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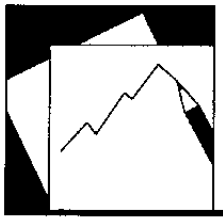

IMF Working Paper

Inflation in Albania

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Inflation in Albania

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Abstract

As Albania has succeeded in reducing inflation to very low levels, understanding the driving forces behind the behavior of the price level becomes increasingly important for policy design. In particular, persistent changes in relative prices may contribute to movements of the aggregate price level, and policymakers need to decide to what extent such effects should be accommodated. The present study provides insight into the nature and extent of relative price adjustments during the transition period, and argues that some of their inflationary effects should not be resisted.

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I. INTRODUCTION

In fighting inflation, Albania has been one of the most successful transition economies. Very high inflation in the early stage of transition swiftly gave way to moderate and smoothly declining inflation rates. The flare-up in inflation in 1996 and 1997 proved temporary, and inflation has been virtually absent since mid-1999. This notwithstanding, policymakers need to understand the factors underlying aggregate inflation, with particular emphasis on characteristics, that deviate from those found in longer established market economies.

This paper investigates some of the factors that drive Albania's inflation performance. Specifically, it analyzes the impact of relative price adjustments on inflation, arguing that they impose an upward bias on inflation because they take place in a skewed manner. Possible reasons for skewed price adjustments include downward price rigidities, the need for factor cost adjustments, and measurement problems in the price index. Empirically, skewness is found to have a significant short-term impact on inflation, which, given the recent upward trend in skewness, is likely to grow in the near future. Monetary policy should allow for some positive inflation, as some factors driving skewness and higher inflation represent equilibrium adjustments that should not be resisted.

In looking at the underlying relative price adjustments and their impact on aggregate inflation, the paper follows ideas presented in the comprehensive study on inflation in transition economies by Coorey et al. (1996). That paper presents an abundance of evidence, mainly derived from cross-country analysis, that suggests that in addition to macroeconomic factors the characteristics of the price-setting behavior of agents has an important impact on aggregate inflation. Pujol and Griffiths (1996) find similar results for Poland with a special emphasis on labor market rigidities that drive inflation. With longer time series now available, individual country studies should be better able to identify these effects by taking full account of country-specific events and using observations of the more recent and economically more stable past.

The inflation process in Albania has attracted some scientific interest, with earlier contributions concentrating on the macroeconomic perspective as well as institutional and measurement issues. Notably, the paper by McNeilly and Schiesser-Gachnang (1998) presents a comprehensive description of the inflation process in the early stages of transition, including an analysis of the contribution of administrative price changes to overall inflation. The success of early price liberalization in controlling inflation in the medium term is confirmed by the behavior of core inflation, which is found to be the preferable variable for economic policy purposes. Domaç and Elbirt (1998) analyze the factors determining inflation from a macroeconomic perspective. Using Granger causality tests, they find that money and the nominal exchange rate drive overall inflation, while net credit to the government has a significant impact on the relative price of nontraded services. Kalra (1999), finally, presents a two-equation equilibrium model determining money, prices, interest rates, and the exchange rate. While the set up of the model makes the specification of the inflation equation somewhat rudimentary, the author finds a stable long-run relationship between the macroeconomic variables with long-run homogeneity of money supply and the price level,

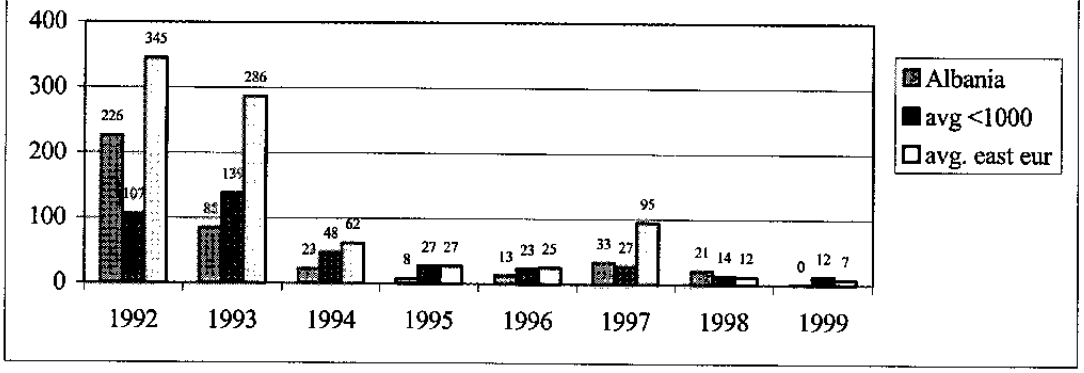
broadly in line with the results presented below. The impact of the pyramid crisis of 1996 and 1997 is scrutinized in Jarvis (1999), who points out that outside the immediate period of civil disorder, inflation was driven by macroeconomic variables, especially loose monetary and fiscal policies before the crisis and successful stabilization policies thereafter.

The paper is structured as follows. Section II presents evidence on price developments from the aggregate perspective, linking inflation to monetary and fiscal variables. As this analysis remains rough, the following section discusses theoretical arguments based on menu costs, explaining how the need for relative price changes has introduced skewness in the distribution of individual price changes and an upward bias in Albanian inflation. Evidence underlining those arguments makes up Section IV. The extent of the inflationary impact of skewed price adjustments is estimated in Section V by a long-run equilibrium equation for inflation based on macroeconomic variables and a short-run dynamic specification that includes skewness as an explanatory variable. The impact of skewness is found to be of a significant magnitude, e.g., adding about 2 percentage points to inflation in 2000. Section VI derives the implications for monetary policy. The current low or negative inflation rates in Albania are most likely suboptimal and some monetary relaxation appears warranted.

II. Aggregate Inflation

Since the start of the transition process, inflation has declined substantially in Albania (see Figure 1). The price level increased by more than 200 percent in 1992 in the immediate aftermath of exiting from central economic planning. To a great extent, inflation in 1992 reflected the liberalization of a large share of the goods in the consumption basket: between November 1991 and January 1993, the share of price-controlled goods in the CPI basket fell from 79 percent to 22 percent. In the following years, inflation declined steadily and rapidly in an environment of strong economic growth and macroeconomic stability. By 1995 inflation was in the single digits, amounting to less than 8 percent, but this degree of price stability was interrupted by mounting political instability before and after the general elections of May 1996, which resulted in generally looser fiscal and monetary policies. In

Figure 1: Inflation in Albania and Transition Economies
(Annual average in percent)



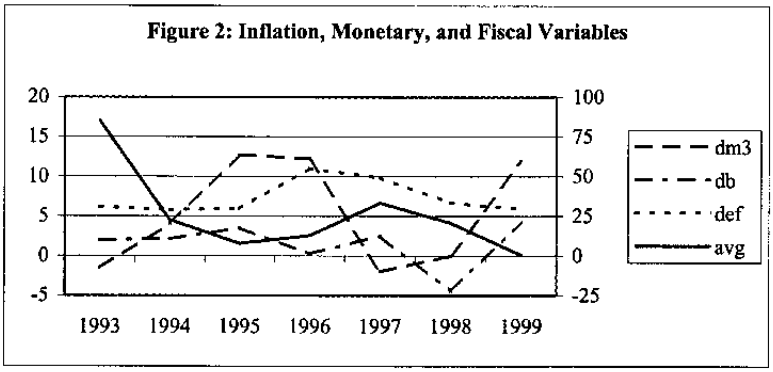
addition, the rise of the pyramid schemes likely contributed to inflationary pressures through increasing the perceived wealth of individuals. In consequence, inflation climbed to nearly 13 percent in 1996. The following year saw the collapse of the pyramid schemes and the descent into political and social turmoil. Monthly inflation peaked at 14 percent in March 1997, the highest rate ever, and average annual inflation exceeded 33 percent. However, the authorities regained control over economic conditions through the implementation of strong stabilization policies that started in the second half of 1997. Monetary tightening, evidenced by a 16 percentage point increase in the real interest rate over 12 months, helped in reducing inflation to around 20 percent in 1998 while output recovered strongly from the trough of 1997. The continuation of prudent macroeconomic policies, combined with inflation dampening external shocks, namely the strong supply response during the Kosovo crisis and generally low commodity prices, resulted in near price stability in 1999.

From an international perspective, Albania's inflation performance is similar to that of other transition economies although its inflation rates were generally lower. Figure 1 allows a comparison of Albania's annual average inflation with the unweighted averages for two sets of transition economies, focusing on a transition perspective and a regional perspective, respectively. The first set, [avg<1000], contains transition economies with a relatively stable macroeconomic performance throughout the transition period, as defined by annual inflation remaining below 1,000 percent during the transition period.[1] The second set, [avg.east.eur], represents the European transition economies replacing Krygyz Republic and Mongolia in the previous set with Bulgaria and Croatia. The hickup in Eastern European inflation in 1997 was driven by the Bulgarian hyperinflation of more than 1,000 percent and, to a lesser extent, the experience in Romania. Judging from Figure 1, Albania's inflation experience is not systematically different from that in other transition economies, exhibiting a steep decline during the early years of transition, followed by a further, more gradual, reduction. It is noteworthy, however, that inflation rates in Albania remained below both averages for five out of the eight annual observations.

Albania's somewhat more favorable inflation performance can in part be explained by the structure of its real sector. Albania's output is dominated by the agricultural sector, which has contributed more than half of total output during the entire transition period. After the end of centralized economic planning, agricultural assets were privatized rapidly, providing most rural families with their own agricultural production base. The privatization and swift price liberalization led to a strong positive output response, which helped contain the effect of an initial monetary overhang. At the same time, labor costs in the largest part of the economy became flexible, as most farmers were self-employed. The industrial sector, on the other hand, was relatively small and external trade relations were limited, which spared Albania

[1] This set includes the Czech Republic, Estonia, Hungary, the Kyrgyz Republic, Latvia, Lithuania, Mongolia, Poland, Romania, the Slovak Republic, and Slovenia.

the experience of having to re-allocate large parts of the labor force and to provide support for them, an event that has contributed to inflation in other transition economies.[2]



As factors that might explain inflation behavior over time, monetary and fiscal policies appear to have had a significant impact mainly during the years 1996 through 1998. Figure 2 presents average inflation (*avg,* right scale), the level of domestic borrowing of the government (*def*), and absolute changes in broad (*dm3*) and base money (*db*), all in real terms (left scale). Inflation during the first years of the transition period appears to have been driven mainly by the early nominal devaluation and price increases in reaction to price liberalization, while the monetary and fiscal variables—notably the increase in broad money expansion—had no visible impact on inflation. This changed during 1996, when inflation started to pick up in tandem with the domestic deficit. While the expansion in broad money continued at a high level, base money growth halted. The following year, inflation rose faster as the need for government finance continued at a high level, while the source of financing shifted from broad money to money creation by the central bank, reflecting the severe economic crisis after the collapse of the pyramid schemes. The stabilization policies of 1998 succeeded in reducing the need for government finance needs and tightening monetary conditions, as evidenced by the behavior of the monetary base. Inflation returned to a downward path which continued in 1999 despite renewed expansion in base and broad money.

III. Theories on Relative Prices

While the analysis of aggregate inflation has shown that macroeconomic relationships involving monetary and fiscal variables and prices also hold true in Albania, there is scope for further explanatory variables. Relative price changes at the level of individual goods represent one potential variable that may affect inflation and—given the size of relative price changes in Albania—its impact may be considerable.

With menu costs, relative price adjustments tend to take place in a manner that induces an upward bias on inflation (Ball and Mankiw, 1994, 1995). The reason is that menu costs prevent small price changes from taking place, leaving large changes to drive inflation. Two mechanisms need to be distinguished, depending on the symmetry of the shocks driving relative price adjustment: In an environment where the underlying shocks are symmetric, the inflationary bias occurs only with positive trend inflation (Ball and Mankiw, 1994). In this

[2] See Pujol and Griffiths (1996) for a discussion of these factors in Poland.

scenario, relative price adjustments generally take place in a skewed fashion, as those suppliers wishing to adjust their relative price downward tend to maintain the nominal price, but at the same time positive price adjustments need to account also for the inflation rate and are, thus, larger than without trend inflation. Only if expected inflation is high (relative to menu costs and required relative price changes), will the negative relative price adjusters also resume continuous (positive) price adjustments to prevent excessive downward correction of their relative prices. With asymmetric shocks, on the other hand, the inflationary bias results independent of trend inflation; in particular, asymmetric positive relative price adjustments induce an upward bias, as large increases in few prices are not offset by small declines in many, and the reverse holds for asymmetric negative adjustments.

Both types of shocks, symmetric and asymmetric, are likely to occur in a transition economy like Albania. The transition from a centrally planned to a market-driven economy induces a complete rearrangement of economic relationships, necessitating a new structure of relative prices. In many cases, the necessary relative price changes are symmetric, i.e., relative price increases in some category coincide with relative price reductions in other goods. In addition, there are four reasons for asymmetric, positive relative price adjustments during the transition process: First, according to the so-called cost recovery hypothesis, the relative prices for capital-intensive services (e.g., housing) may increase only slowly from their depressed levels during central economic planning, inducing a sequence of positive price adjustment shocks.[3] Second, relative wages of high-skilled workers may be slow to adjust to equilibrium, causing a similar asymmetry in relative price adjustments. Third, insufficient adjustments of measured prices for quality improvements may result in observed relative price changes exceeding actual ones. Fourth, the Balassa-Samuelson effect leads to a relative increase in the price of nontradables if productivity gains in that sector fall behind those in the traded goods sector. It should be noted that the last two effects, which also prevail without menu costs, are augmented in the presence of menu costs. While identification problems and a lack of data prevent the testing and discrimination of the individual hypotheses, some anecdotal evidence will be presented in the empirical sections below.

The first explanation for skewed relative price adjustments, the cost-recovery hypothesis, posits that it may be optimal for relative prices of capital-intensive services to adjust only slowly during the transition phase. The reason is that centrally planned economies entered transition with a large capital stock relative to their per capita income and with no associated debt. In this situation, it may be optimal to set service prices initially to recover only current costs while letting the capital stock depreciate to a level consistent with income. With rising income levels, prices would be raised gradually to cover depreciation and the cost of capital.

Relative wage adjustments between skilled and unskilled labor may induce a similar gradual shift in relative prices. During the central planning period, wages were compressed with skilled labor earning only a small premium over unskilled labor, but the opening of the

[3] See also Coorey et al. (1996) for a discussion.

economy induced real wages to converge to market-determined levels. While empirical evidence for Albania is lacking, evidence from other countries suggests that (i) the relative wage adjustment occurs through a rise in skilled wages rather than a decline in unskilled wages, and (ii) the change in the wage structure is not driven by public or privatized enterprises but by newly established ones.[4] Given these regularities, the slow emergence of new private enterprises in Albania suggests that also the adjustment of the wage structure has evolved only gradually over time, inducing a sequence of wage shocks to the economy.

The third potential explanation for skewed relative price increases is a result of measurement problems for the price index and, thus, reflects a discrepancy between actual and observed inflation. In particular, to the extent that measured prices do not account sufficiently for quality improvements, reported price increases will exceed the underlying actual (i.e., quality adjusted) price increase and thus become a source of skewness. The observed skewness is augmented to the degree that—in the presence of menu costs—quality maintainers fail to lower their prices.

Fourth and finally, differential productivity developments in the traded and the nontraded goods sector of an economy can lead to differential price changes; in particular, slower productivity growth in the nontraded sector may result in persistently higher price increases in that sector than in the traded goods sector. While some supporting evidence for this Balassa-Samuelson hypothesis has been presented for industrial countries, its validity for transition economies remains difficult to establish, not least because of the relatively short period of market-determined prices, the continuous change in what goods are traded, and the likely substantial—but difficult to measure—productivity gains in nontraded output. Similar to the discussion of quality improvements, a lack of price reductions owing to menu costs augments the original Balassa-Samuelson effect.

IV. Evidence on Relative Prices

A. The CPI Basket

The Albanian CPI basket is composed of 221 individual items that are grouped into the eight major classes: food; clothing; rent, water, fuel, power; household items; medical care; transport and communication; recreation and education; and personal care (see Table A1 in the Appendix for details). The weights in the basket were assigned in 1994 on the basis of 1992 household consumption data. In view of the likely change of the consumption behavior over the transition period, new basket weights are expected to be implemented in 2001, probably with less weight on food items.

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[4] See, for example, Flanagan (1995), and Munich et al. (1999) for (i), and Rutkowski (1996) for (ii).

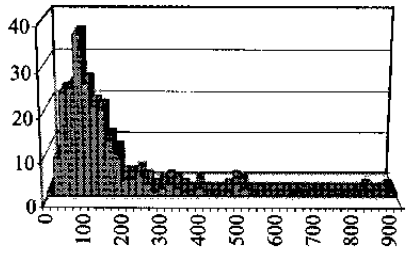
Table 1: Price Changes of Individual Items

		Weight (In percent)	Cumulative Change			Weight (In percent)	Cumulative Change
	Average		123.4				
1	Grapes	0.53	915.1	212	VCR	0.22	19.7
2	Petroleum (heating)	1.42	841.9	213	Lampshade	0.10	18.9
3	Hair cut women	0.02	508.3	214	Washing machine	1.19	18.2
4	Electricity	0.51	500.2	215	Tape recorder	0.26	15.2
5	Hair cut men	0.01	492.2	216	Cement	0.43	14.2
6	Dates	0.01	487.7	217	Dried onions	1.36	8.5
7	Pears	0.02	486.9	218	Color TV	2.22	8.3
8	Newspaper	0.17	460.8	219	Candles	0.01	6.8
9	Urban bus transport	0.07	390.0	220	Ventilator	0.49	6.1
10	Fire wood	0.39	384.9	221	Satellite dish	0.41	-12.1
11	Kidney beans	0.33	347.8				
12	Spinach	0.05	331.2				
13	Melons	0.04	326.0				
14	Dental treatment	0.10	317.3				
15	Foreign language teaching	0.09	315.9				
16	Plums	0.21	301.0				
17	Figs	0.06	286.5				
18	Dried beans	0.95	281.5				
19	Olives	0.09	265.0				
20	Sewing of dress	0.01	251.4				

B. Relative Price Adjustments

The behavior of individual prices over the observation period reveals the need for substantive relative price adjustments during the transition to a market economy. While cumulative inflation of the unweighted basket between 1994 and 1999 amounted to 123 percent,[5] the underlying price changes varied between more than 900 percent (for grapes) and –12 percent (for satellite dishes), as shown in Table 1. The overall distribution of price changes in Figure 3 shows that the bulk (more than 95 percent) of the cumulative price changes lies between 20 percent and 400 percent. Interestingly, the two endpoints of the distribution also represent two classes of items that can be found at the top and at the bottom of the distribution of cumulative inflation rates, respectively: at the lower end of the distribution, household and recreation items dominate. Ventilators, color TVs, washing machines, and VCRs can be found next to satellite dishes among the ten items with the lowest

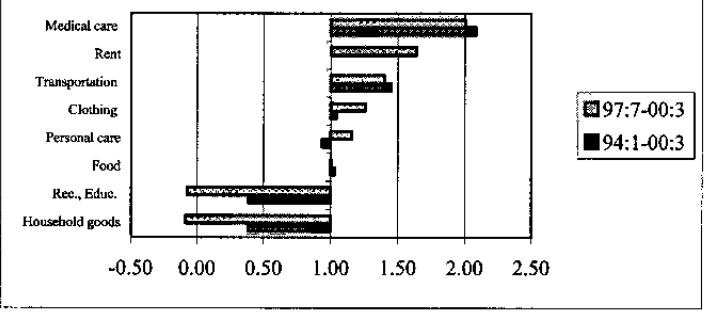
Figure 3: Histogram of Cumulative Price Increases



[5] Only annual observations are available for the individual series.

rates of price change. At the top of the spectrum, fruit and vegetables occupy a dominant position with ten items within the top 20. Other items with high price increases include energy, with heating petroleum ranking second (841 percent) and electricity ranking fourth (500 percent), as well as some services such as haircuts and private language teaching.

Figure 4: Price Change Relative to Average

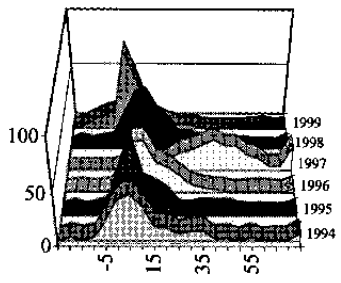


The intuition that the relative price changes are not evenly distributed among the eight groups is borne out by looking at the cumulative price changes among the main classes in the CPI basket. Figure 4 shows the cumulative price change by class relative to the unweighted average price increase for two sample periods, the full sample and the recent past, starting in mid-1997. The analysis concentrates on market prices, excluding administered prices. Both sample periods present the same picture with the relative prices of medical care, rent (market determined prices are only available for the shorter subsample), and transportation rising rapidly, while those for recreation and household items lag behind. Clothing, personal care, and food prices developed close to the average.

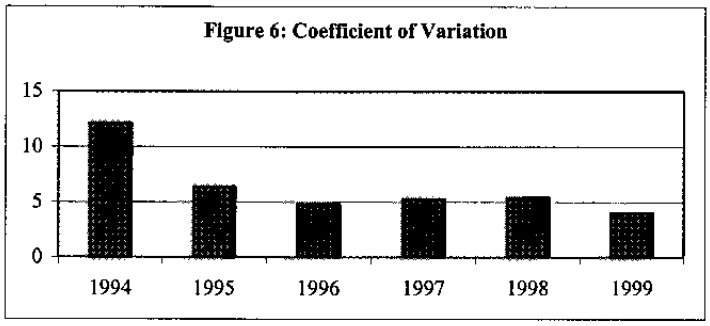
The different behavior of the eight categories reflects underlying systematic changes in the price structure in line with the theoretical discussion above. The cost-recovery hypothesis is supported by the observed increase in the rent category (since 1997), which is attributable to about equal parts to higher energy costs and higher rental costs for space, as shown in Table A1 in the Appendix. An increase in relative wages can be seen to drive medical costs, but it is also reflected in other skilled professions, such as foreign language training. Quality mismeasurement likely explains the relative increase in (private) transportation costs, which reflects higher prices for imported cars. The observed price increase, contrary to the decline in prices for other imported goods, seems to reflect an insufficient correction for quality improvements or a gradually declining share of smuggled vehicles in the market. Some evidence for the Balassa-Samuelson effect can be found in the below average price increase for imported items, such as household and recreational goods, while service price increases tend to be higher than average. The relative price of food items in general remains close to the average price level as the strong increase in fruit prices is offset by declines in other areas.

A look at the annual distributions of price changes (Figure 5) reinforces the notion that the change in relative prices occurred gradually through a relatively

Figure 5: Annual Histograms



smooth process of price changes. The histograms show that the annual distributions did not change substantially over the years. In fact, the distributions for 1994, 1996, and 1998 are strikingly similar; the slight upward movement of tails of the first of these three curves reflects the higher number of observations outside the range presented in the figure, including, for example, the high administrative price changes for energy in 1994. Two features distinguish the distribution in 1997 from the others. First, its center lies further to the right, with a mean of the distribution of more than 42 percent, which also results in a higher number of observations outside the figure's range. Second, the distribution appears more symmetric; positive and negative deviations from the mean are more evenly distributed. In 1999, the center of the distribution moves to the left, and, while it appears to be less wide than in previous years, its shape remains basically unchanged.



The visual impression of a gradual reduction in the dispersion of individual price changes is borne out by an analysis of the coefficients of variation of the annual distributions, as shown in Figure 6.[6] Although the coefficient had dropped in 1999 to roughly a third of its 1994 level, the speed of decline slowed markedly since the earlier transition phase and the direction is indeed subject to reversal, supporting the notion that the pressure for relative price adjustments remains high.

C. Skewness

Relative price adjustments will have an impact on inflation, however, only to the degree that they take place in an asymmetric fashion. In particular, if the individual price adjustments are positively skewed average inflation will be pushed upward. Figures 3 and 5 above show that this was indeed the case in Albania, reflecting the need for price adjustments that take place very gradually over the long run. Some of the very high price increases reflect changes in administrative prices (such as electricity), but the same picture holds also if solely market-determined goods are included. While data limitations prevent the testing for the dominance of one of the above-mentioned theoretical reasons for skewed price adjustment, namely symmetric shocks and trend inflation versus asymmetric shocks, there is some evidence that both effects contribute to the observed skewness.

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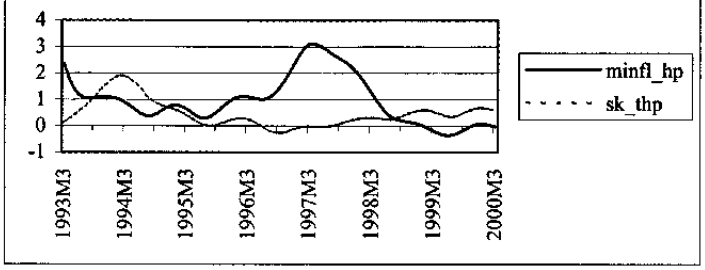
[6] The coefficient of variation was computed using $1+\pi/100$, with π representing the inflation rate in percent.

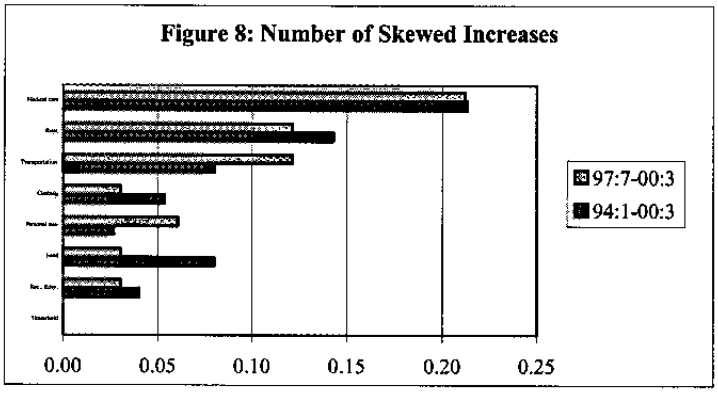
The view that symmetric shocks in combination with trend inflation induce skewness is supported by its behavior during the observation period. The line *sk* in Figure 7 presents the development of the Theil skewness[7] of the distribution of individual price changes, smoothed by HP filtering. While skewness was almost always positive throughout the sample, in line with the argumentation above, it varied over time, increasing early in the transition period up to its peak in early 1994 from which it descended to close to zero levels between mid-1995 and mid-1997. Since then, it has been growing slowly but steadily. In the early stages of the transition process (through mid-1995), the need for sectoral price adjustments was high while inflation was on a steep downward path, inducing low inflation expectations and making the downward price stickiness binding. Both effects resulted in a high skewness. In the period of loose macroeconomic policies, from mid-1995 through mid-1997, inflation expectations were high enough to allow symmetric relative price adjustments and skewness around zero. The implementation of tight macroeconomic policies after mid-1997, finally, rendered the downward barrier binding again and skewness started to increase.

Figure 7: Skewness and Monthly Inflation



But there is also evidence that continued price adjustment of the same groups of items, i.e. asymmetric shocks, drive the skewness of the price distribution. This can be derived by comparing the relative price changes of the subgroups of the CPI basket (see Figure 4) with the number of skewed increases of the respective groups. Figure 8 shows the share of periods with above average price increases compared with the unweighted average increase in the total number of periods for each of the categories. Above average increases are defined as being larger or equal than 1.5 standard deviations of the overall distribution of price increases. It turns out that the ordering of the goods classes by the number of skewed increases matches the ordering by cumulative price increases, i.e., the categories with the highest cumulative price increases (medical care, rent, transportation) were also the ones with the highest number of above average positive price adjustments. Again, the picture holds (broadly) for the full sample as well as the shorter period.

Figure 8: Number of Skewed Increases



[7] See the Appendix for the definition.

V. Empirical Analysis

The previous section provided theoretical and empirical evidence that, in addition to monetary and fiscal variables, the characteristics of the individual price adjustments may have an impact on inflation. In particular, it was argued, that the need for relative price adjustments, which arose with the start of the transition to a market economy, remains strong. In addition, it was shown that several characteristics of the Albanian economy may induce asymmetric price adjustments, resulting in a positive impact on inflation.

This section will present an econometric analysis of the impact on aggregate inflation of macroeconomic variables on one side and the skewness of the price distribution on the other. The analysis is based on a model in which in the long run the aggregate price level is presented as a composition of that for traded goods, which is determined by foreign prices combined with the exchange rate, and nontraded goods with prices determined by the domestic excess supply of money. This long-run relationship is econometrically represented by a cointegrating vector composed of the variables above. The impact of skewed price adjustments affects inflation only in the short run and is, therefore, introduced into the dynamic error-correction specification of the model.

A. A Model of Inflation

The domestic price level in period t, P_t, is a weighted average of the prices of tradable, P^T, and nontradable, P^N, goods,

$$\log P_t = \theta \log P_t^T + (1-\theta)\log P_t^N, \tag{1}$$

where θ is the weight of tradable goods in the CPI basket and $0<\theta<1$. Assuming purchasing power parity, the price of tradable goods is given by the world market price level, P^*, and the nominal exchange rate, e, with an increase in e representing a depreciation of the domestic currency,

$$\log P_t^T = \log e_t + \log P_t^* . \tag{2}$$

The price of nontradables is determined in the domestic money market by the supply and demand for money:

$$\log P_t^N = \alpha(\log M_t^s - \log M_t^d), \tag{3}$$

where M_t^s is the supply of money, M_t^d is the demand for real balances, and α represents the relationship between aggregate demand and that for nontradables. The demand for real money is assumed to depend positively on real income, Y_t, and on the level of interest rates, i_t, the latter reflecting the return on broad money balances rather than opportunity costs, so that the price of nontradables is given by

$$\log P_t^N = \alpha(\log M_t^s - \gamma_1 \log Y_t - \gamma_2 i_t). \tag{4}$$

An increase in the supply of money is assumed to induce higher prices, while higher money demand, brought about by higher income or higher interest rates will lead to a lower price level. From the results above, the equation for the price level can be written as

$$\log P_t = \theta(\log e_t + \log P_t^*) + (1-\theta)\alpha(\log M_t^s - \gamma_1 \log Y_t - \gamma_2 i_t). \quad (5)$$

Rewriting equation (5) as an estimable equation and putting lower case letters for logs gives the following specification:

$$p_t = \beta_0 + \beta_1 m_t^s + \beta_2 y_t + \beta_3 i_t + \beta_4 e_t + \beta_5 p_t^* + \varepsilon_t, \quad (6)$$

where the signs of β_1, β_4, and β_5 are expected to be positive, while β_2 and β_3 would be negative and ε is an error term.

In addition to the variables listed above, worker remittances might be of importance for price changes in Albania. A substantial number of the total Albanian workers live abroad, in particular in Greece and Italy, but also in Germany, Switzerland, and other European countries, and transfers wealth to their families in Albania by sending cash or goods. The volume is conservatively estimated at some US$0.6 bn in 2000, about twice the volume of exports or some 15 percent of GDP. The impact of these remittances on inflation, however, is difficult to assess for the following reasons. First, there are no accurate data on the actual flow of remittances. Second, to the extent that remittances arrive in Albania in foreign currency and are converted into leks, their impact on the domestic economy is under the control of the central bank and becomes indistinguishable from other monetary policy effects. Third, there is anecdotal evidence that part of the remittances remain in foreign currency cash in the economy and are used to settle large transactions, such as purchases of real estate. To the extent that those transactions have merely a limited impact on the CPI basket, they can be neglected for the current analysis. Empirically, a variable representing remittances would be expected to contribute positively to inflation through the demand effect. However, including the sum of German and Italian GDP (for reasons of data availability and as a very rough approximation) in the estimation to represent the effect of remittances yields the wrong (negative) sign in the long-run specification and is, therefore, omitted in the following analysis.

Skewness, representing asymmetric price adjustments, is introduced into the dynamic specification of the model, which takes the following form:

$$dp_t = \delta_0 + \delta_1 dm_t^s + \delta_2 dy_t + \delta_3 di_t + \delta_4 de_t + \delta_5 dp_t^* + \delta_6 sk_t + \delta_7 ecm_{t-1} + \eta_t, \quad (7)$$

where the prefix d indicates first differences, *ecm* stands for the error term of the long run specification, which represents deviations from the long-run equilibrium, and η is the error

term. The impact of skewness on inflation is captured by the variable *sk*, and, in line with the considerations presented above, δ_6 is expected to be positive.[8]

B. Estimation

Monthly data are available for all variables except GDP, for which the annual data were converted into monthly observations, assuming constant monthly growth rates. For interest rates, the 12-month minimum deposit rate as set by the Bank of Albania is used. Foreign prices are represented by the trade weighted foreign price level and the respective weighted average nominal exchange rate. Data are seasonally unadjusted and seasonal dummies are used in all regressions, but not reported. The major step in price liberalization in August 1992 removed price controls on about 50 percent of the goods in the CPI basket and thus marks the start of usable observations on inflation. Allowing for a sufficient number of lags, the regressions generally cover the period 1993:3 through 2000:3, or 85 observations. As the underlying theory deals with the behavior of market-determined prices, the original CPI basket was adjusted to remove classes of goods with predominantly administered prices. In deciding on whether to include a particular item, attention was given to the official classification of administered prices as well as to the behavior of the price of the respective good. This approach entailed the following changes: "public transport" and "communication" were excluded from the basket for the entire period; the categories "bread and cereals" and "rent, water, fuel, and power" were included only for the period after the price liberalization of September 1996; and the items "medical care" and "personal transportation" entered into the adjusted basket in December 1993. The price level of items entering the basket was adjusted so as to leave aggregate inflation unaffected by the immediate effect of the price liberalization of the respective item. Tests using interactive dummies were also run to ascertain that the skewness of the basket does not change significantly as a result of the adjustment. Table A2 in the Appendix presents the composition of the basket during the observation period. All long-run variables were tested for stationarity and found to be integrated of order one, I(1). Real income was excluded from testing for stationarity, as there are only seven underlying observations and the monthly data were generated artificially.

Estimating equation (6), the Johansen procedure points to two cointegrating vectors between the five variables—price level, money, income, interest rate, and nominal exchange rate—using two lags in the VAR. The foreign price level is not found to be individually significant, potentially a consequence of statistical multicollinearity as the foreign price series behaves very similarly to domestic money supply.

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[8] Other studies have included the variance of individual price changes as an explanatory variable to model the effects of price variability. However, the focus of the current study is on the inflationary impact of asymmetric price adjustments, making skewness the variable of choice.

Table 2: Cointegrating Vectors, 1993:3-2000:3

lcpi	lyr	lm3	lint	lneer
1.00	2.29	-0.85	0.05	0.27
0	0.60	-0.14	0	-0.21

alpha		Standard errors of alpha	
-0.35	0	0.07	0
0	0.00	0	0.01
0	0.26	0	0.05
0	0.33	0	0.40
0	0.00	0	0.10

Limiting the vector space to one vector linking all five variables and another one relating money, income, and the nominal exchange rate is found not to impose a binding constraint. The first of the two vectors shown in Table 2 can be interpreted as the process determining inflation in line with the monetary model presented above, which is supported by the finding that all variables are weakly exogenous to inflation in the system. The second vector could potentially reflect a rule linking the supply of money to real economic activity and the development of the nominal exchange rate where a nominal appreciation induces a loosening of monetary policy.

The empirical model confirms the expectation from theory. The inflation vector points to a positive effect of money supply on the price level with an elasticity of 0.85, indicating a slightly less than neutral effect during the transition period.[9] Stronger economic activity and a higher interest rate level increase the demand for money and thus induce a lower price level, while a nominal appreciation makes imported goods cheaper, exerting downward pressure on the price level. Kalra (1998) finds a corresponding behavior of money demand in this study.

The short-run specification of the inflation relationship is in line with the findings from the long-run solution. A parsimonious specification with a maximum lag length of four, shown in Table 3, exhibits basically the behavior predicted by theory: money has a lagged positive impact on inflation, nominal appreciation a negative one, and skewness has a simultaneous positive impact, suggesting that indeed sectoral price adjustments put upward pressure on inflation. Given the scarcity of information on income, it is not surprising that the GDP variable remains insignificant in the dynamic specification. Interestingly, the interest rate variable shows a positive contemporaneous and lagged coefficient in the dynamic equation, opposite from its long-run impact. A potential explanation lies in the discretionary nature of

[9] Using narrower monetary aggregates results in similar elasticities, but the econometric tests point to less reliable estimations, which may indicate some degree of currency substitution, including foreign currency deposits.

Table 3: Dynamic Specification of dlcpi
(1993:4-2000:3)

Variable	Coefficient	Std.Error	t-value	t-prob
Constant	-0.012	0.002	-5.385	0.0000
dlcpi_1	0.626	0.075	8.377	0.0000
dlm3_1	0.195	0.056	3.497	0.0008
dlint_2	0.022	0.010	2.192	0.0318
dlneer	-0.140	0.038	-3.726	0.0004
dlneer_4	-0.059	0.032	-1.829	0.0719
ecm_1	-0.822	0.098	-8.375	0.0000
SK_T	0.005	0.001	6.503	0.0000
d972	0.050	0.009	5.287	0.0000
d972_1	0.096	0.011	8.356	0.0000
d972_4	0.032	0.010	3.207	0.0020

R^2 = 0.89 F(15,68) = 35.565 [0.000] DW = 1.83
RSS = 0.00547 for 16 variables and 84 observations

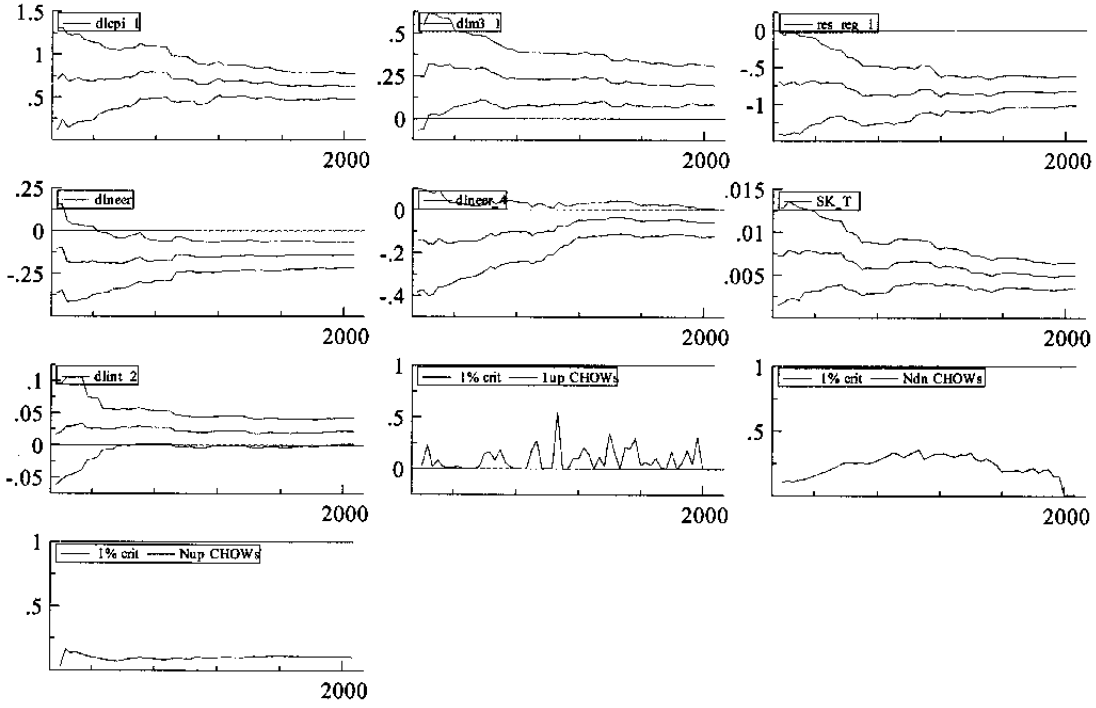
AR 1- 5 F(5,63)	=	1.024 [0.4113]
ARCH 5 F(5,58)	=	0.6647 [0.6517]
Normality Chi^2(2)	=	2.0199 [0.3642]
Xi^2 F(22,45)	=	0.76977 [0.7428]
RESET F(1,67)	=	1.3247 [0.2538]

changes for this administratively set variable, which reduces the number of economically meaningful observations. The error correction term, reflecting the tendency of the system to revert to its long-run equilibrium in response to a shock, is significant and points to a rapid adjustment: some 82 percent of the needed adjustment takes place during one period after the shock. Dummy variables for February, March, and May 1997 capture the inflation effects of the collapse of the pyramid schemes and the ensuing civil disorder, which cannot be explained by the model. The dynamic specification explains about 89 percent of the total variation in inflation and specification tests point to no significant violation of the assumptions underlying the regression.

The estimated equation exhibits a fair degree of stability; see Figure 9. Recursive estimation of the equation yields relatively stable parameters for almost all variables and error bands converge reasonably fast and remain narrow throughout the estimation period. The sole exception is the parameter on lagged exchange rate changes, which exhibits some variation over time and only slow convergence of the standard errors. Indeed, the coefficient does not turn significantly different from zero until the end of the estimation period, indicating that the lagged response of inflation to nominal exchange rate changes is a relatively recent phenomenon, which might reflect a gradually increasing degree of price stability in a more stable economic environment. The recursive estimation of the interest rate coefficient also reveals that this variable is just barely significant for most of the estimation period.

The Chow tests for structural breaks based on recursive estimation support the notion of a relatively stable inflation function. One-step ahead Chow tests (1-up Chow) check stability by comparing repeated one-step ahead forecasts with the actual outcomes; break-point Chow tests (N-dn Chow) indicate structural breaks for periods after the end of the respective subsample, while forecast Chow tests (N-up Chow) point to possible breaks before the respective subsample. By repeating the tests for various subsample lengths the complete time period is covered. The test values for all periods remain safely below the 1 percent limit, even during 1997, indicating that the dummy variables take care of the temporary fluctuations.

Figure 9: Regression Graphs



Re-estimating the dynamic equation over the post-crisis period, i.e., 1997:7 through 2000:3, yields structurally unchanged results, as shown in Table 4. The signs of the coefficients remain the same as in the full sample, the coefficient values are broadly unchanged, and they remain highly significant except for the interest rate variable. The misspecification tests remain insignificant.

Based on the dynamic specification and on assumptions regarding the explanatory variables, average inflation in 2000 is forecast at –0.4 percent, while the year-on-year rate remains positive at 0.9 percent. Figure 10 shows out-of-sample projections for the monthly inflation rate through end-2000, including error bands, as well as the actual outcomes through

Table 4: Short-Run Dynamic Specification of dlcpi
(1997:7-2000:3)

Variable	Coefficient	Std.Error	t-value	t-prob
Constant	-0.009	0.003	-2.876	0.009
dlcpi_1	0.476	0.093	5.136	0.000
dlm3_1	0.308	0.132	2.331	0.030
dlint_2	0.032	0.028	1.137	0.269
dlneer	-0.214	0.059	-3.653	0.002
dlneer_4	-0.077	0.035	-2.199	0.040
ecm_1	-0.721	0.112	-6.466	0.000
SK_T	0.003	0.001	3.280	0.004

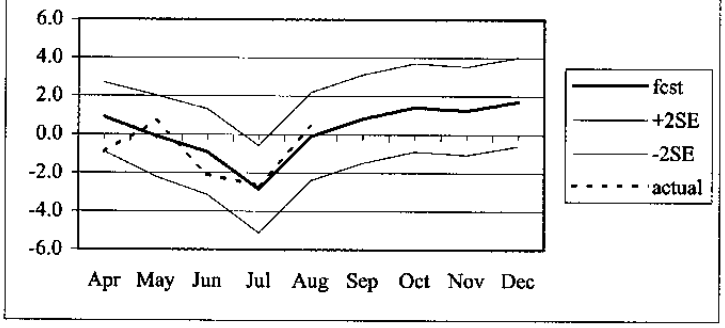
R^2 = 0.90 F(12,20) = 15.404 [0.000] DW = 2.46
RSS = 0.00088 for 13 variables and 33 observations

AR 1- 5 F(5,15)	=	0.72991 [0.6120]
ARCH 5 F(5,10)	=	0.82285 [0.5607]
Normality Chi^2(2)	=	3.1311 [0.2090]
RESET F(1,19)	=	1.3699 [0.2563]

August.[10] While the model overpredicted inflation in April by about two standard errors, predictions for the following months were relatively accurate.

Obviously, the prediction accuracy depends to a large extent on the reliability of the assumptions concerning the exogenous variables of the dynamic specification, which are as follows: Money supply is assumed to grow at a rate of 11 percent in 2000 and its seasonal pattern is assumed unchanged from the pattern in 1999 derived from seasonally adjusting over the full sample. The interest rate is expected to fall by another 0.25 percentage points at end-September, the nominal effective exchange rate is presumed constant through the end of the year, and real GDP is set to grow at an annual rate of 7 percent. The skewness of the price distribution

Figure 10: Inflation in 2000, Forecast and Actual



[10] Note that the actual rate for April excludes the administrative increase for water prices to make it comparable to the estimation.

Table 5: Skewness and Inflation in Transition Economies
(In 1999)

	Alb	Bul	Mkd
Skewness	0.67	0.95	-0.55
Average inflation	0.39	2.57	-1.26

is forecast to continue on its trend path that started in mid-1997 with seasonality imposed in the same way as for money supply.

It is illustrative to assess the impact of the upward trend in the skewness of the price distribution on the inflation rate. Using average skewness during the past two years and applying the estimated coefficient, the annual contribution of skewness to inflation is on the order of 2 percentage points.

Evidence from other transition economies supports the result found for Albania that the skewness of the price distribution can have an important impact on inflation. Table 5 shows average inflation and (unweighted) skewness in Bulgaria and Macedonia in addition to Albania in 1999. The data for skewness are only roughly comparable to the Albanian ones, because the sample sizes vary between countries and administrative price increases were not excluded for the other transition economies.[11] The table indicates that Bulgaria may be facing a skewness phenomenon similar to that of Albania, as skewness is even slightly larger at a low positive inflation rate. The Macedonian evidence supports the assumption of symmetric shocks and trend inflation, as it shows that with negative inflation rates skewness can also become negative, inducing additional downward pressure on the price level.

VI. Implications for Monetary Policy

In summary, the results above show that the continued need for relative price adjustments has put upward pressure on inflation. The inflationary impact is of an economically meaningful magnitude and, judging by the recent upward trend in the skewness of the distribution of individual price changes, likely to persist in the future.

For monetary policy, the question is to what extent the inflationary impact of asymmetric price increases should be accommodated.[12] To decide, the trade-off between the risk of inducing inflationary expectations in the economy and the costs of disinflation at low

[11] Sample sizes are 35 for Bulgaria and 25 for Macedonia.

[12] The need for monetary accommodation would be alleviated to the degree that increases in skewness induce a nominal appreciation, which would exert some downward pressure on inflation through a reduction of import prices. Causality tests between skewness and exchange rates, however, fail to support such a hypothesis while they confirm the strong link between skewness and monetary accomodation.

inflation rates needs to be considered. In particular, because the asymmetric price shocks described above—i.e., the cost-recovery mechanism, relative wage adjustment, the Balassa-Samuelson effect, and the effect of quality changes—represent equilibrium developments, fighting them could be harmful for the economy. At positive inflation rates, however, even symmetric shocks induce asymmetric price adjustments, generating additional, unwarranted inflationary pressures.

For Albania, some higher inflation rate than that usually targeted in developed economies is likely optimal. In the latter, inflation targets around 2 percent can be justified by the effect of quality mismeasurement and the desire to leave some scope for low or negative real interest rates. To this, the effect of asymmetric relative price adjustments has to be added, which has been estimated—including the endogenous inflationary effect of symmetric shocks at positive trend inflation—at around 2 percentage points. Consequently, it appears safe to suggest that an inflation target around 3 percent should be sufficient to allow for the necessary price changes. At the same time, cross-country evidence suggests that such a target also remains safely below the threshold, estimated at around 5 percent, above which inflation likely has damaging effects on the economy.[13] In the current situation of persistently low and negative inflation, some relaxation of Albania's monetary conditions appears, therefore, warranted. Only if inflation is systematically underestimated, owing to past changes in consumer behavior and obsolete CPI weights, could an unchanged monetary stance be justified. However, the net effect on measured inflation of reassigning CPI weights is uncertain. In particular it depends on whether weights reallocated from food to nonfood items, a likely adjustment, are allocated more heavily toward high or low inflation categories.

[13] *World Economic Outlook*, October 1995.

In line with Coorey et al. (1996), the Theil skewness is defined as

$$sk\_t = \frac{\sum_{i=1}^{n} w_i(\pi_i - \bar{\pi})^3}{\left(\sum_{i=1}^{n} w_i(\pi_i - \bar{\pi})^2\right)^{3/2}} \qquad \text{where} \qquad \bar{\pi} = \sum_{i=1}^{n} w_i \pi_i \ .$$

Contrary to the skewness of weighted inflation rates, the Theil skewness has the desirable feature of assuming zero value when all individual inflation rates are equal. In addition, it uses the expenditure weights in the CPI basket to weight the deviation of individual items from the weighted average of the basket.

Table A1: Composition of the CPI Basket

	weight (in percent)	94-99 percent change		weight (in percent)	94-99 percent change		weight (in percent)	94-99 percent change
Food	**72.39**		**Clothing and Shoes**	**2.82**		**Medical Care**	**0.92**	
111001 rice	1.28	57.9	211089 men coat	0.03	96.3	511181 aspirin	0.19	219.7
112002 wheat flour	0.37	93.8	211090 men suit	0.04	114.5	511182 antibiotic	0.19	196.3
113003 bread (1600 g)	9.06	120.8	211091 men jacket	0.02	128.9	511183 vitamin	0.06	181.5
113004 bread (1000 g)	2.27	157.0	211092 jeans	0.18	130.4	521184 optical glass	0.04	129.6
113005 bread (500 g)	0.87	122.0	211093 padded jacket	0.1	146.9	531185 payment doctor	0.34	172.5
114006 biscuit	0.24	23.0	211094 sweater	0.06	146.9	533186 payment dentist	0.1	317.3
114007 pastries/cakes	0.13	92.3	211095 shirt	0.12	54.7			
115008 macaroni	1.19	46.2	211096 cotton blouse	0.03	81.0	**Transport and Communication**	**5.16**	
116009 starch	0.06	37.4	211097 socks	0.02	108.8	611187 car	1.4	172.1
121010 beef	1.94	129.0	211098 pants	0.03	53.4	611188 bicycle	0.21	65.2
122011 veal	5.56	177.4	211099 vest	0.08	63.2	611189 bus spare part	0.05	76.8
123012 pork	0.01	101.0	212100 dress (women)	0.2	160.3	611190 benzene	0.33	77.9
124013 lamb	0.36	121.9	212101 skirt	0.06	156.4	613191 urban bus	0.07	390.0
125014 chicken	2.34	42.9	212102 suit	0.03	117.1	613192 taxi payment	0.17	144.4
126015 sausage	2.82	51.5	212103 pants	0.05	72.5	613193 interurban bus	0.64	146.8
127016 canned meat	0.04	70.2	212104 cotton blouse	0.1	102.6	613194 international bus	0.4	103.1
129017 fish	0.2	133.9	212105 coat	0.05	98.5	613195 train fare	0.24	135.0
129018 canned fish	0.01	100.0	212106 padded jacket	0.02	107.0	613196 air fare	0.45	37.6
131019 milk	3.41	92.8	212107 stocking	0.03	85.1	621197 postage stamps	0.01	79.6
132020 powder milk	0.12	128.3	212108 sweater	0.04	106.4	622198 telephone	1.19	116.7
133021 curd	0.93	60.1	212109 bras	0.01	49.3			
134022 white cheese	5.34	71.6	212110 underwear	0.05	56.9	**Recreation and Education**	**3.57**	
134023 cheese	0.23	98.6	212111 night gown (women)	0.04	29.2	711199 color TV	2.22	8.3
135024 eggs	2.96	87.8	213112 sweater child	0.02	73.7	711200 VCR	0.22	19.7
141025 butter	3.04	151.2	213113 cotton blouse	0.04	79.7	711201 satellite dish	0.41	-12.1
142026 margarine	0.06	67.4	213114 socks	0.01	91.2	711202 radio/tape recorder	0.05	47.9
143027 cooking oil	3.79	53.8	213115 pants	0.05	92.9	711203 audio cassette	0.26	15.2
143028 olive oil	0.26	83.6	213116 flannel	0.02	89.3	713204 toys	0.04	56.4
151029 plums	0.21	301.0	213117 dress girl	0.02	66.1	721205 theatre ticket	0.01	225.3
151030 grape	0.53	915.1	213118 padded jacket	0.02	76.4	721206 school book	0.1	205.8
151031 apples	2.02	223.3	213119 underpants	0.03	41.3	721207 newspaper	0.17	460.8
151032 dates	0.01	487.7	221120 poplin	0.03	110.1	721208 foreign language teaching	0.09	315.9
151033 oranges	1.29	242.1	221121 cloth	0.04	93.1			
151034 lemons	0.01	111.1	221122 woolen cloth	0.04	58.3	**Personal Care**	**0.46**	
151035 water melon	0.34	30.6	221123 acrylic thread	0.01	42.3	811209 hair cut men	0.01	492.2
151036 peach	0.14	159.1	222124 sewing of suit	0.03	238.0	811210 hair cut women	0.02	508.3
151037 melon	0.04	326.0	222125 sewing of dress	0.01	251.4	812211 tooth paste	0.03	158.2
151038 pears	0.02	486.9	231126 leather shoes	0.21	129.0	812212 razor	0.02	116.8
151039 bananas	0.82	28.5	231127 shoes	0.08	100.8	812213 toilet soap	0.09	35.0
151040 figs	0.06	286.5	231128 sport shoes men	0.18	124.3	812214 deodorant	0.02	49.8
151041 olives	0.09	265.0	232129 leather shoes women	0.16	127.8	812215 lipstick	0.01	118.9
151042 peanuts	0.07	54.6	232130 shoes	0.06	89.4	812216 shampoo	0.07	76.9
154043 tomato	1.93	74.7	232131 boots women	0.08	122.9	821217 watch woman	0.02	30.0
154044 spinach	0.05	331.2	232132 sandal	0.06	108.8	822218 purse	0.06	91.7
154045 leek	0.47	134.5	232133 slipper	0.12	64.8	822219 sunglasses men	0.02	21.5
154046 cabbage	0.23	91.6	233134 leather shoe	0.04	118.6	823220 pen	0.01	32.3
154047 cauliflower	0.01	103.0	233135 boot child	0.01	146.5	823221 copybook	0.08	65.3
154048 okra	0.04	187.1	233136 sandal	0.05	162.5			
154049 peas	0.02	172.7	234137 shoe repair men	0.01	69.5			
154050 pepper	0.67	139.0						
154051 eggplant	0.08	241.7	**Rent, Water, Fuel, and Power**	**6.41**				
154052 cucumber	0.03	125.6	311138 rent	0.6	226.9			
154053 green salad	0.16	210.1	321139 painting	1.42	100.5			
154054 kidney bean	0.33	347.8	321140 wall tile masonry	0.29	167.1			
154055 carrot	0.01	162.2	322141 oil paints	0.06	26.2			
154056 fresh onion	0.11	233.1	322142 cement	0.43	14.2			
154057 dried onion	1.36	8.5	322143 lime	0.05	57.7			
154058 dried haricot	0.95	281.5	322144 tiles	0.36	65.6			
154059 canned vegetables	0.07	163.0	322145 tap	0.28	70.2			
154060 tomato sauce	0.01	96.7	331146 water supply	0.6	210.3			
154061 potatoes	2.77	76.0	341147 electricity	0.51	500.2			
161062 sugar	1.67	21.4	343148 petroleum	1.42	841.9			
162063 coffee	0.86	171.1	344149 fire wood	0.39	384.9			
	weight	94-99 percent		weight	94-99 percent		weight	94-99 percent

	(in percent)	change		(in percent)	change		(in percent)	change
162064 tea	0.02	118.0						
162065 cocoa	0.04	95.1	**Household Items**	**8.27**				
163066 cherry jam	0.14	184.3	411150 bedroom	0.33	64.7			
163067 honey	0.09	53.4	411151 table	0.13	59.3			
163068 chocolate	0.39	52.9	411152 chair	0.07	22.1			
163069 caramel	0.23	42.6	411153 cupboard	0.29	92.6			
163070 chewing gum	0.03	23.5	411154 armchairs	0.98	60.6			
163071 ice cream	0.29	140.3	411155 lampshade	0.1	18.9			
164072 salt	0.08	128.1	411156 detergent	0.07	32.9			
164073 spices, vinegar	0.18	73.5	412157 synthetic carpet	0.38	77.6			
171074 non-alcoholic drinks, open	0.18	53.7	412158 linoleum	0.04	42.3			
171075 non-alc. drinks, bottled	0.58	35.4	421159 blanket	0.17	43.3			
172076 raki	0.45	62.9	421160 towel	0.02	97.9			
172077 brandy	0.01	55.3	421161 curtain	0.16	82.9			
172078 wine	0.14	93.9	421162 bed linen	0.1	76.1			
172079 bottled beer	0.59	91.3	431163 refrigerator	1.03	28.1			
172080 open beer	0.03	67.9	432164 washing machine	1.19	18.2			
181081 restaurant meal	0.1	152.4	433165 electric stove	1.11	24.4			
181082 hamburger	0.07	79.8	433166 dishwashing liquid	0.21	88.7			
182083 coffee (bar)	0.05	157.4	433167 oil stove	0.07	30.6			
182084 non-alc. drink (bar)	0.18	103.9	434168 radiator oil	0.08	28.1			
182085 fernet (bar)	0.04	74.4	434169 ventilator	0.49	6.1			
182086 beer (bar)	0.44	126.8	435170 vacuum cleaner	0.08	23.5			
191087 cigarettes	1.61	69.0	436171 iron	0.06	23.4			
191088 open tobacco	0.06	133.5	441172 soup plates	0.03	69.8			
			441173 glasses	0.09	35.8			
			443174 sauce pan	0.03	60.2			
			445175 electric lamp	0.01	88.4			
			451176 washing soap	0.52	67.0			
			451177 ornament/artificial flower	0.31	64.2			
			451178 small electric bakery	0.04	37.9			
			452179 water pail	0.07	69.5			
			452180 candles	0.01	6.8			

Table A2. Composition of CPI Basket for Empirical Analysis
(Weights in percent)

			92:8-93:11	93:12-96:8	96:9-00:3
TOTAL		100.0	100.0	100.0	100.0
100000	Food, Beverages and Tabacco	72.4	79.0	75.9	74.8
110000	Bread and Cereals (9/96)	15.5	0	0	16.0
113000	Bread	12.2	0	0	12.6
120000	Meat, Poultry and Fish	13.3	18.4	17.7	13.7
130000	Dairy Products and Eggs	13.0	18.0	17.3	13.4
140000	Oils and Fats	7.2	9.9	9.5	7.4
150000	Fruits and Vegetables	15.0	20.8	19.9	15.4
151000	Fruits	5.7	7.8	7.5	5.8
154000	Vegetables	9.3	12.9	12.4	9.6
160000	Sugar, Coffee, Tea	4.0	5.6	5.4	4.2
170000	Beverages at home	2.0	2.7	2.6	2.0
171000	Non-alcoholic beverages	0.8	1.1	1.0	0.8
172000	Alcoholic beverages	1.2	1.7	1.6	1.3
180000	Food & Beverages away from home	0.9	1.2	1.2	0.9
181000	Restaruants and Kiosks	0.2	0.2	0.2	0.2
182000	Cafes and Bars	0.7	1.0	0.9	0.7
190000	Tobacco	1.7	2.3	2.2	1.7
200000	Clothing and Footwear	2.8	3.9	3.8	2.9
210000	Clothing	1.8	2.4	2.3	1.8
211000	Mens's clothing	0.7	1.0	0.9	0.7
212000	Women's clothing	0.7	0.9	0.9	0.7
213000	Children's clothing	0.2	0.3	0.3	0.2
230000	Footwear	1.1	1.5	1.4	1.1
231000	Men's footwear	0.5	0.7	0.6	0.5
232000	Women's footwear	0.5	0.7	0.6	0.5
233000	Children's footwear	0.1	0.1	0.1	0.1
300000	Rent, Water, Fuel, Power (9/96)	6.4	0	0	6.6
340000	Fuel and Power	2.3	0	0	2.4
400000	Household goods	8.3	11.5	11.0	8.5
410000	Furniture and floor	2.4	3.3	3.2	2.5
430000	Major hosehold appl	4.3	6.0	5.8	4.5
500000	Medical care (12/93)	0.9	0	1.2	1.0
600000	Transportation & Commun. (12/93)	5.2	0	2.7	2.1
611000	Personal transportation	2.0	0	2.7	2.1
613000	Public transportation	2.0	0	0	0
620000	Communication	1.2	0	0	0
700000	Recreation, Education, and Culture	3.6	5.0	4.8	3.7
710000	Recreation equipment	3.2	4.4	4.3	3.3
800000	Personal care	0.5	0.6	0.6	0.5

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