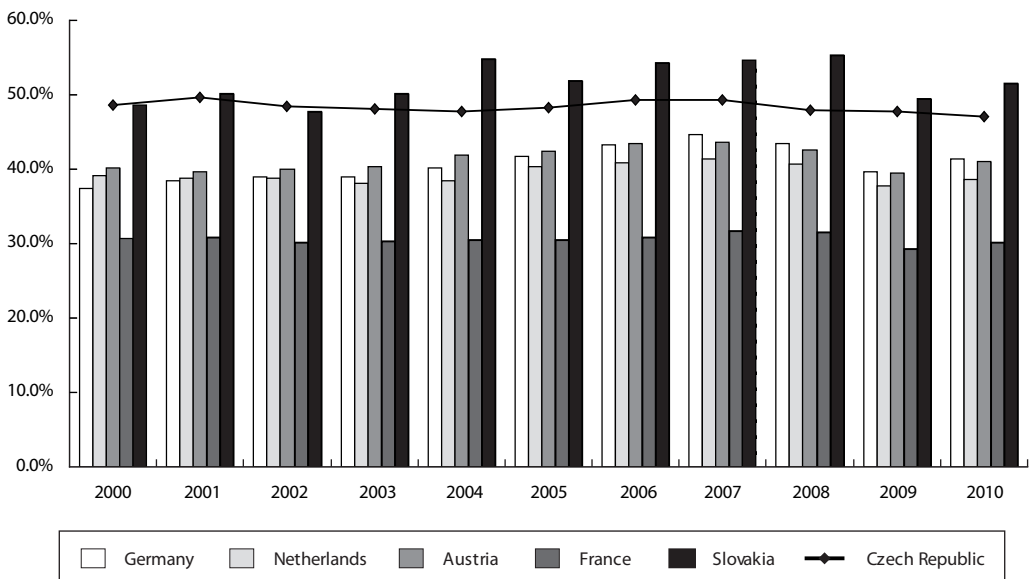
Source: Czech Statistical Office (www.czso.cz), EUROSTAT, our own calculations

The non-financial corporations in the Czech Republic have a high value of profit share (45% to 49%, cf. Table 2) in comparison with the developed countries thanks to the low proportion of expense items (compensation to employees and net taxes on production and imports). The average value of profit share in EU-27 or EA-17 is 38% or 39%, respectively. Similar values of the profit share as in the Czech Republic can be seen for the non-financial corporations in Slovakia.

2.2 Distribution of Income Account

The non-financial corporations are on the losing side in the distribution described on the primary distribution of income account and the secondary distribution of income account – from the value added

or the operational surplus to the disposable income, which is also saving for the non-financial corporations, i.e., their own source for financing their investments.

In the primary distribution for the Czech non-financial corporations there is a considerable growth of negative balance of the property income; during the 1997–1998 crisis the interest balance was dominant (due to the high interest rate on credit and the growing indebtedness of the non-financial corporations, which were looking for financial sources mainly in the form of bank loans because of the insufficiently developed capital market). After the massive influx of (mainly foreign) investments, the main role was played by the balance of distributed income of corporations (in which dividend is a dominant tool) with its peak in the years of the 2008–2009 crisis.

Figure 3 Balance of property income for the non-financial corporations in the Czech Republic (mil. CZK)
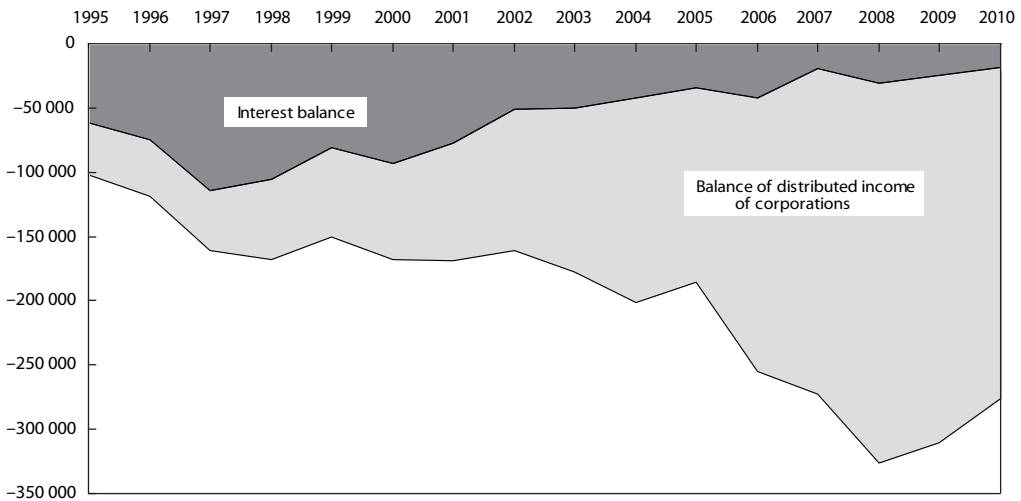
Source: Czech Statistical Office (www.czso.cz), EUROSTAT, our own calculations

Hence, the non-financial corporations were, in the first decade of the 21st century, trying to find financing resources in share emissions and to reduce their loan indebtedness. This trend can be proven by data from the financial account (cf. Figure 4). The said data enable us not only to explain the disproportion among the property income balance components, but also to identify the reasons for the substantial changes in the net lending/borrowing values in the two instances of crises. In 1995–1997, the non-financial corporations' indebtedness in the form of bank loans was growing with its peak in 1997; this trend was reflected in a high level of net borrowing in the said years (–151.2 bln. CZK in 1996 or –141.4 bln. CZK in 1997). In the following years this of indebtedness was reduced and the non-financial corporations focused on looking for financing resources mainly by share emissions. A significant growth of indebtedness in the form of loans and shares and other equity occurred in 2006–2008. With the coming crisis the indebtedness was reduced by both a higher volume of paid-up loans in comparison with new ones, and a higher volume of paid-up shares in comparison with issued ones. Such factors together with the above-mentioned aspects of the non-financial transactions were among the reasons for on the one hand, the record value of net borrowing in 2007 (–184.1 bln. CZK) and, on the other hand, the record values of net lending in 2009 (95.8 bln. CZK) and 2010 (50.7 bln. CZK).

Figure 4 Net difference of indebtedness in the form of shares and other equity and loans for the non-financial corporations in the Czech Republic (mil. CZK)
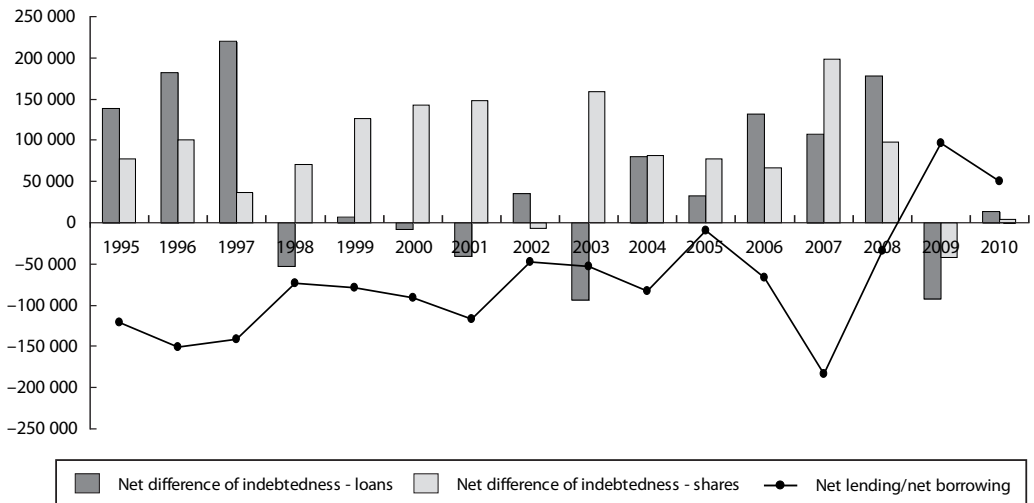
That view on the structure of the property income balance helped us identify the reasons for the high net borrowing in the years 1996 and 2007, even though it is obvious that both 1996 (with real GDP growth at 4.0%) and 2007 (with real GDP growth at 6.1%) were peaks of the economic growth. Let us now have a look at the development of other non-financial transactions.

Within the secondary distribution stage, the most important component of the non-financial corporations' account is represented by paid current taxes. Other transactions on the secondary distribution account (unfunded social benefits to employees and other current transfers) are of a limited importance with respect to their values and time evolution. Amounts of current taxes paid by the non-financial corporations naturally reflect the scope of the production and profitability, thus significantly responding to the stages of the economic cycle.

The current taxes include property and other taxes, mandatory one-sided payments, both financial and in-kind, payable on income and property of individuals and legal entities, taxes on dividends, interest, lottery prizes, etc. If we wish to study the time evolution of this index, we again have to construct a relative index describing the ratio between the paid current taxes and the net operational surplus (profit) or net value added. It turns out that the time evolution of relative indices is not identical: while the proportion of current taxes in the value added is more or less stable (from 10.4% in 1995 to 6.5% in 2010), the proportion of current taxes in the net operational surplus shows a higher year-to-year variability (with values from 33.6% in 1995 to 19.5% in 2010). That type of behaviour was especially seen in the 1990s, in which period the time evolution is copied of proportion of the current taxes paid by the non-financial corporations in the total current taxes paid in the national economy as a whole. In this connection, it is also worth mentioning that the net profit share of the non-financial corporations (proportion of the net operational surplus in the net value added) was moderately but continuously growing from 1997 to 2007. The considerations described above are summed up in Figure 5.

Figure 5 Selected relative indices for the non-financial corporations in the Czech Republic
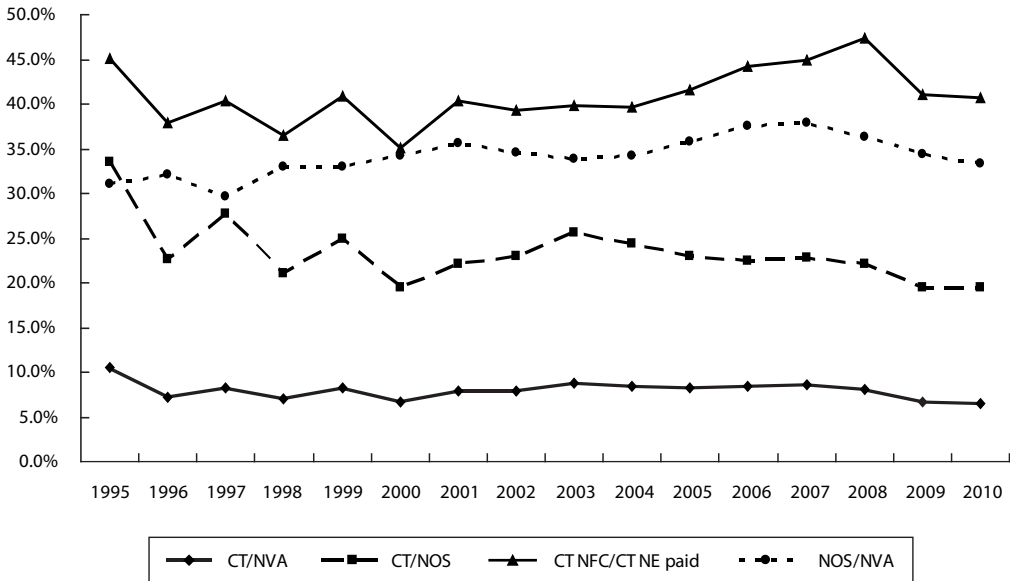
Note: CT – current taxes on income, wealth, etc., NVA – net value added, NOS – net operating surplus, NFC – non-financial corporations, NE – national economy.

Source: Czech Statistical Office (www.czso.cz), our own calculations

If we compare the crises years 1997 and 2009 (i.e., the years characterised by a drop in GDP), then it is obvious that, while in 1997 the proportion of the current taxes paid by the non-financial corporations in their net operational surplus and in their net value added grew, and so did the proportion of the current taxes paid by the non-financial corporations in the corresponding national-economy value, the situation was opposite in 2009. For the sake of completeness, let us add that the net profit share went down in year-to-year comparison in both instances (by 2.5 percentage points in 1997 and by 2.0 percentage points in 2009).

Both the primary and the secondary distribution of income result in disposable income, which equals the saving in the case of non-financial corporations because they do not participate in the redistribution of income in-kind or in the final consumption. In the crisis year of 1997, the non-financial corporations suffered a loss from current transactions amounting to 5.6 bln. CZK, while they achieved a saving of 118.9 bln. CZK in 2009 even though it was a crisis year. The causes of this diametrically changed situation are given by the stages of income creation and distribution, as the analysis described above implies. In 1997, a year-to-year increase of the net value added occurred (by 7.2%); but compensation to employees was also increased (by 11.2%), as well as the (negative) balance of both primary and secondary income, at an inflation rate of 8.5%. In 2009, the net value added went down (by 8.0% year-to-year) as did the compensation to employees[10] (by 4.5%) at an annual inflation rate of 2.8%. The increase in the primary income's negative balance by 35 bln. CZK[11] was nearly compensated by a decrease of the sec-

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[10] By the way, 2009 was the only year in the period 1995–2010 in which the nominal value of compensation to employees was decreased.

[11] A year-to-year increase of the negative balance of the primary income occurred in 2009, but the balance of primary income was lower by 86 bln. CZK in 2008 than in 2007.

ondary income's balance by 29 bln. CZK. Hence the year-to-year decrease in the saving of non-financial corporations was more pronounced in 1997 (from 60.2 bln. CZK to –5.5 bln. CZK) than in 2009 (from 218.8 bln. CZK to 118.8 bln. CZK). However, we should see the year-to-year drop of saving in 2009 as compared with 2008 (by 45.7%) in the context of a reduction of the primary income's negative balance in 2008 in comparison with 2007 (cf. Footnote 8); the saving in 2009 was thus lower than that in 2007 by mere 10 bln. CZK, while the net profit share of the non-financial corporations was higher in 2009 than in 1997 (by 4.5%), i.e., a lower income from business as related to the value added.

Now we are going to view the situation of the non-financial corporations in terms of indices whose definitions are close to those used in corporate practice. Namely, the net entrepreneurial income of the non-financial corporations, defined as the net value added plus subsidies and received property income (exclusive of rents and property income attributed to insurance policy holders) minus compensation to employees, taxes on production and imports, paid interest and paid rent. The net entrepreneurial income of non-financial corporations is also expressed as "after taxation", i.e., after deduction of current taxes. This net income index of the non-financial corporations is utilised to construct relative indices: net debt-to-income ratio after taxes and net return on equity after taxes. These two indices will help us illustrate the different positions of the Czech non-financial corporations in 1997 and in 2009.

Figure 6 Net debt-to-income ratio after taxes for the non-financial corporations in the Czech Republic (in %)
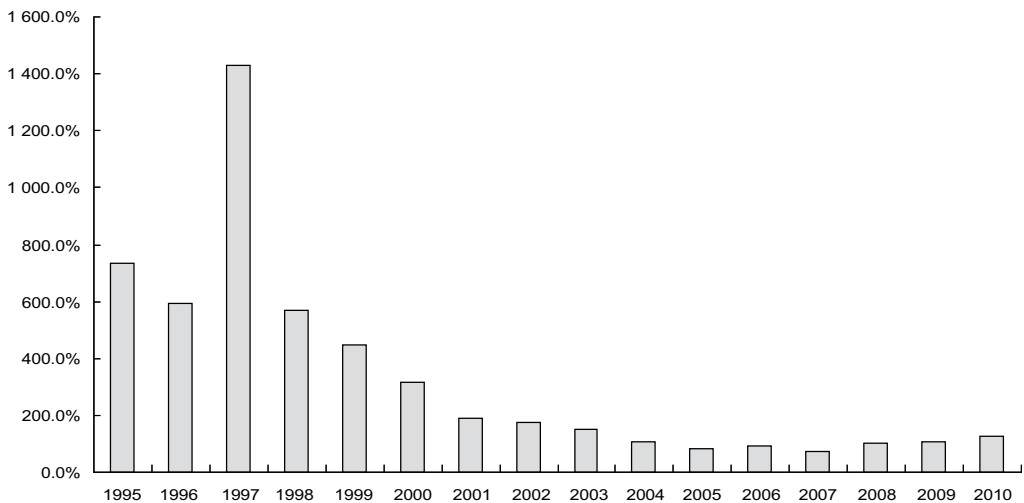
Source: Czech Statistical Office (www.czso.cz), EUROSTAT, our own calculations

The net debt-to-income ratio after taxes is defined as a ratio where the net indebtedness as of the end of the year in the form of securities other than shares and loans[12] stands in the numerator and the net entrepreneurial income after taxes in the denominator. This index expresses the (in)ability of non-financial corporations to cover their current liabilities from operations. The data in Figure 6 unambiguously indicate the principal difference between the situations of the non-financial corporations in the Czech

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[12]   Namely, it is a difference between the liabilities at the end of the year in the form of securities other than shares, excluding financial derivatives and loans on the one hand and the financial assets in the form of currency and deposits, and of securities other than shares, excluding financial derivatives and loans on the other hand.

Republic in 1997 and 2009. While the level of the net debt-to-income ratio after taxes exceeded 1 400% in 1997, and was two-and-half higher than the year before, its value in 2009 was not significantly different form that of 2008, namely, it was equal to 109%, i.e., the same value as in 2004 when economic growth occurred. Reasons for the significant growth of the non-financial corporations' net debt-to-income ratio after taxes in the Czech Republic in 1997 included the year-to-year decrease of the net entrepreneurial income by one-half and an increase of the net indebtedness in the form of securities other than shares and loans by one-third. The decrease of the net income was mainly caused by an increase of the paid interest amount (by 36%, i.e., by 40 bln. CZK) and also a higher absolute increment of all other subtracted items (especially, compensation to employees) then the items included in the minuend (especially the net value added). The main reason for the net indebtedness of the non-financial corporations in 1997 was an increase of the indebtedness in the form of loans by 22%, i.e., 234 bln. CZK; and long-term loan indebtedness was growing faster than short-term indebtedness. Other items of financial assets and liabilities showed only small year-to-year changes. The high level of net indebtedness in the form of securities other than shares and loans in 1997 (858 bln. CZK) was never exceeded in the following years (its value was 536 bln. CZK in 2009).[13] A lack of financial resources and the necessity to focus on bank loans, for which the interest rates were high, can be viewed as the main cause of the economic problems of the non-financial corporations in 1997, and therefore also a substantial cause of the different economic results of the non-financial corporations in the 1997 and 2009 crises.

Another index which confirms the above-mentioned observations and is based on indices close to corporate practice is the net return on equity after taxes. The latter is defined as a ratio between the net entrepreneurial income after taxation and the net indebtedness in the form of shares and other equity.[14]

Figure 7 Net return on equity after taxes of the non-financial corporations in the Czech Republic (in %)
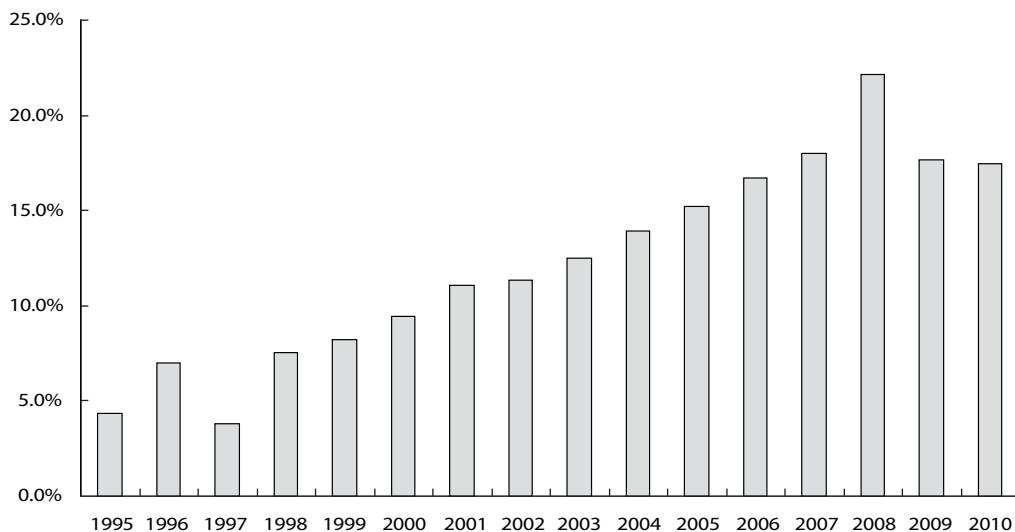
Source: Czech Statistical Office (www.czso.cz), EUROSTAT, our own calculations

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[13] In this connection it should be recalled that the net indebtedness of non-financial corporations in the form of shares and other equity was in 2009 nearly twice as high as in 1997.

[14] The net indebtedness in the form of shares and other equity equals the difference between the payables and receivables in the form of shares and other equity as of the end of the year.

Figure 7 shows that, while the net return on equity after taxes of the non-financial corporations in the Czech Republic was between 3.8% (in 1997) and 9.4% (in 2000) in the 1990s, its values in the 2000s were substantially larger, ranging from 11.1% in 2001 to 22.2% in 2007. The exclusive reason for its decrease in 1997 was the above-mentioned decrease of net income. Profitability of the non-financial corporations in 2009 was even higher by one percentage point than its value in 2006, which was the year of the highest economic growth. A year-to-year decrease of the net return on equity after taxes in 2009 was caused, as already mentioned above, by a decrease of the net entrepreneurial income and an increase of the net indebtedness in the form of shares and other equity by 94 bln. CZK (after a decrease of the latter by more than 300 bln. CZK in 2008). On the basis of these considerations we can say that the situation of the non-financial corporations during the 2009–2010 crisis was completely different from that in the years 1997–1998. The indices close to those used in corporate practice helped us better understand the differences in results of current transactions achieved by the non-financial corporations that are recorded in the saving of the national accounts. Namely, the Czech non-financial corporations' negative results recorded on the national accounts in 1997 (negative saving and a high value of the net borrowing) were caused by their high indebtedness rate and low effectiveness. A substantial change in these parameters in the late 2000s brought to the Czech non-financial corporations a high value of saving and the net lending in 2009, the first year in which net lending had ever been achieved by non-financial corporations, despite the total decrease of the economy by 4.7%.

At the same time we can observe that the non-financial corporations responded in quite a flexible way in 2009 to external signals (of the coming financial and credit crisis) occurring as early as 2008 and, expecting the adverse situation in 2009, they strictly reduced all current expenses. Such a situation could not have been expected in 1997, when the crisis was caused by specific Czech conditions of an economic transformation and the outlook for 1997 was rather optimistic even at the end of 1996 (with an expected value of the GDP growth at 2%).

2.3 Accumulation

The reasons for different savings of the Czech non-financial corporations in 1997 and 2009, i.e., caused by the current transactions, were explained above. For the sake of completeness, this analysis will now be complemented by a view of accumulation, or non-financial investments. A relationship between the saving and the investments, reflected in the net lending/net borrowing, was already outlined in Figure 1, which implies that the significant decrease in saving in 2009 (to nearly one-half) made the non-financial corporations substantially reduce their investments (with a year-to-year decrease of the gross capital formation by 29.5%) in order to achieve the positive result amounting to a net lending value of 95.8 bln. CZK. On the other hand, the Czech non-financial corporations had negative saving of 5.6 bln. CZK in 1997 (for the reasons explained above) so that, even if the investments went down by 8.3%, a high net borrowing value of 141.4 bln. CZK occurred.[15] The steps in which the loss from non-financial operations had been accumulated in the 1990s and the opposite – the positive outcome of the same operations in the late 2000s – are documented in Table 3, based on the logic of the sector accounts.[16]

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[15] The above-mentioned data must be understood in connection with the investment rate, equal to 38.2% in 1997 and to 25.4% in 2009.

[16] The following formula is valid: net value added – compensation to employees + balance of other primary income + balance of secondary income = net disposable income = net saving. Further: net saving + capital transfer balance – net capital formation = net lending / net borrowing.

Table 3 Balance values of the non-financial corporations' account in the Czech Republic (mil. CZK, current prices)

Index	1995	1996	1997	1998	2007	2008	2009	2010
Net value added	**611 887**	**738 806**	**792 131**	**873 264**	**1 729 843**	**1 825 087**	**1 677 081**	**1 680 603**
Compensation to employees	425 169	504 523	562 097	599 325	1 100 130	1 191 645	1 137 056	1 150 901
Balance of other primary income	−99 774	−117 032	−156 973	−159 395	−344 071	−258 226	−293 288	−284 188
Balance of secondary income	−66 139	−57 050	−78 635	−78 124	−158 253	−156 359	−127 887	−125 888
Net saving (= net disposable income)	**20 805**	**60 201**	**−5 574**	**36 420**	**127 389**	**218 857**	**118 850**	**119 626**
Balance of capital transfers	30 011	10 682	33 888	50 676	24 312	74 719	70 030	68 754
Net capital formation[17]	171 898	222 090	169 706	160 608	335 752	327 178	93 033	137 668
Net lending / net borrowing	**−121 082**	**−151 207**	**−141 392**	**−73 512**	**−184 051**	**−33 602**	**95 847**	**50 712**

Source: Czech Statistical Office (www.czso.cz), our own calculations

The reasons for the different economic results of the Czech non-financial corporations in the years of crises, i.e., a high value of net borrowing in 1997 and, on the other hand, a high value of net lending in 2009, can therefore be sought not only in the different levels of indebtedness and effectiveness, but also in different levels of investments.

CONCLUSIONS

The economic crises that occurred in the Czech Republic in the late 1990s and the late 2000s had different causes and effects. However, both slackened the pace of the national economy, which was expressed by a decrease of GDP: by 0.9% in 1997 and by 4.7% in 2009. The causes of the 1997–1998 crisis can exclusively be identified within the Czech economy; it was a crisis accompanying the economic transformation characterised by a hasty and not too well-thought-out privatisation, inconsistent restructuring of industry, unclear concept of the banking sector's development with a subsequent crash of many banks, and a too-restrictive monetary policy. All these factors together with significant investment activities of the non-financial corporations under the conditions of a lack of available financial means and practically non-existent capital market led to the problems in financing, expensive loans and a high level of non-financial corporations' indebtedness. Adding the low effectiveness of the Czech non-financial corporations into the mixture we can see why their current transactions resulted in a negative value (negative net saving); and the high investment rate contributed to the negative results of all non-financial transactions (and to the prevalence of a high net borrowing).

The 2009 crisis was caused by external factors; it came from the USA, first as a credit and financial crisis, which later grew into an economic crisis; but symptoms of an economic slowdown had already occurred in 2008. Warnings from the outside meant that the Czech non-financial corporations were ready for potential threats. From the macroeconomic viewpoint, that stage in 2009 meant a lower volume of

[17] Here: net capital formation = gross capital formation – consumption of fixed capital + acquisitions less disposals of non-financial non-produced assets.

paid wages and salaries (compensation to employees) due to the reduction of employment, a lower volume of both financial and non-financial investments, a higher volume of paid-up than received loans, and of paid-up than emitted shares. Overall effects were such that the non-financial corporations achieved net lending in the year of crisis (and for the first time since 1995), i.e., they created a surplus of resource.

Differences between the Czech non-financial corporations in the two crises, distant from each other in time, may be described with the aid of a number of relative indices immediately (i.e., in the definitions of both numerators and denominators) based on the national accounts' indices. Their values enabled us to explain the reasons for the loss from current transactions in 1997 and the surplus in 2009, but failed to express in detail the different economic conditions of the Czech non-financial corporations in either crisis. Such aspects were better identified by relative indices whose numerators and denominators are derived from the national accounts' indices so that their definitions and informative content were closer to assessment of economic performance that is usual in the corporate practice. In this way we revealed that the principal differences were given by the rate of indebtedness and by effectiveness. Values of these indices were significantly different for the years 1997 and 2009, which we investigated in this article.

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