PURCHASING POWER PARITY AND RELATIVE
PRICE VARIABILITY: THE MISSING LINK?

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Discussion Paper 88.11
May 1988

ISSN 0811-6067
ISBN 0-86422-699-3

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Abstract

The failure of strict purchasing power parity to hold in the 1970s can be explained by the preponderance of the real shocks which involve large changes in sectoral relative prices. Previous work has attempted to measure these effects by using proxies for the prices of traded and nontraded goods. In this study we use the Divisia price variance as a measure of changes in the structure of relative prices to reexamine the case for real shocks causing deviations from parity. Using data from 21 OECD countries, the results show that an increase in the variance of relative prices at home (in relation to that abroad) depreciates the currency.

* I am grateful to Professor Kenneth W Clements for his guidance in preparing this paper. I also acknowledge the help of Peter Lai and Shirley-Ann Poulton.

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1. INTRODUCTION

Purchasing power parity (PPP) has been a major focus of empirical research since the return to floating exchange rates by major currencies in the early 1970s. PPP theory is usually presented in two versions. The "absolute version" states that exchange rate (defined as the domestic currency cost of a unit of foreign currency) is equal to the ratio of domestic to foreign prices. According to the "relative version", the percentage change in the rate is equal to the inflation differential. There seems to have emerged a consensus in the recent literature, however, that PPP is inadequate as a description of recent exchange rate changes in the short run.

Several explanations are put forward for the observed short-run departures from PPP. One is the role of sectoral relative prices as an important channel for real factors to affect exchange rates. In this paper we reexamine the case for changes in relative prices causing deviations from parity using an approach quite different from those found in the previous literature. Rather than using proxies for the prices of traded and nontraded goods as a measure of sectoral relative prices, we use the Divisia price variance for this purpose. This variance is a summary measure of changes in the relative prices of a broad basket of commodities. Consequently, it is likely to be a more satisfactory reflection of changes in real factors than the relative price of traded goods which has been used in previous research (see, for example, Clements and Frenkel, 1980).

The paper is organised as follows. A brief review of the previous literature is given in Section 2. Then follows in Section 3 a theoretical analysis of sectoral relative prices and exchange rates. In

Section 4 we introduce the Divisia price variance as a measure of the changes in sectoral relative prices. Sections 5 and 6 contain the empirical results. Some concluding comments are given in Section 7.

2. THE PREVIOUS LITERATURE

Departures from PPP have historically been linked to real factors. Based on the Ricardo-Harrod concept of divergent international productivity and real income levels, the literature has emphasised the role of real factors such as shifts in technology, tastes, commercial policies or labour force growth in causing systematic deviations from PPP through changes in sectoral relative prices (Dornbusch, 1985).

In addition to real factors, there are other situations which may lead to deviations from PPP. According to the "asset market theory", exchange rates, like the prices of other assets such as bonds and shares which are traded in organised financial markets, are much more sensitive to expectations concerning the future course of events than are national price levels. This inherent difference between exchange rates and prices means that deviations from PPP "are likely to be the rule rather than the exception" (Frenkel, 1981a, p.146).

A second situation leading to deviations from parity is due to the role played by capital flows and current account imbalances. Frenkel (1984) illustrates the link between current account imbalances and the relative price of traded goods. In this framework variations in relative prices are found to be associated with current account imbalances and deviations from PPP.

Furthermore, some authors have attempted to explain departures from PPP as a US phenomenon. In doing that, they carry out analyses

with the European currencies only and find a vastly improved performance for PPP during the 1970s (Frenkel, 1981; Manzur, 1986; Miller, 1984). The reasons for the better performance of PPP within Europe are threefold. The first is the geographical location leading to lower transport costs among the neighbouring European countries. The role of the transport costs in PPP computations is also emphasised by Aizenman (1986). A second explanation involves commercial policies and other trade practices which, because of the existence of such agencies as the EEC, have been more stable within Europe. The third argument emphasises the various institutional arrangements in Europe such as the EMS which contribute to a more integrated European economy and lower volatility of exchange rates (Frenkel, 1981a).

3. EXCHANGE RATES AND RELATIVE PRICES

Strict PPP implies that the exchange rate is determined exclusively by prices at home and abroad. The rate is largely independent of the real factors such as differential growth rates among sectors, oil embargoes, supply shocks, commodity booms and shortages and so on. Prices of goods are spatially arbitrated and, after being adjusted for trade barriers and transport costs, they are equalised across countries when expressed in terms of a common currency. The only way real factors play any role in strict PPP theory is via the effect of income on the exchange rate through the money demand equation. As incomes usually change only slowly, this effect, however, is likely to be of minor importance in the short run.

However as indicated above, the empirical record of strict PPP in the 1970s is far from satisfactory. This period is characterised by

large and, apparently, cumulative deviations from PPP. The literature seems to have converged to the notion that PPP can be expected to hold only if most of the shocks to the system are of a monetary origin which do not require changes in the structure of relative prices (Frenkel, 1981b). Accordingly, the poor performance of PPP in the 1970s can be explained by the preponderance of the real shocks to the world economy which involve large changes in sectoral relative prices (see Frenkel, 1981a, who also suggests that the poor performance is in part a US phenomenon).

The role of sectoral relative prices can be best illustrated with the model of Clements and Frenkel (1980). Let the general price level in the home country (P) be a linear homogeneous (Cobb-Douglas) function of the prices of nontraded goods (P_N) and traded goods (P_T):

$$(3.1) \quad P = P_N^b P_T^{1-b},$$

where b is the expenditure share for nontraded goods. Similarly, in the foreign country (denoted by an asterisk):

$$(3.2) \quad P^* = P_N^{*b} P_T^{*1-b}.$$

From equations (3.1) and (3.2) the ratio of traded goods prices can be expressed as

$$(3.3) \quad \frac{P_T}{P_T^*} = \frac{(P_T/P_N)^b}{(P_T^*/P_N^*)^{b^*}} \cdot \frac{P}{P^*}.$$

Let PPP apply to traded goods only, so that

$$(3.4) \quad S = \frac{P_T}{P_T^*},$$

where S is the spot exchange rate (defined as the domestic currency cost of a unit of foreign currency). Combining equations (3.4) and (3.3) and assuming for expository purposes that $b = b^*$, we obtain

$$(3.5) \quad S = \left(\frac{r}{r^*} \right)^b \cdot \left(\frac{P}{P^*} \right),$$

where $r = P_T/P_N$ and $r^* = P_T^*/P_N^*$ are the sectoral relative prices at home and abroad. Equation (3.5) links the exchange rate to the ratio of general price levels through a term which summarises the internal price structure in the two economies.

It follows from equation (3.5) that

$$(3.6) \quad \hat{S} = b (\hat{r} - \hat{r}^*) + (\hat{P} - \hat{P}^*),$$

where a hat denotes proportionate change ($\hat{x} = dx/x$). Relative PPP implies $\hat{S} = (\hat{P} - \hat{P}^*)$, so that the deviation from PPP implied by equation (3.6) is

$$b (\hat{r} - \hat{r}^*).$$

It is clear that the deviation is zero only if there is no change in the relative prices ($\hat{r} = \hat{r}^* = 0$); or, more generally, if the relative price changes are identical in both countries ($\hat{r} = \hat{r}^*$). In general, of course, there is no reason to expect relative prices to behave in this manner. Consequently, when there are large changes in sectoral relative prices, there will be deviations from strict PPP when applied to aggregate price levels.

In fact, there is good reason to expect that sectoral relative prices will change in a manner which gives rise to deviations from PPP.

Balassa (1964) argues that productivity growth in the sector producing nontraded goods (or services) is slower than that pertaining to traded goods. This causes the relative price of nontraded goods to be higher in more affluent countries. The result is that the actual value of the currency of a rich country will be systematically above its PPP level. This is the productivity bias hypothesis.

As argued by Frenkel (1981a), the issue of changes in sectoral relative prices is also related to the choice of the price index to use for testing PPP. When there are large real shocks that alter the structure of relative prices, then obviously the choice of the index becomes of critical importance.

4. MEASURING RELATIVE PRICE CHANGES

Sectoral relative prices can be measured by the ratio of prices of traded to nontraded goods. Since there are no official data available for the prices of traded and nontraded goods, empirical studies use proxies for these prices. Frenkel (1981) uses the ratio of the cost-of-living to the wholesale price index for this purpose. He argues that the cost-of-living index contains relatively more nontraded commodities than does the wholesale price index. Clements and Frenkel (1980) proxied the prices of traded goods by the wholesale price index and the prices of nontraded goods by wages.

We use a totally different approach to measure sectoral relative price changes. Let p_{it} and q_{it} be the price and quantity consumed of commodity i ($i = 1, \dots, n$) at time t . Then $M_t = \sum_{i=1}^n p_{it}q_{it}$ is total expenditure and $w_{it} = p_{it}q_{it}/M_t$ is the i^{th} budget share. Let $\bar{w}_{it}$ be the arithmetic average of w_{it} and $w_{i,t-1}$ and D be the log-change

operator ($Dx_t = \log x_t - \log x_{t-1}$). We can then define the log-change in the overall price index as

$$(4.1) \quad DP_t = \sum_{i=1}^n \bar{w}_{it} Dp_{it}.$$

This is a weighted mean of n price log-changes, the weights being the $\bar{w}_{it}$'s which are positive and add up to one. Equation (4.1) defines the Divisia price index which is a weighted first-order moment of $Dp_1, \dots, Dp_n$. The corresponding second-order moment is the Divisia price variance,

$$(4.2) \quad V_t = \sum_{i=1}^n \bar{w}_{it} (Dp_{it} - DP_t)^2.$$

This is a measure of the degree to which prices change disproportionately, or, alternatively, a measure of the degree of relative price changes between the two periods t and $t-1$. When all prices change equiproportionately, $Dp_{it} = DP_t$ ($i = 1, \dots, n$) and the variance V_t vanishes. For further details of equations (4.1) and (4.2), see Theil (1967).

The Divisia price variance for 21 countries is presented in Table 1. For Luxembourg and Switzerland V is computed with $n = 9$ commodities; for Germany and Japan $n = 8$; and in the remaining countries $n = 10$. The table also contains in the last three columns the means of the variances, the Divisia price index defined by equation (4.1) and the exchange rate log-change. In level form the exchange rates are expressed in terms of the domestic currency cost of \$US 1; these data are from the International Financial Statistics published by the International Monetary Fund (see Appendix A1 for details). All other data are from Stening (1985).

Table 1

Divisia Price Variance, Mean Inflation and Mean Exchange Rate Change For 21 Countries

Country	Divisia price variance											
	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972
1. UK	-	-	-	-	3.81	1.33	1.14	1.95	.78	1.67	2.91	4.70
2. Switzerland	2.45	1.24	2.44	2.58	3.18	1.55	5.04	4.64	2.91	2.46	2.24	4.06
3. Italy	-	-	-	-	1.46	.82	1.82	1.90	.51	1.30	2.34	3.43
4. Japan	-	-	-	-	-	-	-	-	-	-	-	-
5. France	-	-	-	-	1.72	1.82	3.23	3.81	1.46	1.10	1.01	1.42
6. Germany	4.53	1.68	1.83	2.10	1.83	2.29	4.06	9.03	2.92	.91	1.92	.78
7. Canada	.81	.71	1.50	1.70	1.85	3.51	3.43	3.09	2.16	3.98	3.37	3.51
8. Australia	7.18	9.49	8.92	2.75	4.69	1.26	1.94	2.19	6.28	5.20	5.65	1.57
9. Austria	-	-	-	-	3.46	2.37	4.96	5.79	1.90	31.64	5.14	3.42
10. Belgium	18.21	5.94	9.55	1.79	15.31	6.51	2.22	1.45	1.37	4.94	3.55	4.52
11. Denmark	-	-	-	-	-	-	-	-	-	-	-	-
12. Netherlands	1.02	.83	1.80	6.72	3.72	6.39	9.47	4.51	5.70	7.87	9.75	6.72
13. Finland	2.81	3.80	4.70	13.87	8.72	3.91	5.61	33.63	.49	2.18	1.67	3.31
14. Greece	-	-	-	-	-	-	-	-	-	-	-	-
15. Iceland	13.87	35.62	31.84	22.94	10.02	20.26	2.55	9.16	60.78	24.49	21.62	37.91
16. Ireland	-	-	-	-	-	-	-	-	-	-	-	-
17. Luxembourg	-	-	-	-	-	-	-	-	-	-	-	-
18. Norway	-	-	-	-	1.88	2.03	3.67	1.21	1.58	3.21	2.15	.82
19. Spain	-	-	-	-	9.74	2.00	7.18	9.13	7.18	8.81	3.69	8.39
20. Sweden	-	-	-	-	1.66	3.24	3.22	1.50	5.07	1.92	2.06	4.18
21. USA	.32	.68	.26	8.22	.36	2.17	2.65	1.11	1.21	.73	1.60	1.55

The year 1961, for example, refers to the transition from 1960 to 1961. All entries except those in the last two columns of the subsequent page are multiplied by 10000. The entries in the last two columns of the subsequent page are multiplied by 100.

Table 1 (Contd)

Country	Divisia price variance										Mean	Mean	Mean exchange
											variance	inflation	rate log-change
	1973	1974	1975	1976	1977	1978	1979	1980	1981		V	DP	DS
1. UK	9.90	4.55	10.09	3.55	1.82	3.98	5.36	11.65	21.96	5.36	9.56	1.88	
2. Switzerland	5.93	2.27	2.53	7.19	.17	4.11	8.53	2.49	2.76	3.37	4.55	-3.75	
3. Italy	5.18	17.65	9.14	11.28	6.75	4.28	4.49	9.95	1.61	4.94	10.13	3.52	
4. Japan	16.76	28.23	7.52	4.73	3.96	8.12	2.42	4.18	.32	8.47	8.32	-3.54	
5. France	2.80	7.42	1.98	2.52	2.81	.62	2.41	10.10	1.99	2.84	7.48	.61	
6. Germany	.37	4.33	.53	.57	1.11	.83	4.30	1.63	2.27	2.37	3.96	-2.92	
7. Canada	17.11	10.72	4.74	9.50	8.31	9.76	2.68	1.84	5.31	4.74	5.27	1.01	
8. Australia	9.60	15.40	16.51	6.62	4.44	7.69	4.21	3.50	2.87	6.09	6.58	-.13	
9. Austria	6.89	10.42	3.65	5.21	3.49	4.55	4.05	5.10	6.93	6.41	5.28	-2.85	
10. Belgium	5.09	7.59	8.85	5.36	5.10	2.74	7.59	17.61	34.54	8.09	5.13	-1.40	
11. Denmark	12.49	10.92	2.40	7.91	3.40	2.95	18.30	7.92	4.31	7.84	10.26	.27	
12. Netherlands	-	-	-	-	-	-	-	-	-	5.38	4.14	-1.35	
13. Finland	-	-	-	-	-	-	-	-	-	7.06	4.60	2.14	
14. Greece	32.50	16.87	6.47	4.82	4.46	3.74	6.36	8.53	4.38	9.79	15.58	6.82	
15. Iceland	-	-	-	-	-	-	-	-	-	24.25	10.87	7.36	
16. Ireland	17.39	19.55	14.75	11.42	11.45	20.12	6.09	-	-	14.39	13.53	2.86	
17. Luxembourg	4.80	2.71	4.00	9.74	2.57	3.95	4.87	12.49	-	5.64	6.90	-5.11	
18. Norway	.86	4.49	8.98	.68	.67	3.16	2.47	5.48	11.02	3.20	7.05	-1.30	
19. Spain	-	-	-	-	-	-	-	-	-	7.02	6.53	.88	
20. Sweden	3.91	21.89	3.43	2.67	4.24	6.16	6.43	4.71	4.21	4.74	7.43	-.10	
21. USA	14.81	6.20	3.30	4.41	3.03	4.04	4.70	9.64	3.96	3.57	4.78	-	

Looking at the third-last column of Table 1, it can be seen that the Divisia price variances range from a low of $\sqrt{2.37} = 1.5$ percent per annum for Germany to a high of $\sqrt{24.25} = 4.9$ percent per annum for Iceland. Average inflation (given in the next column) varies from 3.2 percent per annum for Germany to 15.6 percent for Greece. On the whole, these data indicate that the high-inflation countries experience a higher variability of relative prices than do the low-inflation countries. This agrees with the literature on inflation and relative prices as surveyed by Marquez and Vining (1984).

Comparing the average inflation rates with the average exchange rate changes given in the last two columns of Table 1, it is apparent that the currencies of the high-inflation countries depreciate, while the low-inflation countries have appreciating currencies. See Figure 1. It follows that these data are broadly consistent with relative PPP as a long-run tendency.

In what follows we augment the standard PPP regression equation by including the Divisia price variance as a measure of relative price variability. As the variance is based on the behaviour of prices involving a broader basket of commodities, it is likely to be a more satisfactory measure of changes in the structure of relative prices than the traditional approach of using the relative price of traded goods.

5. RESULTS

We start with the relative version of PPP which states that exchange rate is equal to the inflation differential. We formulate this as

Figure 1
Average Exchange Rate Log-change against
Average Inflation Differential

$$(5.1) \quad DS_{ct} = a_c + b_c(DP_{ct} - DP_t^*) + e_{ct} \quad c = 1, \dots, 20 \text{ countries};$$

$$t = 1, \dots, T^c \text{ years},$$

where DS_{ct} is the log-change in the exchange rate of country c (in terms of \$US) from year $t-1$ to t ; DP_{ct} is the rate of inflation at home as measured by the Divisia price index; DP_t^* is US inflation; and e_{ct} is an error term satisfying all the classical assumptions. Note that as the variables in equation (5.1) are all relative to the US, we lose the US so that there are now only 20 countries, not 21. Under PPP, the coefficients a_c and b_c should be zero and unity, respectively. The number of observations available for many of the individual country is not large enough to provide precise estimates of the coefficients for each country. (The individual country estimates are given in Appendix A4). We thus specify that $a_c = a$ and $b_c = b$ for $c = 1, \dots, 20$ and pool the data across countries. To isolate the effects of different exchange rate regimes, we apply this model separately to the pre- and post-float periods.

The pooled estimates of equation (5.1) are presented in the upper part of Table 2. As may be seen, in all cases the elasticity of the exchange rate with respect to inflation differentials is statistically significant, but smaller than unity in most cases. The values of the elasticity are higher under floating rates. The estimates of the constant term, a , are negative and, in most cases, significant.

Next, to allow for country-specific effects we include in the model country dummy variables. The results are reported in the lower part of Table 2; the estimates of the dummy variable coefficients are given in Appendix A3. It can be seen that the parameter estimates are less precise in all cases when the dummies are included.

Table 2

Exchange Rates and Consumer Prices:
Pooled Time-Series Cross-Section Data

$$DS_{ct} = a + b(DP_{ct} - DP_{ct}^*) + e_{ct}$$

(t-values in parentheses)

Period	Estimation method	a x 100	b	SEE x 100	DF	D-W	R ²
<u>Without Dummies</u>							
Whole Period	OLS	-	.669 (6.085)	7.66	292	1.59	.11
	OLS	-1.707 (3.411)	.869 (7.072)	7.53	291	1.65	.15
	CORC	-	.687 (5.418)	7.51	292	1.97	.15
	CORC	-1.684 (2.878)	.864 (6.296)	7.42	291	1.96	.17
Pre-float	OLS	-	.464 (3.672)	5.31	160	1.18	.08
	OLS	-.867 (1.762)	.603 (4.067)	5.28	159	1.20	.09
	CORC	-	.500 (3.285)	4.86	160	1.79	.23
	CORC	-.876 (1.254)	.587 (3.521)	4.85	159	1.79	.24
Post-float	OLS	-	.787 (4.473)	9.77	131	2.12	.13
	OLS	-2.471 (2.660)	1.015 (5.282)	9.55	130	2.25	.18
	CORC	-	.791 (4.769)	9.75	131	1.98	.14
	CORC	-2.536 (3.132)	1.037 (6.061)	9.46	130	2.00	.19
<u>With Dummies</u>							
Whole Period	OLS	-1.334 (.710)	.668 (3.995)	7.64	272	1.71	.18
	CORC	-1.114 (.519)	.689 (3.862)	7.57	272	1.95	.19
Pre-float	OLS	-1.271 (.673)	.174 (.846)	5.25	145	1.36	.18
	CORC	-1.217 (.480)	.384 (1.874)	4.96	145	1.79	.27
Post-float	OLS	-1.020 (.301)	.846 (2.581)	9.97	116	2.31	.20
	CORC	-1.109 (.385)	.909 (3.058)	9.82	116	2.03	.22

Note: OLS = ordinary least squares; CORC = Cochrane-Orcutt adjustment for autocorrelation; SEE = standard error of the equation; DF = degrees of freedom; D-W = Durbin-Watson statistic. The whole period has 20 countries; the pre-float and the post-float periods both have 15. For most countries, the pre-float period is 1961-1972 and the post-float 1973-1981; see Appendix A2 for details of the sample. The dummy variable coefficients are given in Appendix A3.

We now augment equation (5.1) to include the relative price variance,

$$(5.2) \quad DS_{ct} = a_c + b_c(DP_{ct} - DP_t^*) + d_c(\sqrt{V_{ct}} - \sqrt{V_t^*}) + e_{ct},$$

where $\sqrt{V_{ct}}$ is the square root of the Divisia price variance of country c in year t ; and $\sqrt{V_t^*}$ is the square-root of the US price variance. Using the square roots of the variances means that they are in terms of percent per annum (when multiplied by 100), like DP and DP^* .

As before, we pool the data and drop the country subscript on the coefficients a , b and d in equation (5.2). The results are summarised in Table 3. As can be seen, d is positive and highly significant in all cases. This finding indicates that an increase in the variance of relative prices at home (in relation to that abroad) depreciates the currency. One explanation for this is that when there is more variability of relative prices, the price system becomes less efficient in transmitting information. It becomes increasingly difficult for economic agents to extract correct signals about relative prices from the observed absolute prices (Friedman, 1977). The result is increased uncertainty in the financial markets, causing the exchange rate to depreciate. It should also be noted that the estimates of d are higher under floating rates. Thus, not only are real factors important in determining exchange rates, they are of increased importance in the current floating rate regime.

6. ADDITIONAL RESULTS WITH WHOLESALE PRICES

The Divisia indexes used in the preceding sections refer to consumer prices. It is sometimes argued that PPP should perform better

Table 3

Exchange Rates, Consumer Prices and Relative Price Variability:
Pooled Time-Series Cross-Section Data

$$DS_{ct} = a + b(DP_{ct} - DP_L^*) + d(\sqrt{V_{ct}} - \sqrt{V_L^*}) + e_{ct}$$

(t-values in parentheses)

Period	Estimation method	a x 100	b	d	SEE x 100	DF	D-W	R ²
<u>Without Dummies</u>								
Whole Period	OLS	-	.515 (4.169)	.963 (2.648)	7.58	291	1.59	.13
	OLS	-2.041 (4.075)	.709 (5.478)	1.247 (3.453)	7.39	290	1.68	.18
	CCRC	-	.534 (3.865)	.989 (2.663)	7.43	291	1.96	.17
	CCRC	-2.012 (3.491)	.711 (5.017)	1.205 (3.272)	7.30	290	1.95	.20
Pre-float	OLS	-	.180 (1.101)	.921 (2.677)	5.22	159	1.14	.12
	OLS	-1.487 (2.942)	.308 (1.862)	1.281 (3.582)	5.09	158	1.19	.16
	CCRC	-	.238 (1.404)	1.038 (3.299)	4.72	159	1.79	.28
	CCRC	-1.503 (2.152)	.338 (1.941)	1.197 (3.712)	4.67	158	1.79	.30
Post-float	OLS	-	.634 (3.475)	2.039 (2.549)	9.57	130	1.98	.17
	OLS	-2.241 (2.439)	.857 (4.262)	1.832 (2.320)	9.39	129	2.09	.21
	CCRC	-	.634 (3.474)	2.041 (2.551)	9.57	130	1.98	.17
	CCRC	-2.310 (2.702)	.892 (4.672)	1.549 (1.981)	9.37	129	1.99	.21
<u>With Dummies</u>								
Whole Period	OLS	-1.475 (.801)	.541 (3.224)	1.527 (3.493)	7.49	271	1.73	.21
	CCRC	-1.255 (.601)	.561 (3.145)	1.460 (3.397)	7.42	271	1.95	.23
Pre-float	OLS	-1.665 (.898)	.731 (.356)	1.123 (2.715)	5.14	144	1.29	.22
	CCRC	-1.555 (.603)	.262 (1.292)	1.185 (3.343)	4.79	144	1.79	.32
Post-float	OLS	- .787 (.238)	.707 (2.181)	2.369 (2.593)	9.73	115	2.13	.24
	CCRC	-.917 (.303)	.762 (2.457)	1.983 (2.163)	9.69	115	2.01	.25

See notes to Table 2.

with the wholesale prices. The reason is that the wholesale prices give smaller weight to services which are nontraded goods. To investigate this issue, in this section we use wholesale prices and redo the regressions.

The results are presented in Tables 4 and 5, where WPI denotes the wholesale price index. The coefficients for relative inflation are now around unity in all but the pre-float cases. Moreover, in all cases these estimates are highly significant. Thus it is indeed the case that PPP holds better with wholesale prices. As can be seen from Table 5, the relative price variance term is in most cases significant, but less so than before. In all cases, the explanatory power of the equations has markedly improved, reflecting the closer relationship between exchange rates and wholesale prices.

7. CONCLUSION

Departures from PPP have historically been linked to real factors that involve large changes in the sectoral relative prices. Previous research has used proxies for the prices of traded and nontraded goods as a measure of sectoral relative prices. In this paper we introduced a new approach to measure changes in the structure of relative prices and reexamined the case for such changes in causing deviations from PPP. We augmented the standard PPP regression equation by including the Divisia price variance as a measure of the relative price variability. This variance is a summary measure of changes in the relative prices of a broad basket of commodities. Consequently, it is likely to be a more comprehensive reflection of changes in real factors than the relative price of traded in terms of nontraded goods.

Table 4

Exchange Rates and Wholesale Prices:
Pooled Time-Series Cross-Section Data

$$DS_{ct} = a + b(WPI_{ct} - WPI_t^*) + e_{ct}$$

(t-values in parentheses)

Period	Estimation method	a x 100	b	SEE x 100	DF	D-W	R ²
<u>Without Dummies</u>							
Whole period	OLS	-	1.002 (11.088)	6.49	246	1.81	.33
	OLS	-.568 (1.376)	1.012 (11.182)	6.47	245	1.82	.34
	CORC	-	1.002 (10.742)	6.46	246	1.98	.34
	CORC	-.572 (1.273)	1.011 (10.846)	6.45	245	1.98	.34
Pre-float	OLS	-	.577 (3.981)	3.96	131	1.34	.10
	OLS	-.739 (2.110)	.652 (4.420)	3.91	130	1.38	.13
	CORC	-	.578 (4.059)	3.75	131	1.90	.19
	CORC	-.748 (1.587)	.618 (4.291)	3.73	130	1.90	.21
Post-float	OLS	-	1.074 (8.437)	8.45	114	2.20	.38
	OLS	-.145 (.183)	1.074 (8.404)	8.48	113	2.20	.38
	CORC	-	1.064 (8.896)	8.39	114	2.01	.39
	CORC	-.164 (.232)	1.065 (8.865)	8.42	113	2.01	.39
<u>With Dummies</u>							
Whole period	OLS	.906 (.361)	1.007 (9.165)	6.64	229	1.85	.35
	CORC	.861 (.323)	1.005 (9.054)	6.62	229	1.97	.35
Pre-float	OLS	-.451 (.335)	.614 (3.847)	4.02	118	1.42	.17
	CORC	-1.026 (.590)	.617 (4.041)	3.85	118	1.91	.23
Post-float	OLS	-.663 (.225)	1.216 (6.571)	8.82	101	2.26	.41
	CORC	-.822 (.324)	1.244 (6.809)	8.70	101	2.03	.42

See notes to Table 2.

Table 5

Exchange Rates, Wholesale Prices and Relative Price
 Variability: Pooled Time-Series Cross-Section Data

$$DS_{ct} = a + b(WPI_{ct} - WPI_L^*) + d(\sqrt{V_{ct}} - \sqrt{V_L^*}) + e_{ct}$$

(t-values in parentheses)

Period	Estimation method	a x 100	b	d	SEE x 100	DF	D-W	R ²
<hr/>								
<u>Without Dummies</u>								
Whole period	OLS	-	.965 (10.284)	.513 (1.396)	6.47	245	1.80	.34
	OLS	-.855 (1.963)	.962 (10.306)	.765 (1.978)	6.44	244	1.83	.35
	CORC	-	.965 (9.981)	.541 (1.452)	6.44	245	1.97	.34
	CORC	-.857 (1.827)	.963 (10.047)	.760 (1.948)	6.41	244	1.98	.35
Pre-float	OLS	-	.550 (3.639)	.204 (.682)	3.97	130	1.30	.10
	OLS	-1.213 (2.970)	.597 (4.047)	.746 (2.176)	3.86	129	1.31	.16
	CORC	-	.505 (3.524)	.665 (2.296)	3.70	130	1.92	.22
	CORC	-1.323 (2.521)	.539 (3.793)	.901 (2.932)	3.63	129	1.91	.26
Post-float	OLS	-	1.006 (7.510)	1.135 (1.542)	8.40	113	2.12	.40
	OLS	-.226 (.287)	1.006 (7.478)	1.149 (1.552)	8.43	112	2.12	.40
	CORC	-	1.010 (7.821)	.927 (1.287)	8.37	113	2.00	.40
	CORC	-.224 (.309)	1.009 (7.791)	.941 (1.298)	8.40	112	2.00	.40
 <u>With Dummies</u>								
Whole period	OLS	-.403 (.158)	.938 (8.316)	1.028 (2.358)	6.57	228	1.87	.37
	CORC	-.362 (.136)	.939 (8.278)	.990 (2.284)	6.56	228	1.98	.37
Pre-float	OLS	-1.567 (1.126)	.557 (3.527)	.939 (2.472)	3.93	117	1.35	.21
	CORC	-2.247 (1.245)	.537 (3.602)	.991 (3.047)	3.73	117	1.93	.29
Post-float	OLS	.199 (.068)	1.151 (6.230)	1.788 (2.052)	8.68	100	2.16	.43
	CORC	-.043 (.016)	1.184 (6.438)	1.501 (1.743)	8.63	100	2.02	.44

See notes to Table 2.

This paper used time-series data pooled across countries. The results indicate that the elasticity of the exchange rate with respect to the relative price variability is positive and highly significant in all cases when consumer prices are used. This finding indicates that an increase in the variance of relative prices at home (in relation to that abroad) depreciates the currency. One explanation for this is that when there is more variability of relative prices, the price system becomes less efficient in transmitting information. It becomes increasingly difficult for economic agents to extract correct signals about relative prices from the observed absolute prices. The result is increased uncertainty in financial markets, causing the exchange rate to depreciate. We also found that the effects of relative price variability on the exchange rate are higher under floating rates. This indicates the increased importance of real factors in determining exchange rates in the current floating rate regime.

For comparison, the equations were re-estimated by replacing consumer prices with wholesale prices. The results show that the relative price variance term is still significant in most cases, but less so than before. However, the explanatory power of all equations increases, reflecting the closer relationship between the exchange rates and wholesale prices.

APPENDICES

A1. THE DATA

Table A1.1 contains the data on the exchange rate log-change (DS), home inflation relative to that in the US ($DP - DP^*$) using consumer prices; relative inflation with wholesale prices ($WPI - WPI^*$); and the corresponding relative price variability ($\sqrt{V} - \sqrt{V^*}$). These data are all annual and are used in both the individual country and pooled regressions. When the data are pooled across countries, countries are ranked in the order given in Table A1.1 with blanks ignored.

The data in Table A1.1 are consistent with those presented in Table 1 in the text. For example, the data pertaining to the United Kingdom in Table A1.1 can be derived from those in Table 1 as follows. The mean of the inflation differential ($DP - DP^*$) for that country of 3.98, given in the last row of Table A1.1 can be derived from Table 1 as the difference between the mean DP for UK and the mean DP for the US after dropping the first four observations for the latter country. These observations for the US have to be dropped since the corresponding observations for the UK are missing.

Nominal exchange rates are annual averages from the International Financial Statistics published by the International Monetary Fund (IFS code AF for Austria, Belgium, Canada, Denmark, Finland, France, Germany, Iceland, Italy, Japan, Luxembourg, the Netherlands, Norway, Spain, Sweden and Switzerland; IFS code AH for Australia, Ireland and UK; and IFS code RF for Greece). The consumer prices (the Divisia price indexes) and the corresponding price variances are from Stening (1985). Wholesale prices for all countries are from International Financial Statistics (IFS code 63).

Table A1.1

Exchange Rate Log-changes, Relative Inflation and Relative Price Variability for 20 Countries

Year	United Kingdom				Switzerland				Italy				Japan			
	DS	(DP- DP^*)	(WPI-WPI *)	($\sqrt{V}-\sqrt{V}^*$)	DS	(DP- DP^*)	(WPI-WPI *)	($\sqrt{V}-\sqrt{V}^*$)	DS	(DP- DP^*)	(WPI-WPI *)	($\sqrt{V}-\sqrt{V}^*$)	DS	(DP- DP^*)	(WPI-WPI *)	($\sqrt{V}-\sqrt{V}^*$)
1961	-	-	-	-	.01	1.50	.46	1.00	-	-	-	-	-	-	-	-
1962	-	-	-	-	.11	3.44	3.17	.29	-	-	-	-	-	-	-	-
1963	-	-	-	-	-.06	2.04	4.11	1.05	-	-	-	-	-	-	-	-
1964	-	-	-	-	-.06	2.59	1.05	-1.26	-	-	-	-	-	-	-	-
1965	-.14	3.15	1.64	1.35	.20	2.24	-1.37	1.18	.06	1.84	-.34	.61	-	-	-	-
1966	.11	1.22	-.50	-.32	-.03	1.95	-1.43	-.23	-.06	.12	-1.78	-.57	-	-	-	-
1967	1.69	.20	1.01	-.56	.04	1.95	.10	.62	-.06	.59	-.42	-.28	-	-	-	-
1968	13.61	.44	1.31	.34	-.28	-1.38	-2.38	1.10	-.11	-2.53	-2.05	.32	-	-	-	-
1969	.29	1.05	.08	-.22	-.07	-1.69	-.98	.61	.62	-1.56	.01	-.39	-	-	-	-
1970	-.24	1.34	2.71	.44	-.06	-.59	.43	.71	-.02	.43	3.45	.29	-	-	-	-
1971	-2.01	3.92	5.44	.44	-4.64	2.50	-1.00	.23	-1.41	.99	.12	.26	-	-	-	-
1972	-2.32	2.91	.79	.92	-7.46	3.92	-.85	.77	-5.86	2.70	-.38	.61	-	-	-	-
1973	2.01	2.86	-5.26	-.70	-18.74	3.49	-2.18	-1.41	-.03	6.30	3.41	-1.49	-10.96	4.53	2.27	.25
1974	4.72	6.39	3.75	-.36	-6.09	.10	-2.25	-.98	10.92	9.50	16.87	1.71	7.23	10.10	10.20	2.82
1975	5.15	13.80	11.92	1.36	-14.34	-.99	-11.18	-.23	.38	8.96	-.61	1.21	1.60	3.62	-5.90	.93
1976	20.70	9.09	10.47	-.22	-3.22	-2.96	-5.19	.58	24.29	11.20	16.81	1.26	-.08	3.11	.37	.07
1977	3.43	8.36	10.79	-.39	-3.92	-4.71	-5.67	-1.33	5.85	10.90	9.40	.86	-9.93	1.09	-4.08	.25
1978	-9.50	1.95	1.93	-.01	-29.58	-5.57	-10.93	.02	-3.89	5.34	.58	.06	-24.37	-2.00	-10.11	.84
1979	-10.03	3.77	-1.54	.15	-7.27	-4.44	-8.13	.75	-2.12	5.29	2.59	-.03	4.05	-5.30	-4.76	-.61
1980	-11.29	5.33	.02	.31	.78	-5.90	-8.09	-1.53	3.02	8.37	5.17	.05	3.41	-3.63	3.24	-1.06
1981	15.81	1.94	.42	2.70	18.89	-2.44	-3.06	-.32	28.32	8.90	6.68	-.72	-2.77	-4.10	-7.31	-1.42
Mean	1.88	3.98	2.65	.31	-3.75	-.23	-2.64	.08	3.52	4.55	3.50	.22	-3.54	.82	-1.79	.23

(contd)

Table A1.1 (contd)

Year	France				Germany				Canada				Australia			
	DS	(DP- $\overline{DP}^*$)	(WPI-WPI *)	($\sqrt{V}-\sqrt{V}^*$)	DS	(DP- $\overline{DP}^*$)	(WPI-WPI *)	($\sqrt{V}-\sqrt{V}^*$)	DS	(DP- $\overline{DP}^*$)	(WPI-WPI *)	($\sqrt{V}-\sqrt{V}^*$)	DS	(DP- $\overline{DP}^*$)	(WPI-WPI *)	($\sqrt{V}-\sqrt{V}^*$)
1961	-	-	-	-	-3.71	2.13	1.78	1.56	4.37	-.54	.31	.33	.19	-.80	-	2.11
1962	-	-	-	-	-.51	1.66	.78	.47	5.35	.27	1.00	.02	-.19	.29	-	2.26
1963	-	-	-	-	-.29	1.45	.79	.84	.90	.05	1.49	.71	.28	-.97	-	2.48
1964	-	-	-	-	-.29	.92	.88	-1.42	.01	-.18	.65	-1.56	.39	1.68	-	-1.21
1965	.01	.97	-1.21	.71	.48	1.45	.42	.75	-.06	.29	-.52	.76	-.20	1.62	-	1.57
1966	.25	.46	-.52	-.12	.11	.88	-1.54	.04	-.06	.62	-.45	.40	.11	.26	-	-.35
1967	.13	.69	-1.10	.17	-.31	-.79	-1.16	.39	.13	1.07	1.74	.22	.10	1.07	-	-.24
1968	.63	.99	-4.14	.90	.14	-2.33	-3.15	1.95	-.11	.05	-.57	.70	.01	-.76	-	.43
1969	4.88	2.47	6.33	.11	-1.68	-2.29	-2.00	.61	-.06	-.61	-.15	.37	.01	-1.25	-	1.41
1970	6.14	.40	3.63	.19	-7.37	-.72	1.19	.10	-3.07	-1.01	-1.04	1.14	-.24	1.35	.74	1.43
1971	-.30	1.03	-1.10	-.26	-4.62	1.12	.98	.12	-3.35	-1.87	-1.46	.57	-2.01	2.23	1.49	1.11
1972	-8.86	2.20	.10	-.05	-8.80	1.89	-1.78	-.36	-1.99	.57	-.02	.63	-4.81	2.61	.36	.01
1973	-12.45	1.14	1.43	-2.18	-17.65	1.68	-5.90	-3.24	1.03	1.65	-1.54	.29	-17.45	6.28	-4.01	-.75
1974	7.69	2.89	8.28	.23	-3.22	-2.86	-4.59	-.41	-2.23	1.31	.06	.78	-1.27	6.40	-3.11	1.43
1975	-11.52	3.47	-14.70	-.41	-5.05	-1.71	-4.42	-1.09	3.91	2.77	1.84	.36	9.29	6.65	5.20	2.25
1976	10.89	4.02	2.61	-.51	2.32	-1.09	-.89	-1.35	-3.10	1.83	.50	.98	6.71	5.61	6.26	.47
1977	2.76	2.83	-.52	-.06	-8.09	-2.26	-3.21	-.69	7.57	1.44	1.57	1.14	9.96	3.19	3.73	.37
1978	-8.50	1.73	-3.23	-1.22	-14.51	-4.14	-6.37	-1.10	7.01	.41	1.33	1.11	-3.17	1.77	.39	.76
1979	-5.89	1.28	.65	-.62	-9.15	-4.56	-7.14	-.09	2.66	.27	1.63	-.53	2.36	1.10	1.97	-.12
1980	-.67	2.38	-4.68	.07	-.83	-4.78	-5.81	-1.83	-.18	.13	-.44	-1.75	-1.91	-.89	-.02	-1.23
1981	25.15	3.26	1.72	-.58	21.78	-3.01	-1.18	-.48	2.50	2.27	1.01	.31	-.86	.31	-.59	-.30
Mean	.61	1.89	-.38	-.21	-2.92	-.83	-1.59	-.25	1.01	.49	.33	.33	-.13	1.80	1.03	.66

(Contd)

Table A1.1 (contd)

Year	Austria				Belgium				Denmark				Netherlands			
	DS	(DP-DF*)	(WPI-WPI*)	($\sqrt{V}-\sqrt{V}^*$)	DS	(DP-DF*)	(WPI-WPI*)	($\sqrt{V}-\sqrt{V}^*$)	DS	(DP-DF*)	(WPI-WPI*)	($\sqrt{V}-\sqrt{V}^*$)	DS	(DP-DF*)	(WPI-WPI*)	($\sqrt{V}-\sqrt{V}^*$)
1961	-	-	-	-	.01	1.58	.15	3.70	-	-	-	-	-3.77	.21	.31	.44
1962	-	-	-	-	-.20	-.45	.63	1.61	-	-	-	-	-.80	.04	-.20	.09
1963	-	-	-	-	.21	2.14	2.77	2.58	-	-	-	-	-.06	.60	2.77	.83
1964	-	-	-	-	-.23	2.54	4.37	-1.53	-	-	-	-	.16	4.65	5.62	-.27
1965	-.02	2.70	.61	1.26	-.22	2.77	-.89	3.31	-	-	-	-	-.18	1.64	1.39	1.33
1966	-.05	-.26	-1.35	.07	.24	1.42	-1.17	1.08	-	-	-	-	.52	2.87	2.06	1.05
1967	-.00	1.47	2.16	.60	-.14	.04	-1.08	-.14	-	-	-	-	-.47	.80	-.19	1.45
1968	.03	-1.47	-1.54	1.35	.49	-1.25	-2.32	.15	-	-	-	-	.48	-.93	-.41	1.07
1969	.05	-1.05	-1.36	.28	.41	-1.41	1.04	.07	-	-	-	-	.12	2.05	-5.89	1.29
1970	-.02	-.74	1.00	4.77	-.97	-1.97	1.05	1.37	-	-	-	-	-.20	-1.53	.48	1.95
1971	-3.75	.64	1.83	1.00	-.23	.59	-3.77	.62	-	-	-	-	-3.43	2.88	1.33	1.86
1972	-7.49	2.77	-.52	.60	-11.81	1.76	-.45	.88	-	-	-	-	-8.51	3.35	.62	1.35
1973	-16.60	1.56	-11.05	-1.22	-12.16	.44	-.66	-1.59	-13.87	4.85	1.44	-.31	-	-	-	-
1974	-4.64	.33	-3.22	.74	-.06	1.99	-1.77	.27	.75	4.10	2.72	.81	-	-	-	-
1975	-7.07	.46	-2.67	.09	-5.74	4.61	-7.64	1.16	-5.89	2.21	-3.16	-.27	-	-	-	-
1976	2.96	1.20	1.17	.18	4.85	2.24	2.34	.22	5.07	4.03	3.18	.71	-	-	-	-
1977	-8.20	-.22	-2.98	.13	-7.42	.94	-3.54	.52	-.69	3.41	1.21	.10	-	-	-	-
1978	-12.93	-2.65	-6.52	.12	-12.94	-2.67	-9.41	-.35	-8.49	1.99	-3.27	-.29	-	-	-	-
1979	-8.28	-4.43	-7.69	-.16	-7.15	-4.96	-5.71	.59	-4.71	1.07	-2.37	2.11	-	-	-	-
1980	-3.27	-3.53	-4.88	-.85	-.26	-3.25	-7.51	1.09	6.88	.56	2.83	-.29	-	-	-	-
1981	20.78	-1.86	-.97	.64	23.88	.20	-.87	3.89	23.42	2.62	5.84	.07	-	-	-	-
Mean	-2.85	-.30	-2.23	.57	-1.40	.35	-1.64	.93	.27	2.76	.94	.30	-1.35	1.39	.66	1.04

(Contd)

Table A1.1 (contd)

Year	Finland				Greece				Iceland				Ireland			
	DS	(DP-DP*)	(WPI-WPI*)	(√V-√V*)	DS	(DP-DP*)	(WPI-WPI*)	(√V-√V*)	DS	(DP-DP*)	(WPI-WPI*)	(√V-√V*)	DS	(DP-DP*)	(WPI-WPI*)	(√V-√V*)
1961	.23	.47	.86	1.11	-	-	-	-	10.16	7.80	-	3.16	-	-	-	-
1962	.20	1.59	1.28	1.12	-	-	-	-	6.95	8.77	-	5.14	-	-	-	-
1963	.06	3.77	3.68	1.66	-	-	-	-	.00	7.75	-	5.13	-	-	-	-
1964	-.09	6.49	7.11	.86	-	-	-	-	.00	13.50	-	1.92	-	-	-	-
1965	.09	1.81	2.37	2.35	-	-	-	-	.00	7.65	-	2.57	-	-	-	-
1966	.04	.05	-1.20	.50	-	-	-	-	.00	7.58	-	3.03	-	-	-	-
1967	6.45	2.39	2.69	.74	-	-	-	-	2.68	1.69	-	-.03	-	-	-	-
1968	19.75	5.73	7.87	4.75	-	-	-	-	32.07	7.98	-	1.97	-	-	-	-
1969	.27	-2.34	-.25	-.40	-	-	-	-	36.84	14.50	-	6.70	-	-	-	-
1970	-.50	-2.26	.54	.62	-	-	-	-	.00	6.41	-	4.09	-	-	-	-
1971	-.14	1.31	1.72	.03	-	-	-	-	-.27	3.98	-	3.38	-	-	-	-
1972	-.68	3.18	3.63	.57	-	-	-	-	-.15	9.77	-	4.91	-	-	-	-
1973	-	-	-	-	-1.26	8.65	7.47	1.85	-	-	-	-	2.01	5.52	5.71	.32
1974	-	-	-	-	1.26	11.80	10.02	1.62	-	-	-	-	4.72	5.14	-4.59	1.93
1975	-	-	-	-	6.61	4.69	-.91	.73	-	-	-	-	5.13	12.70	13.07	2.02
1976	-	-	-	-	13.05	7.62	8.60	.10	-	-	-	-	20.72	11.90	13.38	1.28
1977	-	-	-	-	.87	5.69	6.90	.37	-	-	-	-	3.43	5.93	9.89	1.64
1978	-	-	-	-	-.25	5.67	2.32	-.08	-	-	-	-	-9.50	.41	1.06	2.48
1979	-	-	-	-	.79	6.80	7.24	.35	-	-	-	-	-6.46	4.12	-.34	.30
1980	-	-	-	-	14.03	10.10	11.90	-.18	-	-	-	-	-	-	-	-
1981	-	-	-	-	26.25	11.80	14.36	.10	-	-	-	-	-	-	-	-
Mean	2.14	1.85	2.53	1.16	6.82	8.08	7.54	.54	7.36	8.12	-	3.50	2.86	6.53	5.45	1.43

(contd)

Table A1.1 (contd)

Year	Luxembourg				Norway				Spain				Sweden			
	DS	(DP-DP*)	(WPI-WPI*)	(√V-√V*)	DS	(DP-DP*)	(WPI-WPI*)	(√V-√V*)	DS	(DP-DP*)	(WPI-WPI*)	(√V-√V*)	DS	(DP-DP*)	(WPI-WPI*)	(√V-√V*)
1961	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1962	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1963	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1964	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1965	-	-	-	-	-.10	2.46	.07	.77	.03	7.51	7.69	2.52	.13	3.71	-	.69
1966	-	-	-	-	.00	.63	-1.31	-.05	.05	4.27	-.76	.06	.15	3.61	-	.33
1967	-	-	-	-	-.00	2.03	1.75	.29	1.90	3.20	.36	1.05	-.08	2.70	-	.17
1968	-	-	-	-	-.10	-.94	-2.47	.05	13.17	1.08	-.20	.97	.12	-2.44	-	.17
1969	-	-	-	-	.02	-.95	-.05	.16	.24	-1.04	-1.33	1.58	.04	-1.17	-	1.15
1970	-	-	-	-	.04	5.05	3.55	.94	-.21	1.92	-2.01	2.11	.31	.46	-	.53
1971	-	-	-	-	-1.46	1.89	1.84	.20	-.68	3.37	2.38	.66	-1.52	3.43	-	.17
1972	-	-	-	-	-6.68	2.98	-1.15	-.34	-7.43	4.48	2.25	1.65	-7.01	2.97	-	.80
1973	-12.16	-.60	-	-1.66	-13.33	1.96	-6.14	-2.92	-	-	-	-	-8.66	1.58	-	-1.87
1974	-.06	-.12	-	-.84	-4.00	-.69	.45	-.37	-	-	-	-	1.64	-.84	-	2.19
1975	-5.74	2.37	-	.18	-5.81	3.90	-.46	1.18	-	-	-	-	-6.69	2.93	-	.04
1976	4.85	3.71	-	1.02	4.30	3.12	3.23	-1.28	-	-	-	-	4.79	4.81	-	-.47
1977	.61	-.22	-	-.14	-2.47	2.46	.25	-.92	-	-	-	-	2.84	4.10	-	.32
1978	-20.98	-3.25	-	-.02	-1.54	.95	-2.62	-.23	-	-	-	-	.82	3.58	-	.47
1979	-7.17	-3.03	-	.04	-3.46	-4.03	-3.61	-.60	-	-	-	-	-5.26	-1.55	-	.37
1980	-.24	-2.58	-	.43	-2.50	-.49	.79	-.76	-	-	-	-	-1.35	1.09	-	-.93
1981	-	-	-	-	15.02	4.61	1.68	1.33	-	-	-	-	17.99	2.40	-	.06
Mean	-5.11	-.47	-	-.12	-1.30	1.47	-.25	-.15	.88	3.10	1.05	1.44	-.10	1.85	-	.25

All entries are multiplied by 100.

A2. DETAILS OF THE SAMPLE

Table A2.1 contains the sample period and number of observations for each country that are used in the regressions with consumer prices. As can be seen, Japan, Denmark, Greece, Ireland and Luxembourg are dropped from the pre-float regressions; and Australia, the Netherlands, Finland, Iceland and Spain from the post-float ones. The total number of observations for the pre-float, post-float and whole periods are 161, 132 and 293, respectively.

Table A2.2 is the wholesale price version of Table A2.1. In this case, the total number of observations for the for the pre-float, post-float and whole periods are 132, 115 and 247, respectively.

A3. THE DUMMY VARIABLE COEFFICIENTS

Table A3.1 contains the dummy variable coefficients pertaining to the results given in the lower-half of Tables 2-5. For consumer prices, Sweden is the base country so that the intercepts in Tables 2-3 are interpreted as that country's dummy variable coefficients. As there are no wholesale prices for Sweden, Spain is used as the base country here. Consequently, the intercepts in Tables 4-5 are the dummy variable coefficients for Spain. In most cases, the estimates of the dummy variable coefficients are insignificant.

A4. THE INDIVIDUAL COUNTRY ESTIMATES

Tables A4.1-A4.6 are the individual country counterparts of Tables 2-3 in the text. As expected, the individual country estimates are, in general, imprecise.

Table A2.1

Details of Sample when Consumer Prices are Used

Country	Pre-float period		Post-float period		Whole period	
	-----		-----		-----	
	Dates	Number of observations	Dates	Number of observations	Dates	Number of observations
1. United Kingdom	1965-72	8	1973-81	9	1965-81	17
2. Switzerland	1961-72	12	1973-81	9	1961-81	21
3. Italy	1965-72	8	1973-81	9	1965-81	17
4. Japan	-	-	1973-81	9	1973-81	9
5. France	1965-72	8	1973-81	9	1965-81	17
6. Germany	1961-72	12	1973-81	9	1961-81	21
7. Canada	1961-72	12	1973-81	9	1961-81	21
8. Australia	1961-81	21	-	-	1961-81	21
9. Austria	1965-72	8	1973-81	9	1965-81	17
10. Belgium	1961-72	12	1973-81	9	1961-81	21
11. Denmark	-	-	1973-81	9	1973-81	9
12. Netherlands	1961-72	12	-	-	1961-72	12
13. Finland	1961-72	12	-	-	1961-72	12
14. Greece	-	-	1973-81	9	1973-81	9
15. Iceland	1961-72	12	-	-	1961-72	12
16. Ireland	-	-	1973-79	7	1973-79	7
17. Luxembourg	-	-	1973-80	8	1973-80	8
18. Norway	1965-72	8	1973-81	9	1965-81	17
19. Spain	1965-72	8	-	-	1965-72	8
20. Sweden	1965-72	8	1973-81	9	1965-81	17
Total		----- 161		----- 132		----- 293

The year 1965, for example, refers to the transition from 1964 to 1965.

Table A2.2

Details of Sample when Wholesale Prices are Used

Country	Pre-float period		Post-float period		Whole period	
	-----		-----		-----	
	Dates	Number of observations	Dates	Number of observations	Dates	Number of observations

1. United Kingdom	1965-72	8	1973-81	9	1965-81	17
2. Switzerland	1961-72	12	1973-81	9	1961-81	21
3. Italy	1965-72	8	1973-81	9	1965-81	17
4. Japan	-	-	1973-81	9	1973-81	9
5. France	1965-72	8	1973-81	9	1965-81	17
6. Germany	1961-72	12	1973-81	9	1961-81	21
7. Canada	1961-72	12	1973-81	9	1961-81	21
8. Australia	1970-81	12	-	-	1970-81	12
9. Austria	1965-72	8	1973-81	9	1965-81	17
10. Belgium	1961-72	12	1973-81	9	1961-81	21
11. Denmark	-	-	1973-81	9	1973-81	9
12. Netherlands	1961-72	12	-	-	1961-72	12
13. Finland	1961-72	12	-	-	1961-72	12
14. Greece	-	-	1973-81	9	1973-81	9
15. Iceland	-	-	-	-	-	-
16. Ireland	-	-	1973-79	7	1973-79	7
17. Luxembourg	-	-	-	-	-	-
18. Norway	1965-72	8	1973-81	9	1965-81	17
19. Spain	1965-72	8	-	-	-	8
20. Sweden	-	-	-	-	-	-

Total		-----		-----		-----
		132		115		247

The year 1965, for example, refers to the transition from 1964 to 1965.

Table A3.1

The Dummy Variable Coefficients
(x 100)

(t-values in parentheses)

Country Period	Equation (5.1) with consumer prices		Equation (5.2) with consumer prices		Equation (5.1) with wholesale prices		Equation (5.2) with wholesale prices	
	OLS	CORC	OLS	CORC	OLS	CORC	OLS	CORC
1. United Kingdom								
Whole period	.558 (.211)	.385 (.127)	.734 (.283)	.535 (.182)	-1.690 (.565)	-1.565 (.491)	.514 (.171)	-.499 (.158)
Pre-float	2.335 (.889)	1.322 (.373)	2.572 (1.000)	1.339 (.376)	.867 (.443)	1.088 (.431)	1.790 (.918)	1.979 (.767)
Post-float	-1.669 (.343)	-2.503 (.601)	-1.825 (.384)	-2.183 (.499)	-1.394 (.329)	-1.979 (.538)	-2.587 (.615)	-2.813 (.737)
2. Switzerland								
Whole period	-2.262 (.899)	-2.382 (.827)	-2.269 (.920)	-2.360 (.845)	-2.003 (.688)	-1.948 (.628)	-.957 (.328)	-.968 (.315)
Pre-float	-.023 (.009)	-.465 (.143)	-.041 (.017)	-.537 (.164)	-.642 (.362)	-.144 (.062)	.005 (.003)	.593 (.252)
Post-float	-4.167 (.844)	-3.828 (.904)	-3.590 (.744)	-3.498 (.787)	.930 (.217)	1.435 (.385)	.546 (.129)	.950 (.248)
3. Italy								
Whole period	1.817 (.683)	1.597 (.526)	2.198 (.843)	1.996 (.675)	-.909 (.303)	-.789 (.246)	.416 (.137)	.431 (.135)
Pre-float	1.134 (.414)	2.283 (.627)	1.486 (.553)	2.712 (.742)	.396 (.195)	1.788 (.689)	1.471 (.723)	3.150 (1.189)
Post-float	1.403 (.273)	.928 (.211)	1.557 (.311)	1.285 (.278)	-.148 (.034)	-.335 (.087)	-1.153 (.266)	-1.198 (.302)
4. Japan								
Whole period	-2.749 (.872)	-3.560 (.992)	-2.854 (.923)	-3.568 (1.023)	-2.643 (.789)	-2.854 (.800)	-1.694 (.507)	-1.918 (.545)
Pre-float	-	-	-	-	-	-	-	-
Post-float	-3.208 (.680)	-2.958 (.740)	-3.871 (.839)	-3.544 (.841)	-.702 (.169)	-.356 (.099)	-2.089 (.503)	-1.599 (.427)

(Contd)

Table A3.1 (Contd)

(t-values in parentheses)

Country Period	Equation (5.1) with consumer prices		Equation (5.2) with consumer prices		Equation (5.1) with wholesale prices		Equation (5.2) with wholesale prices	
	OLS	CORC	OLS	CORC	OLS	CORC	OLS	CORC
5. France								
Whole period	.677 (.258)	.664 (.221)	1.384 (.537)	1.337 (.457)	.085 (.028)	.232 (.073)	1.586 (.525)	1.621 (.511)
Pre-float	1.796 (.683)	1.660 (.471)	1.990 (.773)	1.805 (.510)	1.072 (.549)	1.804 (.717)	1.929 (.992)	2.786 (1.087)
Post-float	-.313 (.067)	-.749 (.188)	1.195 (.258)	.771 (.182)	2.631 (.633)	2.687 (.751)	2.755 (.673)	2.789 (.757)
6. Germany								
Whole period	-1.032 (.408)	-1.273 (.440)	-.616 (.248)	-.896 (.318)	-1.792 (.617)	-1.780 (.575)	-.369 (.125)	-.443 (.143)
Pre-float	-1.053 (.437)	-1.212 (.371)	-1.114 (.472)	-1.395 (.425)	-1.743 (.981)	-1.272 (.551)	-1.051 (.597)	-.530 (.225)
Post-float	-.668 (.136)	-.211 (.050)	1.454 (.299)	1.381 (.307)	2.176 (.517)	2.637 (.725)	3.073 (.737)	3.245 (.852)
7. Canada								
Whole period	2.018 (.806)	1.566 (.546)	1.711 (.697)	1.322 (.474)	-.228 (.079)	-.264 (.086)	.760 (.262)	.668 (.219)
Pre-float	.882 (.364)	.382 (.117)	.962 (.405)	.289 (.088)	.095 (.053)	.415 (.180)	.948 (.535)	1.284 (.544)
Post-float	2.013 (.428)	2.214 (.555)	1.254 (.272)	1.561 (.371)	1.986 (.477)	2.350 (.655)	.629 (.152)	1.115 (.297)
8. Australia								
Whole period	.004 (.002)	-.260 (.091)	-.636 (.260)	-.871 (.313)	-2.176 (.699)	-2.141 (.645)	-1.327 (.428)	-1.372 (.420)
Pre-float	.772 (.354)	.352 (.118)	.558 (.261)	.088 (.029)	-.589 (.333)	-.010 (.004)	.091 (.052)	.801 (.340)
Post-float	-	-	-	-	-	-	-	-

(Contd)

Table A3.1 (Contd)

(t-values in parentheses)

Country Period	Equation (5.1) with consumer prices		Equation (5.2) with consumer prices		Equation (5.1) with wholesale prices		Equation (5.2) with wholesale prices	
	OLS	DDRC	OLS	DDRC	OLS	DDRC	OLS	DDRC
<hr/>								
9. Austria								
Whole period	-1.314 (.497)	-1.222 (.404)	-2.074 (.797)	-1.940 (.658)	-1.473 (.492)	-1.425 (.447)	-1.051 (.354)	-1.055 (.337)
Pre-float	.672 (.254)	.839 (.238)	-.182 (.070)	-.207 (.058)	-.171 (.088)	.645 (.257)	-.109 (.057)	.785 (.308)
Post-float	-2.259 (.470)	-2.435 (.596)	-2.549 (.543)	-2.555 (.594)	1.767 (.420)	1.619 (.446)	.691 (.165)	.766 (.203)
10. Belgium								
Whole period	-.302 (.121)	-.374 (.130)	-1.533 (.618)	-1.632 (.580)	-1.380 (.476)	-1.393 (.450)	-.938 (.326)	-.979 (.323)
Pre-float	-.405 (.171)	-1.294 (.403)	-1.166 (.499)	-2.272 (.701)	-.241 (.136)	.797 (.346)	-.174 (.100)	1.046 (.446)
Post-float	-.826 (.174)	-.808 (.200)	-2.587 (.552)	-2.235 (.521)	3.468 (.826)	3.715 (1.025)	1.211 (.283)	1.761 (.454)
11. Denmark								
Whole period	-.234 (.074)	-.859 (.239)	-.195 (.063)	-.670 (.192)	-.326 (.097)	-.219 (.061)	.649 (.194)	.651 (.185)
Pre-float	-	-	-	-	-	-	-	-
Post-float	-1.040 (.221)	-.983 (.246)	-1.591 (.346)	-1.509 (.359)	-.200 (.048)	.093 (.026)	-1.530 (.369)	-1.198 (.318)
12. Netherlands								
Whole period	-.937 (.325)	-1.705 (.518)	-2.202 (.773)	-2.850 (.886)	-2.626 (.832)	-2.530 (.752)	-2.390 (.764)	-2.345 (.711)
Pre-float	-.316 (.132)	-.571 (.176)	-.945 (.401)	-1.286 (.392)	-1.519 (.858)	-1.196 (.519)	-1.307 (.753)	-1.014 (.433)
Post-float	-	-	-	-	-	-	-	-

(Contd)

Table A3.1 (Contd)

(t-values in parentheses)

Country Period	Equation (5.1) with consumer prices		Equation (5.2) with consumer prices		Equation (5.1) with wholesale prices		Equation (5.2) with wholesale prices	
	OLS	CORC	OLS	CORC	OLS	CORC	OLS	CORC
13. Finland								
Whole period	2.239 (.777)	2.171 (.660)	.844 (.296)	.883 (.274)	-1.989 (.627)	-1.938 (.573)	-1.721 (.548)	-1.718 (.518)
Pre-float	3.089 (1.288)	2.661 (.818)	2.367 (1.102)	1.866 (.569)	.543 (.304)	.836 (.362)	.639 (.366)	1.037 (.442)
Post-float	-	-	-	-	-	-	-	-
14. Greece								
Whole period	2.753 (.830)	2.549 (.679)	3.095 (.951)	2.882 (.789)	-1.128 (.328)	-1.211 (.331)	.311 (.090)	.155 (.046)
Pre-float	-	-	-	-	-	-	-	-
Post-float	.999 (.196)	.806 (.185)	.606 (.121)	.684 (.149)	-1.690 (.382)	-1.571 (.404)	-3.033 (.688)	-2.714 (.673)
15. Iceland								
Whole period	3.270 (1.067)	2.527 (.728)	-.901 (.279)	-1.429 (.399)	-	-	-	-
Pre-float	7.211 (2.629)	5.323 (1.523)	4.498 (1.570)	2.390 (.667)	-	-	-	-
Post-float	-	-	-	-	-	-	-	-
16. Ireland								
Whole period	-.165 (.047)	-.322 (.081)	-1.371 (.396)	-1.380 (.356)	-3.029 (.846)	-2.805 (.737)	-2.927 (.825)	-2.787 (.745)
Pre-float	-	-	-	-	-	-	-	-
Post-float	-1.643 (.314)	-1.651 (.359)	-4.348 (.833)	-3.820 (.795)	-3.106 (.677)	-2.937 (.728)	-6.164 (1.296)	-5.549 (1.265)

(Contd)

Table A3.1 (Contd)

(t-values in parentheses)

Country Period	Equation (5.1) with consumer prices		Equation (5.2) with consumer prices		Equation (5.1) with wholesale prices		Equation (5.2) with wholesale prices	
	OLS	CORC	OLS	CORC	OLS	CORC	OLS	CORC
17. Luxembourg								
Whole period	-3.467 (1.105)	-3.515 (.939)	-3.196 (.989)	-3.244 (.891)	-	-	-	-
Pre-float	-	-	-	-	-	-	-	-
Post-float	-3.698 (.753)	-3.908 (.936)	-3.702 (.772)	-3.748 (.853)	-	-	-	-
18. Norway								
Whole period	-.945 (.361)	-1.062 (.354)	-.388 (.151)	-.532 (.182)	-2.400 (.805)	-2.380 (.752)	-1.028 (.342)	-1.107 (.351)
Pre-float	-.052 (.020)	-.054 (.015)	.226 (.879)	.462 (.131)	-.372 (.191)	.338 (.139)	.451 (.232)	1.109 (.451)
Post-float	-1.620 (.344)	-1.658 (.413)	-.468 (.101)	.630 (.148)	-	-	-	-
19. Spain								
Whole period	.149 (.045)	-.745 (.202)	-1.508 (.464)	-2.232 (.616)	-	-	-	-
Pre-float	1.615 (.611)	.498 (.147)	.711 (.272)	-.708 (.210)	-	-	-	-
Post-float	-	-	-	-	-	-	-	-

Table A4.1

Exchange Rates and Consumer Prices: Whole Period

$$DS_{ct} = a_c + b_c(DP_{ct} - DP_t^*) + e_{ct}$$

(t-statistics in brackets)

Country	Method of estimation	a_c x 100	b_c	SEE x 100	DF	D-W	R^2
1. UK	OLS	-	.478 (1.235)	8.47	16	1.65	.04
	OLS	-.049 (.015)	.485 (.802)	8.75	15	1.65	.04
	CORC	-	.460 (1.054)	8.71	16	1.73	.05
	CORC	.692 (.181)	.361 (.530)	9.01	15	1.72	.05
2. Switzerland	OLS	-	.451 (.665)	9.58	20	1.06	.01
	OLS	-3.668 (1.851)	.360 (.561)	9.05	19	1.25	.02
	CORC	-	.296 (.284)	8.89	20	1.89	.04
	CORC	-3.455 (1.148)	.233 (.259)	8.90	19	1.75	.09
3. Italy	OLS	-	.983 (3.333)	7.71	16	1.75	.32
	OLS	-1.972 (.722)	1.207 (2.802)	7.83	15	1.76	.34
	CORC	-	.932 (3.306)	7.90	16	1.63	.33
	CORC	-1.776 (.720)	1.125 (2.826)	8.03	15	1.62	.35
4. Japan	OLS	-	.212 (.289)	10.57	8	1.65	.02
	OLS	-3.820 (1.079)	.348 (.472)	10.46	7	1.90	.03
	CORC	-	.598 (.658)	10.16	8	1.81	.01
	CORC	-2.771 (.714)	.553 (.701)	10.59	7	1.80	.08
5. France	OLS	-	.899 (.905)	8.57	16	1.70	.04
	OLS	-4.352 (1.004)	2.618 (1.322)	8.97	15	1.68	.10
	CORC	-	.770 (.742)	9.25	16	1.62	.05
	CORC	-4.432 (.942)	2.573 (1.168)	9.27	15	1.63	.11
6. Germany	OLS	-	.190 (.253)	8.23	20	.87	.01
	OLS	-3.135 (1.716)	-.264 (.345)	7.85	19	1.00	.01
	CORC	-	-.320 (.240)	7.35	20	1.29	.13
	CORC	-2.085 (.531)	-.481 (.361)	7.51	19	1.25	.14

(contd)

Table A4.1 (Contd)

Country	Method of estimation	a _c x 100	b _c	SEE x 100	DF	D-W	R ²
7. Canada	OLS	-	.950 (1.664)	3.14	20	1.29	.03
	OLS	.655 (.869)	.727 (1.157)	3.15	19	1.36	.07
	CORC	-	1.171 (1.831)	2.85	20	2.17	.19
	CORC	.122 (.115)	1.134 (1.537)	2.92	19	2.16	.19
8. Australia	OLS	-	-.028 (.073)	5.41	20	1.34	.00
	OLS	-.120 (.080)	-.005 (.010)	5.54	19	1.34	.00
	CORC	-	-.109 (.206)	5.23	20	1.88	.11
	CORC	.062 (.028)	-.120 (.178)	5.38	19	1.88	.11
9. Austria	OLS	-	-.070 (.068)	8.56	16	.97	.13
	OLS	-2.933 (1.444)	-.289 (.285)	8.28	15	1.14	.01
	CORC	-	.571 (.386)	7.99	16	1.39	.07
	CORC	-1.903 (.467)	.149 (.105)	8.24	15	1.33	.07
10. Belgium	OLS	-	.250 (.338)	7.69	20	1.04	.03
	OLS	-1.526 (.894)	.353 (.470)	7.73	19	1.08	.01
	CORC	-	.838 (.869)	7.38	20	1.48	.10
	CORC	-.426 (.108)	.817 (.823)	7.58	19	1.46	.10
11. Denmark	OLS	-	-.186 (.158)	10.85	8	.97	.00
	OLS	3.999 (.466)	-1.349 (.484)	11.42	7	1.19	.03
	CORC	-	5.819 (3.022)	6.91	8	.81	.53
	CORC	9.748 (.285)	5.514 (2.285)	7.35	7	.94	.55
12. Netherlands	OLS	-	-.621 (1.830)	2.64	11	.79	.02
	OLS	-.783 (.519)	-.405 (.925)	2.68	10	.69	.08
	CORC	-	-.153 (.624)	2.14	11	.66	.36
	CORC	-19.635 (.044)	-.166 (.636)	2.22	10	.66	.38

(contd)

Table A4.1 (contd)

Country	Method of estimation	a _c x 100	b _c	SEE x 100	DF	D-W	R ²
13. Finland	OLS	-	1.030 (2.182)	5.24	11	.99	.21
	OLS	.354 (.183)	.966 (1.600)	5.49	10	1.03	.20
	CCRC	-	1.435 (2.935)	4.64	11	1.62	.42
	CCRC	-1.334 (.321)	1.490 (2.808)	4.86	10	1.61	.43
14. Greece	OLS	-	.921 (2.803)	8.35	8	.87	.19
	OLS	-7.213 (.746)	1.735 (1.518)	8.59	7	1.05	.25
	CCRC	-	1.340 (2.168)	7.20	8	1.42	.41
	CCRC	.514 (.041)	1.306 (1.300)	7.77	7	1.41	.41
15. Iceland	OLS	-	1.007 (2.537)	12.08	11	.99	.15
	OLS	-5.592 (.595)	1.595 (1.491)	12.45	10	.93	.18
	CCRC	-	1.250 (2.099)	10.96	11	1.46	.36
	CCRC	-8.140 (.813)	1.692 (1.972)	11.15	10	1.50	.41
16. Ireland	OLS	-	.816 (2.166)	7.65	6	1.52	.38
	OLS	-8.948 (1.982)	1.808 (3.070)	6.25	5	2.79	.65
	CCRC	-	.867 (1.800)	8.25	6	1.73	.40
	CCRC	-9.922 (2.829)	1.980 (4.363)	5.96	5	2.23	.75
17. Luxembourg	OLS	-	2.209 (1.831)	8.20	7	1.61	.03
	OLS	-4.243 (1.588)	1.860 (1.674)	7.44	6	2.34	.32
	CCRC	-	2.073 (1.795)	7.66	7	1.90	.18
	CCRC	-3.986 (2.166)	1.813 (2.327)	6.77	6	2.12	.47
18. Norway	OLS	-	.174 (.332)	5.82	16	1.12	.05
	OLS	-2.202 (1.344)	.616 (1.016)	5.68	15	1.24	.06
	CCRC	-	.503 (.938)	5.62	16	1.81	.08
	CCRC	-1.880 (.792)	.628 (1.035)	5.72	15	1.70	.11

(contd)

Table A4.1 (contd)

Country	Method of estimation	a _c x 100	b _c	SEE x 100	DF	D-W	R ²
19. Spain	OLS	-	-.127 (.244)	5.74	7	1.48	.02
	OLS	3.435 (1.040)	-.824 (.971)	5.71	6	1.80	.14
	CORC	-	-.435 (.476)	6.05	7	1.94	.03
	CORC	4.598 (1.133)	-1.411 (1.123)	5.96	6	1.92	.21
20. Sweden	OLS	-	.202 (.400)	5.88	16	1.39	.01
	OLS	-.824 (.427)	.392 (.574)	6.04	15	1.40	.02
	CORC	-	.255 (.438)	6.06	16	1.44	.01
	CORC	-.796 (.376)	.406 (.556)	6.25	15	1.42	.02

Table A4.2

Exchange Rates and Consumer Prices: Pre-float

$$DS_{ct} = a_c + b_c (DP_{ct}^* - DP_t^*) + e_{ct}$$

(t-statistics in brackets)

Country	Estimation method	a_c x 100	b_c	SEE x 100	DF	D-W	R^2
<hr/>							
1. UK	OLS	-	-.225 (.263)	5.29	7	1.64	.07
	OLS	5.210 (1.908)	-2.157 (1.730)	4.51	6	2.75	.33
	CORC	-	-.408 (.323)	5.61	7	2.01	.05
	CORC	5.975 (2.936)	-2.692 (2.548)	4.38	6	2.57	.47
2. Switzerland	OLS	-	-.618 (2.261)	14.48	11	1.06	.28
	OLS	-.133 (.150)	-.579 (1.511)	2.30	10	.38	.19
	CORC	-	-.265 (1.301)	1.34	11	2.01	.72
	CORC	1.553 (.972)	-.346 (1.647)	1.25	10	2.47	.78
3. Italy	OLS	-	-.848 (2.214)	1.76	7	1.08	.30
	OLS	-.606 (.949)	-.774 (1.966)	1.77	6	1.17	.39
	CORC	-	-.987 (2.291)	1.74	7	1.37	.39
	CORC	-.961 (1.206)	-.967 (2.454)	1.61	6	1.82	.57
4. France	OLS	-	-.301 (.259)	4.46	7	.93	.00
	OLS	2.508 (.825)	-1.864 (.833)	4.57	6	1.01	.10
	CORC	-	-1.420 (.969)	4.20	7	.93	.24
	CORC	.936 (.128)	-1.568 (.702)	4.59	6	.97	.24
5. Germany	OLS	-	-.718 (1.044)	3.76	11	.43	.40
	OLS	-2.084 (2.113)	-.343 (.547)	3.27	10	.63	.03
	CORC	-	-.690 (.715)	2.58	11	2.20	.39
	CORC	-3.784 (.613)	-.728 (.697)	2.61	10	2.11	.43
6. Canada	OLS	-	.635 (.675)	2.53	11	.44	.04
	OLS	.279 (.359)	.706 (.706)	2.63	10	.45	.05
	CORC	-	.566 (.982)	1.49	11	2.01	.58
	CORC	-1.460 (.820)	.569 (1.002)	1.49	10	2.34	.63

(contd)

Table A4.2 (Contd)

Country	Method of estimation	a _c x 100	b _c	SEE x 100	DF	D-W	R ²
7. Australia	OLS	-	-.028 (.073)	5.41	20	1.34	.00
	OLS	-.120 (.080)	-.005 (.010)	5.54	19	1.34	.00
	CORC	-	-.109 (.206)	5.23	20	1.88	.11
	CORC	.062 (.028)	-.120 (.178)	5.38	19	1.88	.11
8. Austria	OLS	-	-1.091 (1.089)	2.53	7	.68	.18
	OLS	-.930 (.986)	-.913 (1.582)	2.54	6	.67	.29
	CORC	-	-.140 (.736)	1.45	7	2.05	.76
	CORC	-240.935 (.007)	-.499 (1.044)	1.63	6	1.70	.75
9. Belgium	OLS	-	-.559 (1.024)	3.42	11	1.04	.01
	OLS	-.763 (.696)	-.426 (.658)	3.51	10	1.08	.04
	CORC	-	-.763 (1.009)	3.56	11	1.25	.01
	CORC	-1.765 (.389)	-.619 (.753)	3.62	10	1.41	.07
10. Netherlands	OLS	-	-.621 (1.830)	2.64	11	.79	.02
	OLS	-.783 (.796)	-.405 (.925)	2.68	10	.69	.08
	CORC	-	-.153 (.624)	2.14	11	.66	.36
	CORC	-19.635 (.044)	-.166 (.636)	2.22	10	.66	.38
11. Finland	OLS	-	1.030 (2.182)	5.24	11	.99	.21
	OLS	.354 (.183)	.966 (1.600)	5.49	10	1.03	.20
	CORC	-	1.435 (2.935)	4.64	11	1.62	.42
	CORC	-1.334 (.321)	1.490 (2.808)	4.86	10	1.61	.43
12. Iceland	OLS	-	1.007 (2.537)	12.08	11	.99	.15
	OLS	-5.592 (.595)	1.595 (1.491)	12.45	10	.93	.18
	CORC	-	1.250 (2.099)	10.96	11	1.46	.36
	CORC	-8.140 (.813)	1.692 (1.972)	11.15	10	1.50	.41

(contd)

Table A4.2 (contd)

Country	Method of estimation	a_c x 100	b_c	SEE x 100	DF	D-W	R^2
13. Norway	OLS	-	-.450 (.450)	2.29	7	1.13	.04
	OLS	-.519 (.457)	-.315 (.694)	2.43	6	.99	.07
	CORC	-	-.475 (1.272)	2.43	7	1.17	.05
	CORC	-293.279 (.002)	-.005 (.017)	2.16	6	.70	.37
14. Spain	OLS	-	-.127 (.244)	5.74	7	1.48	.02
	OLS	3.435 (1.040)	-.824 (.971)	5.71	6	1.80	.14
	CORC	-	-.435 (.476)	6.05	7	1.94	.03
	CORC	5.598 (1.133)	-1.411 (1.123)	5.96	6	1.92	.21
15. Sweden	OLS	-	-.408 (1.325)	2.43	7	.91	.06
	OLS	-.472 (.415)	-.307 (.753)	2.58	6	.88	.07
	CORC	-	-.484 (1.100)	2.45	7	1.08	.15
	CORC	-289.551 (.002)	-.103 (.286)	2.28	6	.79	.39

Table A4.3

Exchange Rates and Consumer Prices: Post-float

$$DS_{ct} = a_c + b_c(DP_{ct} - DP_t^*) + e_{ct}$$

(t-statistics in brackets)

Country	Estimation method	a_c x 100	b_c	SEE x 100	DF	D-W	R^2
1. UK	OLS	-	.539 (1.049)	10.80	8	1.67	.08
	OLS	-3.102 (.432)	.915 (.893)	11.39	7	1.85	.10
	CORC	-	.517 (.881)	11.52	8	1.71	.08
	CORC	-11.065 (1.892)	2.004 (2.443)	11.47	7	2.12	.22
2. Switzerland	OLS	-	.957 (.770)	2.19	8	.38	.18
	OLS	-8.894 (1.462)	-.579 (.369)	13.55	7	1.44	.02
	CORC	-	1.595 (1.085)	12.25	8	1.70	.10
	CORC	13.933 (.789)	4.148 (1.203)	12.72	7	2.20	.17
3. Italy	OLS	-	1.042 (2.589)	10.35	8	1.85	.21
	OLS	-20.782 (1.616)	3.391 (2.261)	9.44	7	2.10	.42
	CORC	-	.989 (2.882)	10.50	8	1.66	.24
	CORC	-20.744 (2.639)	3.255 (3.580)	8.43	7	1.58	.58
4. Japan	OLS	-	.212 (.289)	10.57	8	1.65	.24
	OLS	-3.820 (1.079)	.348 (.472)	10.46	7	1.90	.03
	CORC	-	.598 (.658)	10.16	8	1.81	.01
	CORC	-2.771 (.714)	.553 (.701)	10.59	7	1.80	.08
5. France	OLS	-	1.165 (.803)	11.84	8	1.77	.07
	OLS	-17.917 (1.767)	7.335 (1.971)	10.53	7	1.77	.36
	CORC	-	.799 (.702)	11.13	8	1.49	.14
	CORC	-11.468 (1.244)	4.681 (1.382)	10.77	7	1.32	.31
6. Germany	OLS	-	.491 (.389)	12.07	8	.89	.01
	OLS	-7.129 (1.077)	-1.309 (.626)	11.95	7	1.07	.05
	CORC	-	.474 (.185)	10.39	8	.97	.10
	CORC	10.451 (.806)	2.548 (.613)	10.69	7	1.03	.19

(contd)

Table A4.3 (Contd)

Country	Method of estimation	a_c x 100	b_c	SEE x 100	DF	D-W	R^2
7. Canada	OLS	-	1.049 (1.269)	3.96	8	1.71	.14
	OLS	2.546 (1.009)	-.244 (.160)	3.95	7	2.34	.00
	CORC	-	1.216 (1.106)	4.17	8	1.94	.12
	CORC	3.592 (1.515)	-1.067 (.642)	4.12	7	1.92	.06
8. Austria	OLS	-	.396 (.231)	11.70	8	.90	.15
	OLS	-4.661 (1.082)	-.515 (.272)	11.57	7	1.16	.01
	CORC	-	1.614 (.699)	9.92	8	1.16	.11
	CORC	52.620 (.395)	4.927 (1.810)	9.05	7	2.16	.36
9. Belgium	OLS	-	.646 (.492)	11.28	8	1.01	.00
	OLS	-1.857 (.469)	.634 (.459)	11.87	7	1.05	.03
	CORC	-	1.343 (.825)	10.70	8	1.46	.11
	CORC	12.108 (.283)	1.869 (.983)	11.22	7	2.18	.16
10. Denmark	OLS	-	-.186 (.158)	10.85	8	.97	.00
	OLS	3.999 (.466)	-1.349 (.484)	11.42	7	1.19	.03
	CORC	-	5.819 (3.032)	6.91	8	.81	.53
	CORC	9.748 (.285)	5.514 (2.285)	7.35	7	.94	.55
11. Greece	OLS	-	.921 (2.803)	8.35	8	.87	.19
	OLS	-7.213 (.746)	1.735 (1.518)	8.58	7	1.05	.25
	CORC	-	1.340 (2.168)	7.20	8	1.42	.41
	CORC	.514 (.041)	1.306 (1.300)	7.77	7	1.41	.41
12. Ireland	OLS	-	.816 (2.166)	7.65	6	1.52	.38
	OLS	-8.948 (1.982)	1.808 (3.070)	6.27	5	2.79	.65
	CORC	-	.867 (1.800)	8.25	6	1.73	.40
	CORC	-9.922 (2.829)	1.980 (4.363)	5.96	5	2.23	.75

(contd)

Table A4.3 (contd)

Country	Method of estimation	a_c x 100	b_c	SEE x 100	DF	D-W	R^2
13. Luxembourg	OLS	-	2.209 (1.831)	8.20	7	1.61	.03
	OLS	-4.243 (1.583)	1.860 (1.674)	7.44	6	2.34	.32
	CCRC	-	2.073 (1.795)	7.66	7	1.90	.18
	CCRC	-3.986 (2.166)	1.813 (2.327)	6.77	6	2.12	.47
14. Norway	OLS	-	.598 (.670)	7.68	8	1.08	.01
	OLS	-2.927 (1.020)	1.065 (1.063)	7.66	7	1.27	.14
	CCRC	-	1.083 (1.495)	5.87	8	1.92	.25
	CCRC	-1.461 (.507)	1.219 (1.479)	6.24	7	1.69	.27
15. Sweden	OLS	-	.715 (.802)	7.66	8	1.54	.07
	OLS	-1.492 (.394)	1.080 (.817)	8.10	7	1.60	.09
	CCRC	-	.768 (1.070)	7.05	8	1.34	.14
	CCRC	-1.656 (.575)	1.161 (1.156)	7.45	7	1.18	.18

Table A4.4

Exchange Rates, Consumer Prices and Price Variability: Whole Period

$$DS_{ct} = a_c + b_c(DP_{ct} - DP_t^*) + d_c(\sqrt{V_{ct}} - \sqrt{V_t^*}) + e_{ct}$$

(t-statistics in brackets)

Country	Estimation period	a_c x 100	b_c	d_c	SEE x 100	DF	D-W	R^2
<hr/>								
1. UK	OLS	-	.375 (.911)	1.951 (.801)	8.57	15	1.61	.08
	OLS	-.500 (.151)	.442 (.720)	2.018 (.789)	8.87	14	1.63	.08
	CORC	-	.275 (.549)	2.900 (1.041)	8.66	15	1.80	.12
	CORC	.983 (.235)	.134 (.180)	2.913 (1.018)	8.97	14	1.79	.12
2. Switzerland	OLS	-	.397 (.561)	.932 (.378)	9.80	19	1.07	.15
	OLS	-3.795 (1.873)	.277 (.415)	1.391 (.597)	9.21	18	1.29	.04
	CORC	-	.275 (.266)	.562 (.278)	9.12	19	1.87	.05
	CORC	-3.486 (1.146)	.206 (.225)	.697 (.323)	9.13	18	1.73	.10
3. Italy	OLS	-	1.029 (3.040)	-.813 (.305)	7.94	15	1.79	.32
	OLS	-2.035 (.722)	1.266 (2.660)	-.939 (.346)	8.07	14	1.81	.35
	CORC	-	.973 (2.735)	-.672 (.224)	8.16	15	1.66	.33
	CORC	-1.886 (.722)	1.192 (2.460)	-.905 (.295)	8.31	14	1.66	.35
4. Japan	OLS	-	1.126 (.779)	-4.252 (.742)	10.88	7	1.75	.04
	OLS	-3.614 (.975)	1.151 (.794)	-3.773 (.654)	10.92	6	1.98	.10
	CORC	-	2.425 (1.501)	-8.616 (1.158)	9.37	7	1.51	.28
	CORC	-1.796 (.551)	2.280 (1.353)	-8.043 (1.035)	9.98	6	1.58	.32
5. France	OLS	-	1.388 (1.382)	4.696 (1.546)	8.61	15	1.78	.18
	OLS	-4.058 (.973)	2.976 (1.552)	4.556 (1.496)	8.62	14	1.86	.23
	CORC	-	1.293 (1.609)	6.619 (2.113)	8.49	15	1.70	.25
	CORC	-3.159 (1.019)	2.597 (1.708)	6.861 (2.231)	8.48	14	1.80	.31
6. Germany	OLS	-	-.094 (.126)	2.422 (1.610)	7.92	19	.82	.01
	OLS	-2.774 (1.544)	-.458 (.606)	2.103 (1.434)	7.64	18	.95	.11
	CORC	-	-.005 (.004)	2.324 (1.562)	6.99	19	1.11	.25
	CORC	1.225 (.173)	.132 (.102)	2.387 (1.580)	7.19	18	1.15	.25

(contd)

Table A4.4 (Contd)

Country	Method of estimation	a _c x 100	b _c	d _c	SEE x 100	DF	D-W	R ²
7. Canada	OLS	-	.906 (1.494)	.239 (.271)	3.21	19	1.30	.03
	OLS	.659 (.802)	.729 (1.120)	-.016 (.017)	3.24	18	1.36	.07
	CCRC	-	1.180 (1.751)	-.042 (.050)	2.93	19	2.16	.19
	CCRC	.137 (.122)	1.143 (1.496)	-.062 (.070)	3.01	18	2.15	.19
8. Australia	OLS	-	-.171 (.427)	1.135 (1.209)	5.34	19	1.30	.07
	OLS	-1.081 (.665)	-.002 (.005)	1.441 (1.362)	5.42	18	1.34	.09
	CCRC	-	-.242 (.449)	1.390 (1.354)	5.12	19	1.96	.19
	CCRC	-.694 (.309)	-.131 (.199)	1.473 (1.347)	5.25	18	1.96	.20
9. Austria	OLS	-	-.087 (.082)	.747 (.476)	8.77	15	.90	.12
	OLS	-4.122 (1.871)	-.422 (.422)	2.031 (1.264)	8.12	14	1.11	.11
	CCRC	-	.888 (.661)	1.901 (1.460)	7.72	15	1.43	.19
	CCRC	1.561 (.108)	1.016 (.733)	1.897 (1.374)	8.01	14	1.48	.19
10. Belgium	OLS	-	.007 (.009)	1.469 (1.520)	7.45	19	1.13	.08
	OLS	-3.941 (2.240)	-.070 (.105)	2.708 (2.603)	6.77	18	1.67	.28
	CCRC	-	.263 (.292)	1.778 (1.663)	7.10	19	1.73	.21
	CCRC	-4.518 (2.762)	.105 (.176)	3.601 (3.079)	6.69	18	1.71	.34
11. Denmark	OLS	-	-.235 (.181)	.686 (.139)	11.58	7	.95	.01
	OLS	3.966 (.412)	-1.345 (.444)	.069 (.013)	12.33	6	1.18	.03
	CCRC	-	5.873 (2.647)	-.211 (.089)	7.46	7	.81	.53
	CCRC	9.691 (.237)	5.519 (1.876)	-.018 (.007)	8.05	6	.93	.55
12. Netherlands	OLS	-	-.443 (1.190)	-.756 (1.102)	2.61	10	.69	.13
	OLS	.262 (.148)	-.479 (1.039)	-.910 (.717)	2.75	9	.70	.13
	CCRC	-	-.410 (1.367)	-1.007 (.887)	2.18	10	.72	.40
	CCRC	.744 (.272)	-.486 (1.249)	1.284 (.841)	2.31	9	.83	.41

(contd)

Table A4.4(contd)

Country	Method of estimation	a _c x 100	b _c	d _c	SEE x 100	DF	D-W	R ²
13. Finland	OLS	-	-.131 (.246)	2.934 (2.969)	4.01	10	.95	.58
	OLS	-1.915 (1.241)	-.023 (.044)	3.533 (3.282)	3.90	9	1.07	.64
	CORC	-	.680 (1.961)	2.355 (4.172)	2.92	10	.89	.79
	CORC	-2.236 (.571)	.690 (1.859)	2.373 (3.932)	3.04	9	.89	.80
14. Greece	OLS	-	1.452 (4.374)	-8.027 (2.502)	6.48	7	1.16	.57
	OLS	-6.706 (.906)	2.203 (2.462)	-7.945 (2.443)	6.57	6	1.68	.62
	CORC	-	1.547 (3.328)	-9.959 (1.542)	6.60	7	1.29	.57
	CORC	-5.138 (.616)	2.056 (2.099)	-9.050 (1.621)	7.14	6	1.53	.58
15. Iceland	OLS	-	1.081 (1.025)	-.183 (.077)	12.66	10	.99	.15
	OLS	-5.917 (.569)	1.521 (1.136)	.265 (.103)	13.12	9	.92	.18
	CORC	-	1.203 (1.258)	.156 (.072)	11.55	10	1.45	.36
	CORC	-9.390 (.821)	1.509 (1.477)	.723 (.289)	11.75	9	1.43	.41
16. Ireland	OLS	-	1.303 (2.416)	-3.106 (1.220)	7.36	5	1.90	.52
	OLS	-8.666 (1.228)	1.807 (2.748)	-.194 (.057)	7.01	4	2.78	.65
	CORC	-	1.946 (4.792)	-5.836 (3.060)	6.27	5	1.77	.72
	CORC	-6.185 (.779)	2.013 (4.176)	-2.425 (.502)	6.69	4	1.92	.76
17. Luxembourg	OLS	-	1.900 (1.480)	3.403 (.849)	8.37	6	1.91	.14
	OLS	-4.006 (1.430)	1.632 (1.360)	2.804 (.753)	7.72	5	2.67	.39
	CORC	-	2.255 (1.622)	-2.210 (.330)	8.31	6	1.94	.20
	CORC	-4.063 (2.118)	1.736 (2.033)	1.477 (.410)	7.43	5	2.20	.49
18. Norway	OLS	-	-.040 (.089)	3.339 (2.784)	4.88	15	1.67	.31
	OLS	-1.146 (.767)	.209 (.367)	3.052 (2.397)	4.95	14	1.70	.34
	CORC	-	-.002 (.004)	3.485 (2.637)	5.00	15	1.69	.32
	CORC	-1.035 (.694)	.204 (.357)	3.285 (2.359)	5.09	14	1.62	.34

(contd)

Table A4.4 (contd)

Country	Method of estimation	a_c x 100	b_c	d_c	SEE x 100	DF	D-W	R^2
19. Spain	OLS	-	-.672 (.924)	1.843 (1.061)	5.69	6	1.71	.14
	OLS	1.876 (.357)	-.839 (.917)	1.120 (.405)	6.16	5	1.75	.16
	CORC	-	-.722 (.726)	1.798 (.819)	6.23	6	1.72	.14
	CORC	6.805 (.439)	-1.643 (.721)	-1.176 (.162)	6.64	5	1.98	.14
20. Sweden	OLS	-	.200 (.389)	1.058 (.630)	5.99	15	1.21	.04
	OLS	-1.471 (.701)	.538 (.756)	1.533 (.835)	6.10	14	1.17	.07
	CORC	-	.714 (1.011)	2.260 (1.419)	5.97	15	1.43	.11
	CORC	-1.102 (.305)	.767 (.956)	2.258 (1.314)	6.17	14	1.38	.11

Table A4.5

Exchange Rates, Consumer Prices and Price Variability: Pre-float

$$DS_{ct} = a_c + b_c(DP_{ct} - DP_t^*) + d_c(\sqrt{V_{ct}} - \sqrt{V_t^*}) + e_{ct}$$

(t-statistics in brackets)

Country	Estimation method	a_c x 100	b_c	d_c	SEE x 100	DF	D-W	R^2
1. UK	OLS	-	-.527 (.392)	1.337 (.306)	5.67	6	1.43	.06
	OLS	6.575 (2.333)	-3.689 (2.174)	4.537 (1.265)	4.30	5	2.76	.49
	CORC	-	-1.418 (.812)	4.426 (1.108)	5.71	6	1.77	.10
	CORC	8.388 (3.491)	-5.060 (2.671)	8.072 (1.407)	4.04	5	2.63	.64
2. Switzerland	OLS	-	-.580 (1.997)	-.451 (.560)	2.26	10	.41	.21
	OLS	.279 (.238)	-.646 (1.560)	-.611 (.565)	2.38	9	.45	.21
	CORC	-	-.232 (1.091)	.085 (.303)	1.41	10	2.09	.72
	CORC	-226.118 (.007)	-.538 (1.711)	.141 (.372)	1.43	9	1.80	.74
3. Italy	OLS	-	-.652 (1.490)	-1.531 (.947)	1.77	6	1.23	.39
	OLS	-.516 (.768)	-.618 (1.356)	-1.303 (.767)	1.83	5	1.27	.46
	CORC	-	-.708 (1.876)	-3.106 (1.956)	1.50	6	1.23	.62
	CORC	-.652 (1.551)	-.700 (2.165)	-2.888 (2.112)	1.29	5	2.05	.78
4. France	OLS	-	-.577 (.446)	2.549 (.623)	4.67	6	1.16	.06
	OLS	2.072 (.582)	-1.757 (.718)	1.520 (.325)	4.95	5	1.14	.12
	CORC	-	-1.523 (.941)	-1.190 (.306)	4.56	6	.80	.25
	CORC	-.054 (.004)	-1.518 (.601)	-1.196 (.257)	5.10	5	.80	.25
5. Germany	OLS	-	-.750 (1.045)	-.549 (.456)	3.90	10	.52	.38
	OLS	-2.428 (2.057)	-.240 (.357)	.708 (.581)	3.39	9	.66	.06
	CORC	-	-.653 (.682)	.391 (.556)	2.67	10	2.14	.40
	CORC	-3.535 (.660)	-.672 (.639)	.384 (.500)	2.73	9	2.03	.45
6. Canada	OLS	-	.533 (.541)	-.611 (.589)	2.61	10	.44	.07
	OLS	.628 (.705)	.625 (.613)	-1.009 (.837)	2.67	9	.53	.12
	CORC	-	.652 (1.116)	-.513 (1.009)	1.49	10	1.83	.63
	CORC	-1.245 (.696)	.635 (1.086)	-.419 (.820)	1.51	9	2.10	.66

(contd)

Table A4.5 (Contd)

Country	Method of estimation	a _c x 100	b _c	d _c	SEE x 100	DF	D-W	R ²
7. Australia	OLS	-	-.171 (.427)	1.135 (1.209)	5.34	19	1.30	.07
	OLS	-1.081 (.665)	-.002 (.005)	1.441 (1.362)	5.42	18	1.34	.09
	CORC	-	-.242 (.449)	1.390 (1.354)	5.12	19	1.96	.19
	CORC	-.694 (.309)	-.131 (.199)	1.473 (1.347)	5.25	18	1.96	.20
8. Austria	OLS	-	-1.079 (1.868)	-.268 (.529)	2.67	6	.92	.22
	OLS	-1.080 (.759)	-.888 (1.366)	.110 (.153)	2.77	5	.60	.30
	CORC	-	-1.835 (3.027)	-.585 (1.385)	2.24	6	1.84	.52
	CORC	-288.168 (.006)	-.462 (1.041)	.347 (1.354)	1.49	5	1.86	.83
9. Belgium	OLS	-	-.572 (.838)	-.056 (.090)	3.59	10	1.04	.00
	OLS	-1.009 (.736)	-.491 (.695)	.253 (.329)	3.67	9	1.12	.05
	CORC	-	-.706 (.854)	-.159 (.208)	3.74	10	1.23	.01
	CORC	-1.769 (.357)	-.617 (.696)	-.006 (.008)	3.84	9	1.41	.07
10. Netherlands	OLS	-	-.443 (1.190)	-.756 (1.102)	2.61	10	.69	.13
	OLS	.262 (.148)	-.479 (1.039)	-.910 (.717)	2.75	9	.70	.13
	CORC	-	-.410 (1.376)	-1.007 (.887)	2.18	10	.72	.40
	CORC	.744 (.272)	-.486 (1.249)	1.284 (.841)	2.31	9	.83	.41
11. Finland	OLS	-	-.131 (.246)	2.934 (2.969)	4.01	10	.95	.58
	OLS	-1.915 (1.241)	-.023 (.044)	3.533 (3.282)	3.90	9	1.07	.64
	CORC	-	.680 (1.961)	2.355 (4.172)	2.92	10	.89	.79
	CORC	-2.236 (.571)	.690 (1.859)	2.373 (3.932)	3.04	9	.89	.80
12. Iceland	OLS	-	1.081 (1.025)	-.183 (.077)	12.66	10	.99	.15
	OLS	-5.917 (.569)	1.521 (1.136)	.265 (.103)	13.12	9	.92	.18
	CORC	-	1.203 (1.258)	.156 (.072)	11.55	10	1.45	.36
	CORC	-9.390 (.821)	1.509 (1.477)	.723 (.289)	11.75	9	1.43	.41

(contd)

Table A4.5 (contd)

Country	Method of estimation	a_c x 100	b_c	d_c	SEE x 100	DF	D-W	R^2
13. Norway	OLS	-	-1.097 (.4026)	5.120 (3.494)	1.42	6	1.64	.68
	OLS	-.940 (1.549)	-.896 (3.228)	5.472 (4.087)	1.28	5	1.76	.79
	CORC	-	-1.073 (3.714)	6.215 (3.822)	1.34	6	.88	.76
	CORC	-.888 (1.627)	-.940 (3.583)	6.405 (4.415)	1.21	5	.64	.84
14. Spain	OLS	-	-.672 (.924)	1.843 (1.061)	5.69	6	1.71	.14
	OLS	1.876 (.357)	-.839 (.917)	1.120 (.405)	6.16	5	1.75	.16
	CORC	-	-.722 (.726)	1.798 (.819)	6.23	6	1.72	.14
	CORC	6.805 (.439)	-1.643 (.721)	1.176 (.162)	6.64	5	1.98	.22
15. Sweden	OLS	-	-.287 (.829)	-1.335 (.834)	2.48	6	.81	.16
	OLS	.689 (.354)	-.362 (.849)	-2.138 (.748)	2.68	5	.87	.18
	CORC	-	-.420 (.954)	-2.534 (1.451)	2.25	6	1.35	.40
	CORC	-247.486 (.002)	-.138 (.363)	-1.500 (.432)	2.31	5	.82	.49

Table A4.6

Exchange Rates, Consumer Prices and Price Variability: Post-float

$$DS_{ct} = a_c + b_c(DP_{ct} - DP_t^*) + d_c(\sqrt{V_{ct}} - \sqrt{V_t^*}) + e_{ct}$$

(t-statistics in brackets)

Country	Estimation method	a_c x 100	b_c	d_c	SEE x 100	DF	D-W	R^2
1. UK	OLS	-	.432 (.794)	2.860 (.794)	11.06	7	1.66	.15
	OLS	-4.150 (.558)	.921 (.879)	3.221 (.837)	11.64	6	1.98	.20
	CCRC	-	.291 (.400)	3.604 (.769)	11.73	7	1.88	.18
	CCRC	-10.988 (1.576)	1.850 (1.925)	3.475 (.712)	11.89	6	2.29	.30
2. Switzerland	OLS	-	.837 (.630)	2.676 (.493)	15.21	7	1.20	.02
	OLS	-10.039 (1.289)	-.701 (.402)	-1.670 (.270)	14.54	6	1.49	.03
	CCRC	-	2.065 (1.225)	-3.969 (.714)	12.66	7	1.86	.17
	CCRC	-26.178 (1.347)	7.060 (1.800)	-6.491 (1.261)	12.15	6	2.79	.37
3. Italy	OLS	-	1.059 (2.202)	-.331 (.082)	11.06	7	1.86	.21
	OLS	-30.389 (2.044)	4.731 (2.571)	-4.730 (1.192)	9.17	6	2.74	.53
	CCRC	-	1.259 (2.189)	-3.548 (.633)	10.96	7	1.68	.29
	CCRC	-31.704 (4.600)	5.000 (5.516)	-7.151 (2.612)	5.73	6	2.53	.84
4. Japan	OLS	-	1.126 (.779)	-4.252 (.742)	10.88	7	1.75	.04
	OLS	-3.614 (.975)	1.151 (.794)	-3.773 (.654)	10.92	6	1.98	.10
	CCRC	-	2.425 (1.509)	-8.616 (1.158)	9.37	7	1.51	.28
	CCRC	-1.796 (.551)	2.280 (1.353)	-8.043 (1.035)	9.98	6	1.58	.32
5. France	OLS	-	2.160 (1.416)	6.593 (1.441)	11.12	7	1.87	.28
	OLS	-14.056 (.910)	6.355 (1.308)	2.316 (.351)	11.26	6	1.77	.37
	CCRC	-	1.774 (1.406)	8.469 (1.382)	10.91	7	1.84	.29
	CCRC	-7.199 (.421)	3.698 (.780)	4.018 (.294)	11.71	6	1.49	.32
6. Germany	OLS	-	-.230 (.179)	4.116 (1.446)	11.29	7	.93	.16
	OLS	3.239 (.241)	.366 (.129)	5.378 (.889)	12.14	6	.91	.16
	CCRC	-	.132 (.047)	2.255 (.536)	11.06	7	.89	.13
	CCRC	27.686 (.453)	2.906 (.651)	4.793 (1.223)	10.49	6	1.46	.35

Table A4.6 (Contd)

Country	Method of estimation	a _c x 100	b _c	d _c	SEE x 100	DF	D-W	R ²
7. Canada	OLS	-	.746 (.747)	1.032 (.602)	4.12	7	1.82	.09
	OLS	2.922 (1.149)	-.918 (.525)	1.457 (.849)	4.04	6	2.79	.11
	CORC	-	.894 (.731)	.898 (.461)	4.43	7	1.94	.09
	CORC	5.250 (3.814)	-3.013 (2.826)	2.530 (2.555)	3.24	6	1.84	.52
8. Austria	OLS	-	.247 (.158)	9.592 (1.625)	10.65	7	.68	.16
	OLS	-.615 (1.141)	-.615 (.361)	9.352 (1.671)	10.43	6	.97	.31
	CORC	-	3.308 (1.343)	8.166 (2.749)	7.78	7	1.07	.53
	CORC	1072.976 (.018)	4.353 (2.170)	6.857 (2.773)	6.31	6	1.99	.74
9. Belgium	OLS	-	.554 (.549)	4.852 (2.573)	8.64	7	1.28	.49
	OLS	-6.047 (2.537)	.484 (.640)	6.517 (4.179)	6.48	6	2.77	.75
	CORC	-	.431 (.300)	4.914 (1.990)	8.62	7	2.21	.50
	CORC	-7.172 (4.146)	.658 (1.378)	7.415 (5.305)	5.61	6	2.67	.82
10. Denmark	OLS	-	-.235 (.181)	.686 (.139)	11.58	7	.95	.01
	OLS	3.966 (.412)	-1.345 (.444)	.069 (.013)	12.33	6	1.18	.03
	CORC	-	5.873 (2.647)	-.211 (.089)	7.46	7	.81	.53
	CORC	9.691 (.237)	5.519 (1.876)	-.018 (.007)	8.05	6	.93	.55
11. Greece	OLS	-	1.452 (4.374)	-8.027 (2.502)	6.48	7	1.16	.57
	OLS	-6.706 (.906)	2.203 (2.462)	-7.945 (2.443)	6.57	6	1.68	.62
	CORC	-	1.547 (3.328)	-9.959 (1.542)	6.60	7	1.29	.57
	CORC	-5.138 (.616)	2.056 (2.099)	-9.050 (1.621)	7.14	6	1.53	.58
12. Ireland	OLS	-	1.303 (2.416)	-3.106 (1.220)	7.36	5	1.90	.52
	OLS	-8.666 (1.228)	1.807 (2.749)	-.194 (.057)	7.01	4	2.78	.65
	CORC	-	1.946 (4.792)	-5.836 (3.060)	6.27	5	1.77	.72
	CORC	-6.185 (.779)	2.013 (4.176)	-2.425 (.502)	6.69	4	1.92	.76

(contd)

Table A4.6 (contd)

Country	Method of estimation	a_c x 100	b_c	d_c	SEE x 100	DF	D-W	R^2
13. Luxembourg	OLS	-	1.900 (1.480)	3.403 (.849)	8.37	6	1.91	.14
	OLS	-4.006 (1.430)	1.632 (1.360)	2.804 (.753)	7.72	5	2.67	.39
	CCRC	-	2.255 (1.622)	2.210 (.330)	8.31	6	1.94	.20
	CCRC	-4.063 (2.118)	1.736 (2.033)	1.477 (.410)	7.43	5	2.20	.49
14. Norway	OLS	-	.523 (.707)	3.519 (2.163)	6.36	7	2.06	.41
	OLS	-.692 (.240)	.638 (.687)	3.300 (1.673)	6.83	6	2.04	.41
	CCRC	-	.925 (1.081)	1.043 (.382)	6.29	7	1.92	.26
	CCRC	-1.262 (.417)	1.071 (1.055)	.962 (.307)	6.78	6	1.70	.28
15. Sweden	OLS	-	.891 (.976)	2.422 (.968)	7.69	7	1.10	.18
	OLS	-2.406 (.622)	1.508 (1.095)	2.801 (1.042)	8.05	6	1.06	.23
	CCRC	-	.747 (1.361)	-4.549 (1.482)	6.65	7	2.07	.34
	CCRC	-.887 (.330)	.983 (1.084)	-4.137 (1.113)	7.21	6	1.97	.36

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