



VOLATILITY OF RETAIL PRICES OF ROASTED COFFEE IN SELECTED COUNTRIES

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**Table 1: Average imports of selected
importing countries (60-kg bags)**

	Period average			
	1975-2010	1975-1989	1990-2010	2001-2010
Belgium	2 061 965	1 333 209	2 582 505	3 439 960
Finland	828 914	810 502	842 065	864 716
France	4 618 487	4 278 063	4 861 647	4 794 670
Germany	9 660 584	7 063 878	11 515 374	13 186 563
Italy	3 996 306	2 882 961	4 791 552	5 599 468
Japan	4 105 976	2 734 422	5 085 657	5 626 113
Netherlands	2 149 024	2 067 388	2 207 335	2 182 596
Spain	2 317 144	1 429 042	2 951 503	3 409 756
Sweden	1 197 572	1 202 305	1 194 192	1 204 085
Switzerland	945 130	821 952	1 033 114	1 249 831
United Kingdom	2 244 197	1 921 539	2 474 667	2 706 144
USA	15 776 885	14 815 873	16 463 322	17 589 431
Total selected countries	49 902 185	41 361 133	56 002 936	61 853 332
Total world imports	75 177 183	60 947 086	85 341 537	94 583 343
Share of selected in World	66.4%	67.9%	65.6%	65.4%

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Table 2: Average consumption in selected importing countries (60 kg bags)

	Period average			
	1975-2010	1975-1989	1990-2010	2001-2010
Belgium	1 153 763	1 292 468	1 054 688	1 159 698
Finland	1 013 120	1 021 886	1 006 859	1 037 701
France	5 282 614	5 134 120	5 388 681	5 352 484
Germany	8 951 133	8 121 326	9 543 852	9 166 608
Italy	4 612 022	3 865 988	5 144 903	5 582 554
Japan	5 232 742	3 549 774	6 434 862	7 054 535
Netherlands	2 020 052	2 037 111	2 007 867	1 673 082
Spain	2 487 205	1 832 585	2 954 791	3 021 731
Sweden	1 459 820	1 641 920	1 329 749	1 226 712
Switzerland	819 448	685 287	915 278	948 660
United Kingdom	2 397 683	2 169 977	2 560 329	2 713 515
USA	18 956 094	18 219 098	19 482 520	20 741 432
Total selected countries	54 385 697	49 571 540	57 824 380	59 678 714
Total consumption in importing countries	75 177 183	60 947 086	85 341 537	94 583 343
Share of selected in World	72.3%	81.3%	67.8%	63.1%

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Table 3: Average retail prices of roasted coffee in selected importing countries (US cents/lb)

	Period average			
	1975-2010	1975-1989	1990-2010	2001-2010
Belgium	367.58	335.19	390.72	427.49
Finland 1/	285.22	282.43	286.28	282.43
France	311.20	341.60	289.49	296.79
Germany	395.41	398.15	393.46	394.72
Italy	490.37	370.84	575.74	626.35
Japan 1/	1 036.91	859.94	1 104.32	789.47
Netherlands 2/	330.16	304.67	349.28	374.93
Spain 3/	340.44	335.39	343.57	342.39
Sweden	341.80	337.48	344.89	320.37
Switzerland 4/	436.86	381.61	488.66	504.40
United Kingdom 5/	1 133.69	824.75	1 354.35	1 488.22
USA 6/	305.00	273.42	328.69	325.46

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Retail price volatility indexes

- ▶ On the basis of observations of monthly variations in retail prices, volatility during one year will be calculated.
- ▶ Measurement will be based on the following equations:

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Retail price volatility indexes

$$\text{Equation 1: } \text{Var} (P_m, P_{m-1}) = \text{Ln} (P_m/P_{m-1})$$

Var = variation in retail price from one month to the next

P_m = retail price for the month

P_{m-1} = retail price for the previous month

Ln = Napierian logarithm

$$\text{Equation 2: } \sigma = \sqrt{\frac{\sum_{M=1}^N \text{Ln}(P_M/P_{M-1})}{N}}$$

v = square root; N = Total number of months; σ = standard deviation for the month

$$\text{Volatility} = \sigma \times \sqrt{N}$$

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Retail price volatility indexes

- ▶ The volatility index for the ICO composite indicator is also shown for comparison purposes.
- ▶ The volatility of the ICO composite indicator price is higher than the one of retail price.
- ▶ Presumably, retail prices are more stable than the ICO composite indicator price as they take into account other components including logistics, marketing, processing, taxes and profit.

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**Table 4: Volatility index averages
(calculated from prices in US cents/lb)**

	Period average			
	1975-2010	1975-1989	1990-2010	2001-2010
Belgium	11.2%	13.5%	9.6%	9.5%
Finland	12.5%	11.4%	12.9%	11.5%
France	11.7%	15.1%	9.3%	8.8%
Germany	10.2%	9.9%	10.3%	10.1%
Italy	8.8%	9.5%	8.4%	8.3%
Japan	15.6%	11.2%	17.3%	21.2%
Netherlands	12.7%	16.1%	10.3%	8.7%
Spain	10.6%	11.8%	9.8%	8.4%
Sweden	13.6%	15.4%	12.3%	10.0%
Switzerland	11.9%	11.3%	12.4%	11.0%
United Kingdom	10.8%	10.6%	10.9%	10.1%
USA	9.1%	9.0%	9.2%	8.5%
ICO composite	23.3%	25.2%	22.0%	17.8%

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**Table 5: Average retail prices
(in national currencies)**

		Period average				Variation from 1975-1989 to 1990-2000
		1975-2010	1975-1989	1990-2010	2001-2010	
Belgium	(BFF/kg)	288.37	293.97	284.37	299.56	-3.3%
Finland	(FMk\$/kg)	30.53	31.01	30.35	29.45	-2.1%
France	(FF/kg)	38.76	44.60	34.50	34.23	-22.6%
Germany	(DM/kg)	16.02	19.25	13.72	13.03	-28.7%
Italy	(Lira/kg)	15 524.84	9 793.73	19 618.50	21 038.74	100.3%
Japan	(¥/200g)	599.91	690.22	564.23	412.60	-18.3%
Netherlands	(F\$/kg)	14.63	16.29	13.45	13.45	-17.4%
Spain	(Pst/kg)	931.54	813.09	1 004.86	1 024.87	23.6%
Sweden	(SKr/kg)	51.25	43.90	56.59	54.62	28.9%
Switzerland	(SwF/kg)	15.61	16.20	15.05	15.42	-7.1%
United Kingdom	(£/100g)	1.49	1.06	1.80	1.92	69.5%
USA	(US\$/lb)	3.03	2.73	3.26	3.22	19.3%

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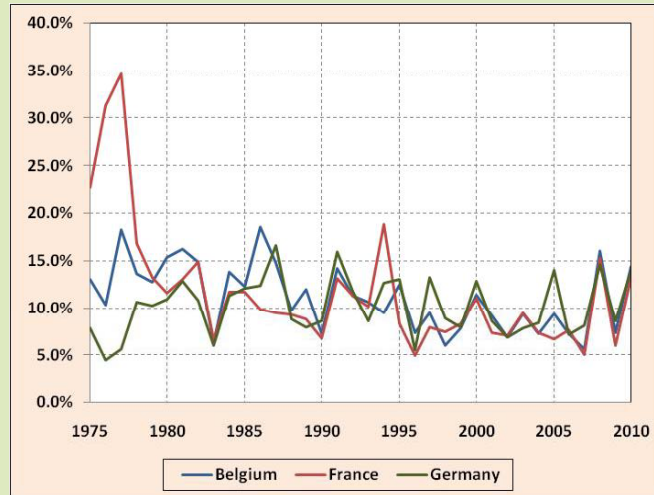
**Table 6: Volatility index averages
(calculated from prices in national currencies)**

	Period average			
	1975-2010	1975-1989	1990-2010	2001-2010
Belgium	5.3%	7.6%	3.7%	2.9%
Finland	7.5%	6.8%	7.7%	7.7%
France	5.6%	9.6%	2.7%	1.9%
Germany	5.6%	4.2%	6.6%	7.1%
Italy	2.0%	3.1%	1.1%	0.4%
Japan	11.1%	5.2%	13.4%	20.1%
Netherlands	7.4%	11.8%	4.1%	0.5%
Spain	4.8%	7.3%	3.2%	1.8%
Sweden	9.5%	13.0%	7.0%	4.1%
Switzerland	5.8%	4.9%	6.6%	6.4%
United Kingdom	6.5%	5.9%	6.9%	6.9%
USA	9.1%	9.0%	9.1%	8.3%

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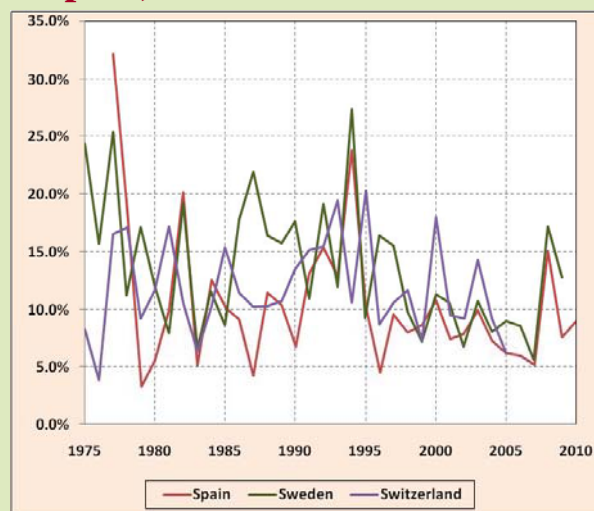
Retail price volatility indexes Belgium, France and Germany



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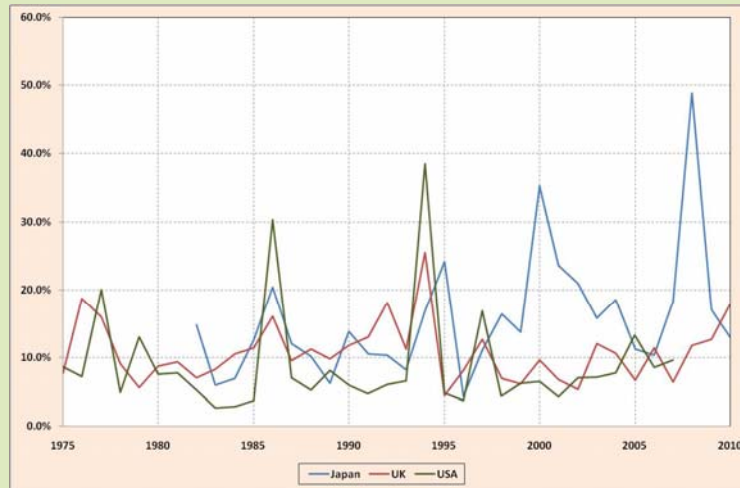
Retail price volatility indexes Spain, Sweden and Switzerland



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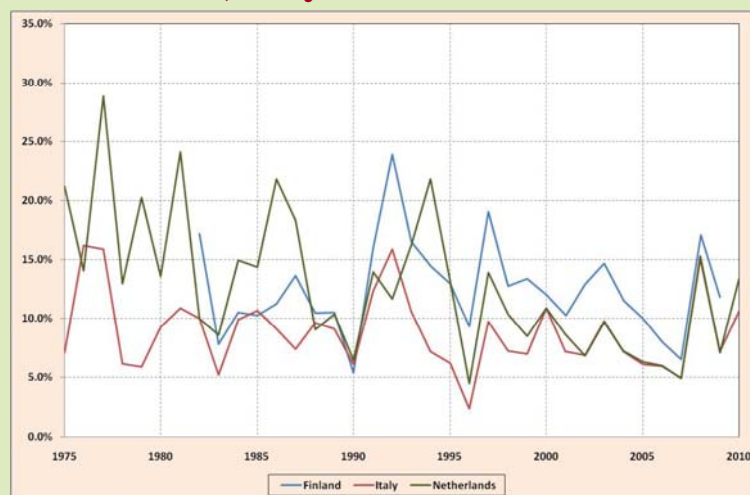
Retail price volatility indexes Japan, UK and USA



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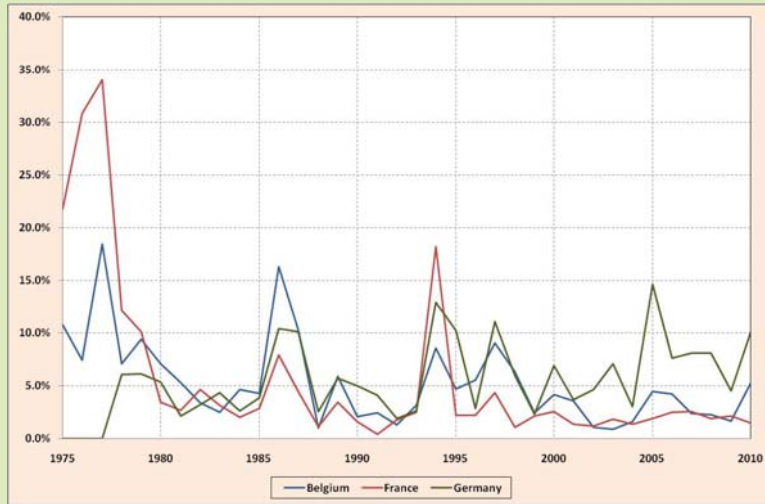
Retail price volatility indexes Finland, Italy and the Netherlands



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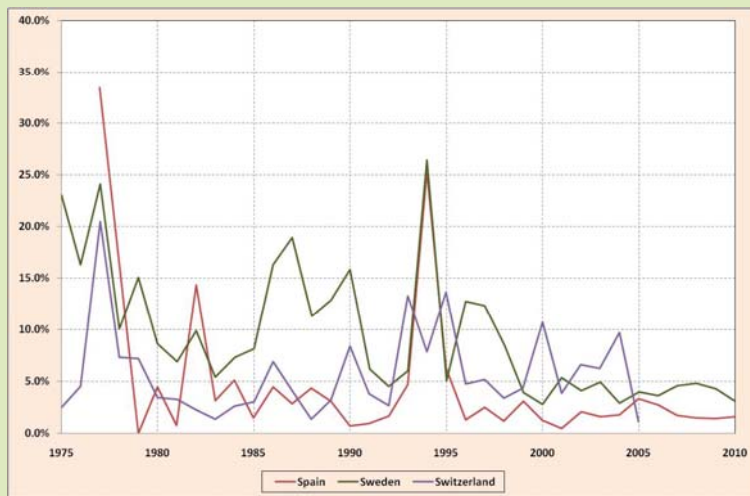
Volatility index averages Belgium, France and Germany



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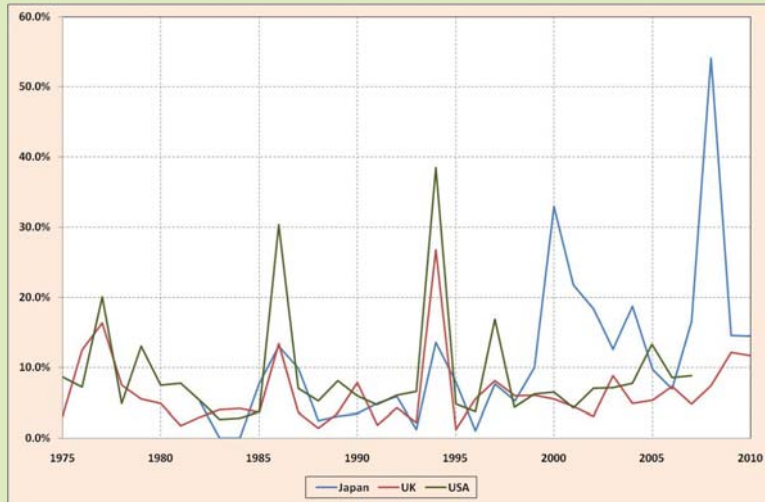
Volatility index averages Spain, Sweden and Switzerland



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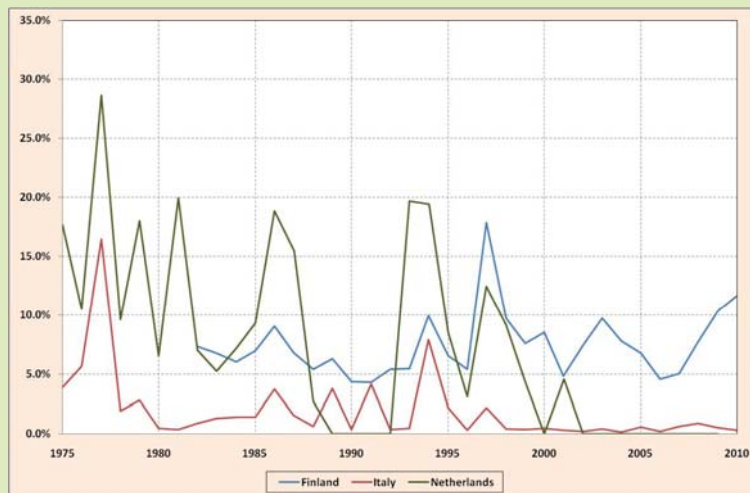
Volatility index averages Japan, UK and USA



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Volatility index averages Finland, Italy and the Netherlands



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Conclusion

- In conclusion, it should be noted that with the exception of Japan, retail price volatility in the selected importing countries weakened during the free market period. It was even weaker during the most recent period in comparison with previous years.
- In the case of retail prices expressed in United States dollars, volatility was significantly influenced by fluctuations in exchange rates between national currencies and the US dollar.

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Conclusion (cont'd)

- It should also be noted that retail prices are less volatile than the ICO composite indicator price. This could be explained by the inclusion of more stable components such as logistics, marketing and processing costs as well as taxes and profit in the determination of retail prices.

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