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IMPACT OF INFLATION ON ECONOMIC PROCESSES IN THE POLISH TIMBER INDUSTRY

Abstract: A major macroeconomic index, inflation is a price increase process affecting the distribution of national income. According to estimations, even up to 90% of new money issued in Poland is generated by commercial banks. Each bank loan means generating such new money. In economic theory, this process is referred to as "money creation." This paper presents the impact of inflation and deflation on economic processes in the Polish timber industry.

Key words: inflation, economic process

INTRODUCTION

While inflation is common in the global economy, its intensity may vary across countries and periods. The intensity is determined by the inflation rate: the increase in price levels in a specific period compared to the baseline period, expressed in percentages. Based on the yearly inflation rate, the following classification is adopted: creeping inflation (up to several percent), walking inflation (over a dozen percent), galloping inflation (over 20%) and hyperinflation: a situation where rational management, sound business cases and business activity planning become infeasible, and incentive schemes are ineffective due to intense inflation processes. As a consequence, social life progressively falls into anarchy.

The complexity of the inflation process results from the multiplicity of its causes, manifestations and impacts. The causes of inflation are as follows: in the case of demand-pull inflation: excessive amounts of money in circulation;

in the case of cost-push inflation: increasing production costs.

To restrict and counteract inflation, adequate policies need to be implemented by the government as regards incomes of the nation, limiting the government deficits (fiscal policy), the central bank's supervision over money issuance, and money creation by commercial banks (monetary policy).

The inflation rate is an economic index closely followed by virtually all market actors: consumers, producers, traders, central banks, commercial and investment banks, and politicians. Inflation level and the axis of expected inflation changes is what decides of future costs, profits, standards of living and social attitudes. These factors have a direct effect on support levels revealed by opinion polls which are closely monitored by politicians.

This paper presents the impact of inflation and deflation on management processes in the Polish timber industry.

INFLATION MEASUREMENT

Inflation may be measured in multiple ways. The results may vary depending on the measure employed.

General inflation, or the consumer price index, is a widely adopted indicator. Known internationally as CPI, it shows the change in prices of a basket of goods purchased by an average

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household. International analyses are based on comparing the shares of specific groups of goods in the basket.

Recently, the highest inflation rates were reported in Zimbabwe (previously, Southern Rhodesia). Already in 2008, there was not enough space to display the zeros on the calculators' screens. In mid-2008, the inflation level reached 2.2 million %. When 231 million % was attained, the government worksheets went out of scale, and official data was no longer published. As estimated by the economists, the peak inflation rate was 500 billion % or even more. The galloping inflation could be stopped by replacing the local currency (Zimbabwean dollars) with foreign currencies in the calculations. From December 2008, the estimations of price dynamics have been based on US dollars. Several months later, other currencies (South African rand, Botswana pula and British pound) started to be used as a reference even in day-to-day transactions. In 2009, as a consequence of the above stabilization measures, the Zimbabwean consumer price index decreased to 7.7%, and signs of economic recovery became visible for the first time since 2000. In December 2010, the inflation rate in Zimbabwe was 3.2%: the inflation was over.

At the beginning of 2015, high inflation levels were reported in Venezuela, a country going through recession (with a GDP growth rate of -2.5%) and struggling with hyperinflation (64% in 2014). The main reasons were the shortage of goods and political and social tensions. The crisis was strengthened by the risk of nationalization, restricted imports and price and margin controls. Under these circumstances, the difficult situation of local entrepreneurs was getting even worse.

MONEY CHANGEOVER AND REDENOMINATION

In the case of excessive inflation, the government may decide to put in place money changeover and redenomination measures. In Poland, after world war 2, money changeover took place three times. The first changeover was performed under the decree of the Polish Committee of National Liberation of August 24, 1944, depriving the majority of the population of their savings. The second monetary reform was announced in the Act of October 28, 1950 and performed on October 30, 1950. Coming as a total surprise, the 1950 changeover was also a redenomination. Polish zlotys in circulation from 1948 to 1950 were quickly replaced (within a couple of days) with the newly issued money. The underlying principle was to convert bank deposits, all prices and employee remunerations using the same rate, i.e. 100 old zlotys against 3 new ones. The cash conversion rate was definitely less advantageous: 100 old zlotys against 1 new zloty. Strict financial discipline was also imposed, reducing the high inflation levels for nearly 25 years (from 1957 to 1981; Table 1, Table 2).

The third changeover, and the second redenomination, took place on January 1, 1995. A new monetary unit referred to as "zloty" (PLN) was introduced to replace the "old zloty" (PLZ). In all conversion cases, 10,000 old zlotys were replaced with 1 new zloty. The redenomination was caused by hyperinflation, reaching a level of 2,408% in 1989-1990 (Table 1, Table 2) and as much as 10,488% in 1989-1994 (which is more than the 1995 redenomination rate). It may be concluded that the 1995 redenomination compensated for the hyperinflation effects taking place during the transformation period (1989 – 1994). Inflation rates are shown on a cumulative and rolling basis in Table 1 and Table 2, respectively.

If the analysis excludes the 1989-1994 period, i.e. under the assumption that the 1988 inflation rate was immediately followed by that of 1995, the price increase from 1949 to (and including) 2016 was 10,481.67% (Table 2) which is slightly less than during the economic and political transformation (1989 – 1994).

Table 1. Yearly cumulative consumer price indexes in 1950-2016

Cumulative consumer price indexes									
YEAR	CPI	YEAR	CPI	YEAR	CPI	YEAR	CPI	YEAR	CPI
1950	100,00	1970	203,97	1990	71 595,11	2010	305,04	1988	100,00
1951	109,60	1971	203,77	1991	121 926,46	2011	318,15	1989	351,10
1952	125,38	1972	203,77	1992	174 354,84	2012	329,93	1990	2 407,84
1953	177,92	1973	209,47	1993	235 902,11	2013	332,89	1991	4 100,56
1954	166,71	1974	224,35	1994	311 862,58	2014	332,89	1992	5 863,80
1955	162,71	1975	231,08	1995	127,80	2015	329,90	1993	7 933,72
1956	161,08	1976	241,24	1996	153,23	2016	327,92	1994	10 488,38
1957	169,78	1977	253,06	1997	176,06				
1958	174,36	1978	273,56	1998	196,84				
1959	176,28	1979	292,71	1999	211,21				
1960	179,45	1980	320,23	2000	232,54				
1961	180,71	1981	388,11	2001	245,33				
1962	185,23	1982	779,33	2002	249,99				
1963	186,71	1983	951,57	2003	251,99				
1964	188,95	1984	1 094,30	2004	260,81				
1965	190,65	1985	1 259,54	2005	266,29				
1966	192,94	1986	1 482,48	2006	268,95				
1967	195,83	1987	1 856,06	2007	275,68				
1968	198,97	1988	2 973,41	2008	287,25				
1969	201,75	1989	10 439,65	2009	297,31				

Source: the Information Portal of the Central Statistical Office (accessed on August 23, 2017)
Price index (previous year = 100)

Table 2. Yearly rolling consumer price indexes in 1949-2016

Rolling consumer price indexes									
YEAR	CPI	YEAR	CPI	YEAR	CPI	YEAR	CPI	YEAR	CPI
1950	107,50	1970	219,27	1990	0,00	2010	9 750,26	1988	100,00
1951	117,82	1971	219,05	1991	0,00	2011	10 169,52	1989	351,10
1952	134,79	1972	219,05	1992	0,00	2012	10 545,80	1990	2 407,84
1953	191,26	1973	225,18	1993	0,00	2013	10 640,71	1991	4 100,56
1954	179,21	1974	241,17	1994	0,00	2014	10 640,71	1992	5 863,80
1955	174,91	1975	248,41	1995	4 085,02	2015	10 544,94	1993	7 933,72
1956	173,16	1976	259,34	1996	4 897,94	2016	10 481,67	1994	10 488,38
1957	182,51	1977	272,04	1997	5 627,73				
1958	187,44	1978	294,08	1998	6 291,81				
1959	189,50	1979	314,66	1999	6 751,11				
1960	192,91	1980	344,24	2000	7 432,97				
1961	194,26	1981	417,22	2001	7 841,78				
1962	199,12	1982	837,78	2002	7 990,78				
1963	200,71	1983	1 022,93	2003	8 054,70				
1964	203,12	1984	1 176,37	2004	8 336,62				
1965	204,95	1985	1 354,00	2005	8 511,69				
1966	207,41	1986	1 593,66	2006	8 596,80				
1967	210,52	1987	1 995,27	2007	8 811,72				
1968	213,89	1988	3 196,42	2008	9 181,82				
1969	216,88	1989	0,00	2009	9 503,18				

Source: the Information Portal of the Central Statistical Office (accessed on August 23, 2017)
Price index (previous year = 100)

INFLATION INDEXES

Table 3 shows a summary of annual consumer price indexes systematically calculated by the Central Statistical Office over the 1950-2016 period Accordingly, in Poland, deflation was reported 6 times, at the end of: 1954 (93.7%), 1955 (97.6%), 1956 (99%), 1971 (99.9%), 2015 (99.1%) and 2016 (99.4%). The highest price decrease took place in 1954 (by 6.3% vs. 1953). In 1972 and 2014, prices remained stable, and the annual price index was 100%. Also, the annual inflation rate was below 1% five times: in 1961 (100.7%), 1962 (100.8%), 1965 (100.9%), 2003 (100.8%) and 2013 (100.9%).

The highest annual inflation rate (685.8%) was recorded in 1990. Also, two times, in 1989 (351.1%) and 1982 (200.8%), the inflation rate went beyond 200%. Ten times, it ranged from 121.2% to 170.3%, reaching the levels of galloping inflation (over 20%). Poland faced galloping inflation 13 times (in the 68-year period under consideration), including in nine consecutive years, from 1987 (125.2%) to 1995 (127.8%). Since 1995, inflation has been mastered. Thus, Poland has not experienced galloping inflation for the last 22 years.

Based on data consistently published by the Central Statistical Office (as per the Public Statistics Program, by the 15th calendar day of each month following the reporting month), the Money Portal publishes 4 inflation indexes each month:

Inflation 1: the corresponding month of the previous year is used as the calculation baseline,

Inflation 2: the previous month is used as the calculation baseline,

Inflation 3: last December is used as the calculation baseline,

Inflation 4: average inflation rate from the last 12 months = the annual average inflation index.

Inflation indexes of particular economic importance include Inflation 1 and Inflation 2 which will be thoroughly analyzed later in this paper.

Table 3. Consumer price indexes in 1950-2016

Yearly consumer price indexes							
YEAR	CPI	YEAR	CPI	YEAR	CPI	YEAR	CPI
1950	107,5	1970	101,1	1990	685,8	2010	102,6
1951	109,6	1971	99,9	1991	170,3	2011	104,3
1952	114,4	1972	100,0	1992	143,0	2012	103,7
1953	141,9	1973	102,8	1993	135,3	2013	100,9
1954	93,7	1974	107,1	1994	132,2	2014	100,0
1955	97,6	1975	103,0	1995	127,8	2015	99,1
1956	99,0	1976	104,4	1996	119,9	2016	99,4
1957	105,4	1977	104,9	1997	114,9		
1958	102,7	1978	108,1	1998	111,8		
1959	101,1	1979	107,0	1999	107,3		
1960	101,8	1980	109,4	2000	110,1		
1961	100,7	1981	121,2	2001	105,5		
1962	102,5	1982	200,8	2002	101,9		
1963	100,8	1983	122,1	2003	100,8		
1964	101,2	1984	115,0	2004	103,5		
1965	100,9	1985	115,1	2005	102,1		
1966	101,2	1986	117,7	2006	101,0		
1967	101,5	1987	125,2	2007	102,5		
1968	101,6	1988	160,2	2008	104,2		
1969	101,4	1989	351,1	2009	103,5		

Source: the Information Portal of the Central Statistical Office (accessed on August 3, 2017)

Price index (previous year = 100)

deflation | galloping inflation | inflation below 1%

hyperinflation above 200%

INFLATION CALCULATIONS WITH THE CORRESPONDING MONTH OF THE PREVIOUS YEAR USED AS THE BASELINE

Table 4 shows a summary of Inflation 1 indexes, calculated with the corresponding month of the previous year used as the baseline. The analysis period extends from 1989 to 2017. In 1H 1990, that index went beyond 1,000%, reaching the peak value (1,183.1%) in February 1990. In 2H 1989 and throughout 1990, Inflation 1 remained above 100%. For the last time, Inflation 1 exceeded 20% in August 1996. Thus, it may be concluded that this date marked the end of galloping inflation in Poland.

Table 4. Monthly price indexes compared to previous year in 1989-2017

Monthly price indexes (Inflation 1: with the corresponding month of the previous year used as the baseline)												
year	month											
	1	2	3	4	5	6	7	8	9	10	11	12
1989		70,3	74,2	77,8	85,4	91,3	103,9	182,7	269,2	457,1	557,0	639,6
1990	1007,6	1183,1	1132,8	1102,9	1076,5	1051,2	994,0	748,5	558,0	356,0	285,9	249,3
1991	94,9	80,0	81,8	71,0	67,8	72,4	68,3	67,6	67,1	64,8	62,7	60,4
1992	45,4	40,1	38,1	40,2	43,2	39,0	41,3	44,3	46,5	46,4	45,4	44,3
1993	37,5	39,7	39,7	38,1	35,8	34,3	34,8	34,4	31,0	29,8	33,0	37,6
1994	32,4	29,9	30,2	31,2	31,2	32,7	32,8	32,2	34,6	36,1	33,5	29,5
1995	32,3	33,6	33,1	32,4	32,3	30,3	27,6	25,7	24,2	22,4	22,0	21,6
1996	21,0	20,4	20,4	20,3	19,8	19,5	20,4	20,5	19,5	19,5	19,1	18,5
1997	17,8	17,3	16,6	15,3	14,6	15,3	14,9	14,5	13,6	13,1	13,2	13,2
1998	13,6	14,2	13,9	13,7	13,3	12,2	11,9	11,3	10,6	9,9	9,2	8,6
1999	6,9	5,6	6,2	6,3	6,4	6,5	6,3	7,2	8,0	8,7	9,2	9,8
2000	10,1	10,4	10,3	9,8	10,0	10,2	11,6	10,7	10,3	9,9	9,3	8,5
2001	7,4	6,6	6,2	6,6	6,9	6,2	5,2	5,1	4,3	4,0	3,6	3,6
2002	3,4	3,5	3,3	3,0	1,9	1,6	1,3	1,2	1,3	1,1	0,9	0,8
2003	0,5	0,5	0,6	0,3	0,4	0,8	0,8	0,7	0,9	1,3	1,6	1,7
2004	1,7	1,6	1,7	2,2	3,4	4,4	4,6	4,6	4,4	4,5	4,5	4,4
2005	4,0	3,6	3,4	3,0	2,5	1,4	1,3	1,6	1,8	1,6	1,0	0,7
2006	0,7	0,7	0,4	0,7	0,9	0,8	1,1	1,6	1,6	1,2	1,4	1,4
2007	1,6	1,9	2,5	2,3	2,3	2,6	2,3	1,5	2,3	3,0	3,6	4,0
2008	4,0	4,2	4,1	4,0	4,4	4,6	4,8	4,8	4,5	4,2	3,7	3,3
2009	3,1	3,3	3,6	4,0	3,6	3,5	3,6	3,7	3,4	3,1	3,3	3,5
2010	3,6	2,9	2,6	2,4	2,2	2,3	2,0	2,0	2,5	2,8	2,7	3,1
2011	3,6	3,6	4,3	4,5	5,0	4,2	4,1	4,3	3,9	4,3	4,8	4,6
2012	4,1	4,3	3,9	4,0	3,6	4,3	4,0	3,8	3,8	3,4	2,8	2,4
2013	1,7	1,3	1,0	0,8	0,5	***0,2***	1,1	1,1	1,0	0,8	0,6	0,7
2014	0,5	0,7	0,7	0,3	***0,2***	0,3	-0,2	-0,3	-0,3	-0,6	-0,6	-1,0
2015	-1,3	-1,6	-1,5	-1,1	-0,9	-0,8	-0,7	-0,6	-0,8	-0,7	-0,6	-0,5
2016	-0,7	-0,8	-0,9	-1,1	-0,9	-0,8	-0,9	-0,8	-0,5	-0,2	0,0	0,8
2017	1,8	2,2	2,0	2,0	1,9	1,5	1,7	1,8				

Source: own study based on the Money Portal (accessed on August 23, 2017)

inflation above 1000% inflation below 1% deflation

Table 5. Monthly price indexes compared to previous month in 1989-2017

Monthly price indexes compared to previous month (linflation II - to the previous month used as the baseline)													
year	month												
	1	2	3	4	5	6	7	8	9	10	11	12	
1989		7,9	8,1	9,8	7,2	6,1	9,5	39,5	34,4	54,8	22,4	17,7	
1990	**79,6**	23,8	4,3	7,5	4,6	3,4	3,6	1,8	4,6	5,7	4,9	5,9	
1991	12,7	6,7	4,5	2,7	2,7	4,9	0,1	0,6	4,3	3,2	3,2	3,1	
1992	7,5	1,8	2,0	3,7	4,0	1,6	1,4	2,7	5,3	3,0	2,3	2,2	
1993	4,1	3,4	2,1	2,3	1,8	1,4	1,1	2,3	2,5	1,9	4,0	5,6	
1994	1,9	1,1	2,0	2,9	1,7	2,3	1,5	1,7	4,5	2,9	1,8	1,9	
1995	3,9	2,1	1,7	2,3	1,8	1,0	**-0,9**	0,4	3,0	1,7	1,3	1,5	1
1996	3,4	1,5	1,5	2,2	1,4	1,0	-0,1	0,5	1,9	1,4	1,3	1,3	1
1997	2,9	1,1	0,8	1,0	0,6	1,5	-0,2	0,1	1,4	1,1	1,2	1,0	1
1998	3,2	1,7	0,6	0,7	0,4	0,4	-0,4	-0,6	0,8	0,6	0,5	0,4	2
1999	1,5	0,6	1,0	0,8	0,7	0,2	-0,3	0,6	1,4	1,1	0,9	0,9	1
2000	1,8	0,9	0,9	0,4	0,7	0,8	0,7	-0,3	1,0	0,8	0,4	0,2	1
2001	0,8	0,1	0,5	0,8	1,1	-0,1	-0,3	-0,3	0,3	0,4	0,1	0,2	3
2002	0,8	0,1	0,2	0,5	-0,2	-0,4	**-0,5**	-0,4	0,3	0,3	-0,1	0,1	5
2003	0,4	0,1	0,3	0,2	0	-0,1	-0,4	-0,4	0,5	0,6	0,3	0,2	3
2004	0,4	0,1	0,3	0,8	1,0	0,9	-0,1	-0,4	0,3	0,6	0,3	0,1	2
2005	0,1	-0,1	0,1	0,4	0,3	-0,2	-0,2	-0,1	0,4	0,4	-0,2	-0,2	**6**
2006	0,2	0	-0,1	0,7	0,5	-0,3	0	0,3	0,2	0,1	0	-0,2	3
2007	0,4	0,3	0,5	0,5	0,5	0	-0,3	-0,4	0,8	0,6	0,7	0,3	2
2008	0,7	0,4	0,4	0,4	0,8	0,2	0	-0,4	0,3	0,4	0,2	-0,1	2
2009	0,5	0,9	0,7	0,7	0,5	0,2	0,1	-0,4	0	0,1	0,3	0	1
2010	0,6	0,2	0,3	0,4	0,3	0,3	-0,2	-0,4	0,6	0,5	0,1	0,4	2
2011	1,2	0,2	0,9	0,5	0,6	-0,4	-0,3	0	0,1	0,7	0,7	0,4	2
2012	0,7	0,4	0,5	0,6	0,2	0,2	**-0,5**	-0,3	0,1	0,4	0,1	0,1	2
2013	0,1	0	0,2	0,4	-0,1	0	0,3	-0,3	0,1	0,2	-0,2	0,1	3
2014	0,1	0,1	0,1	0	-0,1	0	-0,2	-0,4	0	0	-0,2	-0,3	5
2015	-0,2	-0,1	0,2	0,4	0	0	-0,1	-0,4	-0,3	0,1	-0,1	-0,2	**7**
2016	-0,4	-0,1	0,1	0,3	0,1	0	-0,3	-0,2	0	0,5	0,1	0,7	4
2017	0	0	0	0	0	0	0	0					0
total	23,1	10,5	11,7	15,0	11,1	5,2	-4,2	-3,8	13,2	12,6	7,7	6,9	
+	20	17	21	21	17	11	3	5	18	21	16	16	
-	**2**	**3**	**1**	**0**	**3**	**6**	**17**	**16**	**1**	**0**	**5**	**5**	deflation
0	1	3	1	2	3	6	3	2	3	1	1	1	
>=	21	20	22	23	20	17	6	7	21	22	17	17	
together	23	23	23	23	23	23	23	23	22	22	22	22	

The number of months where deflation occurred in the year under consideration (in the period covered by this study: from 1995)		
	0	1
	1	6
	2	**7**
	3	4
	4	1
	5	2
	6	1
	7	1

Source: own study based on the Money Portal (accessed on August 23, 2017)

inflation below 10% inflation 0% deflation

Inflation 1 remained at a very low level (below 1%) for a total of 32 months (Table 4), in 2002 (2 times), 2003 (9 times), 2005 (once), 2006 (6 times), 2013 (6 times), 2014 (6 times), 2016 (twice). In August 2014, for the first time since the social, economic and political transformation, negative inflation (deflation) was recorded in Poland. Initially, it was quite low: -0.2% compared to the corresponding month of the previous year. Previously, negative (annual) inflation was reported 43 years ago, in 1971 (Table 1). Inflation 1 remained negative throughout 2H 2014, consistently growing from -0.2% in July to -1% in December 2014. The levels of -1.3% and -1,6% (the negative peak rate in the period concerned) were reached, respectively, in January and February 2015. In March 2015, the deflation rate slightly decreased to -1.5%. The total duration of the 2014-2016 deflation was 28 months, from July 2014 to October 2016 (Table 4).

The economy, including the timber industry, dealt well with the Polish deflation. However, generally, the decrease in consumer prices is accompanied by recession or a major economic slowdown. For reasons which include preventing the growing deflation, the Monetary Policy Council reduced the interest rates. However, they did so only at the beginning of March 2015 (i.e. 8 months after the deflation started to grow increasingly faster). The one-time decrease was very high (50 basis points), so that the interest rates reached the lowest level ever. The consequence was a very limited decrease of deflation, by -0.1 percentage points, in March 2015. It took more than one and a half year to fully suppress deflation.

INFLATION CALCULATIONS WITH THE PREVIOUS MONTH USED AS BASELINE

After 1989, deflation against previous month (Inflation 2) was reported for the first time in July 1995, reaching a quite significant level of -0.9% (Table 5). Also, it was the highest month-over-month deflation in the period concerned. The levels recorded in August 1998, July 2002 and July 2012 were -0.6%, -0.5% and -0.5%, respectively. Since 1995, deflation has occurred on a regular basis, initially once a year (before 2000) and usually twice a year (7 times) or three times a year (4 times) thereafter. Before 1997, deflation was recorded in July only. In 1998, it was experienced both in July and August. In Poland, these are the two months with the most frequent occurrence of monthly deflation: 17 times in July, 16 times in August (over a 23-year period). In 2015 and 2005, deflation occurred 7 and 6 times, respectively, reaching the highest frequency in the 23-year period under consideration. In 2002 and 2014, deflation was recorded 5 times, with 4 occurrences in 2016. In 2015, deflation was experienced for the first time in January and September. No deflation was recorded in April or October. Inflation reached 0 in January 2017 for the first time. In the 8-month period from January to August 2017, the Inflation 2 index was 0 (Table 5).

DEFLATION

The opposite of inflation, deflation means a long-term decrease in the average price levels. However, this is neither a desired nor an expected price decrease resulting from technological progress or reduced manufacturing costs. Generally, deflation is caused by the shortage of money in the economy. Low amounts of money in the market translate into in low levels of demand. For the producers, this means problems with selling their goods and services. Growing stocks of products and merchandise make them reduce their prices and reduce output. When selling outstanding merchandise at discounted prices, they incur losses they try to minimize. Thus, they reduce expenditure, including personnel costs, in two ways: either by reducing remunerations or by reducing employment. The latter measure means growing unemployment which reduces demand more rapidly. This is putting greater pressure on further reduction of prices and output. A deflationist spiral is initiated.

Noticing the consecutive price reductions, consumers decide to make their purchases at a later time, even if they can afford it now. This results in a consistent reduction of consumption, and has a devastating effect on economic growth as it is largely contributed to by domestic consumption, in addition to exports and investments.

Deflation is believed to be a symptom of a deepening economic recession, resulting in decreased wages and increased unemployment. But that is not all. The decreasing prices trigger the increase of real interest rates. Companies and individuals with bank loans find themselves in a deteriorating situation: on one hand, their revenue is dropping (and this fact alone makes it more difficult to repay the liabilities and loans) while on the other, the real cost of loans becomes higher.

The consequence of deflation is a wave of bankruptcies and insolvencies, hitting hard the banking system. Deflation also means losses for the state budget: tax revenues are decreasing due both to the reduced value of goods and services sold, and to the deteriorating financial standing of companies and banks. Budget expenditure does not decrease too rapidly (if at all); the amount of unemployment benefits certainly rises. Generally, the state budget deficit and government debt increase as a consequence of deflation.

The deepest deflation took place during the Great Depression, i.e. the 1929-1933 global economic downturn. Also, deflation had a disturbing effect on business relationships in Japan in the 1995-2005 period.

Major deflation, which means persistent long-term decrease in prices with adverse effects on the economy, is very rate in today's economy.

INFLATION TARGET

Deflation is compared to sand being thrown into an efficiently operating gearbox (increasing friction between the interoperating parts and hampering their operation). In turn, low inflation rates are considered to be the correct lubrication of the gearbox (reducing the friction but only to an appropriate level, without slippage).

The key principle of monetary policies adopted by many central banks is a commitment to achieve a specific inflation level, i.e. the inflation target. The optimum target level was formulated by Peter Howitt, a Canadian economist, and is referred to as the Howitt's rule. The target level is such an inflation rate where further reduction brings more disadvantages than advantages to the economy. This means an excessive restriction of the price increase rate is not always beneficial.

When setting the optimum inflation target, impact of reduced inflation rates on the economic growth and unemployment is taken into consideration. The optimum inflation target is not equivalent to the lowest possible inflation and may vary over time. It depends on the current phase of the economic cycle.

Central banks usually assume that an inflation rate of around 2% (+/- 1%) is an advantageous level for the economic development. It enables reaching a growth rate close to the potential rate. Therefore, the inflation targets set by the US Federal Reserve (Fed) and by the European Central Bank (ECB) for the dollar and euro, respectively, are 2%. The inflation target set by the National Bank of Poland for the zloty is slightly higher: 2.5%.

Also, it is recommended to keep the inflation above 1-1.5%. That dogma exerts a certain pressure on the world's largest banks, making them keep their interest rates at a very low level (often reaching zero), even with low unemployment figures and very moderate GDP growth rates.

CONCLUSIONS

Today, an increase of living costs at an annual rate of 2-4% is believed to be a positive development which means the economy is in a healthy condition. However, the zero-inflation policy results in high costs in the short term while providing illusive long-term benefits. It may easily turn into deflation. And fighting against deflation is a lengthy process which involves serious problems. Usually, it requires much more time and effort than fighting against inflation.

The situation of industrial companies, including timber processors, strictly depends on inflation rates, just as the entire economy. Mastering the inflation definitely promotes economic development and helps entrepreneurs running their businesses. The Polish economy, especially the timber

industry, have undergone the 28-month deflation period (July 2014 – October 2016) in a healthy condition.

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