Price-Setting Behaviour in Switzerland
Evidence from CPI Micro Data

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Abstract

This paper investigates price-setting behaviour of firms based on the individual price quotes underlying the Swiss consumer price index. The data set covers the years from 1993 to 2005. Six main findings emerge from the analysis. (i) Prices are sticky; the median duration amounts to 4.6 quarters. (ii) Price-setting behaviour is heterogeneous across sectors and outlet characteristics. (iii) Price changes are sizeable; the median absolute size amounts to 9.4%. (iv) There is no indication of general downward price stickiness; even in the case of positive inflation, 41.3% of all price adjustments are decreases and the distributions of price changes do not show substantial asymmetries. (v) Firms respond to expected cost shocks at the date of their occurrence; VAT rate changes do not lead to more price adjustments before they take effect. (vi) There is some evidence that firms adjust their behaviour according to the state of the economy; in particular, firms facing higher rates of inflation adjust prices more frequently.

JEL classification: E31, D40

Keywords: Price-setting; frequency of price changes; nominal price rigidity; time-dependent pricing; state-dependent pricing.

Contents

List of Abbreviations

COICOP	Classification of Individual Consumption According to Purpose
CPI	Consumer Price Index
ECB	European Central Bank
FSO	Federal Statistical Office
IPN	Inflation Persistence Network
SDP	State-Dependent Pricing
TDP	Time-Dependent Pricing
VAT	Value Added Tax

1   Introduction

In recent years, macroeconomists have reemphasised the empirical observation that individual prices remain fixed over a substantial period of time. A large literature has emerged that studies the effect of monetary policy on inflation and output using dynamic stochastic general equilibrium models with nominal price stickiness. These models are used as a tool to analyse monetary policy and to produce forecasts. Researchers working with them must have an idea of how long time spells between price adjustments actually are and whether or not they are affected by the state of the economy. The latter question is related to the two forms of modelling price-setting behaviour which currently dominate the field: Time-Dependent Pricing (TDP) and State-Dependent Pricing (SDP). Calvo (1983) and Taylor (1980) propose models of TDP, Dotsey et al. (1999), among others, of SDP. With SDP, the frequency of price adjustment depends on the state of the economy, whereas with TDP, the adjustment process is exogenous.

The empirical literature on nominal price stickiness has generally taken two directions. The first group of studies is based on surveys. In the questionnaires, firms are asked how often and why they adjust prices. In most cases, they are also confronted with explanations of price stickiness to assess the relevance of different theories. Examples are Blinder et al. (1998) for the US or the studies conducted by researchers from the European Central Bank (ECB) as part of the so-called Inflation Persistence Network (IPN) (e.g. Fabiani et al., 2005). For Switzerland, Zurlinden (2007) has summarised an interview study conducted by the Swiss National Bank's delegates for regional economic contacts. In addition, there are survey studies focusing on Swiss export prices by Fischer et al. (2007) and on prices in the manufacturing sector by Rupprecht (2007).

Results from survey studies may be doubted on the grounds that what people do is not always what they say they do. For this reason, survey studies are not a complete substitute for an analysis of market price data. Such an analysis is the focus of the second group of studies on price stickiness. These studies examine micro price data from large-scale firm-level surveys. Prominent examples of this literature are studies by Bils and Klenow (2004), Klenow and Kryvtsov (2008), and Nakamura and Steinsson (2008), who examine micro data from the US consumer and producer price indexes. Along the same lines, several papers have been written on European countries by researchers of the IPN. These studies were summarised by Altissimo et al. (2006) and Dhyne et al. (2006). However, no comparable study has been made for Switzerland so far.[1]

This paper attempts to fill the gap by examining the micro data from Switzerland's consumer price index (CPI). The data collected by the federal statistical office (FSO) cover the period from 1993 to 2005. The questions addressed are the following: (i) How often do prices change? (ii) Are there differences across sectors and firm size? (iii) How large are price changes on average? (iv) Is there evidence in favour of downward nominal price rigidity?

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[1] Goette et al. (2005) analyse Swiss micro data from 1977 to 1993 for restaurants.

In addition, the paper examines changes in price adjustment frequencies and changes in the size of price adjustments based on quarterly averages. Two more questions arise in this context: (v) Does information about future VAT cost shocks affect price-setting behaviour immediately? (vi) How do changes in the economic environment, specifically changes in inflation, influence the frequency and size of price changes?

The remainder of this paper is structured as follows. Section 2 describes the data. Sections 3 and 4 present the results. Section 5 concludes.

2 Data

The data used in this paper are price quotes of the individual products underlying the Swiss CPI.[2] An individual product is defined as a good or service sold in a specific outlet in a given quantity and quality. The price quotes were collected by the FSO over the 1993–2005 period. This section describes the raw data and then summarises the sampling decisions.

2.1 The FSO price data

Most of the price quotes are registered locally at stores. This means that they are actual transaction prices, in contrast to list prices which may differ significantly from what the firm actually charges. The rest of the prices are gathered over the internet or reported directly to the FSO.

Table 1: Structure of the CPI data set

Category	COICOP	FSO
Food and non-alcoholic beverages	01	MG
Food	01.1	
Bread and cereals	01.1.1	
Bread		IP
Whole-grain bread		SP
...		
Alcoholic beverages, tobacco and narcotics	02	MG
Clothing and footwear	03	MG
Housing, water, electricity, gas and other fuels	04	MG
Furnishings, household equipment and routine household maintenance	05	MG
Health	06	MG
Transport	07	MG
Communication	08	MG
Recreation and culture	09	MG
Education	10	MG
Restaurants and hotels	11	MG
Miscellaneous goods and services	12	MG

MG: Main groups
IP: Index positions
SP: Survey positions

The price quotes are registered in fixed intervals for a range of individual products. Most prices are collected

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[2]Source: FSO; data collection for the Swiss CPI 1993–2005.

every quarter. There are some exceptions. Prices of most food and energy products, for example, are registered monthly. The reason is that prices of these products are expected to change more often. Prices of administered products, some industrial products and some services are collected half-yearly or yearly.

Most individual products cannot be observed over the whole sampling period. Either the firm stopped supplying the specific product, or the FSO dropped it from the sample. In the first instance, the FSO has two ways to proceed. The price series is continued with the price of a product of the same quality or with the price of a close substitute. In the second instance, if a product is rotated out of the sample, the series ends without replacement. To compensate for such losses, new individual products are monitored such that the number of price quotes stays roughly constant over time. All these replacement actions are indicated by different processing codes.

The FSO changed its methodology to construct the CPI in May 1993, May 2000 and December 2005.[3] Since the May 2000 revision, the CPI structure follows the Classification of Individual Consumption According to Purpose (COICOP) displayed in Table 1. There are 12 main groups from *food and non-alcoholic beverages* to *miscellaneous goods and services*.[4] Each main group is broken down into two levels of subgroups. Furthermore, the FSO defines index positions and survey positions in order to categorise the price quotes in more detail.

The May 2000 revision brought changes in the number and composition of the main groups. However, the survey positions remained mostly the same and have simply been regrouped into the new structure of the CPI basket. More important changes associated with the May 2000 revision concern sales prices. Before 2000, the data collectors had to ask the manager of a specific outlet, what the price would have been, if it were not reduced. After that, the transaction price was collected and marked with a sales flag irrespective of the product type. Finally, the FSO has collected the prices of some products more regularly since 2000 and 2001. This primarily concerns services and industrial products.

2.2 Sampling decisions

The investigation takes place over the period from Q3 1993–Q4 2005. The beginning and the end of this period are determined by the two CPI revisions of May 1993 and December 2005. Due to the CPI revision of May 2000, the full period is split into two shorter periods: from Q2 1993 to Q1 2000 and from Q2 2000 to Q4 2005. All results presented in Section 3 are provided for these two periods.

The analysis is based on quarterly data. This implies that the maximum number of price changes per quarter is one for all products. If prices have been collected more frequently, this has been ignored. The

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[3]For more information on the methodology, cf. FSO (1993, 2000, 2006).

[4]The terminology according to the United Nations' COICOP methodology is somewhat different to the one used in this paper. They refer to the first level as Divisions, the second level as Groups and the third level as Classes. In this paper, the terminology of the FSO is applied.

monthly data are aggregated to quarterly frequency by choosing the last month of every quarter.[5] Prices of half-yearly or yearly collected goods are excluded from the sample. That way we ensure that all prices are allowed to change once per quarter. At the same time, we systematically exclude prices that are unlikely to change very often, since this is the reason why the FSO collects them less frequently.

Some index positions are excluded from the sample because they do not contain actual micro price data. In these cases, the FSO uses external data sources and then calculates an average price. Examples are public transport, pharmaceuticals, hospital services, medical services, postal services, telecommunication and rents. Similarly, the prices of administered products are excluded, for they are collected rarely and do not reflect market conditions.

Sales prices are excluded from the sample because they differ from normal price changes in various respects. In particular, they are temporary and generally expected to occur regularly. One way to identify sales prices is to use the sales indicator provided by the FSO. However, because the pricing decision of the firm could reflect both regular sales and a reoptimisation of prices in response to economic shocks, this indicator can be misleading. Price changes that are purely temporary have therefore been excluded; that is, prices that drop in one period and then return to their original value in the next. These temporary price changes account for 1.3% of all price changes in the first sample and 1.7% in the second sample.[6]

Finally, one has to decide how to treat price changes due to product turnover. This is not a problem if the FSO replaces a product directly, that is, if the quality is the same (as in the context of simple repackaging, for example). Consequently, they are treated like regular price changes. Replacements by close substitutes, however, are tricky because the price difference may reflect an unobserved difference in quality. In this case, the price change is counted when the frequency of price changes is calculated, but is ignored when the focus is on the size of price changes. Price changes due to product turnover account for 2.6% and 2.7% of all price changes in the two samples.

In Section 4, the focus is on quarterly changes of descriptive statistics. The data set used in this section contains only survey positions for which price quotes are available throughout the full period from Q2 1993 to Q4 2005. Thus, results presented in Section 4 are based on a smaller data set than those presented in Section 3.

Table 2 summarises the effect of the sampling decisions on the number of observations. The original data set provided by the FSO includes almost 2.9 million quarterly observations in the first period (Q2 1993–Q1 2000) and 1.6 million observations in the second period (Q2 2000–Q4 2005). The number of observations used in the descriptive analysis in Section 3 amounts to 66.2% of the original data set in the first period and 95.2% in the

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[5]Another possibility would be to randomly choose one month per quarter. This, however, would make comparisons of quarterly averages over time difficult, since some price changes would be mechanically shifted one quarter into the future.

[6]To examine whether the exclusion of temporary price changes affects the results, some key statistics are reported for the data set which includes these temporary price changes.

Table 2: Sample summary

| | (a) Q2 1993–Q1 2000 | | | | | (b) Q2 2000–Q4 2005 | | | | |
Category	$\%_1$	O_1	W	$\%_2$	O_2	$\%_1$	O_1	W	$\%_2$	O_2
Overall	66.2	1,904,959	40.3	57.8	1,663,485	95.2	1,492,348	52.3	68.4	1,072,286
Processed food	99.5	711,338	9.5	83.8	599,079	99.1	358,284	8.9	91.6	330,996
Unprocessed food	100.0	386,879	4.9	83.5	322,978	100.0	199,722	3.5	87.9	175,491
Industrial products	71.5	703,133	17.1	65.9	647,915	99.2	678,800	20.3	71.1	486,615
Energy	57.7	16,323	2.8	51.8	14,648	52.2	15,922	4.0	46.5	14,191
Services	11.4	87,286	6.0	10.3	78,865	82.0	239,620	15.6	22.2	64,993

$\%_1$: Share of observations in the original data set for Section 3 (%)

$\%_2$: Share of observations in the original data set for Section 4 (%)

O_1 : Observations for Section 3

O_2 : Observations for Section 4

W : CPI expenditure weight

second period. The index positions included in the two samples account for 40.3% and 52.3% of the CPI. The significant difference in the share of discarded observations is due to the restriction that only those observations that are collected quarterly or more frequently are considered. Furthermore, there are significant differences among sectors. In the first period, for example, only 11.4% of the original observations from the services sector are used in the descriptive analysis. This may lead to an upward bias of the frequency statistics reported in Section 3, since most of the excluded product prices are those which the FSO collects less frequently because they are expected to change rarely. The number of observations used in the analysis in Section 4 is further reduced to 57.8% of the original data set in the first period and 68.4% of the original data set in the second period.

3   Frequency and size of price adjustments

This section presents the main findings about price-setting behaviour in Switzerland based on a descriptive analysis. Most of the statistics are calculated at the index position level and are then aggregated across sectors by taking an average or median, weighted by the corresponding expenditure weights. One exception are the groupings with respect to the outlet size, which are calculated at the level of the individual firm and then aggregated using an unweighted mean and median.

3.1   Are prices sticky?

To examine whether prices are sticky, we can calculate the frequency of price changes. Let fpc_j denote the average fraction of prices of index position j which change in a given quarter. Given fpc_j, the median time spell between two consecutive price adjustments can be computed. Assuming that the duration of price spells

follows an exponential distribution, the implied (median) duration, d_j, can be written as:[7]

$$d_j \quad = \quad \frac{\ln(0.5)}{\ln(1 - fpc_j)} \quad .$$ (1)

Table 3 summarises the results for the aggregated frequency and duration statistics over the periods Q2 1993–Q1 2000 and Q2 2000–Q4 2005. The main results are given in the first row. We can see that from 2000 to 2005, an average of 23.4% of all prices have changed per quarter (fpc). This implies an average duration of 4.6 quarters. The median frequency of price changes (fpc_m) is lower at 13.8%, implying a duration of 4.6 quarters. The results for 1993–2000 are similar. The frequency of price changes amounts to 23.6% and 13.2% (median) and the implied duration to 5.0 and 4.8 quarters respectively.

As described in the data section, temporary price changes (sales) are excluded from the data set. The median frequency and implied duration based on data that include temporary price changes (fpc_m^s, d_m^s) appear in the fifth and sixth column. As can be expected, the frequency is slightly higher (1.6pp) in the two periods, and the duration lower (0.5 quarters).

Table 3: Frequency of price changes

	(a) Q2 1993–Q1 2000						(b) Q2 2000–Q4 2005					
Category	fpc_m	d_m	fpc	d	fpc_m^s	d_m^s	fpc_m	d_m	fpc	d	fpc_m^s	d_m^s
Overall	13.2	4.8	23.6	5.0	14.8	4.3	13.8	4.6	23.4	4.6	15.4	4.1
Processed food	12.6	5.0	12.5	5.7	13.9	4.5	12.2	5.3	12.5	5.6	14.4	4.4
Unprocessed food	41.8	1.1	40.5	1.9	44.5	1.0	37.4	1.4	38.7	1.9	41.5	1.2
Industrial products	10.7	6.0	12.8	6.3	11.2	5.8	14.4	4.4	20.1	4.5	17.0	3.7
Energy	78.4	0.4	83.3	0.4	80.5	0.4	85.5	0.3	87.6	0.5	88.7	0.3
Services	19.5	1.6	30.0	4.7	19.7	1.5	9.0	6.6	13.8	6.1	9.2	6.6
Small outlets	10.3	6.2	15.5	9.1	10.6	5.9	9.5	5.1	16.5	7.8	10.0	4.8
Medium outlets	12.6	4.9	16.8	10.5	13.2	4.6	13.0	3.7	15.3	5.8	13.6	3.5
Large outlets	22.2	2.6	31.7	4.4	23.6	2.4	18.8	2.9	29.2	5.1	19.9	2.7

fpc : Frequency of price changes (%) m = median

d : Implied duration (quarters) s = including sales

Compared to studies on the euro area and the US, the price durations found for Switzerland are longer. For the euro area, Dhyne et al. (2006) obtain a median duration of 10.6 months over the 1996–2001 period. For the US, Nakamura and Steinsson (2008) find a median duration of 11 months for 1998–2005, whereas Bils and Klenow (2004) find an even smaller median duration (4.3 months). The differences to the findings for Switzerland may reflect different sampling schemes. Alternatively, they may result from differences in structural factors of the economy, such as trend inflation, the degree of competition on the markets for goods and services, and the flexibility of the labour market.

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[7]An exponential distribution of price durations implies a constant conditional probability that a price changes in a certain quarter given no change happened until then (i.e. the hazard rate α). The unconditional probability that a price changes during a given quarter is $F = 1 - e^{-\alpha}$. Therefore, $\alpha = -\ln(1 - F)$. The mean duration is then calculated as $-\frac{1}{\ln(1-F)}$ and the median duration as $\frac{\ln(0.5)}{\ln(1-F)}$.

3.2 Does price stickiness differ between sectors or outlet characteristics?

This section examines whether the price-setting measures differ among sectors and between outlets of different size. Results on prices of products broken down into five sectorial groups are shown in Table 3, rows 2–6.[8] Taking the median durations for the 2000–2005 period as the chief indicator, we can make out a cluster of groups at the upper end with d_m ranging from 4.4 to 6.6 quarters (*industrial products*, *processed food* and *services*). *Energy*, with $d_m = 0.3$ quarters, defines the other pole. *Unprocessed food* takes the middle ground ($d_m = 1.4$ quarters).

These results suggest that prices of consumer goods are changed more frequently when input prices are volatile. Energy, for example, contains mostly products based on crude oil which is traded on the world market. The price of crude oil responds promptly to market conditions, and changes in the price of crude oil are transmitted rapidly to the price of fuels or heating oil. In the service sector, on the other hand, the largest input factor is labour, the price of which does not vary greatly in the short term. Wages are sticky due to long-term wage contracts that are not likely to change more than once per year. The difference between *unprocessed food* and *processed food* gives another example for the role played by factor shares in the production process. As the labour input is larger in *processed food*, the corresponding consumer prices may be expected to be stickier. This is corroborated by the results in Table 3, indicating that the median duration equals 5.3 quarters for *processed food* and 1.4 quarters for *unprocessed food*. The results for the 1993–2000 period are similar for *energy*, *unprocessed food* and *processed food*. Differences between the two periods are apparent in the service sector and for *industrial products*. This stems from the fact, that for these sectors, a relatively large share of the price quotes was discarded in the first sample. The frequency in the services sector is especially biased upwards due to the exclusion of rarely collected items of the CPI.

Next, the products are grouped according to the size of the outlet where they are on offer. Table 3, rows 7–9, show the corresponding results for *small outlets*, *medium outlets* and *large outlets*.[9] The results over the 2000–2005 period suggest that the median price duration of products offered by small outlets (5.1 quarters) is larger than that of products offered by medium or large outlets (3.7 and 2.9 quarters respectively). The results for the 1993–2000 period also suggest that large firms change prices more often.

Taking the results at face value, it can be argued that long-term customer relations play a more important role for small outlets than for large outlets. Thus, small outlets are likely to lose more when they raise prices and thereby risk impairing customer relations. Another explanation is that large outlets may have more information on market conditions than small ones. Thus, they respond more rapidly and more frequently to changes in market conditions than small outlets.

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[8]This grouping takes place at the index position level. The allocation is according to the Eurostat's classification of individual consumption by purpose adapted to the needs of harmonised indices of consumer prices. For more information cf. http://ec.europa.eu/eurostat/ramon.

[9]This information was provided by the FSO. The FSO defines large outlets as country-wide operative firms, medium outlets as country-wide firms with only few branches, and small outlets as regional firms.

3.3 How large are price changes?

The overall inflation rate can be decomposed into two parts. How many prices are adjusted, and by how much? Whereas the focus was on the first question in Sections 3.1 and 3.2, this section focuses on the second question. To examine the size of price changes, let the percentage change in prices of index position j be defined as

$$Size_j \quad = \quad \frac{\sum_{i=1}^{n_j} \sum_{t=2}^{\tau_i} c_{jit}((|p_{jit} - p_{ji,t-1}|)/p_{ji,t-1})}{\sum_{i=1}^{n_j} \sum_{t=2}^{\tau_i} c_{jit}} \quad , \tag{2}$$

where p_{jit} denotes the level of a price quote, $c_{jit} \in \{0,1\}$ indicates whether a price change has occurred or not, i indexes individual products, j index positions, and t time. This measure is calculated for the total and separately for price increases and price decreases ($Size_j^+$, $Size_j^-$).

Table 4: Size of price changes

| | (a) Q2 1993–Q1 2000 | | | | | (b) Q2 2000–Q4 2005 | | | | |
Category	$Size_m$	$Size$	$Size^+$	$Size^-$	$Size_m^s$	$Size_m$	$Size$	$Size^+$	$Size^-$	$Size_m^s$
Overall	9.0	9.8	9.8	10.3	10.9	9.4	11.6	12.1	11.6	13.6
Processed food	8.9	8.7	8.5	9.2	10.5	10.6	10.3	9.9	11.3	14.3
Unprocessed food	15.2	18.4	20.9	15.8	16.4	14.6	19.2	21.6	16.8	18.1
Industrial products	9.0	8.4	7.6	10.1	11.4	10.4	13.5	14.2	13.3	20.2
Energy	2.7	4.5	5.6	3.3	2.7	4.8	7.0	7.9	5.9	5.7
Services	8.1	11.0	11.1	11.3	13.5	7.9	9.2	9.6	9.9	11.7

$Size$: Size of price changes (%)

m = median
s = including sales

The results summarised in Table 4 show that the median absolute size of a price change amounts to 9.4% over the 2000–2005 period, whereas the mean absolute size is higher at 11.6%. Results for the period 1993–2000 are similar. Given the low and stable CPI inflation observed during these two periods, the size of the price changes may come as a surprise. However, the results are consistent with the view that price adjustments are costly. The literature on menu costs suggests that when firms decide on a price adjustment, they do this in an optimising way by balancing the fixed cost of a price adjustment against the effect of the new price on the discounted value of expected future returns. In the absence of price adjustment costs, one would expect that firms revise their prices continuously and thus by rather small amounts.

Turning to the six sectors, it can be noted that the median size of price changes in the 2000–2005 period ranges from 14.6% for *unprocessed food* to 4.8% for *energy*. Most sectors illustrate the trade-off between frequency and size of price adjustments. The energy sector is characterised by relatively frequent price adjustments (cf. Section 3.2); the price adjustments, however, are relatively small. Other sectors, with less frequent price adjustments, exhibit larger price changes. The two sectors that do not line up in this way are *unprocessed food* and *services*. Both the frequency and the size of price adjustments are high for *unprocessed food* and low for *services*.

The comparison between the size of price increases and decreases provides some interesting insights. Price increases are about as sizeable as decreases in the overall sample. There are, however, substantial differences in various sectors. Price decreases are larger than increases in *processed food* and *services*. Note that these are the product categories with less frequent price changes than in the overall sample, and as we will see below, with less frequent price decreases. On the other hand, the size of price decreases is lower in sectors where price changes (specifically price decreases) occur frequently.

If the temporary price changes reflect price changes due to sales, it can be expected that they are relatively large in size. This is confirmed by the median size, which is generally higher if temporary price changes are not excluded from the data set ($Size_m^s$).

3.4 Are prices downward rigid?

It is often argued that monetary policy should target a rate of inflation above zero in the presence of nominal downward rigidity of prices. Such a target, it is said, would facilitate relative price adjustments and therefore lead to more efficient market outcomes. Table 5 takes a look at the frequency of price increases and decreases. It shows these frequencies (fpc^+, fpc^-) and the share of price increases and decreases in total price changes ($fpc_\%^+$, $fpc_\%^-$).

Table 5: Frequency of price increases and decreases

	(a) Q2 1993–Q1 2000				(b) Q2 2000–Q4 2005			
Category	fpc^+	fpc^-	$fpc_\%^+$	$fpc_\%^-$	fpc^+	fpc^-	$fpc_\%^+$	$fpc_\%^-$
Overall	13.2	10.3	56.2	43.8	13.7	9.6	58.7	41.3
Processed food	6.7	5.9	53.1	46.9	8.2	4.4	65.2	34.8
Unprocessed food	21.4	19.1	52.9	47.1	21.4	17.2	55.4	44.6
Industrial products	8.1	4.7	63.6	36.4	11.1	9.0	55.2	44.8
Energy	40.7	42.6	48.8	51.2	47.2	40.4	53.9	46.1
Services	18.6	11.4	62.2	37.8	10.0	3.8	72.2	27.8

$fpc^{+,-}$: Positive, negative fpc (%)

$fpc_\%^{+,-}$: Relative fpc (%)

The results indicate that, in the 2000–2005 period, 41.3% of all price changes were price decreases. In the 1993–2000 period, this share is slightly higher at 43.8%. It is not surprising that price increases are more frequent than price decreases because the average CPI inflation rate was positive over these two periods. Nevertheless, the results make it clear that, despite positive overall inflation, a substantial share of all price changes were price decreases. Turning to the results for the six sectors, one notes that the share of price decreases varies a great deal across sectors. In the *unprocessed food*, *industrial products* and *energy* sectors, price decreases are almost as frequent as price increases. For *services*, however, price decreases are substantially less frequent than price increases. These findings are similar to those reported by studies on the euro area and the United States. Working with data from the euro area, Dhyne et al. (2006) find a ratio between price

increases and decreases of 58% to 42%. In the service sector, they find a share of price decreases in total price changes of 20%. For the US, Nakamura and Steinsson (2008) report a share of price decreases of 35.2%. For services (excluding travel), this share is down to 21%.

To some extent, differences among sectors reflect differences in the sectorial inflation rate. In Switzerland, prices in the service sector rose by 1.4% on average over the 1993–2005 period, whereas prices of goods rose at an average rate of just 0.6%.[10] Another factor is the varying share of labour input in the production process. As noted above, the service sector is widely regarded as a sector with a relatively high labour share in production. As wages exhibit some degree of nominal downward rigidity, this could translate into downward rigid consumer prices. Evidence for downward rigidity of nominal wages in Switzerland is provided by Fehr and Goette (2005).

With positive CPI inflation, the distribution of price changes provides a more informative indicator of nominal rigidities than the share of price decreases in total price changes. Figure 1 (panels a and b) displays the distributions of percentage changes in prices in 1994 and 2004.[11] In both periods, small price increases (up to 5%) occur most frequently. However, small price decreases occur quite regularly, too. This is in line with the moderate inflation rates in Switzerland both in 1994 and 2004 (0.85%, 0.80%). Although small price decreases are less frequent than small price increases, there is no indication for a substantial asymmetry in the distribution. In Mexican data, for example, Gagnon (2007) found much more pronounced asymmetries in the distribution of price changes.

Figure 1 further displays the distribution of percentage changes in prices for selected sectors. The general characteristics of the overall histogram prevail in the histograms for *processed food* (panels c and d) and *industrial products* (panels e and f). Although small price increases occur most frequently, the asymmetry of the distribution is small. The histograms for *unprocessed food* (panels g and h) differ substantially from those for the overall economy. First, small price increases are only slightly less frequent than small price decreases (up to 10%). Second, the distributions feature fatter tails. This may reflect the fact that the prices of *unprocessed food* are strongly affected by seasonal patterns and that they are not storable. Although price changes occur frequently they are rather large in size. The histogram for *services* is another interesting case. In 1994, only about 12% of all price changes were decreases with a size up to 10% (panel i) compared to about 22% in the overall sample. At the same time, however, small price increases were about as frequent as in the overall sample. Interestingly, this asymmetry has become less pronounced in recent years. In 2004, small price decreases accounted for over 25% of all price changes (panel j). Overall, the results suggest that there is no general downward nominal price rigidity. However, the service sector at the beginning of the sample might be an exception.

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[10]The inflation rates refer to services including health and administered products.
[11]All histograms are restricted to show only price changes from -100% to 100%. There are very few price changes of larger size.
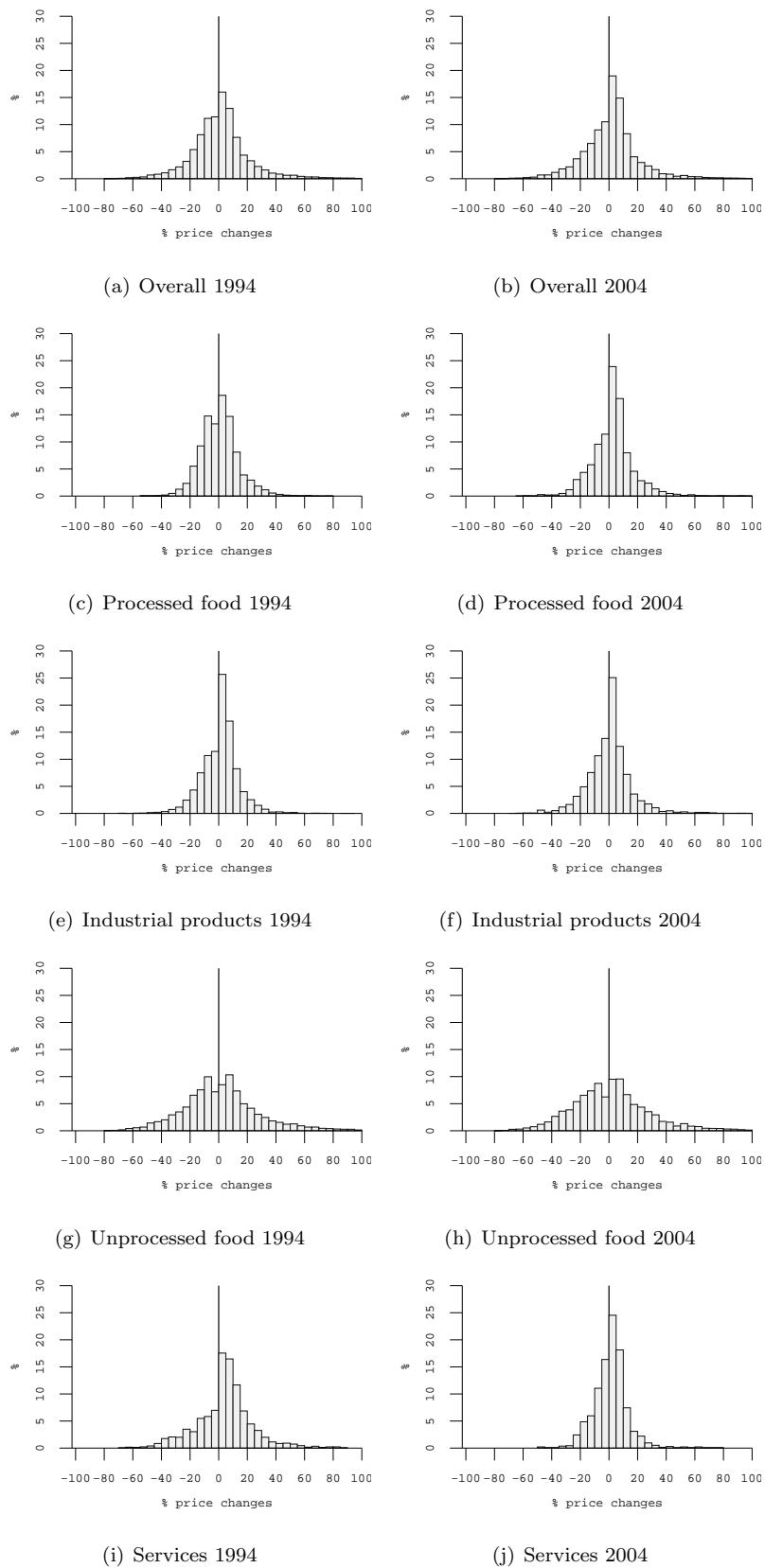
Figure 1: Histograms of the size of price changes

4 Factors affecting price-setting behaviour

This section looks at how the quarterly frequency (fpc_t) and the size ($Size_t$) of price changes have evolved over the 1993–2005 period and what factors have affected price-setting behaviour. Compared to Section 3, the data set is further reduced in order to create a consistent sample over the 1993–2005 period (cf. Section 2.2). Moreover, the statistics are calculated as unweighted means in order to prevent effects from changes in the CPI expenditure weights.

Empirical evidence for the effect of economic factors on price adjustment frequencies is provided by Fougère et al. (2007) and Dias et al. (2007), among others. They show that shifts in the level of inflation and VAT rate hikes increase the probability that a firm changes the price of its product. In a similar set-up, Rupprecht (2007) finds in survey data for Switzerland that macroeconomic factors as well as firm specific characteristics influence price-setting behaviour.

4.1 Price-setting statistics over time

Figure 2 shows the quarterly fpc_t from 1993 to 2005. The average size of positive and negative price changes ($Size_t^+$, $Size_t^-$) is displayed in Figure 3. We can see that the frequency of price changes varies a great deal during that period. The size of the price changes also exhibits some variability. The general trend is flat for all series.
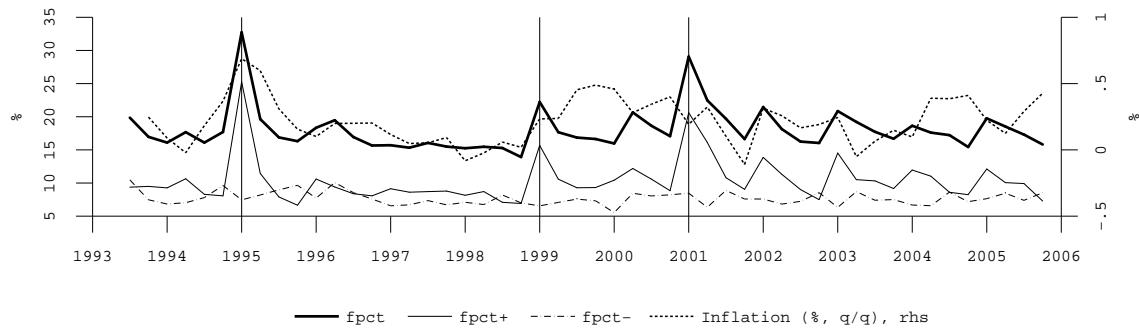
Figure 2: Frequency of price changes

It is interesting to view the patterns in Figures 2 and 3 against the backdrop of the implications of TDP and SDP models. TDP models assume that the price adjustment frequency is given exogenously. In Calvo (1983), for example, the firm receives a stochastic signal each period about whether or not it is allowed to adjust its price. The signal occurs at some exogenously assumed constant probability. Hence, the firm decides only about the size of the price adjustment, not about the timing. Another example of a TDP model is Taylor (1980), where prices are sticky due to multi-period nominal contracts of fixed intervals. A common feature of these models is that the share of firms that adjust prices is invariant to unexpected changes in the economic
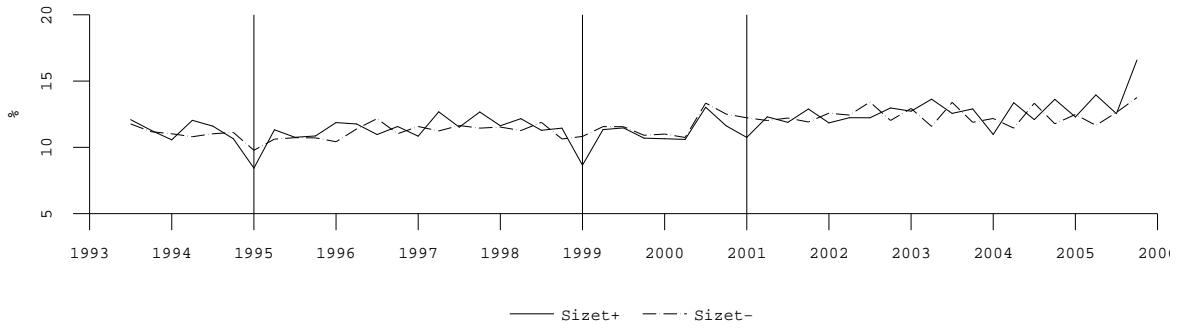
Figure 3: Size of price changes

environment. In an SDP model, firms decide on both the timing and the size of a price change. Assuming stochastic costs of price adjustment, the firm weighs the realisation of the adjustment cost against the effect of adjusting its price on the discounted flow of expected future earnings. So the key implication of SDP models is that firms react to economic shocks by changing the price adjustment frequency as well as the size of the price adjustment. Dotsey et al. (1999) is a prominent example of this type of model.

The substantial variability of fpc_t is consistent with the SDP models. It is not consistent with the TDP model if we exclude the extreme case where all changes in the economic environment are expected. Because both models predict the size of price changes to vary over time, the variability of the size of price changes displayed in Figure 3 is consistent with both models.

4.2   Effect of changes in VAT rates

The fpc_t series plotted in Figure 2 shows considerable spikes in 1995, 1999 and 2001 (vertical lines). The VAT replaced the turnover tax on goods (6.2%) in Q1 1995. Initially, the tax rate was set at 6.5% for most goods and services. In Q1 1999 and Q1 2001, it was raised to 7.5% and 7.6% respectively.[12] As one would expect, the tax changes affected the frequency of price increases (fpc_t^+), while the frequency of price decreases (fpc_t^-) remained largely unchanged. In all three cases, the size of the price increase was slightly lower than in the two adjoining quarters. This may be the combined result of two factors. First, price increases due to tax hikes are unlikely to hamper the relationship with the customer, since they can be justified in a transparent and credible way. Thus, when the decision on whether or not to adjust prices is taken, the concern about the customer relationship is smaller than in other situations. Second, the size of the tax change was relatively small in comparison with the average size of a price increase observed in the 1993–2005 period.

It is noteworthy that the VAT rate changes do not appear to have an effect before they actually take place. Most models of price-setting imply that firms act in a forward-looking manner and reoptimise their current

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[12]Note that some products are benefiting from reduced VAT rates. For food, the rate started at 2% and was later raised to 2.3% and 2.4% respectively. For hotels and restaurants the corresponding rates were 3.0%, 3.5% and 3.6% respectively. In these sectors, the characteristic spikes of the fpc_t due to VAT rate changes are much less pronounced.

prices as soon as they obtain information about future events. This suggests that there are forces that prevent firms from raising prices prior to an increase in the VAT, even if this increase is perfectly anticipated. Two reasons may apply. First, price changes coinciding with realised cost increases are easier to communicate and less likely to hamper long-term customer relationships. Second, a change in the VAT rate may serve as a focal point between competitors in order to coordinate price increases which would otherwise lead to a loss in market share if taken individually.

4.3 Effect of changes in inflation

Changes in the rate of inflation are a prominent candidate for a factor affecting the frequency of price changes. The frequency of price changes is expected to increase with rising inflation. Working with data on Mexico, Gagnon (2007) found strong evidence in support of such an effect. In Figure 2, quarter-on-quarter percentage changes in Switzerland's CPI are shown together with the fpc_t measures.[13] Unfortunately, the changes in the rate of inflation have been modest throughout the period under review. Moreover, the picture is blurred by the VAT rate changes and their effects on the rate of inflation.

In spite of these events, there is a remarkable connection between the fpc_t and the inflation rates. We can spot a phase with falling inflation rates ending in 1998. From 1999 onwards, the inflation rates first moves higher and then sideways until 2005. In this second phase, the average quarter-on-quarter rate of inflation is slightly higher (0.25%) than during the 1994–1999 period (0.16%). This inflation pattern is roughly in line with the medium-term changes in the fpc_t. Abstracting from the three spikes, we notice a slight decline ending in 1999, followed by higher fpc_t levels from 1999 onwards. In addition, we can see that the frequency of price increases (fpc_t^+) is shifting upwards in 1999.

In order to test more formally, whether inflation influences price-setting behaviour, we can estimate the model[14]

$$y_{jt} = w_t\alpha_j + \pi_t\beta + vat_t\gamma + u_{jt}, \quad t = 1, 2, \ldots, T \quad , \tag{3}$$

where $y_{jt} \in \{fpc_{jt}^{(+,-)}, Size_{jt}^{(+,-)}\}$ denotes the frequency or size of price adjustments in index position j at time t, α_j is a vector of group specific coefficients, w_t is a vector of deterministic functions of time (constant, time trend and seasonal dummies), π_t denotes the quarter-on-quarter aggregate inflation rate, and u_{jt} is a group specific disturbance term. In addition, we control for VAT changes by a set of dummy variables (vat_t). The coefficients β and γ can be estimated by the fixed-effects estimator such that unobserved group specific characteristics drop out (cf. e.g. Wooldridge, 2005).

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[13]The inflation rates were calculated from the seasonally adjusted (trend component) CPI, since there is substantial short-term volatility after 2000 when the FSO began to collect sales prices.

[14]Results for the United States in a similar set-up are provided by Nakamura and Steinsson (2008).

Table 6: Fixed-effects estimation results

	fpc_t	$Size_t$	fpc_t^+	fpc_t^-	$Size_t^+$	$Size_t^-$
π_t	3.23 *	0.15	2.28 *	0.68	-0.11	0.20
	(0.48)	(0.27)	(0.49)	(0.65)	(0.38)	(0.26)
$vat95_t$	13.38 *	-2.15 *	13.26 *	0.15	-2.04 *	-1.19 *
	(1.43)	(0.27)	(1.52)	(0.59)	(0.39)	(0.31)
$vat99_t$	3.97 *	-2.41 *	4.13 *	-0.55	-2.52 *	-0.73 *
	(0.85)	(0.22)	(0.88)	(0.49)	(0.26)	(0.35)
$vat01_t$	11.28 *	-0.92 *	9.95 *	1.56 *	-1.11 *	0.37
	(0.91)	(0.33)	(0.92)	(0.59)	(0.47)	(0.36)
N	138	138	138	138	138	138
T	50	50	50	50	50	50

$*$: Significant at the 5% level

fpc_t : Frequency of price changes (%)

$Size_t$: Size of price changes (%)

π_t : q/q inflation (%)

Table 6 displays the estimated coefficient on inflation and the VAT dummies along with the robust standard errors suggested by Arellano (1987) in parentheses. The coefficients give the average effect of a change in inflation or VAT rates on the frequency or size of price adjustment, holding fixed the group specific differences. The estimation is based on data from 138 index positions over 50 quarters.

A one-percent increase in quarter-on-quarter inflation leads to a 3.23 percent increase in the frequency of price changes. Although inflation has a positive effect on the size of price adjustment, the coefficient is not significant. A breakdown into positive and negative price changes shows that inflation raises the frequency of price increases (fpc_t^+), but the frequency of price decreases (fpc_t^-) is not significantly affected.

The results on the VAT dummies are in line with our discussion above (Section 4.2). The frequency of price changes is clearly higher when VAT rates are changed. The absolute size of price changes is reduced by such cost shocks.

5 Conclusions

This paper provides evidence about price-setting behaviour in Switzerland. Based on a large data set with micro data from the CPI for the period from 1993 to 2005, several conclusions emerge from the analysis:

(i) The median price duration amounts to 4.6 quarters between 2000 and 2005 (4.8 quarters during 1993–2000). This duration is somewhat longer than that obtained by studies on other countries.

(ii) The median price duration is heterogeneous across sectors and in outlets of different size. Factors like the labour share in production, the storability of the good, and the importance attributed to customer relations for price-setting may play an important role in explaining the differences among price durations.

(iii) Price changes are sizable. Between 2000 and 2005, the median absolute size of all price changes was 9.4% (9.0% in 1993–2000).

(iv) Prices are not rigid downwards. Between 2000 and 2005, 41.3% of all price changes have been price decreases (43.8% in 1993–2000). Thus, even during periods with positive CPI inflation, a considerable share of all price changes are price decreases. Moreover, the distributions of price changes are generally rather symmetric compared to other countries.

(v) Prices are not adjusted in anticipation of VAT rate changes. They are adjusted in the quarter in which the VAT rate change takes effect.

(vi) Macroeconomic factors, such as changes in inflation, appear to affect the frequency of price changes. This is consistent with predictions from SDP models. Because the rate of inflation remained fairly stable during the period under review, the evidence for the effect of inflation on price-setting behaviour is limited, however.

Compared to other countries, Switzerland exhibits higher median durations of prices. This could be due lower inflation rates or a less competitive domestic sector than in the euro area or the United States for example.

The duration statistics (or the corresponding frequencies of price changes) presented here can be used in the calibration of micro-founded macroeconomic models. They represent the first estimates of price duration in the Swiss economy based on CPI micro data.

References

ALTISSIMO, F., M. EHRMANN, AND F. SMETS (2006): "Inflation Persistence and Price-Setting Behaviour in the Euro Area: A Summary of the Inflation Persistence Network Evidence," *National Bank of Belgium Working Paper No. 95.*

ARELLANO, M. (1987): "Computing Robust Standard Errors for Within-Groups Estimators," *Oxford Bulletin of Economics and Statistics*, 49, 431–34.

BILS, M. AND P. J. KLENOW (2004): "Some Evidence on the Importance of Sticky Prices," *Journal of Political Economy*, 112, 947–985.

BLINDER, A., E. CANETTI, D. LEBOW, AND J. RUDD (1998): *Asking about Prices: A New Approach to Understanding Price Stickiness*, Russel Sage Foundation, New York.

CALVO, G. (1983): "Staggered Pricing in a Utility Maximizing Framework," *Journal of Monetary Economics*, 12, 383–398.

DHYNE, E., L. J. ÀLVAREZ, H. LE BIHAN, G. VERONESE, D. DIAS, J. HOFFMANN, N. JONKER, P. LÜNNEMANN, F. RUMLER, AND J. VILMUNEN (2006): "Price Changes in the Euro Area and the United States: Some Facts from Individual Consumer Price Data," *Journal of Economic Perspectives*, 20, 171–192.

DIAS, D. A., C. R. MARQUES, AND J. M. SANTOS SILVA (2007): "Time or State Dependent Price Setting Rules? Evidence from Micro Data," *European Economic Review*, 51, 1589–1613.

DOTSEY, M., R. G. KING, AND A. L. WOLMAN (1999): "State-Dependent Pricing and the General Equilibrium Dynamics of Money and Output," *Quarterly Journal of Economics*, 114, 655–690.

FABIANI, S., M. DRUANT, I. HERNANDO, C. KWAPIL, B. LANDAU, C. LOUPIAS, F. MARTINS, T. Y. MATHÄ, R. SABBATINI, H. STAHL, AND A. C. STOKMAN (2005): "The Pricing Behaviour of Firms in the Euro Area: New Survey Evidence," *ECB Working Paper No. 535.*

FEHR, E. AND L. GOETTE (2005): "Robustness and Real Consequences of Nominal Wage Rigidity," *Journal of Monetary Economics*, 52, 779–804.

FISCHER, A. M., M. LUTZ, AND M. WÄLTI (2007): "Who Prices Locally? Survey Evidence of Swiss Exporters," *CEPR Discussion Papers No. 6442.*

FOUGÈRE, D., H. LE BIHAN, AND P. SEVESTRE (2007): "Heterogeneity in Consumer Price Stickiness: A Microeconometric Investigation," *Journal of Business & Economic Statistics*, 25, 247–264(18).

FSO (1993): *BFS aktuell – Der neue Landesindex der Konsumentenpreise: Mai 1993 = 100*, Federal statistical office.

——— (2000): *BFS aktuell – Der neue Landesindex der Konsumentenpreise: Mai 2000 = 100*, Federal statistical office.

——— (2006): *BFS aktuell – Der neue Landesindex der Konsumentenpreise: Dezember 2005 = 100*, Federal statistical office.

GAGNON, E. (2007): "Price Setting During Low and High Inflation: Evidence from Mexico," *Board of Governors of the Federal Reserve System – International Finance Discussion Paper No. 896.*

GOETTE, L., R. MINSCH, AND J.-R. TYRAN (2005): "Micro Evidence on the Adjustment of Sticky-Price Goods: It's How Often, Not How Much," *CEPR Discussion Papers No. 5364.*

KLENOW, P. J. AND O. KRYVTSOV (2008): "State-Dependent or Time-Dependent Pricing: Does It Matter for Recent U.S. Inflation?" *Quarterly Journal of Economics*, 123.

NAKAMURA, E. AND J. STEINSSON (2008): "Five Facts About Prices: A Reevaluation of Menu Cost Models," *Quarterly Journal of Economics*, 123.

RUPPRECHT, S. M. (2007): "When Do Firms Adjust Prices? Evidence from Micro Panel Data," *KOF Working Papers No. 160.*

TAYLOR, J. B. (1980): "Aggregate Dynamics and Staggered Contracts," *The Journal of Political Economy*, 88, 1–23.

WOOLDRIDGE, J. M. (2005): "Fixed-Effects and Related Estimators for Correlated Random-Coefficient and Treatment-Effect Panel Data Models," *The Review of Economics and Statistics*, 87, 385–390.

ZURLINDEN, M. (2007): "The Pricing Behaviour of Swiss Companies: Results of a Survey Conducted by the SNB Delegates for Regional Economic Relations." *Swiss National Bank Quarterly Bulletin 2007/1.*

Appendix

Table 7: Statistics across index positions (Q2 1993–Q1 2000)

IP	Sector	fpc	d	fpc^s	d^s	$fspc$	$fpto$	fpc^+	fpc^-	O_1	W
Rice	PF	14.3	4.5	17.6	3.6	3.4	0.8	8.7	5.6	9291	0.0365
Flour	PF	14.1	4.6	17.4	3.6	3.3	0.7	5.5	8.7	6882	0.0665
Bread	PF	9.3	7.1	9.6	6.8	0.4	0.5	4.5	4.8	23733	0.7931
Small baked goods	PF	4.7	14.4	4.8	14.1	0.1	0.4	3.8	0.9	15840	0.1461
Viennese pastries, pastry products	PF	6.6	10.2	7.0	9.5	0.5	0.6	5.4	1.2	33371	0.4279
Biscuit/rusk products	PF	12.0	5.4	14.6	4.4	2.6	1.4	7.0	5.0	30643	0.0693
Pasta	PF	13.3	4.9	16.9	3.7	3.6	1.6	8.0	5.3	16665	0.0890
Other cereal products	PF	13.2	4.9	16.3	3.9	3.1	1.0	7.8	5.3	20515	0.1582
Beef	UPF	40.1	1.4	44.0	1.2	3.9	0.4	21.4	18.7	31005	0.6049
Veal	UPF	49.3	1.0	53.6	0.9	4.3	0.3	26.9	22.4	21085	0.2650
Pork	UPF	48.5	1.0	53.1	0.9	4.6	0.4	23.7	24.8	29642	0.6189
Lamb	UPF	11.2	5.8	13.2	4.9	2.0	0.2	7.2	4.1	17923	0.0955
Poultry	UPF	15.7	4.1	18.4	3.4	2.7	0.9	9.7	6.0	15623	0.2622
Other meat	UPF	10.6	6.2	11.8	5.5	1.2	0.3	6.2	4.4	22204	0.2350
Sausages	PF	12.9	5.0	15.6	4.1	2.7	0.7	8.8	4.1	24030	0.6274
Cooked meat	PF	20.7	3.0	22.5	2.7	1.8	0.6	12.4	8.3	25913	0.6236
Processed meat	PF	11.2	5.9	12.2	5.3	1.0	0.5	6.7	4.4	9446	0.0206
Fresh fish	UPF	36.9	1.5	41.5	1.3	4.6	0.6	21.0	15.9	11538	0.1601
Frozen fish	UPF	13.4	4.8	14.2	4.5	0.9	1.7	8.4	5.0	1804	0.0702
Tinned fish and smoked fish	PF	14.0	4.6	14.5	4.4	0.4	1.6	9.6	4.4	1840	0.0655
Whole milk	PF	13.7	4.7	14.4	4.5	0.7	0.2	2.2	11.5	10278	0.4008
Other type of milk	PF	12.9	5.0	13.5	4.8	0.6	0.3	2.3	10.6	13056	0.5244
Hard cheese	PF	15.2	4.2	18.3	3.4	3.1	0.6	7.7	7.5	17056	0.2940
Other cheese	PF	13.4	4.8	16.6	3.8	3.1	1.1	6.7	6.7	55993	0.3465
Other dairy products	PF	10.6	6.2	12.8	5.1	2.2	1.0	4.2	6.4	44005	0.3333
Cream	PF	18.7	3.3	20.7	3.0	2.0	0.5	5.3	13.4	22635	0.2172
Eggs	UPF	15.2	4.2	18.1	3.5	2.9	0.9	8.7	6.5	9824	0.2641
Butter	PF	12.4	5.3	17.1	3.7	4.7	0.9	4.3	8.1	18666	0.2285
Margarine, fats, edible oils	PF	19.6	3.2	22.6	2.7	3.0	1.3	10.4	9.2	33603	0.1573
Citrus fruit	UPF	40.3	1.3	43.3	1.2	3.0	3.6	21.9	18.4	19943	0.2013
Stone fruit	UPF	34.0	1.7	34.1	1.7	0.2	1.2	17.0	17.0	17633	0.1170
Pome fruit	UPF	42.7	1.2	45.4	1.1	2.6	12.7	24.0	18.8	31061	0.3240
Bananas	UPF	54.3	0.9	58.9	0.8	4.6	0.3	27.8	26.5	3289	0.1367
Other fruits	UPF	30.8	1.9	32.8	1.7	2.0	3.1	16.0	14.8	27430	0.2378
Dried, frozen and tinned fruit	PF	11.4	5.7	12.5	5.2	1.2	1.5	7.7	3.7	4843	0.1498
Fruiting vegetables	UPF	74.5	0.5	79.9	0.4	5.4	1.4	37.3	37.2	17654	0.3202
Root vegetables	UPF	55.4	0.9	58.7	0.8	3.3	0.4	29.1	26.3	15566	0.1376
Salad vegetables	UPF	52.4	0.9	55.3	0.9	2.8	0.4	27.2	25.3	26756	0.2987
Brassicas	UPF	59.3	0.8	62.8	0.7	3.5	0.3	30.2	29.1	21518	0.1152
Onions	UPF	51.6	1.0	54.9	0.9	3.3	0.3	27.6	24.1	9630	0.0787
Other vegetables	UPF	26.3	2.3	28.3	2.1	2.0	0.2	14.2	12.1	23833	0.1714
Potatoes	UPF	52.2	0.9	55.1	0.9	2.9	11.0	30.1	22.1	11918	0.1573
Dried, frozen, tinned vegetables, etc.	PF	9.6	6.9	10.6	6.2	1.1	1.1	5.7	3.8	7990	0.1938
Potato products	PF	9.8	6.7	13.8	4.6	4.1	1.0	6.0	3.8	2159	0.0861
Jam and honey	PF	11.2	5.8	13.6	4.7	2.4	1.1	9.0	2.3	2830	0.1011
Chocolate	PF	11.3	5.8	13.1	4.9	1.8	1.5	7.0	4.4	18370	0.3268
Sweets and chewing gum	PF	10.6	6.2	12.2	5.3	1.5	1.4	7.2	3.4	13217	0.0796
Ice-cream	PF	9.0	7.3	11.7	5.6	2.6	1.8	5.1	4.0	17554	0.1302
Sugar	PF	14.0	4.6	15.5	4.1	1.5	0.4	6.1	7.9	7173	0.0496
Soups, spices, sauces	PF	9.2	7.1	10.6	6.2	1.4	1.7	7.0	2.2	12100	0.1723
Ready-made foods	PF	7.5	8.9	8.8	7.5	1.3	1.3	5.2	2.4	3946	0.3408
Coffee	PF	27.3	2.2	30.4	1.9	3.1	1.3	14.2	13.1	17666	0.1433
Instant coffee	PF	23.8	2.5	27.0	2.2	3.2	1.1	12.0	11.8	1701	0.0712
Tea	PF	11.7	5.6	14.0	4.6	2.4	1.1	7.4	4.3	19146	0.0571
Cocoa and nutritional beverages	PF	11.0	5.9	11.6	5.6	0.6	0.7	8.4	2.6	1367	0.0459
Natural mineral water	PF	10.0	6.6	12.1	5.4	2.1	1.2	5.6	4.4	6796	0.1508
Soft drinks	PF	10.1	6.5	12.1	5.4	2.0	1.6	6.0	4.0	15798	0.3174

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Table 7 – continued from previous page

Fruit or vegetable juices	PF	9.7	6.8	11.6	5.6	1.8	1.8	6.1	3.7	12876	0.1601
Spirits/brandies	PF	14.0	4.6	15.7	4.1	1.8	1.7	7.3	6.7	11991	0.0796
Liqueurs and aperitifs	PF	13.0	5.0	15.0	4.3	2.0	1.0	6.1	7.0	10600	0.0665
Swiss red wine	PF	12.9	5.0	14.2	4.5	1.3	2.4	7.3	5.6	19304	0.1920
Foreign red wine	PF	13.4	4.8	14.8	4.3	1.3	2.7	8.8	4.7	26220	0.4148
Swiss white wine	PF	13.7	4.7	14.9	4.3	1.2	2.5	8.5	5.2	21384	0.2313
Foreign white wine	PF	11.2	5.8	12.5	5.2	1.3	2.8	7.0	4.2	4596	0.0169
Sparkling wine	PF	14.4	4.5	21.1	2.9	6.7	1.7	8.7	5.8	6616	0.0562
Beer	PF	9.7	6.8	11.4	5.7	1.8	1.7	5.9	3.8	11634	0.2023
Men's underwear	IND	7.6	8.7	8.1	8.3	0.4	1.5	5.4	2.3	19301	0.0936
Women's underwear	IND	8.2	8.1	8.6	7.7	0.4	2.0	5.7	2.5	31299	0.2800
Baby clothes	IND	9.4	7.0	9.4	7.0	0.0	1.7	5.0	4.4	6575	0.0908
Children's hosiery and underwear	IND	8.9	7.5	9.3	7.1	0.4	2.6	5.4	3.5	11680	0.0805
Garment fabrics	IND	5.4	12.4	5.5	12.2	0.1	1.7	3.1	2.3	3928	0.0843
Haberdashery and knitting wool	IND	8.1	8.2	8.2	8.1	0.2	1.1	7.1	1.0	10430	0.2950
Other clothing accessories	IND	4.5	14.9	4.5	14.9	0.0	1.2	2.6	1.9	1298	0.1077
Garment alterations	SER	5.3	12.7	5.5	12.3	0.2	0.8	3.9	1.4	9049	0.0328
Upkeep of textiles	SER	5.8	11.7	5.8	11.5	0.1	0.5	4.8	0.9	12749	0.3109
Shoe repairs	SER	6.4	10.5	6.4	10.4	0.0	0.4	5.7	0.7	9747	0.0581
Products for housing maintenance and repair	IND	9.8	6.7	10.0	6.6	0.2	1.1	7.3	2.5	6361	0.1817
Heating oil	EN	93.8	0.2	95.7	0.2	1.9	3.9	49.7	44.1	10003	0.8942
Living room	IND	7.4	9.0	7.5	8.9	0.1	3.4	5.6	1.8	37094	0.7547
Bedroom	IND	7.6	8.8	7.6	8.7	0.1	3.2	6.1	1.4	19301	0.5684
Kitchen and garden	IND	9.0	7.3	9.4	7.0	0.4	3.5	5.9	3.1	4908	0.1554
Furnishings	IND	6.5	10.3	6.6	10.1	0.2	3.1	3.9	2.5	2633	0.4644
Floor coverings and carpets	IND	7.2	9.3	7.4	9.0	0.2	3.5	4.6	2.6	3846	0.3624
Bed linen and household linen	IND	5.0	13.4	5.1	13.4	0.0	3.9	3.3	1.7	9511	0.3764
Curtains and curtain accessories	IND	7.7	8.6	7.8	8.5	0.1	5.0	4.1	3.6	2556	0.1283
Major household appliances	IND	16.9	3.8	17.1	3.7	0.3	6.2	11.6	5.2	13122	0.2528
Smaller electric household appliances	IND	10.3	6.4	11.6	5.6	1.3	5.3	5.5	4.8	11347	0.2509
Kitchen utensils	IND	11.7	5.6	12.5	5.2	0.7	2.4	8.8	2.9	11563	0.1742
Tableware and cutlery	IND	9.6	6.9	9.7	6.8	0.2	1.4	7.8	1.8	20226	0.2463
Motorized tools for DIY and garden	IND	11.1	5.9	11.4	5.7	0.4	4.8	6.1	5.0	3861	0.0618
Tools for house and garden	IND	10.8	6.1	11.2	5.9	0.3	1.6	7.7	3.1	6213	0.5075
Equipment and other accessories for house and garden	IND	9.5	7.0	10.0	6.6	0.5	1.6	5.8	3.7	7007	0.1760
Detergents and cleaning products	IND	15.6	4.1	17.7	3.6	2.1	2.1	9.2	6.5	36962	0.4438
Cleaning articles	IND	9.4	7.0	10.0	6.6	0.6	1.8	6.0	3.4	6169	0.1433
Other household articles	IND	10.1	6.5	11.1	5.9	1.0	1.7	6.1	4.0	25513	0.2116
Therapeutic appliances	IND	12.8	5.1	12.8	5.0	0.1	2.1	7.8	5.0	3404	0.2491
New cars	IND	20.8	3.0	21.0	2.9	0.2	6.9	15.6	5.2	6064	2.2126
Motorcycles	IND	12.4	5.2	12.4	5.2	0.0	3.0	9.1	3.3	6415	0.1676
Bicycles	IND	13.1	4.9	13.5	4.8	0.3	4.4	7.6	5.6	9837	0.2584
Spare parts	IND	23.3	2.6	23.8	2.6	0.4	2.9	16.0	7.3	15583	0.2069
Tyres and accessories	IND	26.1	2.3	26.8	2.2	0.6	2.4	12.4	13.7	17207	0.1330
Maintenance material	IND	20.7	3.0	21.0	2.9	0.3	1.8	13.0	7.7	7243	0.0833
Fuels	EN	78.4	0.5	80.5	0.4	2.1	1.2	36.4	41.9	6320	1.9074
Repair services and work	SER	23.4	2.6	23.7	2.6	0.3	0.7	14.7	8.7	3006	1.6059
Telephone equipment	IND	16.1	3.9	16.3	3.9	0.2	11.7	3.5	12.6	1006	0.1330
Television sets	IND	17.0	3.7	17.7	3.6	0.7	14.4	4.7	12.4	5270	0.3436
Audio appliances	IND	10.4	6.3	10.9	6.0	0.5	10.5	3.9	6.5	14120	0.3493
Photographic, cinematographic equipment and optical instruments	IND	19.5	3.2	20.3	3.1	0.8	7.8	7.8	11.7	6345	0.1161
PC hardware	IND	36.4	1.5	37.3	1.5	0.9	16.0	7.0	29.4	4005	0.3043
Computer software	IND	20.4	3.0	21.7	2.8	1.3	6.4	7.6	12.8	4024	0.1264
Office machine	IND	16.0	4.0	16.6	3.8	0.6	3.0	5.4	10.7	5318	0.0459
Recording media	IND	9.8	6.7	10.3	6.4	0.5	1.5	4.8	5.0	21154	0.3951
Repair and installation	SER	6.1	10.9	6.1	10.9	0.0	1.2	5.5	0.6	1464	0.1208
Games, toys and hobbies	IND	12.0	5.4	12.5	5.2	0.5	2.2	7.8	4.2	11394	0.3708

Table 7 – continued from previous page

Winter sports equipment	IND	11.7	5.6	11.9	5.5	0.2	4.4	6.4	5.3	10759	0.3212
Summer/year-round sports articles, camping equipment	IND	8.5	7.8	8.7	7.6	0.2	2.6	4.6	3.9	12362	0.1554
Plants and flowers	IND	16.5	3.8	18.4	3.4	1.9	0.7	9.1	7.4	23435	0.7538
Pets and related products	IND	9.5	6.9	11.2	5.9	1.7	2.1	5.8	3.7	11121	0.4232
Sporting events	SER	5.0	13.4	5.0	13.4	0.0	0.0	4.2	0.8	238	0.0356
Mountain railways, ski lifts.	SER	10.2	6.4	10.3	6.4	0.1	0.3	9.0	1.2	8421	0.2219
Cinema	SER	7.2	9.2	7.3	9.1	0.1	0.5	6.1	1.1	5135	0.3230
Theatre and concerts	SER	11.0	6.0	11.0	6.0	0.0	2.4	8.5	2.5	10148	0.1545
Photographic services	SER	4.1	16.6	4.3	15.7	0.2	0.9	2.3	1.8	6862	0.2875
Leisure-time courses	SER	11.8	5.5	11.8	5.5	0.0	3.4	10.6	1.2	4587	0.8081
Newspapers, purchased singly	IND	7.7	8.7	7.8	8.5	0.1	0.7	7.2	0.4	3634	0.3137
Newspapers, by subscription	IND	18.6	3.4	18.6	3.4	0.1	1.0	16.5	2.1	3048	0.8006
Writing and drawing materials	IND	10.5	6.2	11.1	5.9	0.5	1.2	7.2	3.4	24825	0.1685
Package holidays	SER	64.5	0.7	65.6	0.6	1.1	4.6	37.2	27.2	13073	1.8915
Beverages in canteens	SER	7.7	8.6	7.7	8.6	0.0	1.4	7.1	0.6	2807	0.1948
Soaps and foam baths	IND	8.5	7.8	9.8	6.7	1.3	1.7	5.5	3.0	18547	0.2294
Hair-care products	IND	9.5	7.0	11.0	5.9	1.5	1.5	6.3	3.2	19118	0.2341
Dental-care products	IND	11.4	5.7	12.8	5.0	1.4	1.7	7.3	4.1	10686	0.2332
Beauty products and cosmetics	IND	9.7	6.8	11.0	6.0	1.3	2.0	6.6	3.1	42740	0.2341
Paper articles for personal hygiene	IND	12.4	5.3	13.8	4.7	1.4	2.0	7.6	4.7	23195	0.2378
First aid material	IND	8.1	8.2	8.8	7.6	0.6	1.4	6.2	1.9	8105	0.0375
Personal care appliances, electric	IND	7.2	9.2	7.6	8.7	0.4	1.5	5.0	2.2	16208	0.0421
Personal care appliances	IND	9.2	7.2	10.1	6.5	1.0	6.7	5.1	4.0	3292	0.0449
Watches	IND	4.3	15.8	4.3	15.6	0.0	3.3	3.2	1.1	4126	0.5918
Other personal effects	IND	8.8	7.5	9.2	7.2	0.4	2.6	5.7	3.2	16839	0.2622

IP: Index position; *UPF*: Unprocessed food; *PF*: Processed food; *IND*: Industrial products; *EN*: Energy; *SER*: Services; *fpc*: Frequency of price changes (%); *d*: Implied duration (Quarters); *fspc*: Frequency of sales price changes (%); *fpto:* Frequency of price changes due to product turnover (%); O_1: Number of price quotes; *W*: Average CPI expenditure weight; *s* = including sales prices.

Table 8: Statistics across index positions (Q2 1993–Q1 2000)

IP	Sector	Size	Size$^+$	Size$^-$	Size^s
Rice	PF	10.3	10.4	10.2	12.5
Flour	PF	8.8	10.0	8.1	11.4
Bread	PF	5.8	5.6	6.0	6.8
Small baked goods	PF	11.3	10.9	12.9	11.7
Viennese pastries, pastry products	PF	8.9	8.2	12.2	10.5
Biscuit/rusk products	PF	9.8	8.9	11.0	11.8
Pasta	PF	13.0	12.6	13.6	15.8
Other cereal products	PF	10.5	9.9	11.4	13.5
Beef	UPF	10.5	11.1	9.8	10.9
Veal	UPF	9.3	9.6	8.8	9.4
Pork	UPF	12.0	13.9	10.3	12.1
Lamb	UPF	12.3	12.6	11.9	13.7
Poultry	UPF	11.7	11.4	12.1	48.3
Other meat	UPF	15.9	15.4	16.5	16.4
Sausages	PF	11.2	10.6	12.5	15.0
Cooked meat	PF	10.3	10.9	9.4	45.2
Processed meat	PF	10.5	10.9	10.0	11.5
Fresh fish	UPF	14.1	15.0	13.0	14.6
Frozen fish	UPF	7.4	7.3	7.6	8.6
Tinned fish and smoked fish	PF	8.3	7.6	10.0	9.4
Whole milk	PF	5.9	6.1	5.9	6.3
Other type of milk	PF	6.0	5.4	6.1	6.7
Hard cheese	PF	8.4	9.0	7.8	10.3
Other cheese	PF	8.6	9.2	8.1	10.5
Other dairy products	PF	9.0	9.5	8.7	11.6
Cream	PF	7.6	7.0	7.8	8.8

Table 8 – continued from previous page

Eggs	UPF	8.3	8.3	8.3	9.6
Butter	PF	6.5	7.7	6.0	9.4
Margarine, fats, edible oils	PF	8.1	7.3	9.1	9.5
Citrus fruit	UPF	23.1	25.4	20.3	24.9
Stone fruit	UPF	47.9	63.5	32.2	47.7
Pome fruit	UPF	19.0	20.4	17.3	18.9
Bananas	UPF	15.9	18.5	13.1	16.3
Other fruits	UPF	30.8	37.3	23.9	68.2
Dried, frozen and tinned fruit	PF	10.3	10.0	10.9	11.9
Fruiting vegetables	UPF	27.9	33.7	22.0	27.6
Root vegetables	UPF	26.1	29.8	22.0	25.7
Salad vegetables	UPF	31.0	37.6	23.9	31.0
Brassicas	UPF	26.5	31.4	21.5	26.4
Onions	UPF	30.5	34.8	25.6	29.8
Other vegetables	UPF	23.2	26.4	19.3	23.1
Potatoes	UPF	22.4	23.7	20.7	22.1
Dried, frozen, tinned vegetables, etc.	PF	8.2	7.5	9.5	10.3
Potato products	PF	11.6	11.0	12.5	15.4
Jam and honey	PF	7.1	6.7	8.6	9.4
Chocolate	PF	9.5	9.0	10.4	11.0
Sweets and chewing gum	PF	10.5	9.4	12.8	15.4
Ice-cream	PF	11.4	11.6	11.1	15.0
Sugar	PF	6.9	6.4	7.3	7.7
Soups, spices, sauces	PF	7.3	6.6	9.5	9.5
Ready-made foods	PF	7.3	6.6	8.7	10.4
Coffee	PF	12.2	14.5	9.7	12.7
Instant coffee	PF	8.3	9.0	7.5	9.1
Tea	PF	9.1	8.2	10.6	13.0
Cocoa and nutritional beverages	PF	6.4	5.7	8.8	6.9
Natural mineral water	PF	11.8	11.6	11.9	15.2
Soft drinks	PF	10.7	10.4	11.2	13.8
Fruit or vegetable juices	PF	9.5	8.8	10.5	12.9
Spirits/brandies	PF	7.9	5.3	10.8	9.0
Liqueurs and aperitifs	PF	8.4	5.7	10.7	8.9
Swiss red wine	PF	7.2	6.6	8.0	8.6
Foreign red wine	PF	9.7	9.5	10.0	10.9
Swiss white wine	PF	8.0	7.6	8.6	9.0
Foreign white wine	PF	9.4	8.4	11.0	11.5
Sparkling wine	PF	8.1	7.8	8.5	11.0
Beer	PF	8.9	7.9	10.5	11.1
Men's underwear	IND	10.5	10.1	11.4	12.0
Women's underwear	IND	11.0	10.4	12.5	13.4
Baby clothes	IND	13.1	13.8	12.4	16.5
Children's hosiery and underwear	IND	11.3	11.6	10.9	13.6
Garment fabrics	IND	10.3	8.8	12.4	12.9
Haberdashery and knitting wool	IND	7.6	7.4	9.7	10.8
Other clothing accessories	IND	10.8	10.2	11.8	12.0
Garment alterations	SER	16.8	17.8	13.7	18.2
Upkeep of textiles	SER	8.2	7.6	12.0	9.5
Shoe repairs	SER	6.7	6.7	7.4	7.2
Products for housing maintenance and repair	IND	7.9	7.4	9.4	12.9
Heating oil	EN	8.3	10.1	6.2	8.8
Living room	IND	5.9	5.3	7.6	9.6
Bedroom	IND	5.9	5.2	9.0	6.1
Kitchen and garden	IND	9.3	7.8	12.4	9.8
Furnishings	IND	9.3	7.0	13.0	9.6
Floor coverings and carpets	IND	7.7	5.9	10.9	7.8
Bed linen and household linen	IND	11.5	8.7	17.2	12.0
Curtains and curtain accessories	IND	10.9	9.2	12.9	10.9
Major household appliances	IND	4.8	3.7	7.1	4.9

Table 8 – continued from previous page

Smaller electric household appliances	IND	11.6	10.3	13.1	13.1
Kitchen utensils	IND	8.7	8.1	10.8	11.5
Tableware and cutlery	IND	8.0	7.6	10.4	13.0
Motorized tools for DIY and garden	IND	8.2	6.4	10.5	8.6
Tools for house and garden	IND	8.3	7.9	9.5	9.9
Equipment and other accessories for house and garden	IND	11.1	10.5	12.0	16.8
Detergents and cleaning products	IND	10.4	10.1	10.8	56.6
Cleaning articles	IND	9.9	9.3	11.2	11.4
Other household articles	IND	10.3	10.0	10.8	28.1
Therapeutic appliances	IND	5.9	5.4	6.8	6.6
New cars	IND	2.4	2.0	3.4	2.7
Motorcycles	IND	3.8	3.0	5.8	4.0
Bicycles	IND	8.0	7.4	8.8	10.1
Spare parts	IND	5.5	4.1	8.5	5.7
Tyres and accessories	IND	6.4	5.2	7.6	7.6
Maintenance material	IND	5.6	5.2	6.4	7.1
Fuels	EN	2.7	3.5	2.0	2.7
Repair services and work	SER	4.3	3.4	5.7	4.3
Telephone equipment	IND	14.3	8.3	15.9	14.2
Television sets	IND	11.4	8.9	12.3	11.6
Audio appliances	IND	11.6	9.4	12.8	12.0
Photographic, cinematographic equipment and optical instruments	IND	11.3	10.5	11.8	11.5
PC hardware	IND	11.9	9.4	12.5	12.2
Computer software	IND	13.9	13.2	14.3	16.4
Office machine	IND	13.4	11.2	14.5	16.7
Recording media	IND	9.9	9.4	10.4	11.7
Repair and installation	SER	7.7	7.6	8.8	8.4
Games, toys and hobbies	IND	10.2	9.4	11.7	12.6
Winter sports equipment	IND	9.9	9.1	10.8	13.0
Summer/year-round sports articles, camping equipment	IND	9.5	8.9	10.1	11.8
Plants and flowers	IND	16.5	17.6	15.2	17.7
Pets and related products	IND	9.4	8.9	10.1	14.0
Sporting events	SER	23.7	24.2	21.5	23.7
Mountain railways, ski lifts.	SER	7.3	6.8	11.4	7.6
Cinema	SER	10.4	10.4	10.2	10.4
Theatre and concerts	SER	9.1	9.4	7.2	12.6
Photographic services	SER	17.1	18.1	15.9	19.4
Leisure-time courses	SER	7.2	7.1	8.7	13.7
Newspapers, purchased singly	IND	10.7	10.0	23.9	12.1
Newspapers, by subscription	IND	4.6	4.4	6.0	4.9
Writing and drawing materials	IND	8.7	8.2	10.0	24.8
Package holidays	SER	18.4	19.5	16.9	18.4
Beverages in canteens	SER	12.4	12.5	11.5	13.7
Soaps and foam baths	IND	9.8	9.0	11.2	12.3
Hair-care products	IND	10.2	9.3	11.9	12.7
Dental-care products	IND	9.7	8.9	11.3	12.4
Beauty products and cosmetics	IND	9.1	8.5	10.4	12.8
Paper articles for personal hygiene	IND	9.8	9.7	10.0	14.4
First aid material	IND	6.9	6.6	8.0	8.5
Personal care appliances, electric	IND	9.9	9.6	10.8	15.5
Personal care appliances	IND	10.1	9.0	11.4	11.2
Watches	IND	9.0	7.8	12.3	9.1
Other personal effects	IND	9.6	8.9	10.9	12.3

IP: Index position; *UPF*: Unprocessed food; *PF*: Processed food; *IND*: Industrial products; *EN*: Energy; *SER*: Services; *Size*: Size of price changes (%); s = including sales prices.

IP	Sector	fpc	d	fpc^s	d^s	fspc	fpto	fpc$^+$	fpc$^-$	O$_1$	W
Rice	PF	15.3	4.2	19.2	3.2	4.0	1.6	8.3	7.0	3280	0.0427
Flour	PF	12.3	5.3	14.8	4.3	2.4	1.3	5.8	6.6	3026	0.0674
Bread	PF	7.5	8.8	8.3	8.0	0.8	0.9	5.9	1.7	8384	0.6160
Small baked goods	PF	6.7	10.0	7.1	9.3	0.5	0.6	5.4	1.2	9024	0.3550
Viennese pastries, pastry products	PF	9.6	6.9	10.5	6.2	0.9	0.9	7.6	2.0	15408	0.2812
Biscuit/rusk products	PF	11.9	5.4	14.4	4.4	2.5	1.6	6.9	5.1	11819	0.1522
Pasta	PF	17.0	3.7	22.1	2.8	5.1	1.8	9.8	7.2	5502	0.1638
Other cereal products	PF	13.6	4.7	18.0	3.5	4.4	1.7	8.2	5.4	7286	0.1912
Beef	UPF	36.4	1.5	41.0	1.3	4.6	0.7	22.4	14.1	15927	0.3615
Veal	UPF	41.2	1.3	45.9	1.1	4.6	0.4	24.2	17.0	10714	0.1760
Pork	UPF	41.8	1.3	46.7	1.1	4.8	0.4	23.4	18.5	13226	0.3793
Lamb	UPF	23.0	2.6	27.2	2.2	4.1	0.3	15.5	7.6	6895	0.0886
Poultry	UPF	18.8	3.3	22.9	2.7	4.1	1.1	13.0	5.8	13331	0.3371
Other meat	UPF	15.8	4.0	18.3	3.4	2.5	0.6	10.1	5.7	12319	0.2139
Sausages	PF	16.7	3.8	19.7	3.2	3.0	1.5	12.4	4.3	10947	0.5981
Cooked meat	PF	18.4	3.4	21.2	2.9	2.8	1.3	12.3	6.1	15337	0.5035
Processed meat	PF	13.1	4.9	15.2	4.2	2.0	0.8	9.0	4.1	6848	0.0241
Fresh fish	UPF	37.8	1.5	42.7	1.2	4.8	1.8	21.1	16.7	8756	0.1804
Frozen fish	UPF	13.9	4.6	16.3	3.9	2.4	2.5	9.0	4.9	4417	0.0752
Tinned fish and smoked fish	PF	13.7	4.7	15.5	4.1	1.9	2.5	8.4	5.3	2796	0.0861
Whole milk	PF	7.9	8.5	9.0	7.3	1.1	0.7	4.3	3.6	3175	0.2376
Other type of milk	PF	9.0	7.3	10.0	6.6	1.0	1.0	4.8	4.2	3291	0.1534
Hard cheese	PF	17.1	3.7	22.1	2.8	5.0	1.5	9.9	7.2	8624	0.2077
Other cheese	PF	14.6	4.4	18.4	3.4	3.8	1.7	8.6	6.0	32730	0.2957
Other dairy products	PF	9.4	7.0	12.2	5.3	2.8	2.0	5.6	3.8	16009	0.4002
Cream	PF	9.6	6.8	11.9	5.5	2.2	2.2	4.8	4.9	7421	0.1543
Eggs	UPF	12.0	5.4	14.2	4.5	2.2	1.0	7.3	4.7	3851	0.1547
Butter	PF	11.2	5.9	13.1	5.0	1.9	0.8	7.8	3.3	4511	0.1605
Margarine, fats, edible oils	PF	16.0	4.0	18.8	3.3	2.8	1.9	9.2	6.8	8531	0.1422
Citrus fruit	UPF	40.2	1.3	43.7	1.2	3.5	1.7	21.7	18.5	9127	0.1270
Stone fruit	UPF	36.7	1.5	37.3	1.5	0.6	0.2	18.7	18.0	8594	0.1004
Pome fruit	UPF	41.7	1.3	44.6	1.2	2.9	4.5	22.5	19.2	15407	0.1702
Bananas	UPF	50.1	1.0	55.3	0.9	5.3	0.7	24.0	26.0	1809	0.0861
Other fruits	UPF	33.0	1.7	34.5	1.6	1.5	1.1	17.4	15.6	14776	0.2010
Dried, frozen and tinned fruit	PF	12.1	5.4	13.9	4.6	1.8	2.1	7.3	4.8	9173	0.1568
Fruiting vegetables	UPF	74.1	0.5	79.1	0.4	5.0	0.5	35.8	38.3	9175	0.1975
Root vegetables	UPF	58.5	0.8	62.4	0.7	3.9	0.6	31.6	26.9	9016	0.1544
Salad vegetables	UPF	64.3	0.7	68.2	0.6	3.9	0.8	33.6	30.7	9911	0.2214
Brassicas	UPF	64.9	0.7	68.0	0.6	3.1	0.2	33.5	31.4	8289	0.0593
Onions	UPF	50.8	1.0	53.8	0.9	3.0	0.8	26.0	24.8	5828	0.0532
Other vegetables	UPF	32.0	1.8	35.8	1.6	3.9	0.3	17.0	15.0	9751	0.0853
Potatoes	UPF	44.1	1.2	47.1	1.1	3.0	3.9	24.7	19.3	8603	0.0942
Dried, frozen, tinned vegetables, etc.	PF	12.1	5.4	13.3	4.9	1.2	1.7	7.8	4.4	13163	0.1468
Potato products	PF	13.8	4.7	16.3	3.9	2.4	1.4	8.6	5.3	4672	0.1290
Jam and honey	PF	16.4	3.9	17.8	3.5	1.4	2.0	11.8	4.6	4135	0.1014
Chocolate	PF	14.4	4.5	16.1	3.9	1.7	1.9	9.8	4.6	6966	0.3554
Sweets and chewing gum	PF	11.1	5.9	12.4	5.2	1.3	1.7	7.6	3.5	4597	0.1257
Ice-cream	PF	13.9	4.6	17.5	3.6	3.6	2.6	8.4	5.5	5595	0.1372
Sugar	PF	11.4	5.8	13.2	4.9	1.8	0.5	6.7	4.7	2598	0.0384
Soups, spices, sauces	PF	11.4	5.7	13.3	4.8	1.9	2.2	7.6	3.9	22626	0.4759
Ready-made foods	PF	12.2	5.3	13.5	4.8	1.3	3.1	7.9	4.2	7567	0.3276
Coffee	PF	14.0	4.6	18.7	3.4	4.6	1.4	6.8	7.2	6222	0.1686
Instant coffee	PF	11.5	5.7	16.4	3.9	4.9	0.8	6.7	4.8	2764	0.0544
Tea	PF	14.4	4.4	16.6	3.8	2.2	2.0	8.6	5.8	5881	0.0715
Cocoa and nutritional beverages	PF	15.2	4.2	17.2	3.7	2.0	1.2	10.6	4.6	2052	0.0351
Natural mineral water	PF	8.7	7.6	10.8	6.1	2.1	0.8	5.6	3.1	3564	0.1998
Soft drinks	PF	12.7	5.1	15.1	4.2	2.4	1.4	8.5	4.2	8886	0.2986
Fruit or vegetable juices	PF	11.4	5.7	13.0	5.0	1.6	1.3	8.1	3.3	4164	0.1580
Spirits/brandies	PF	12.2	5.3	13.8	4.7	1.6	1.6	8.2	4.0	8122	0.1419
Liqueurs and aperitifs	PF	12.1	5.4	14.4	4.5	2.3	0.7	7.8	4.3	6724	0.0604
Swiss red wine	PF	13.2	4.9	14.9	4.3	1.7	2.7	8.6	4.6	10301	0.1100

Table 9 – continued from previous page

Foreign red wine	PF	13.2	4.9	15.7	4.1	2.5	3.4	8.8	4.4	11194	0.3623
Swiss white wine	PF	12.5	5.2	14.0	4.6	1.4	2.5	8.3	4.2	9499	0.1500
Foreign white wine	PF	12.4	5.2	14.6	4.4	2.2	3.1	7.5	4.8	2496	0.0426
Sparkling wine	PF	16.5	3.8	22.6	2.7	6.1	1.7	9.6	6.9	4552	0.1005
Beer	PF	14.9	4.3	16.9	3.7	2.0	1.7	10.2	4.7	6822	0.1435
Men's coats, jackets	IND	17.0	3.7	21.8	2.8	4.9	3.5	8.7	8.3	8766	0.2196
Men's suits	IND	15.2	4.2	27.0	2.2	11.8	4.1	8.4	6.9	1883	0.0842
Men's trousers	IND	13.3	4.9	25.0	2.4	11.8	3.4	7.7	5.6	4584	0.2502
Men's shirts	IND	13.9	4.6	22.9	2.7	9.0	2.6	7.5	6.5	3463	0.1476
Men's sweaters	IND	15.4	4.2	21.3	2.9	5.9	3.7	8.1	7.3	4774	0.1932
Men's underwear	IND	8.1	8.2	10.7	6.2	2.5	1.8	5.1	3.1	6071	0.1333
Men's Sportswear	IND	13.8	4.7	14.9	4.3	1.2	5.4	7.4	6.4	6174	0.0863
Women's coats, jackets	IND	20.8	3.0	21.5	2.9	0.7	3.0	10.1	10.7	2927	0.0672
Women's costumes, trouser suits, dresses	IND	25.7	2.3	32.3	1.8	6.6	4.1	12.9	12.8	6190	0.1812
Women's skirts	IND	22.5	2.7	34.4	1.6	11.9	4.2	11.2	11.3	3288	0.0918
Women's trousers	IND	19.9	3.1	31.2	1.9	11.3	3.7	10.5	9.4	6085	0.3341
Women's jackets	IND	22.6	2.7	28.9	2.0	6.3	3.6	11.3	11.3	4886	0.3071
Women's blouses	IND	22.8	2.7	32.7	1.7	10.0	4.5	11.1	11.6	3410	0.1487
Women's jumpers	IND	19.3	3.2	23.4	2.6	4.1	3.5	10.0	9.3	7692	0.3995
Women's underwear	IND	11.1	5.9	14.6	4.4	3.6	2.6	6.9	4.2	6956	0.3266
Women's sportswear	IND	15.4	4.1	16.9	3.7	1.5	5.9	8.2	7.2	6131	0.1024
Children's coats and jackets	IND	23.8	2.5	24.7	2.4	0.8	5.0	11.6	12.2	2412	0.0458
Children's trousers and skirts	IND	26.6	2.2	37.4	1.5	10.8	5.1	14.7	12.0	3520	0.0895
Children's jerseys	IND	24.5	2.5	31.1	1.9	6.6	4.7	12.9	11.6	3801	0.0963
Baby clothes	IND	19.7	3.2	23.1	2.6	3.4	4.3	11.6	8.1	1809	0.1003
Children's hosiery and underwear	IND	14.3	4.5	20.5	3.0	6.2	3.2	8.1	6.2	4415	0.0828
Children's sportswear	IND	16.4	3.9	18.2	3.5	1.8	5.1	8.8	7.6	4428	0.0455
Garment fabrics	IND	6.4	10.5	7.4	9.0	1.0	1.1	3.8	2.6	2575	0.0430
Haberdashery and knitting wool	IND	6.8	9.9	7.0	9.5	0.2	1.8	5.5	1.3	3415	0.0895
Other clothing accessories	IND	10.2	6.5	14.0	4.6	3.9	2.6	5.9	4.3	2265	0.1129
Garment alterations	SER	5.0	13.6	5.0	13.6	0.0	0.5	3.5	1.5	4037	0.0292
Upkeep of textiles	SER	5.6	12.1	5.9	11.4	0.3	0.3	4.3	1.3	8176	0.1070
Women's footwear	IND	15.9	4.0	21.2	2.9	5.3	5.6	9.0	6.8	11848	0.4186
Men's footwear	IND	14.6	4.4	19.0	3.3	4.4	5.4	8.2	6.4	10154	0.2753
Children's footwear	IND	13.8	4.7	18.2	3.4	4.5	6.1	7.5	6.3	9071	0.1521
Shoe repairs	SER	5.6	12.0	5.6	12.0	0.0	0.3	4.8	0.8	6189	0.0263
Products for housing maintenance and repair	IND	10.3	6.4	11.2	5.8	0.9	2.5	7.3	3.0	7340	0.1100
Heating oil	EN	92.7	0.3	93.0	0.3	0.3	0.7	53.6	39.1	10223	1.1644
Wood	EN	5.5	12.2	6.0	11.2	0.5	0.8	3.9	1.7	1696	0.0523
Living room	IND	10.7	6.1	11.3	5.8	0.6	4.8	7.5	3.1	18230	0.4121
Bedroom	IND	8.8	7.5	9.6	6.9	0.7	3.7	6.5	2.3	12793	0.4487
Kitchen and garden	IND	11.1	5.9	11.9	5.5	0.8	4.7	7.6	3.5	4437	0.1819
Furnishings	IND	10.9	6.0	12.0	5.4	1.0	5.6	7.7	3.3	2941	0.4530
Floor coverings and carpets	IND	10.2	6.4	10.8	6.1	0.6	3.4	6.4	3.9	4658	0.1595
Bed linen and household linen	IND	5.8	11.5	6.5	10.4	0.6	3.4	3.6	2.2	12248	0.1848
Curtains and curtain accessories	IND	7.2	9.3	7.5	8.9	0.3	3.0	5.3	1.9	3480	0.0859
Major household appliances	IND	23.6	2.6	24.1	2.5	0.5	7.4	17.3	6.3	12438	0.2746
Smaller electric household appliances	IND	14.1	4.6	15.4	4.2	1.3	6.0	7.9	6.2	11723	0.3382
Kitchen utensils	IND	12.7	5.1	13.3	4.9	0.6	3.8	8.5	4.1	7399	0.1771
Tableware and cutlery	IND	9.9	6.6	11.0	6.0	1.1	2.3	7.3	2.6	14664	0.1675
Other household utensils	IND	7.4	9.0	7.8	8.5	0.4	2.7	5.0	2.4	2507	0.0805
Motorized tools for DIY and garden	IND	13.3	4.9	13.9	4.6	0.6	4.7	8.2	5.1	5915	0.0785
Tools for house and garden	IND	12.2	5.3	12.5	5.2	0.2	2.4	8.7	3.6	4561	0.0857
Equipment and other accessories for house and garden	IND	10.1	6.5	10.8	6.1	0.6	2.4	6.6	3.5	7138	0.3101
Detergents and cleaning products	IND	14.8	4.3	17.0	3.7	2.2	2.7	8.9	5.9	20738	0.4068
Cleaning articles	IND	11.5	5.7	12.1	5.4	0.6	2.6	7.7	3.8	3477	0.0897
Other household articles	IND	9.9	6.6	11.1	5.9	1.2	2.3	6.4	3.5	13530	0.2847
Household cleaning services	SER	12.0	5.4	12.0	5.4	0.0	0.2	11.9	0.1	1300	0.3606

Table 9 – continued from previous page

Therapeutic appliances	IND	12.9	5.0	13.0	5.0	0.1	2.0	8.1	4.8	5167	0.4402
New cars	IND	27.7	2.1	27.8	2.1	0.1	5.9	20.7	7.0	3947	2.3048
Second-hand cars	IND	93.9	0.2	93.9	0.2	0.0	8.2	30.0	63.9	6837	0.9647
Motorcycles	IND	17.4	3.6	17.5	3.6	0.1	3.2	10.2	7.2	6523	0.1613
Bicycles	IND	9.5	7.0	9.7	6.8	0.3	4.1	5.1	4.4	18632	0.1525
Spare parts	IND	24.7	2.4	24.8	2.4	0.1	2.6	17.2	7.5	15474	0.2858
Tyres and accessories	IND	31.7	1.8	32.3	1.8	0.6	2.8	15.7	16.0	12941	0.0703
Maintenance material	IND	23.4	2.6	23.9	2.5	0.5	1.9	13.9	9.4	7608	0.0233
Fuels	EN	87.0	0.3	90.3	0.3	3.3	1.0	45.3	41.7	4003	2.7869
Repair services and work	SER	23.1	2.6	23.1	2.6	0.0	0.8	17.4	5.7	3013	0.6709
Air transport	SER	64.9	0.7	67.8	0.6	2.8	5.2	36.8	28.2	639	0.3088
Telephone equipment	IND	32.2	1.8	34.6	1.6	2.4	20.0	10.1	22.2	2545	0.1122
Television sets	IND	23.1	2.6	24.2	2.5	1.1	12.5	7.4	15.7	8928	0.2442
Audio appliances	IND	15.7	4.1	16.4	3.9	0.7	8.4	7.9	7.8	12423	0.1658
Photographic, cinematographic equipment and optical instruments	IND	23.1	2.6	24.4	2.5	1.3	9.8	7.6	15.5	14835	0.1214
PC hardware	IND	39.5	1.4	41.1	1.3	1.7	22.1	13.2	26.3	14322	0.3800
Computer software	IND	28.7	2.0	29.8	2.0	1.1	9.1	13.8	14.9	2453	0.0654
Office machine	IND	26.8	2.2	27.2	2.2	0.4	5.0	12.0	14.8	1830	0.0106
Recording media	IND	11.4	5.7	12.1	5.4	0.7	4.0	5.3	6.1	18023	0.3438
Repair and installation	SER	5.6	11.9	5.8	11.5	0.2	0.4	3.7	1.9	1028	0.0447
Musical instruments	IND	14.5	4.4	14.8	4.3	0.3	3.4	9.8	4.7	1199	0.0686
Games, toys and hobbies	IND	11.1	5.9	11.6	5.6	0.5	4.2	6.0	5.1	10158	0.4970
Winter sports equipment	IND	13.9	4.6	14.0	4.6	0.1	6.2	7.5	6.4	14637	0.2772
Summer/year-round sports articles, camping equipment	IND	10.1	6.5	10.7	6.1	0.6	6.3	5.3	4.9	17103	0.1816
Plants and flowers	IND	15.7	4.1	17.3	3.6	1.6	0.8	8.9	6.8	28922	0.6816
Pets and related products	IND	10.5	6.2	11.7	5.6	1.2	1.7	6.8	3.8	7763	0.4010
Veterinary services for pets	SER	10.2	6.4	10.2	6.4	0.0	0.0	9.9	0.3	2732	0.1236
Sporting events	SER	10.9	6.0	11.6	5.6	0.6	0.5	7.4	3.5	632	0.0444
Mountain railways, ski lifts.	SER	0.0		0.0		0.0	0.0	0.0	0.0	332	0.2800
Cinema	SER	7.0	9.5	7.0	9.5	0.0	0.5	5.9	1.1	3108	0.2733
Theatre and concerts	SER	12.0	5.4	12.0	5.4	0.0	2.6	8.5	3.5	6796	0.2236
Photographic services	SER	4.9	13.8	6.5	10.2	1.6	1.1	3.0	1.9	11365	0.1879
Leisure-time courses	SER	14.6	4.4	14.7	4.4	0.1	4.5	11.5	3.2	3810	0.5220
Newspapers, purchased singly	IND	13.4	4.8	13.7	4.7	0.3	0.8	10.7	2.7	933	0.2392
Newspapers, by subscription	IND	18.3	3.4	18.3	3.4	0.0	0.3	16.6	1.7	1176	0.6308
Other printed matter	IND	6.0	11.1	6.2	10.9	0.1	2.0	4.0	2.0	5902	0.1435
Writing and drawing materials	IND	13.5	4.8	14.5	4.4	1.1	1.5	8.8	4.6	20608	0.2902
Package holidays	SER	28.5	2.1	29.3	2.0	0.8	4.3	16.5	12.0	16176	1.3187
Life-long learning	SER	11.9	5.5	11.9	5.5	0.0	3.8	8.8	3.1	4077	0.1833
Meals taken in restaurants and cafs	SER	9.1	7.3	9.3	7.1	0.2	1.5	7.0	2.0	46673	3.9644
Wine taken in restaurants	SER	8.9	7.5	9.0	7.3	0.1	2.1	7.6	1.3	9887	0.7257
Beer taken in restaurants	SER	10.9	6.0	11.2	5.8	0.3	1.5	9.3	1.6	5431	0.5560
Spirits, other alcoholic drinks taken in restaurants	SER	5.7	11.9	5.7	11.8	0.1	1.0	4.1	1.5	7450	0.1222
Coffee and tea taken in restaurants	SER	11.6	5.6	12.0	5.4	0.4	0.3	11.0	0.7	9354	0.7075
Mineral water and soft drinks taken in restaurants	SER	10.7	6.2	10.8	6.1	0.1	1.0	8.9	1.8	6345	0.7323
Other non-alcoholic beverages taken in restaurants	SER	9.4	7.0	9.8	6.7	0.4	1.2	7.7	1.7	3195	0.0470
Takeaway food	SER	7.4	9.0	7.8	8.6	0.4	1.5	6.2	1.2	7915	0.5514
Meals in canteens	SER	10.0	6.6	10.0	6.6	0.0	1.9	8.3	1.8	967	0.5065
Beverages in canteens	SER	8.4	7.9	8.4	7.9	0.0	1.8	6.4	2.0	1734	0.2285
Hotels	SER	25.4	2.4	27.9	2.1	2.5	0.3	12.8	12.7	36795	0.8109
Alternative accommodation facilities	SER	22.5	2.7	22.5	2.7	0.0	2.3	18.0	4.5	5104	0.2674
Hairdressing establishments	SER	8.2	8.2	8.2	8.1	0.0	0.5	7.6	0.5	15693	0.8781
Soaps and foam baths	IND	10.3	6.4	11.4	5.7	1.1	3.0	6.8	3.5	12179	0.1416
Hair-care products	IND	13.6	4.7	15.1	4.2	1.5	2.6	9.5	4.2	11393	0.2289
Dental-care products	IND	12.1	5.4	13.5	4.8	1.5	2.0	7.3	4.7	6599	0.1380
Beauty products and cosmetics	IND	12.7	5.1	13.7	4.7	1.0	2.9	8.6	4.1	28311	0.3748
Paper articles for personal hygiene	IND	13.9	4.6	15.4	4.1	1.5	2.2	9.6	4.3	13709	0.3872

Table 9 – continued from previous page

First aid material	IND	9.4	7.0	10.2	6.4	0.8	2.2	6.5	2.9	5343	0.0405
Personal care appliances, electric	IND	10.0	6.5	10.5	6.2	0.5	2.6	6.8	3.3	10086	0.0256
Personal care appliances	IND	13.7	4.7	14.9	4.3	1.2	7.3	8.1	5.6	3265	0.0525
Watches	IND	6.2	10.8	6.2	10.8	0.0	4.0	5.0	1.2	2348	0.4244
Other personal effects	IND	11.0	6.0	12.9	5.0	2.0	2.9	7.1	3.9	11468	0.3097
Car insurance	SER	8.3	8.0	8.3	8.0	0.0	5.9	7.1	1.3	7063	0.4708
Financial services	SER	16.2	3.9	16.2	3.9	0.0	3.6	11.1	5.2	388	0.0981
Other services	SER	16.5	3.9	16.6	3.8	0.1	1.1	14.5	2.0	2216	0.1815

IP: Index position; *UPF*: Unprocessed food; *PF*: Processed food; *IND*: Industrial products; *EN*: Energy; *SER*: Services; *fpc*: Frequency of price changes (%); *d*: Implied duration (Quarters); *fspc*: Frequency of sales price changes (%); *fpto:* Frequency of price changes due to product turnover (%); O_1: Number of price quotes; *W*: Average CPI expenditure weight; *s* = including sales prices.

Table 10: Statistics across index positions (Q1 2000–Q4 2005)

IP	Sector	Size	$Size^+$	$Size^-$	$Size^s$
Rice	PF	10.8	11.0	10.6	17.4
Flour	PF	10.9	10.0	11.6	14.0
Bread	PF	7.1	6.5	9.2	10.0
Small baked goods	PF	11.8	11.7	12.3	14.3
Viennese pastries, pastry products	PF	11.8	11.4	13.8	18.8
Biscuit/rusk products	PF	10.9	10.6	11.2	16.3
Pasta	PF	12.9	12.7	13.2	19.9
Other cereal products	PF	10.8	10.6	11.0	17.2
Beef	UPF	12.5	12.5	12.5	13.3
Veal	UPF	9.5	9.9	9.0	9.9
Pork	UPF	13.9	14.7	12.8	14.2
Lamb	UPF	12.5	12.5	12.5	14.5
Poultry	UPF	14.8	14.0	16.6	18.4
Other meat	UPF	14.2	14.7	13.5	20.0
Sausages	PF	12.8	12.1	14.9	16.3
Cooked meat	PF	11.7	11.5	12.2	14.0
Processed meat	PF	12.4	11.9	13.4	15.7
Fresh fish	UPF	14.9	16.5	12.8	17.5
Frozen fish	UPF	10.6	10.1	11.5	13.0
Tinned fish and smoked fish	PF	12.3	12.4	12.2	15.2
Whole milk	PF	6.7	6.1	7.4	8.8
Other type of milk	PF	6.7	6.0	7.5	7.6
Hard cheese	PF	11.8	11.9	11.8	14.6
Other cheese	PF	10.5	10.0	11.2	13.6
Other dairy products	PF	12.1	11.6	12.9	17.5
Cream	PF	10.8	10.3	11.2	62.0
Eggs	UPF	9.6	9.4	9.9	12.9
Butter	PF	6.4	6.5	6.1	7.9
Margarine, fats, edible oils	PF	9.4	9.5	9.2	12.8
Citrus fruit	UPF	26.0	29.5	21.7	27.4
Stone fruit	UPF	42.6	55.9	29.9	43.3
Pome fruit	UPF	19.9	21.8	17.6	20.0
Bananas	UPF	15.7	18.9	12.8	16.6
Other fruits	UPF	31.2	37.6	24.2	32.2
Dried, frozen and tinned fruit	PF	12.0	12.1	11.7	14.5
Fruiting vegetables	UPF	28.5	35.2	22.3	28.3
Root vegetables	UPF	24.0	27.1	20.3	24.0
Salad vegetables	UPF	30.5	35.6	24.9	31.2
Brassicas	UPF	30.5	37.1	23.4	30.3
Onions	UPF	29.0	35.0	22.7	28.8
Other vegetables	UPF	22.1	24.9	19.1	22.2
Potatoes	UPF	23.5	25.9	20.6	23.9
Dried, frozen, tinned vegetables, etc.	PF	10.2	9.6	11.3	12.3
Potato products	PF	10.8	10.3	11.8	12.9

Table 10 – continued from previous page

Jam and honey	PF	9.0	8.8	9.6	10.6
Chocolate	PF	9.5	8.9	10.9	14.3
Sweets and chewing gum	PF	12.4	11.7	13.7	25.3
Ice-cream	PF	12.2	11.4	13.5	20.4
Sugar	PF	8.6	8.3	8.9	13.2
Soups, spices, sauces	PF	10.4	10.1	11.0	14.6
Ready-made foods	PF	10.8	9.8	12.6	13.6
Coffee	PF	11.0	12.1	10.1	14.5
Instant coffee	PF	8.0	7.7	8.3	11.4
Tea	PF	12.7	12.8	12.4	20.9
Cocoa and nutritional beverages	PF	7.0	6.1	9.4	14.6
Natural mineral water	PF	11.1	10.7	12.0	14.6
Soft drinks	PF	10.3	9.7	11.5	28.8
Fruit or vegetable juices	PF	8.8	7.9	11.2	13.6
Spirits/brandies	PF	6.3	6.2	6.7	10.8
Liqueurs and aperitifs	PF	6.1	5.8	6.6	12.5
Swiss red wine	PF	8.3	7.5	9.9	11.6
Foreign red wine	PF	10.5	9.9	11.7	17.6
Swiss white wine	PF	8.2	7.5	9.8	11.9
Foreign white wine	PF	10.3	9.1	12.1	16.9
Sparkling wine	PF	8.3	7.7	9.1	11.8
Beer	PF	9.4	9.0	10.2	13.5
Men's coats, jackets	IND	31.4	37.6	25.0	37.0
Men's suits	IND	26.5	29.9	22.4	33.3
Men's trousers	IND	30.4	35.3	24.1	42.5
Men's shirts	IND	31.8	35.9	27.1	42.1
Men's sweaters	IND	35.3	42.2	27.6	43.4
Men's underwear	IND	17.6	17.0	18.6	28.0
Men's Sportswear	IND	21.0	22.6	19.2	27.6
Women's coats, jackets	IND	35.9	43.2	28.9	36.3
Women's costumes, trouser suits, dresses	IND	37.1	44.8	29.2	40.4
Women's skirts	IND	38.0	46.3	29.5	44.2
Women's trousers	IND	34.5	42.0	26.2	43.0
Women's jackets	IND	37.2	45.9	28.0	42.8
Women's blouses	IND	39.0	48.8	29.8	45.8
Women's jumpers	IND	39.3	47.7	30.6	42.9
Women's underwear	IND	16.6	17.9	14.5	32.9
Women's sportswear	IND	22.3	24.2	20.3	26.8
Children's coats and jackets	IND	36.2	43.6	29.1	36.5
Children's trousers and skirts	IND	37.6	45.4	28.2	43.5
Children's jerseys	IND	36.3	44.0	27.8	42.2
Baby clothes	IND	28.3	31.4	24.0	30.8
Children's hosiery and underwear	IND	21.5	23.0	19.7	30.4
Children's sportswear	IND	26.4	29.9	22.5	29.2
Garment fabrics	IND	16.7	14.7	19.4	22.6
Haberdashery and knitting wool	IND	9.3	7.9	16.7	434.5
Other clothing accessories	IND	22.7	24.7	20.0	29.7
Garment alterations	SER	17.0	17.6	15.4	20.7
Upkeep of textiles	SER	11.2	11.3	10.9	14.0
Women's footwear	IND	23.5	24.6	21.9	27.8
Men's footwear	IND	23.3	25.6	20.4	28.2
Children's footwear	IND	22.1	24.1	19.8	26.2
Shoe repairs	SER	7.4	7.6	6.5	9.8
Products for housing maintenance and repair	IND	10.3	9.6	12.1	156.4
Heating oil	EN	12.0	13.4	10.2	12.0
Wood	EN	11.7	10.7	14.5	14.8
Living room	IND	8.0	7.2	10.0	11.5
Bedroom	IND	7.9	6.6	11.7	10.1
Kitchen and garden	IND	10.2	9.2	12.6	13.1
Furnishings	IND	10.5	8.6	15.4	18.2
Floor coverings and carpets	IND	13.3	11.9	15.7	14.9
Bed linen and household linen	IND	14.4	13.6	15.6	17.4

Table 10 – continued from previous page

Curtains and curtain accessories	IND	8.7	7.6	11.8	10.1
Major household appliances	IND	5.5	4.4	8.4	5.9
Smaller electric household appliances	IND	9.9	8.9	11.2	12.3
Kitchen utensils	IND	9.4	8.6	11.2	23.4
Tableware and cutlery	IND	8.6	7.7	11.3	32.4
Other household utensils	IND	12.3	11.5	14.0	13.8
Motorized tools for DIY and garden	IND	10.3	9.4	11.8	12.4
Tools for house and garden	IND	8.1	7.5	9.6	44.4
Equipment and other accessories for house and garden	IND	9.9	9.5	10.8	20.1
Detergents and cleaning products	IND	11.8	11.9	11.7	72.8
Cleaning articles	IND	12.9	13.1	12.6	20.4
Other household articles	IND	13.2	13.1	13.5	54.0
Household cleaning services	SER	0.8	0.8		1.0
Therapeutic appliances	IND	6.8	5.7	8.8	9.7
New cars	IND	2.4	1.9	4.5	11.9
Second-hand cars	IND	2.5	3.5	2.0	3.0
Motorcycles	IND	4.6	3.1	6.8	13.3
Bicycles	IND	12.0	13.7	10.1	23.4
Spare parts	IND	5.4	4.8	6.7	10.3
Tyres and accessories	IND	6.3	5.5	7.1	7.4
Maintenance material	IND	6.8	5.9	8.0	8.6
Fuels	EN	4.8	5.5	4.0	5.7
Repair services and work	SER	4.0	4.0	4.0	4.2
Air transport	SER	29.0	33.7	23.2	29.7
Telephone equipment	IND	15.7	16.9	15.1	19.3
Television sets	IND	13.9	11.5	15.1	16.1
Audio appliances	IND	12.7	11.7	13.8	21.7
Photographic, cinematographic equipment and optical instruments	IND	12.8	12.2	13.1	14.6
PC hardware	IND	11.4	10.1	12.1	12.9
Computer software	IND	8.4	8.5	8.4	12.0
Office machine	IND	8.4	9.3	7.6	11.9
Recording media	IND	14.3	13.5	15.1	20.2
Repair and installation	SER	14.7	14.6	14.9	16.3
Musical instruments	IND	7.3	6.3	9.4	7.4
Games, toys and hobbies	IND	11.8	9.4	14.8	27.4
Winter sports equipment	IND	18.2	19.2	17.1	22.0
Summer/year-round sports articles, camping equipment	IND	15.7	16.5	14.9	35.3
Plants and flowers	IND	19.2	20.4	17.6	23.2
Pets and related products	IND	8.7	8.3	9.5	27.0
Veterinary services for pets	SER	5.0	5.1	2.7	5.1
Sporting events	SER	28.2	28.6	24.8	61.1
Cinema	SER	9.5	9.6	8.9	10.0
Theatre and concerts	SER	8.1	8.3	7.7	12.7
Photographic services	SER	25.6	28.1	21.9	48.6
Leisure-time courses	SER	8.0	7.8	10.1	16.0
Newspapers, purchased singly	IND	10.0	10.7	6.1	18.6
Newspapers, by subscription	IND	3.2	3.2	3.8	11.8
Other printed matter	IND	12.6	13.0	11.8	13.4
Writing and drawing materials	IND	9.3	8.6	10.7	48.4
Package holidays	SER	8.4	8.2	8.7	14.3
Life-long learning	SER	8.7	8.5	9.6	15.0
Meals taken in restaurants and cafs	SER	8.0	7.8	8.6	11.7
Wine taken in restaurants	SER	7.4	7.3	8.0	8.8
Beer taken in restaurants	SER	6.4	6.0	8.7	7.9
Spirits, other alcoholic drinks taken in restaurants	SER	12.4	12.3	12.9	19.1
Coffee and tea taken in restaurants	SER	5.1	5.0	6.9	5.7

Table 10 – continued from previous page

Mineral water and soft drinks taken in restaurants	SER	6.9	6.3	10.4	8.8
Other non-alcoholic beverages taken in restaurants	SER	7.4	6.8	10.3	10.2
Takeaway food	SER	9.7	9.2	12.2	11.1
Meals in canteens	SER	8.5	8.4	9.5	9.6
Beverages in canteens	SER	13.0	12.6	14.5	14.7
Hotels	SER	25.9	31.9	19.9	26.0
Alternative accommodation facilities	SER	5.2	4.5	9.4	14.6
Hairdressing establishments	SER	6.4	6.3	8.8	8.5
Soaps and foam baths	IND	9.7	9.3	10.4	22.0
Hair-care products	IND	9.6	8.7	11.8	16.4
Dental-care products	IND	9.4	8.5	10.9	16.2
Beauty products and cosmetics	IND	9.4	8.8	10.8	25.1
Paper articles for personal hygiene	IND	10.4	9.5	12.5	30.6
First aid material	IND	7.2	7.2	7.4	14.6
Personal care appliances, electric	IND	11.2	10.6	12.5	23.6
Personal care appliances	IND	10.7	9.4	12.5	13.0
Watches	IND	9.2	8.8	10.6	9.9
Other personal effects	IND	14.1	13.5	15.3	30.9
Car insurance	SER	7.6	7.6	7.4	31.4
Financial services	SER	26.8	32.1	12.7	29.1
Other services	SER	4.1	3.7	9.9	8.6

IP: Index position; *UPF*: Unprocessed food; *PF*: Processed food; *IND*: Industrial products; *EN*: Energy; *SER*: Services; *Size*: Size of price changes (%); *s* = including sales prices.

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