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CROSS-COUNTRY EVIDENCE ON THE RELATIONSHIP
BETWEEN CENTRAL BANKS AND GOVERNMENTS

by

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Research Paper

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Abstract

The influence of government pressure on central bank behavior is examined for Canada, France, the U.K. and West Germany. With the budget deficit proxying for this pressure, there is evidence of an overall expansionary effect of the deficit on monetary policy response to stabilization objectives. Despite there otherwise being little consistency in the reaction functions estimated across the four countries, the marked tendency is for policy to become more accommodative at higher levels of the deficit. Hence the results point to a potentially important regularity in the relationship between central banks and governments.

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The importance of administration influence on Federal Reserve policy has been indicated in a number of studies, including Lockett and Potts (1978), who find evidence of a shift in monetary policy between each of the Eisenhower, Kennedy-Johnson and Nixon-Ford administrations. Hamburger and Zwick (1981, 1982) find structural breaks in the Federal Reserve's reaction function to apparently coincide with presidential regime changes. Meanwhile, analysis of the European experience by Hodgman and Resek (1983) and by Woolley (1983) suggests a significant role for administration regime changes that is not just confined to the U.S. This paper analyzes the influence of government pressure on monetary policy determination in Canada, France, the U.K. and West Germany. The method of analysis is to explicitly allow for an influence of fiscal pressure on the trade-off weights applied to the competing goals of monetary policy -- with the results suggesting an overall expansionary effect of this fiscal pressure across the four countries. Indeed, despite the presence of considerable differences in the monetary reaction functions for the countries in the sample, the cross-country results reveal a striking empirical regularity in the relationship between monetary expansion and fiscal pressure.

I. The Empirical Procedure

In the model of monetary policy, the relevant policy instrument is taken to be the rate of growth of the monetary base (DMB).¹ A measure of the cyclically adjusted deficit (DEF) is used as the proxy for government pressure. The deficit is taken to reflect the desired policy stance of the government, with higher levels of the deficit implying increased pressure

for the central bank to support the policy trade-off weights adhered to by the government. On the basis of the argument that the incentives facing politicians are of a shorter-term nature than the incentives facing officials of the central bank, then it is expected that there would be a relative preference for expansionary policy on the part of the government. Indeed, the delays accompanying the economic payoffs from an anti-inflationary policy may themselves be sufficient to make such a policy relatively less attractive to an institution with a shorter time horizon.² Here, the more immediate effects of contractionary policy tend to be confined to an adverse impact on interest rates and output. To incorporate the influence of fiscal pressure from the government, the monetary policy feedback rule has the general form given in (1) below:³

$$(1) \quad \text{DMB}_t = \alpha(\text{DEF}_t)X_t + \varepsilon$$

where DMB is the rate of growth of the monetary base,

DEF is a measure of the cyclically adjusted deficit,

X_t is an $N \times 1$ vector of lagged values of the target variables,

α is a $1 \times N$ vector of coefficients,

ε is an error term.

The nature of the dependence of α on the deficit can be expressed most simply by the linear approximation

$$(2) \quad \alpha_t = \alpha_1 + \alpha_2 \text{DEF}_t$$

which provides the basis for the equation to be estimated for the four countries in the sample.

In seeking to explain the rate of growth of the monetary base (DMB), it is necessary at this point to specify a set of variables that might reasonably be expected to feature in the central banks' reaction function. Here, the goals of price, interest rate and employment stability are represented by series on the rate of growth of the GNP deflator (DP), the three-month treasury bill rate (TB) and the unemployment rate (UN). In order to allow for international influences, the exchange rate with the U.S. (EX) and the balance of payments (BP) are added to the domestic policy variables. Finally, the composition of federal spending, as reflected in the rate of growth of real government purchases (DG), is also introduced into the model.⁴ The response to these variables by the Fed is itself taken to be interactive with the value of the deficit divided by trend GNP.⁵ Including lagged values of the monetary base and the deficit taken separately, the equation to be estimated has the form set out below:

$$\begin{aligned}
 (3) \quad DMB_t = & \beta_0 + \sum_{d=1}^{\ell} \beta_d DMB_{t-d} + \sum_{e=1}^m \alpha_e DEF_{t-e} \\
 & + \sum_{f=1}^n (\delta_{f1} + \delta_{f2} DEF_{t-f}) DG_{t-f} \\
 & + \sum_{g=1}^p (\kappa_{g1} + \kappa_{g2} DEF_{t-g}) DP_{t-g} \\
 & + \sum_{h=1}^q (\xi_{h1} + \xi_{h2} DEF_{t-h}) TB_{t-h} \\
 & + \sum_{i=1}^r (\tau_{i1} + \tau_{i2} DEF_{t-i}) UN_{t-i}
 \end{aligned}$$

$$\begin{aligned}
 & + \sum_{j=1}^s (\phi_{j1} + \phi_{j2} \text{DEF}_{t-j}) \text{EX}_{t-j} \\
 & + \sum_{k=1}^v (\psi_{k1} + \psi_{k2} \text{DEF}_{t-k}) \text{BP}_{t-k} + u_t \\
 = & \beta_0 + \sum_{d=1}^{\ell} \beta_d \text{DMB}_{t-d} + \sum_{e=1}^m \alpha_e \text{DEF}_{t-e} \\
 & + \sum_{f=1}^n \delta_{f1} \text{DG}_{t-f} + \delta_{f2} (\text{DEF} \cdot \text{DG})_{t-f} \\
 & + \sum_{g=1}^p \kappa_{g1} \text{DP}_{t-g} + \kappa_{g2} (\text{DEF} \cdot \text{DP})_{t-g} \\
 & + \sum_{h=1}^q \xi_{h1} \text{TB}_{t-h} + \xi_{h2} (\text{DEF} \cdot \text{TB})_{t-h} \\
 & + \sum_{i=1}^r \tau_{i1} \text{UN}_{t-i} + \tau_{i2} (\text{DEF} \cdot \text{UN})_{t-i} \\
 & + \sum_{j=1}^s \phi_{j1} \text{EX}_{t-j} + \phi_{j2} (\text{DEF} \cdot \text{EX})_{t-j} \\
 & + \sum_{k=1}^v \psi_{k1} \text{BP}_{t-k} + \psi_{k2} (\text{DEF} \cdot \text{BP})_{t-k} + u_t
 \end{aligned}$$

It can be seen that the postulated dependence of the feedback rule coefficients on the deficit implies that each economic variable should be placed alongside a corresponding interaction term in the estimation -- giving a compound variable with a lag structure synonymous with that of the

basic economic variable. The actual length of these lags remains indeterminate from a theoretical perspective, however; hence an appropriate test procedure must be adopted in order to determine the lag values m , n , p , q , r and s . Here, Akaike's (1970) minimum final prediction error (FPE) criterion is applied to the model with the maximum lag length set at six. The estimation itself is over quarterly data from 1961:1 to 1983:4, using ordinary least squares (OLS).

II. Results for Canada, France, the U.K. and West Germany

Application of the model to the four countries in the sample leads to considerable variation in the number of variables selected by the FPE criterion. Moreover, only in the case of Canada are all the included variables significant at the five percent level. Table 1 gives the significance of the full set of variables in the final specification for each country, and shows that the sets of interaction terms are jointly significant at the five percent level only for Canada and France. Chow tests showed the U.K. to feature instability across exchange rate regimes, indicating that the sample period should be split into the 1961:1 - 1972:2 fixed exchange rate period and 1972:3 - 1983:4 floating exchange rate period.⁶ For France and West Germany, dummy variables were introduced in order to deal with instability corresponding to changes in the political administration.⁷

Although significance of many of the variables is indicated, there are evidently extensive differences in the findings for the respective countries, both in the detailed country tables provided in Appendix A, and

in the overall sign pattern for the results as laid out in Table 2. Note that in Table 2, the partial derivative of the monetary base with respect to each of the economic variables measures the policy response observed at a zero level of the deficit. Here, no clear picture arises and there is an apparent mixture of countercyclical and accommodative policies being applied by the respective central banks. Canada and France, for example, exhibit a significant countercyclical (negative) response to exchange rate and balance of payments movements, while the U.K. (fixed exchange rate period) and West Germany feature a positive response to the international variables represented in their reaction functions.

However, there is in fact support for the paper's underlying hypothesis that the shorter time horizon of the administration would lead to relatively more weight being placed on expansionary policy than is the case with the central bank. This finding stems from the signs on the interaction terms, which in Table 2 are given by the partial derivatives of the right-hand-side coefficients with respect to the deficit. These partials reflect how the response to each of the economic variables is affected by an increase in the deficit, and it is notable that in eleven cases out of a total of fifteen (73%) the observed effect of the deficit is indeed expansionary. That is, over all four countries, there is a tendency for the response to the elements in the objective function to become more accommodative at higher levels of the deficit. For Canada and France -- the two cases where the interaction effect is statistically significant -- six out of the seven terms are positive.⁸

It remains true that the broad range of results contained in the findings of this paper necessarily limit its contribution towards

understanding the monetary policy process in the four countries. At the same time, such large variations in monetary policy reaction function estimates obtained for different countries are in fact a familiar feature of much other cross-country work (Gordon (1977) and Willett et al (1986), for example). Indeed, the primary basis of the present paper is that, despite the aforementioned problems with the results, it is nevertheless possible to discern a pronounced regularity in the relationship between central banks and governments. In essence, the results suggest that accelerations in the rate of monetary expansion may be attributed, at least in part, to the demands that governments may place on their central banks. Moreover, higher budget deficits are specifically seen as inducing a more accommodative response to movements in economic variables.

III. Conclusions

The analysis has modeled monetary policy as the joint product both of central bank trade-off weights and of government pressure, with the latter proxied for by the observed level of the deficit. The tendency for the response pattern to become more accommodative at higher levels of the deficit provides evidence of a marked empirical regularity that is illustrated in the results for the international sample. In view of the structural instability and insignificance of the interaction terms in certain of the countries, further research paying more attention to the role of the deficit may lead to a better understanding of cross-country differences in monetary policy.⁹

TABLE 1

Significance of the Selected Lags for Each Country

	Canada		France		U.K.				West Germany	
	Test Statistic	Critical Value (0.05)	Test Statistic	Critical Value (0.05)	1961:1 - 1972:2		1972:3 - 1983:4		Test Statistic	Critical Value (0.05)
					Test Statistic	Critical Value (0.05)	Test Statistic	Critical Value (0.05)		
DMB	--	--	$F_{3,70}=4.25$	2.74	--	--	--	--	$F_{1,80}=9.74$	3.96
DEF	$F_{2,56}=3.31$	3.17	--	--	$F_{2,24}=1.94$	3.40	$F_{2,34}=1.01$	3.28	--	--
DG and DEF.DG	$F_{4,56}=4.73$	2.54	$F_{2,70}=2.76$	3.13	--	--	--	--	--	--
DP and DEF.DP	$F_{6,56}=3.84$	2.27	--	--	--	--	--	--	$F_{2,80}=0.48$	3.11
TB and DEF.TB	$F_{6,56}=4.65$	2.27	--	--	--	--	--	--	--	--
UN and DEF.UN	--	--	$F_{6,70}=3.62$	2.23	$F_{4,24}=1.51$	2.78	$F_{4,34}=1.76$	2.65	--	--
EX and DEF.EX	$F_{6,56}=2.91$	2.27	--	--	$F_{4,24}=2.71$	2.78	--	--	--	--
BP and DEF.BP	$F_{8,56}=4.00$	2.11	$F_{6,70}=2.93$	2.23	$F_{8,24}=1.93$	2.36	$F_{2,34}=1.84$	3.28	$F_{4,80}=3.36$	2.48
Dummy Variables	--	--	$F_{2,70}=4.90$	3.13	--	--	--	--	$F_{2,80}=3.45$	3.11
All Inter- action Terms	$F_{15,56}=3.18$	1.85	$F_{7,70}=2.30$	2.14	$F_{8,24}=1.89$	2.36	$F_{3,34}=0.69$	2.88	$F_{3,80}=2.47$	2.72

TABLE 2

Sign Pattern for the Results

	<u>Canada</u>	<u>France</u>	<u>U.K.</u>		<u>West Germany</u>
			<u>1961:1 - 1972:2</u>	<u>1972:3 - 1983:4</u>	
$\partial \text{DMB} / \partial \text{DEF}$	< 0	--	< 0	> 0	--
$\partial \text{DMB} / \partial \text{DG}$	> 0	< 0	--	--	--
$\partial (\partial \text{DMB} / \partial \text{DG}) / \partial \text{DEF}$	> 0	> 0	--	--	--
$\partial \text{DMB} / \partial \text{DP}$	> 0	--	--	--	> 0
$\partial (\partial \text{DMB} / \partial \text{DP}) / \partial \text{DEF}$	> 0	--	--	--	> 0
$\partial \text{DMB} / \partial \text{TB}$	< 0	--	--	--	--
$\partial (\partial \text{DMB} / \partial \text{TB}) / \partial \text{DEF}$	> 0	--	--	--	--
$\partial \text{DMB} / \partial \text{UN}$	--	> 0	< 0	> 0	--
$\partial (\partial \text{DMB} / \partial \text{UN}) / \partial \text{DEF}$	--	> 0	> 0	< 0	--
$\partial \text{DMB} / \partial \text{EX}$	< 0	--	> 0	--	--
$\partial (\partial \text{DMB} / \partial \text{EX}) / \partial \text{DEF}$	> 0	--	> 0	--	--
$\partial \text{DMB} / \partial \text{BP}$	< 0	< 0	> 0	< 0	> 0
$\partial (\partial \text{DMB} / \partial \text{BP}) / \partial \text{DEF}$	> 0	< 0	> 0	< 0	< 0

Notes

- * This paper draws on my Ph.D. dissertation entitled 'The Interaction of Central Bank Behavior with Fiscal Policymaking and the Political Business Cycle: A Multi-Country Study,' Houston, Tex.: University of Houston, December 1985. I would like to thank Mike Cox and Steve Green for advice and comments that greatly assisted preparation of the paper in its present form. I am also pleased to acknowledge prior support from Gerald Dwyer, my dissertation chairman, and the other members of my dissertation committee. The views expressed are those of the author and do not necessarily reflect the positions of the Federal Reserve Bank of Dallas or the Federal Reserve System.
1. Use of this monetary measure is supported by Lothian (1976), who stresses the relative constancy of the characteristics of high-powered money across countries and across time.
 2. In terms of the reputational implications discussed by Barro and Gordon (1983a,b), the policymaker's discount rate is in fact crucial in determining whether the policymaker forgoes the short-term benefits available from unanticipated inflation in order to secure the gain from low average inflation over the longer haul. In the Barro and Gordon model, it is shown that, ceteris paribus, the lower the discount rate, the closer the outcome to the model's optimal solution in which the policymaker follows a zero money growth rule. A higher discount rate for the government relative to the central bank would in this case be consistent with preference for a relatively more rapid rate of money growth, and in turn with an expansionary impetus for the fiscal pressure applied by the government.

3. See Burdekin (1986) for formal development of the underlying model associated with this equation. The approach may be related to that of Blinder (1983), who also allows for interaction between the set of coefficients in the monetary policy reaction function and the budget deficit. Blinder, however, addresses the possible impact of central bank economic goals on deficit accommodation; and deals therefore with the reverse of the direction of causality considered here.
4. This accords theoretically with certain optimal public finance considerations raised by Barro (1979), and accords empirically with the significant role for this variable found by Blinder (1983).
5. A problem here is the lack of international data on the full-employment deficit and on trend GNP. Although in the latter case an acceptable proxy can be obtained by regressing the log of real GNP on a time trend, the best alternative to the full-employment deficit was found simply to be observed (unadjusted) deficit. Using the U.S. as a basis of comparison, the observed deficit in fact has a greater correlation with the official 'cyclically adjusted' deficit than does a proxy measure constructed by taking the residuals from a regression of the deficit on current and lagged real GNP. Use of the unadjusted deficit is further justified by the fact that it has relatively little effect on the sign pattern for the U.S. as given in Burdekin (1986), even though there is a reduced overall goodness of fit. (The \bar{R}^2 is 0.63 with the official measure, 0.53 with the unadjusted deficit and 0.45 with the constructed deficit.)
6. In an initial application of the FPE criterion to the full sample, only the deficit and unemployment rate were selected for the U.K. Allowance was then made for a role of the international variables that might be

specific to the separate sub-samples. Here, a reapplication of the FPE criterion revealed both the exchange rate and balance of payments to be significant for the 1961:1 - 1972:2 period, and the balance of payments alone to be significant for the 1972:3 - 1983:4 period. The final specifications for the two U.K. sub-samples include these international variables as well as the deficit and unemployment rate.

7. Chow tests were applied in order to test for stability over French presidential administrations, and the results indicated structural breaks corresponding to the terms of Pompidou and Giscard. For West Germany, instability was indicated over the 1969:4 - 1972:4 and 1973:1 - 1976:4 inter-election periods. Dummy variables were defined for each of these West German inter-election periods, and also for the two French presidential administrations noted above.
8. The statistical insignificance of the interaction terms for the U.K. and West Germany clearly is evidence against the ascribed role for fiscal pressure in influencing central bank behavior. There is also a general insignificance of the economic variables present in the reaction functions for these two countries. (The only exception to this is the balance of payments variable for West Germany). The particular problems in explaining monetary policy in the U.K. and West Germany does, however, almost heighten the importance of the overall expansionary effect of the deficit as a trend discernible across the full sample.
9. The cross-country evidence may, however, be set alongside the results presented in Burdekin (1986), which suggest an important role for fiscal pressure in explaining monetary policy in the U.S.

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OECD, Main Economic Indicators, Historical Statistics 1964-1983, Paris: OECD, 1984.

Appendix A

TABLE A1

Results for Canada

Dependent Variable DMB
Sample 1961:1 - 1983:4

	<u>Coefficient</u>	<u>t-Statistic</u>
Constant	0.122	(1.70)
DEF(-1)	13.259	(1.80)
DEF(-2)	-16.002	(-2.30)
DG(-1)	0.144	(1.22)
DG(-2)	0.045	(0.38)
DEF.DG(-1)	-38.518	(-2.00)
DEF.DG(-2)	41.774	(2.23)
DP(-1)	-0.026	(-0.08)
DP(-2)	-0.070	(-0.21)
DP(-3)	0.952	(2.88)
DEF.DP(-1)	-23.278	(-0.53)
DEF.DP(-2)	120.993	(2.75)
DEF.DP(-3)	42.498	(1.17)
TB(-1)	-0.671	(-2.97)
TB(-2)	1.010	(3.34)
TB(-3)	-0.680	(-3.07)
DEF.TB(-1)	53.081	(3.07)
DEF.TB(-2)	-55.732	(-2.92)
DEF.TB(-3)	3.777	(0.21)
EX(-1)	0.328	(2.61)
EX(-2)	-0.257	(-1.86)
EX(-3)	-0.124	(-1.32)
DEF.EX(-1)	-13.673	(-1.95)
DEF.EX(-2)	16.172	(2.46)
DEF.EX(-3)	-1.289	(-1.26)
BP(-1)	-0.020	(-2.36)
BP(-2)	0.002	(0.26)
BP(-3)	0.004	(0.46)
BP(-4)	-0.040	(-4.41)
DEF.BP(-1)	0.402	(0.70)
DEF.BP(-2)	0.315	(0.55)
DEF.BP(-3)	0.694	(1.19)
DEF.BP(-4)	1.899	(3.15)

$$\bar{R}^2 = 0.90$$

$$DW = 1.79$$

$$\sigma = 0.013$$

TABLE A2

Results for France

Dependent Variable DMB
Sample 1961:1 - 1983:4

	<u>Coefficient</u>	<u>t-Statistic</u>
Constant	0.054	(2.92)
DMB(-1)	-0.329	(-2.81)
DMB(-2)	0.160	(1.37)
DMB(-3)	0.113	(0.95)
DG(-1)	-1.997	(-2.11)
DEF.DG(-1)	156.492	(1.80)
UN(-1)	-0.125	(-0.47)
UN(-2)	-0.282	(-0.56)
UN(-3)	0.453	(1.60)
DEF.UN(-1)	-1.919	(-1.42)
DEF.UN(-2)	2.898	(2.33)
DEF.UN(-3)	3.004	(2.58)
BP(-1)	-0.007	(-1.19)
BP(-2)	0.009	(1.09)
BP(-3)	-0.006	(-0.81)
DEF.BP(-1)	-0.011	(-0.03)
DEF.BP(-2)	-1.347	(-3.08)
DEF.BP(-3)	-0.851	(-2.14)
POMP	0.006	(0.45)
GISC	-0.047	(-2.64)

$$\bar{R}^2 = 0.22$$

$$DW = 1.89$$

$$\sigma = 0.044$$

Note: POMP is a dummy variable set equal to one for the Pompidou administration (1969:3 - 1974:2), and zero else,

GISC is a dummy variable set equal to one for the Giscard administration (1974:3 - 1981:2), and zero else.

TABLE A3
Results for the U.K.

Dependent Variable DMB
Sample 1961:1 - 1972:2

	<u>Coefficient</u>	<u>t-Statistic</u>
Constant	0.040	(0.42)
DEF(-1)	0.350	(0.30)
DEF(-2)	-2.484	(-1.80)
UN(-1)	2.166	(0.82)
UN(-2)	-2.331	(-0.87)
DEF.UN(-1)	22.543	(1.68)
DEF.UN(-2)	32.774	(2.02)
EX(-1)	0.273	(3.19)
EX(-2)	-0.267	(-2.96)
DEF.EX(-1)	-0.139	(-0.36)
DEF.EX(-2)	0.479	(1.11)
BP(-1)	0.077	(1.39)
BP(-2)	-0.073	(-1.34)
BP(-3)	0.069	(1.45)
BP(-4)	-0.052	(-1.04)
DEF.BP(-1)	1.686	(2.34)
DEF.BP(-2)	1.503	(2.31)
DEF.BP(-3)	1.186	(2.11)
DEF.BP(-4)	0.746	(1.36)

$$\bar{R}^2 = 0.83$$

$$DW = 2.15$$

$$\sigma = 0.020$$

Sample 1972:3 - 1983:4

	<u>Coefficient</u>	<u>t-Statistic</u>
Constant	0.082	(1.97)
DEF(-1)	0.731	(1.24)
DEF(-2)	0.372	(0.82)
UN(-1)	-3.255	(-1.37)
UN(-2)	3.400	(1.42)
DEF.UN(-1)	-9.856	(-0.94)
DEF.UN(-2)	-6.509	(-1.16)
BP(-1)	-0.010	(-0.55)
DEF.BP(-1)	-0.212	(-0.71)

$$\bar{R}^2 = 0.60$$

$$DW = 2.47$$

$$\sigma = 0.041$$

TABLE A4

Results for West Germany

Dependent Variable DMB
Sample 1961:1 - 1983:4

	<u>Coefficient</u>	<u>t-statistic</u>
Constant	0.059	(5.36)
DMB(-1)	-0.311	(-3.12)
DP(-1)	0.566	(0.88)
DEF.DP(-1)	9.549	(0.09)
BP(-1)	-0.004	(-1.41)
BP(-2)	0.009	(3.20)
DEF.BP(-1)	0.133	(0.27)
DEF.BP(-2)	-1.219	(-2.62)
D6972	0.034	(2.49)
D7376	-0.004	(-0.31)

$\bar{R}^2 = 0.49$ DW = 2.07 $\sigma = 0.040$

Note: D6972 is a dummy variable set equal to one for the inter-election period of 1969:4 - 1972:4, and zero else,

D7376 is a dummy variable set equal to one for the inter-election period of 1973:1 - 1976:4, and zero else.

Appendix B

Description of the International Data

The UN and BP data series are taken from OECD (1980, 1984); with the remainder, in general, being obtained from the IFS tape. However, for France, the national accounts data are from OECD (1972) and OECD, Quarterly National Accounts (recent issues). Also, the BUDGET series for Canada is by courtesy of the Bank of Canada. (Available from 1967:2 in Bank of Canada Review, various issues.)

The exact definitions of the data series follow below, with the IFS line numbers where appropriate:

(1) $DMB = \log (MBASE/MBASE(-1))$

where MBASE is the (unadjusted) monetary base (line 14).

(2) $DEF = (-1 \times BUDGET)/TRNDGNP$

where BUDGET is the (unadjusted) government budget surplus (line 80),

TRNDGNP is trend GNP; constructed by taking the antilog of the fitted values from a regression of the logarithm of real GNP (line 99a.r -- for U.K. only, line 99b.p) on a constant and a time trend -- which are then multiplied by PRICE to put the series on a nominal basis.

(3) $DG = \log (GOV/GOV(-1))$

where GOV is real government consumption (line 91f divided by PRICE).

(4) $DP = \log (PRICE/PRICE(-1))$

where PRICE is the GNP deflator (line 99a divided by line 99a.r -- for U.K. only, lines 99b and 99b.p respectively).

- (5) UN is the unemployment rate -- for France only, the numbers unemployed (in millions).
- (6) TB is the three-month treasury bill rate (Canada and U.K., line 60c).
- (7) CL is the call money rate (France and West Germany, line 60b).
- (8) EX is the exchange rate with the U.S. (line a.e -- for U.K. only, line a.g).
- (9) BP is the balance of payments deficit on current account -- for France only, the balance of trade.

The only seasonally adjusted series apart from the national accounts data are UN (except for West Germany) and BP (France only).