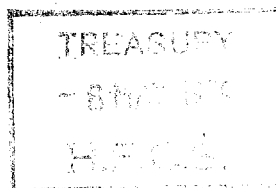


45)

**MONETARY AGGREGATES AND
INTEREST RATES - PART D
20TH APRIL 1979 - 30TH MAY 1979**

MR MIDDLETON



cc Mr Riley
Mr Mowl
Mr Bell

CITY UNIVERSITY PAPER

My covering minute of 17 April to Sir Fred said that the draft was not complete. Chris Riley is preparing table 2, the text that goes with it and the annex on changes in the monetary model. I attach a draft concluding section. I have called it Envoi because I think that it is sensible to leave the main conclusions at the end of the previous section which is after all called the PSBR and £M3 . It also means that we can end with some cautionary notes about the model and the complexity of policy making, and thus leave the reader with the impression that we are not claiming too much for our results. (This may be prudent at this political juncture.) Naturally, I hope that you and others will suggest improvements.

2. I have incorporated all Steven Bell's comments on my text, and also some comments from Frank Cassell and Charles Goodhart. You will be interested to know that Charles' only significant criticism, which he said that he would probably make publicly at the conference, is that our results would be much more convincing if we could show that the explicit demand for £M3 really does depend on wealth. Since Bank work, based on some wealth series of Joe Grice's, could not establish a wealth effect, he was sceptical.

3. I am not sure what our time-table should be now. I am happy to go on incorporating useful comments I receive, but perhaps we should meet together when we have all looked at the missing bits and agree the changes. Colin Mowl is meanwhile improving the numbers.

John O's

V. Envoi

62. This paper has explored the relationship between the PSBR and the growth of the money stock. The preceding three paragraphs summarise the findings. We make two final comments here.

63. First, the empirical results were derived from the Treasury macroeconomic model, and they are subject to a wide margin of error as is the model itself. Some of the crucial relationships in the model, such as that which determines nominal earnings, have been difficult to establish empirically and it would not surprise us if the true relationships were somewhat different. Although at any one time the model that we have is the best available to us, it is being continuously improved by better specification and new estimation. This is especially true of the new model of the monetary sector which is undergoing considerable change. As well as making changes to the model, we are continuously improving our simulation methods in an attempt to produce the most realistic set of policy and behavioural assumptions. The estimated relationship between the PSBR and £M3 will therefore change over time, and any conclusions based on it must also alter.

64. Secondly, the relationship between the PSBR and monetary growth has been discussed in this paper on the assumptions of fixed interest rates, no changes in other monetary policy instruments (eg. the SSD scheme, open market operations, calls for Special Deposits), and either a fixed or a freely floating exchange rate regime. In practice, of course, interest rates can alter, the authorities can use other monetary instruments, and they can intervene in the foreign exchange market to bring about an exchange rate which is neither fixed nor freely floating. Each of these would alter the relationship between the PSBR and £M3. Thus in setting fiscal policy in order to achieve a given monetary target it is not enough to take account of the relationships discussed in this paper. It is also necessary to estimate the effects of other monetary and exchange rate policies on the money stock. In other words, fiscal, monetary and exchange rate policies must be simultaneously determined, in the light of their joint effects on the relevant intermediate and final objectives. The subject of this paper is only one, although an important one, of the relevant considerations.

Table 1: Summary of the Effects on Activity,
Differences in:

Fixed Exchange Rate								
	Real GDP % of base	Prices % of base	Nominal GDP % of base	Current Balance (£m)	Private Sector Balance (£m)	Public Sector Balance (£m)	PSBR (£m)	
<u>Consumers' Expenditure</u>								
Year 1	1.7	-0.1	1.7	-1230	-2350	1120	-1000	
Year 2	1.5	0.4	2.0	-1810	-3660	1860	-1810	
Year 3	1.0	0.9	2.1	-1720	-3730	2010	-1990	
Year 4	0.7	1.2	2.2	-1710	-3830	2150	-2070	
<u>Exports</u>								
Year 1	2.7	-0.4	2.2	2520	1420	1100	-1000	
Year 2	3.1	0.2	3.2	2890	570	2340	-2240	
Year 3	2.8	1.1	3.8	4000	1180	2850	-2740	
Year 4	2.5	1.9	4.4	5140	2140	3070	-2900	
<u>Income Tax</u>								
Year 1	-0.2	0.1	-0.2	250	-860	1120	-1000	
Year 2	-0.5	0.6	0.1	490	-800	1300	-1260	
Year 3	-0.6	0.9	0.3	510	-680	1200	-1170	
Year 4	-0.7	1.1	0.4	370	-650	1040	-1020	
<u>VAT</u>								
Year 1	-0.9	2.0	1.0	760	-930	1710	-1000	
Year 2	-1.4	3.1	1.7	1100	-270	1410	-1250	
Year 3	-1.7	2.8	2.2	430	-10	1010	-820	
Year 4	-1.7	4.1	2.2	600	-280	960	-770	
<u>General Government</u>								
<u>Procurement</u>								
Year 1	-0.8	-0.1	-0.8	410	-560	960	-1000	
Year 2	-0.8	-0.3	-1.1	700	-190	880	-910	
Year 3	-0.7	-0.7	-1.2	790	-370	1150	-1180	
Year 4	-0.4	-0.4	-1.3	920	-590	1480	-1530	

ices, and Sectoral Financial Balances

Base Run

Floating Exchange Rate							
Real GDP % of base	Prices % of base	Nominal GDP % of base	Current Balance (£m)	Private Sector Balance (£m)	Public Sector Balance (£m)	PSBR (£m)	Exchange Rate % of base
2.0	-0.3	1.9	-1550	-2700	1160	-1000	-2.9
2.3	1.0	3.3	-1340	-3490	2180	-2040	-4.8
2.1	2.3	4.6	-740	-3470	2810	-2610	-5.6
1.9	3.7	5.8	-120	-3270	3270	-2980	-7.3
1.5	-0.1	1.3	2130	1120	1000	-1000	11.2
0.7	-1.3	-0.6	210	-1010	1190	-1300	10.3
-	-2.1	-2.0	430	-210	570	-770	12.4
-0.2	-3.4	-3.4	-240	-860	500	-740	14.1
-0.2	0.1	-0.2	280	-830	1110	-1000	0.7
-0.6	0.4	-0.2	320	-920	1240	-1220	1.2
-0.9	0.6	-0.2	190	-860	1050	-1040	1.6
-0.9	0.5	-0.4	-150	-950	800	-830	1.8
-1.0	1.9	0.9	770	-860	1650	-1000	1.5
-1.6	2.7	1.1	690	-570	1290	-1170	1.9
-1.4	3.0	1.1	380	-320	750	-620	2.0
-2.0	3.0	1.0	-120	-730	650	-530	2.3
-0.8	-	-0.7	460	-500	460	-1000	1.3
-1.1	-0.4	-1.5	380	-440	800	-860	2.4
-1.1	-1.1	-2.2	190	-730	880	-970	3.0
-1.1	-1.8	-2.8	-80	-1170	1030	-1170	3.9

Table 2: Summary of the Effects on the
Differen

Fixed Exchange Rate								
	Net Financial Wealth* (£m)	Bank Loans (£m)	Public Sector Debt (£m)	Overseas Assets (net) (£m)	Timing Adj. etc (£m)	£M3 (£m)	£M3 %	
<u>Consumers' Expenditure</u>								
End Year 1	-2350 (-4.1)	130	-760	-240	120	-1100	-1.9	
End Year 2	-6020 (-9.1)	600	-2090	-700	160	-2490	-3.9	
End Year 3	-9750 (-13.4)	750	-3610	-1310	180	-3890	-5.5	
End Year 4	-13580 (-17.2)	870	-5300	-1900	230	-5270	-6.7	
<u>Exports</u>								
End Year 1	1420 (2.3)	40	280	340	100	980	1.6	
End Year 2	1490 (2.9)	840	870	840	180	1310	2.1	
End Year 3	3170 (4.2)	1320	1480	1430	260	1850	2.6	
End Year 4	5310 (6.4)	1750	2500	2030	370	2890	3.7	
<u>Income Tax</u>								
End Year 1	-860 (-1.4)	60	-230	-30	120	-420	-0.7	
End Year 2	-1670 (-2.4)	180	-530	-50	150	-770	-1.2	
End Year 3	-2350 (-3.1)	270	-770	-70	180	-1060	-1.5	
End Year 4	-2990 (-3.6)	310	-1050	-140	180	-1320	-1.7	
<u>VAT</u>								
End Year 1	-930 (-1.5)	540	130	60	690	110	0.2	
End Year 2	-1200 (-1.7)	840	30	260	810	60	0.1	
End Year 3	-1210 (-1.6)	1090	230	490	930	90	0.1	
End Year 4	-1490 (-1.8)	1320	220	580	1040	60	0.1	
<u>General Government Procurement</u>								
End Year 1	-560 (-0.9)	-70	-160	-100	-30	-400	-0.7	
End Year 2	-740 (-1.1)	-310	-340	-280	-50	-490	-0.8	
End Year 3	-1110 (-1.5)	-430	-440	-450	-70	-650	-0.9	
End Year 4	-1700 (-2.1)	-530	-780	-610	-120	-930	-1.2	

All columns show changes in stocks at end-period. The change in the stock of net financial in the private sector financial balances shown in Table 1.

* % of base in brackets

1 Net financial wealth = Public sector debt + overseas assets (net) + £M3

Non-Bank Private Sector Balance Sheet¹

as from Base Run

		Floating Exchange Rate									
£M3 velocity of base	M1	Net Financial Wealth* (£m)	Bank Loans (£m)	Public Sector Debt (£m)	Overseas Assets (net) (£m)	Timing Adj (£m)	£M3 (£m)	£M3 Velocity % of base	£M3 Velocity % of base	M1	
3.5	-0.3	-2700(-4.5)	410	-760	-970	150	-410	-0.7	3.0	0.6	
5.8	-0.8	-3610(-4.0)	1420	-1490	-1790	250	-1230	-1.9	5.7	1.0	
7.6	-1.2	-4670(-12.8)	2290	-2550	-2270	380	-2180	-3.1	8.0	1.2	
9.3	-1.6	-12430(-15.7)	3340	-3590	-2390	550	-3060	-3.9	10.1	1.9	
1.1	0.9	1120(1.9)	-720	-310	1310	10	-590	-1.0	1.7	-1.4	
1.5	1.4	100(0.1)	-1000	-1010	1430	-60	-1390	-2.2	0.9	-2.4	
1.7	2.0	-110(-0.1)	-2010	-1980	1740	-190	-2070	-2.9	0.2	-2.6	
1.3	2.8	-970(-1.2)	-2980	-3100	1660	-300	-2800	-3.6	-0.6	-4.7	
0.6	-0.2	-830(-1.4)	-	-210	180	110	-590	-1.0	0.8	-0.4	
1.5	-0.1	-1750(-2.5)	-10	-790	380	130	-1220	-1.9	1.8	-0.7	
1.9	-0.1	-2600(-3.4)	-100	-1300	510	130	-1780	-2.5	2.2	-0.9	
2.2	-0.2	-3560(-4.2)	-250	-1840	430	100	-2310	-2.9	2.5	-1.2	
0.9	0.8	-860(-1.4)	370	-50	480	640	-290	-0.5	1.2	0.2	
1.9	1.3	-1430(-2.1)	490	-380	910	720	-750	-1.2	2.3	0.2	
2.2	1.5	-1750(-2.3)	490	-610	1160	800	-1000	-1.4	2.6	0.2	
2.4	1.6	-2470(-3.0)	470	-910	1090	870	-1320	-1.7	2.7	0.2	
-0.3	-0.4	-500(-0.8)	-180	-280	300	-40	-740	-1.3	0.1	-0.8	
-0.3	-0.6	-940(-1.4)	-630	-830	540	-90	-1370	-2.1	0.3	-1.4	
-0.3	-0.7	-1670(-2.2)	-1080	-1450	680	-150	-2120	-3.0	0.5	-2.2	
-0.1	-0.9	-2840(-3.4)	-1610	-2320	660	-230	-3020	-3.8	0.7	-2.9	

wealth shown in the first column of each panel is obtained by cumulating the changes

bank loans - timing adjustments etc.,

Simulation [17]: Exogenous Increase in Consumers' Expenditure
Differences from Base Run

Exchange Rate	Private Sector Balance Sheet (£m)							Timing Adj.	£/2	£/2 % of base		
	Consumers' Expenditure % of base	Real GDP % of base	Average Earnings % of base	Exchange Rate % of base	GDP prices % of base	Current Balance (£m)	PSBR (£m)				Net Financial Wealth	Bank Loans
Q1	3.2	1.4	0.2	-	0.1	-140	-140	60	-270	-0.5	-	
Q2	2.4	1.8	0.4	-	0.1	-210	-210	40	-400	-1.0	-0.1	
Q3	2.5	1.9	0.6	-	0.1	-370	-370	110	-740	-1.4	-0.2	
Q4	2.5	1.9	0.7	-	0.1	-440	-440	120	-880	-1.0	-0.3	
Q5	2.4	1.7	0.8	-	0.1	-460	-460	140	-920	-1.2	-0.4	
Q6	2.2	1.6	0.8	-	0.1	-480	-480	140	-960	-1.4	-0.5	
Q7	2.2	1.5	0.9	-	0.1	-480	-480	150	-960	-1.5	-0.7	
Q8	2.2	1.4	1.0	-	0.6	-470	-470	160	-940	-1.4	-0.8	
Q9	2.2	1.4	1.0	-	0.6	-460	-460	160	-920	-1.4	-0.8	
Q10	2.1	1.1	1.3	-	0.9	-450	-450	160	-900	-1.4	-0.9	
Q11	2.0	1.0	1.4	-	1.0	-440	-440	170	-880	-1.4	-1.0	
Q12	1.9	0.9	1.5	-	1.1	-440	-440	180	-880	-1.4	-1.1	
Q13	1.9	0.9	1.6	-	1.1	-440	-440	190	-880	-1.4	-1.2	
Q14	2.4	0.8	1.7	-	1.2	-450	-450	190	-900	-1.4	-1.4	
Q15	2.8	0.7	1.8	-	1.4	-470	-470	220	-940	-1.6	-1.5	
Q16	2.8	0.7	1.9	-	1.4	-470	-470	240	-940	-1.6	-1.7	
Q1	2.2	1.5	0.2	-0.4	0.2	-110	-130	60	-210	-0.4	0.1	
Q2	2.4	1.8	0.4	-1.3	0.1	-170	-210	40	-310	-0.7	0.1	
Q3	2.4	2.1	0.6	-1.4	0.1	-230	-270	120	-370	-0.7	0.2	
Q4	2.3	2.2	0.8	-1.4	0.2	-270	-340	140	-430	-0.7	0.6	
Q5	2.1	2.2	1.0	-1.7	0.2	-320	-420	160	-500	-0.8	0.8	
Q6	2.0	2.2	1.2	-1.5	0.3	-340	-470	180	-530	-0.8	0.8	
Q7	2.4	2.2	1.6	-1.6	1.1	-340	-500	210	-530	-0.8	0.9	
Q8	2.4	2.1	2.0	-1.6	1.5	-340	-530	240	-530	-0.8	0.9	
Q9	2.8	2.1	2.4	-1.4	1.7	-340	-570	280	-570	-0.8	1.0	
Q10	2.7	2.0	2.8	-1.1	2.1	-340	-620	320	-620	-0.8	1.1	
Q11	2.6	2.0	3.1	-1.1	2.3	-340	-670	360	-670	-0.8	1.2	
Q12	2.6	1.9	3.5	-1.1	2.6	-340	-720	400	-720	-0.8	1.3	
Q13	2.5	1.9	3.4	-1.4	2.0	-340	-770	440	-770	-0.8	1.4	
Q14	2.4	1.8	4.2	-1.4	2.3	-340	-820	480	-820	-0.8	1.6	
Q15	2.3	1.8	4.6	-1.1	2.7	-340	-870	520	-870	-0.8	1.7	
Q16	2.2	1.8	5.0	-1.3	3.1	-340	-920	560	-920	-0.8	1.8	

Simulation [17]: Exogenous Increase in Exports of Goods And Services
Differences from Base Run

Private Sector Balance Sheet (\$m)																
Quarter	Exports % of base	Real GDP % of base	Average Earnings % of base	Exchange Rate % of base	GDP prices % of base	Current Balance (\$m)	PSBR (\$m)	Net Financial Wealth	Bank Loans	Govt Savings	Other National Savings	Other Govt Debt	Overseas Assets (net)	Timing Adj., etc	\$M3	\$M3 % of base
Q1	1.2	0.2	0.2	-	-	610	-90	500	-240	10	-	-10	120	20	120	0.2
Q2	1.3	0.5	0.5	-	-	540	-170	510	-390	30	10	-10	140	60	320	0.2
Q3	1.7	0.7	0.7	-	-	570	-210	1120	-230	80	20	-20	220	70	620	0.2
Q4	1.8	1.0	1.0	-	-	670	-370	1260	40	170	40	40	300	90	830	0.2
Q5	1.8	1.1	1.1	-	-0.1	640	-430	1400	240	240	60	50	410	110	1030	1.0
Q6	2.8	1.2	1.2	-	0.1	620	-490	1520	500	410	90	50	520	120	1050	1.0
Q7	2.8	1.3	1.3	-	0.3	660	-530	1630	640	510	110	50	630	140	1060	1.0
Q8	2.7	1.6	1.6	-	0.5	720	-670	1740	750	540	140	40	710	160	1170	1.2
Q9	2.6	1.8	1.8	-	0.7	780	-820	1870	870	670	140	50	870	170	1250	1.2
Q10	2.5	2.0	2.0	-	0.9	860	-960	2060	980	720	220	70	1010	190	1370	1.5
Q11	2.4	2.2	2.2	-	1.1	930	-1030	2240	1080	800	270	80	1140	210	1480	1.7
Q12	2.4	2.4	2.4	-	1.2	1000	-1120	2430	1140	900	310	100	1270	230	1670	1.8
Q13	2.3	2.7	2.7	-	1.5	1070	-1210	2710	1270	1010	360	110	1410	250	1800	2.0
Q14	2.3	2.4	2.4	-	1.6	1120	-1300	2720	1370	1150	410	160	1520	260	1920	2.1
Q15	2.2	2.1	2.1	-	1.8	1170	-1400	2420	1410	1200	460	200	1440	240	2100	2.2
Q16	2.2	2.4	2.4	-	2.0	1210	-1500	2730	1560	1470	520	240	1810	270	2400	2.2
Q17	1.7	0.2	0.2	5.3	-	710	-120	620	-370	-20	-	-40	510	10	140	-0.1
Q18	2.0	0.4	0.4	10.6	-	760	-130	1140	-710	-80	10	-70	470	20	470	-0.1
Q19	1.9	0.5	0.5	11.7	-	670	-360	1430	-460	-40	30	-40	1360	20	1480	-0.1
Q20	1.6	0.4	0.4	16.0	-	490	-530	1340	-400	-310	70	-70	1670	20	1670	-0.1
Q21	1.2	0.1	0.1	13.7	-	210	-440	1160	-410	-410	70	-60	1770	10	1770	-0.1
Q22	0.9	-0.4	-0.4	11.9	-	-	-430	710	-470	-640	40	-40	1760	-10	1760	-0.1
Q23	0.6	-0.9	-0.9	12.9	-	-10	-430	340	-1070	-810	40	-140	1740	-20	1740	-0.1
Q24	0.3	-1.5	-1.5	13.5	-	30	-430	160	-1170	-440	80	-170	1810	-30	1810	-0.1
Q25	0.1	-2.0	-2.0	14.4	-	110	-460	-20	-1440	-140	70	-140	1840	-100	1840	-0.1
Q26	-0.1	-2.5	-2.5	14.4	-	130	-510	-70	-1470	-130	70	-200	1840	-150	1840	-0.1
Q27	-0.2	-2.8	-2.8	16.0	-	120	-500	-40	-2210	-140	30	-220	2080	-190	2080	-0.1
Q28	-0.2	-3.2	-3.2	17.8	-	130	-560	-110	-2570	-170	10	-240	2170	-240	2170	-0.1
Q29	-0.3	-3.5	-3.5	18.6	-	40	-570	-120	-2670	-200	10	-240	2270	-250	2270	-0.1
Q30	-0.4	-4.1	-4.1	18.6	-	-30	-640	-150	-2940	-240	60	-280	2470	-290	2470	-0.1
Q31	-0.4	-4.2	-4.2	18.3	-	-40	-630	-140	-3570	-240	110	-310	270	-340	270	-0.1
Q32	-0.4	-4.7	-4.7	17.1	-	-180	-150	-1240	-3820	-200	-160	-330	2020	-380	2020	-0.1
Q33	1.7	0.2	0.2	5.3	-	710	-120	620	-370	-20	-	-40	510	10	140	-0.1
Q34	2.0	0.4	0.4	10.6	-	760	-130	1140	-710	-80	10	-70	470	20	470	-0.1
Q35	1.9	0.5	0.5	11.7	-	670	-360	1430	-460	-40	30	-40	1360	20	1480	-0.1
Q36	1.6	0.4	0.4	16.0	-	490	-530	1340	-400	-310	70	-70	1670	20	1670	-0.1
Q37	1.2	0.1	0.1	13.7	-	210	-440	1160	-410	-410	70	-60	1770	10	1770	-0.1
Q38	0.9	-0.4	-0.4	11.9	-	-	-430	710	-470	-640	40	-40	1760	-10	1760	-0.1
Q39	0.6	-0.9	-0.9	12.9	-	-10	-430	340	-1070	-810	40	-140	1740	-20	1740	-0.1
Q40	0.3	-1.5	-1.5	13.5	-	30	-430	160	-1170	-440	80	-170	1810	-30	1810	-0.1
Q41	0.1	-2.0	-2.0	14.4	-	110	-460	-20	-1440	-140	70	-200	1840	-100	1840	-0.1
Q42	-0.1	-2.5	-2.5	14.4	-	130	-510	-70	-1470	-130	70	-200	1840	-150	1840	-0.1
Q43	-0.2	-2.8	-2.8	16.0	-	120	-500	-40	-2210	-140	30	-220	2080	-190	2080	-0.1
Q44	-0.2	-3.2	-3.2	17.8	-	130	-560	-110	-2570	-170	10	-240	2170	-240	2170	-0.1
Q45	-0.3	-3.5	-3.5	18.6	-	40	-570	-120	-2670	-200	60	-280	2470	-290	2470	-0.1
Q46	-0.4	-4.1	-4.1	18.6	-	-30	-640	-150	-2940	-240	110	-310	270	-340	270	-0.1
Q47	-0.4	-4.2	-4.2	18.3	-	-40	-630	-140	-3570	-240	110	-310	270	-340	270	-0.1
Q48	-0.4	-4.7	-4.7	17.1	-	-180	-150	-1240	-3820	-200	-160	-330	2020	-380	2020	-0.1
Q49	1.7	0.2	0.2	5.3	-	710	-120	620	-370	-20	-	-40	510	10	140	-0.1
Q50	2.0	0.4	0.4	10.6	-	760	-130	1140	-710	-80	10	-70	470	20	470	-0.1
Q51	1.9	0.5	0.5	11.7	-	670	-360	1430	-460	-40	30	-40	1360	20	1480	-0.1
Q52	1.6	0.4	0.4	16.0	-	490	-530	1340	-400	-310	70	-70	1670	20	1670	-0.1
Q53	1.2	0.1	0.1	13.7	-	210	-440	1160	-410	-410	70	-60	1770	10	1770	-0.1
Q54	0.9	-0.4	-0.4	11.9	-	-	-430	710	-470	-640	40	-40	1760	-10	1760	-0.1
Q55	0.6	-0.9	-0.9	12.9	-	-10	-430	340	-1070	-810	40	-140	1740	-20	1740	-0.1
Q56	0.3	-1.5	-1.5	13.5	-	30	-430	160	-1170	-440	80	-170	1810	-30	1810	-0.1
Q57	0.1	-2.0	-2.0	14.4	-	110	-460	-20	-1440	-140	70	-200	1840	-100	1840	-0.1
Q58	-0.1	-2.5	-2.5	14.4	-	130	-510	-70	-1470	-130	70	-200	1840	-150	1840	-0.1
Q59	-0.2	-2.8	-2.8	16.0	-	120	-500	-40	-2210	-140	30	-220	2080	-190	2080	-0.1
Q60	-0.2	-3.2	-3.2	17.8	-	130	-560	-110	-2570	-170	10	-240	2170	-240	2170	-0.1
Q61	-0.3	-3.5	-3.5	18.6	-	40	-570	-120	-2670	-200	60	-280	2470	-290	2470	-0.1
Q62	-0.4	-4.1	-4.1	18.6	-	-30	-640	-150	-2940	-240	110	-310	270	-340	270	-0.1
Q63	-0.4	-4.2	-4.2	18.3	-	-40	-630	-140	-3570	-240	110	-310	270	-340	270	-0.1
Q64	-0.4	-4.7	-4.7	17.1	-	-180	-150	-1240	-3820	-200	-160	-330	2020	-380	2020	-0.1
Q65	1.7	0.2	0.2	5.3	-	710	-120	620	-370	-20	-	-40	510	10	140	-0.1
Q66	2.0	0.4	0.4	10.6	-	760	-130	1140	-710	-80	10	-70	470	20	470	-0.1
Q67	1.9	0.5	0.5	11.7	-	670	-360	1430	-460	-40	30	-40	1360	20	1480	-0.1
Q68	1.6	0.4	0.4	16.0	-	490	-530	1340	-400	-310	70	-70	1670	20	1670	-0.1
Q69	1.2	0.1	0.1	13.7	-	210	-440	1160	-410	-410	70	-60	1770	10	1770	-0.1
Q70	0.9	-0.4	-0.4	11.9	-	-	-430	710	-470	-640	40	-40	1760	-10	1760	-0.1
Q71	0.6	-0.9	-0.9	12.9	-	-10	-430	340	-1070	-810	40	-140	1740	-20	1740	-0.1
Q72	0.3	-1.5	-1.5	13.5	-	30	-430	160	-1170	-440	80	-170	1810	-30	1810	-0.1
Q73	0.1	-2.0	-2.0	14.4	-	110	-460	-20	-1440	-140	70	-200	1840	-100	1840	-0.1
Q74	-0.1	-2.5	-2.5	14.4	-	130	-510	-70	-1470	-130	70	-200	1840	-150	1840	-0.1
Q75	-0.2	-2.8	-2.8	16.0	-	120	-500	-40	-2210	-140	30	-220	2080	-190	2080	-0.1
Q76	-0.2	-3.2	-3.2	17.8	-	130	-560	-110	-2570	-170	10	-240	2170	-240	2170	-0.1
Q77	-0.3	-3.5	-3.5	18.6	-	40	-570	-120	-2670	-200	60	-280	2470	-290	2470	-0.1
Q78	-0.4	-4.1	-4.1	18.6	-	-30	-640	-150	-2940	-240	110	-310	270	-340	270	-0.1
Q79	-0.4	-4.2	-4.2	18.3	-	-40	-630	-140	-3570	-240	110	-310	270	-340	270	-0.1
Q80	-0.4	-4.7	-4.7	17.1	-	-180	-150	-1240	-3820	-200	-160	-330	2020	-380	2020	-0.1

Simulation [37]: Increase in Personal Income Tax
Differences from Base Run

Private Sector Balance Sheet (\$m)																	
Year	Personal Disposable Income % of base	Consumer's Expenditure % of base	Real GDP % of base	Average Earnings % of base	Exchange Rate % of base	GDP Prices % of base	Current Balance (\$m)	PSBR (\$m)	Net Financial Wealth	Bank Loans	Gilt Savings	National Savings	Other Govt Debt	Overseas Assets (net)	Timing Adj.	EM3	EM3 % of base
Q1	-1.0	-0.7	-0.1	-	-	-	30	-170	-150	10	-10	-20	-10	-10	110	-80	-0.2
Q2	-0.9	-0.5	-0.1	0.1	-	-	60	-170	-460	30	-30	-40	-20	-20	100	-110	-0.1
Q3	-0.9	-0.6	-0.2	0.2	-	-	80	-170	-660	50	-70	-70	-40	-30	110	-310	-0.2
Q4	-0.9	-0.6	-0.2	0.6	-	-	90	-140	-860	60	-120	-60	-70	-30	120	-410	-0.2
Q5	-1.0	-0.8	-0.4	0.8	-	0.5	110	-310	-1030	90	-180	-70	-60	-40	130	-510	-0.2
Q6	-1.0	-0.8	-0.4	0.4	-	0.5	120	-330	-1300	120	-240	-80	-70	-40	140	-610	-0.2
Q7	-1.1	-0.8	-0.5	1.0	-	0.7	130	-320	-1500	150	-290	-100	-70	-50	150	-700	-0.2
Q8	-1.0	-0.9	-0.6	1.2	-	0.9	130	-290	-1660	180	-340	-100	-40	-50	150	-700	-0.2
Q9	-1.1	-0.9	-0.6	1.2	-	0.9	130	-290	-1810	210	-380	-110	-100	-50	160	-800	-0.2
Q10	-1.1	-0.9	-0.6	1.4	-	1.0	130	-290	-1960	240	-410	-120	-110	-50	170	-870	-0.1
Q11	-1.1	-0.9	-0.6	1.4	-	1.0	130	-290	-2110	270	-440	-130	-110	-60	170	-940	-0.1
Q12	-1.1	-0.9	-0.6	1.4	-	1.0	130	-290	-2260	300	-470	-140	-110	-70	180	-1010	-0.1
Q13	-1.0	-0.9	-0.6	1.5	-	1.1	110	-260	-2410	330	-500	-150	-110	-80	180	-1080	-0.1
Q14	-1.0	-0.9	-0.6	1.5	-	1.1	90	-240	-2560	360	-530	-160	-110	-90	170	-1150	-0.1
Q15	-1.0	-0.9	-0.7	1.5	-	1.1	90	-240	-2710	390	-560	-170	-110	-100	170	-1220	-0.1
Q16	-1.1	-0.9	-0.7	1.5	-	1.1	80	-260	-2860	420	-590	-180	-120	-110	180	-1290	-0.1
Exchange Rate																	
Q1	-1.0	-0.7	-0.1	-	0.3	-	40	-170	-140	10	-10	-20	-10	-10	30	-110	-0.2
Q2	-0.9	-0.5	-0.2	0.1	0.7	-	70	-180	-340	20	-40	-40	-40	-20	70	-145	-0.1
Q3	-0.9	-0.6	-0.2	0.3	0.4	-	90	-180	-530	10	-100	-70	-60	-30	110	-170	-0.1
Q4	-0.8	-0.6	-0.4	0.5	1.0	-	90	-140	-720	-	-140	-60	-80	-40	120	-200	-0.1
Q5	-0.9	-0.7	-0.5	0.7	1.1	0.3	90	-120	-910	-10	-170	-70	-100	-40	130	-230	-0.1
Q6	-1.0	-0.7	-0.6	0.8	1.2	0.4	90	-110	-1100	-	-160	-80	-110	-40	130	-260	-0.1
Q7	-1.0	-0.7	-0.6	0.8	1.3	0.5	80	-120	-1290	-	-160	-100	-110	-50	130	-290	-0.1
Q8	-1.0	-0.7	-0.6	0.9	1.4	0.6	70	-140	-1480	-10	-170	-110	-110	-60	140	-320	-0.1
Q9	-1.1	-0.8	-0.6	1.0	1.5	0.6	70	-170	-1670	-10	-180	-120	-110	-70	140	-350	-0.1
Q10	-1.1	-0.8	-0.6	1.0	1.5	0.6	60	-170	-1860	-30	-190	-130	-120	-80	140	-380	-0.1
Q11	-1.1	-0.8	-0.6	1.0	1.5	0.6	60	-170	-2050	-60	-200	-140	-130	-90	140	-410	-0.1
Q12	-1.1	-0.8	-0.6	1.0	1.5	0.7	60	-170	-2240	-90	-210	-150	-140	-100	130	-440	-0.1
Q13	-1.0	-0.7	-0.5	0.7	1.1	0.3	60	-120	-2430	-120	-220	-160	-150	-110	130	-470	-0.1
Q14	-1.0	-0.7	-0.6	0.8	1.2	0.4	60	-110	-2620	-150	-230	-170	-160	-120	130	-500	-0.1
Q15	-1.0	-0.7	-0.6	0.8	1.2	0.5	60	-110	-2810	-180	-240	-180	-170	-130	130	-530	-0.1
Q16	-1.1	-0.8	-0.6	0.9	1.3	0.6	50	-120	-3000	-210	-250	-190	-180	-140	130	-560	-0.1

Simulation [47]: Increase in value added tax
Differences from Base Run

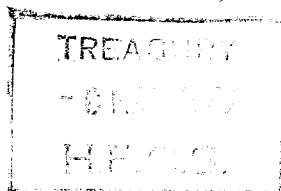
Private Sector Balance Sheet (£m)																	
Q	Real GDP Available Income % of base	Consumers' Expenditure % of base	Real GDP % of base	Average Earnings % of base	Exchange Rate % of base	GDP prices % of base	Current Balance (£m)	PSBR (£m)	Net Financial Wealth	Bank Loans	Gifts	National Savings	Other Govt Debt	Overseas Assets (net)	Timing Adj. %	£m	£m % of base
Q1	-2.1	-1.3	-0.6	-0.1	-	-	110	50	-240	200	40	-20	10	-	440	330	0.6
Q2	-2.2	-1.6	-0.8	0.1	-	-	170	-110	-440	360	100	-40	10	10	610	380	0.5
Q3	-2.1	-1.7	-1.0	0.4	-	-	200	-200	-760	440	140	-70	-20	20	610	200	0.4
Q4	-1.9	-1.7	-1.1	0.9	-	-	220	-300	-800	500	180	-70	-10	50	640	100	0.2
Q5	-2.0	-2.0	-1.2	1.3	-	2.4	240	-330	-840	570	180	-70	-20	40	640	60	0.1
Q6	-2.1	-2.0	-1.2	1.7	-	2.8	260	-320	-1040	670	170	-70	-20	140	640	50	0.1
Q7	-2.1	-2.0	-1.3	1.8	-	3.0	260	-260	-1000	710	170	-70	-10	140	710	30	0.1
Q8	-2.1	-2.0	-1.3	2.0	-	3.2	260	-230	-1110	740	140	-40	-10	240	720	30	0.1
Q9	-2.1	-2.1	-1.4	2.2	-	3.4	240	-200	-1040	740	140	-30	-20	300	760	100	0.2
Q10	-2.1	-2.1	-1.4	2.3	-	3.4	230	-190	-1040	730	220	-30	-30	360	740	120	0.2
Q11	-2.2	-2.1	-1.4	2.4	-	3.6	210	-180	-1040	670	240	-20	-40	410	640	120	0.2
Q12	-2.1	-2.1	-1.4	2.5	-	3.6	180	-140	-1040	610	260	-20	-40	410	640	90	0.1
Q13	-2.1	-2.2	-1.5	2.6	-	3.7	160	-140	-1120	510	270	-20	-40	470	600	80	0.1
Q14	-2.2	-2.2	-1.6	2.7	-	3.8	150	-140	-1240	440	280	-10	-60	520	600	70	0.1
Q15	-2.2	-2.1	-1.6	2.7	-	3.8	130	-140	-1310	380	280	-	-60	540	600	70	0.1
Q16	-2.1	-2.1	-1.6	2.7	-	3.8	120	-110	-1340	320	280	20	-100	540	640	60	0.1
Differences from Base Run																	
Q1	-2.2	-1.3	-0.6	-0.1	0.6	-	120	50	-220	140	30	-20	-	40	440	270	0.5
Q2	-1.2	-1.4	-0.4	0.1	1.4	-	200	-120	-570	310	70	-40	-10	210	600	140	0.3
Q3	-1.0	-1.6	-1.1	0.4	1.9	-	220	-140	-720	370	40	-50	-40	310	610	40	0.1
Q4	-1.4	-1.6	-1.2	0.9	2.0	-	210	-220	-820	370	70	-70	-70	470	610	-240	-0.2
Q5	-1.8	-1.8	-1.4	1.2	1.9	2.4	200	-340	-1000	340	-	-70	-40	600	630	-440	-0.7
Q6	-2.0	-1.9	-1.5	1.4	1.8	2.6	180	-320	-1170	430	-40	-70	-40	710	660	-500	-0.9
Q7	-2.1	-1.9	-1.6	1.5	1.9	2.7	170	-290	-1220	400	-100	-70	-110	810	680	-570	-1.1
Q8	-2.1	-1.8	-1.7	1.6	1.9	2.8	160	-200	-1410	440	-210	-50	-110	900	680	-740	-1.1
Q9	-2.1	-2.0	-1.8	1.7	1.9	2.9	130	-140	-1440	510	-240	-60	-140	940	720	-750	-1.2
Q10	-2.1	-2.0	-1.8	1.7	1.9	3.0	110	-120	-1530	520	-240	-60	-160	1000	740	-810	-1.2
Q11	-2.2	-2.0	-1.8	1.7	1.9	3.0	110	-120	-1630	500	-320	-60	-140	1000	740	-870	-1.2
Q12	-2.2	-2.0	-1.8	1.7	2.0	3.0	90	-140	-1610	480	-320	-60	-140	1100	740	-940	-1.2
Q13	-2.2	-2.1	-1.9	1.7	2.1	3.0	60	-160	-1610	440	-340	-70	-160	1160	740	-1060	-1.4
Q14	-2.2	-2.0	-1.9	1.7	2.2	3.0	30	-140	-1630	440	-440	-70	-160	1160	740	-1160	-1.5
Q15	-2.3	-2.0	-1.9	1.7	2.2	2.9	-10	-130	-1630	410	-440	-70	-170	1130	740	-1210	-1.6
Q16	-2.2	-2.0	-2.0	1.6	2.2	2.9	-40	-110	-1440	460	-430	-40	-140	1080	760	-1300	-1.7

Simulation [57]: Reduction in general government expenditure on procurement
Differences from Base Run

Year	Real GDP % of base	Average Earnings % of base	Exchange Rate % of base	GDP prices % of base	Current Balance (\$m)	PSBR (\$m)	Private Sector Balance Sheet (\$m)										EM3 % of base
							Net Financial Wealth	Bank Loans	Gifts	National Savings	Other Govt Debt	Overseas Assets (net)	Timing Adj.	EM3 M1			
Q1	-0.5	-0.1	-	-	50	-250	-190	70	-10	-	-	30	-10	-100	-0.2		
Q2	-0.7	-0.2	-	-	100	-220	-270	50	-40	-30	-30	100	-10	-120	-0.2		
Q3	-0.7	-0.2	-	-	100	-210	-400	20	-60	-10	-10	40	-10	-170	-0.3		
Q4	-0.7	-0.3	-	-	120	-180	-460	-60	-100	-10	-10	260	-30	-170	-0.3		
Q5	-0.7	-0.3	-	-0.1	130	-180	-470	-100	-10	-20	-30	220	-30	-170	-0.3		
Q6	-0.7	-0.4	-	-0.2	140	-180	-470	-140	-170	-20	-20	160	-40	-140	-0.4		
Q7	-0.7	-0.4	-	-0.2	160	-180	-610	-230	-200	-30	-20	140	-40	-140	-0.4		
Q8	-0.6	-0.5	-	-0.3	160	-190	-670	-260	-220	-40	-20	120	-50	-130	-0.5		
Q9	-0.6	-0.5	-	-0.4	160	-230	-740	-310	-250	-60	-20	100	-60	-140	-0.5		
Q10	-0.6	-0.6	-	-0.4	160	-230	-740	-310	-250	-60	-20	100	-60	-140	-0.5		
Q11	-0.5	-0.6	-	-0.4	170	-240	-810	-310	-270	-70	-20	140	-60	-140	-0.5		
Q12	-0.5	-0.7	-	-0.5	170	-240	-810	-310	-270	-70	-20	140	-60	-140	-0.5		
Q13	-0.5	-0.7	-	-0.6	170	-240	-810	-310	-270	-70	-20	140	-60	-140	-0.5		
Q14	-0.4	-0.8	-	-0.6	140	-210	-840	-340	-360	-110	-40	140	-70	-140	-0.7		
Q15	-0.4	-0.8	-	-0.6	140	-210	-840	-340	-360	-110	-40	140	-70	-140	-0.7		
Q16	-0.4	-0.9	-	-0.7	210	-170	-900	-430	-440	-130	-70	150	-80	-170	-0.7		
Q1	-0.5	-0.1	0.4	-	50	-250	-190	70	-10	-	-	30	-10	-100	-0.2		
Q2	-0.7	-0.2	0.4	-	100	-220	-270	50	-40	-30	-30	100	-10	-120	-0.2		
Q3	-0.8	-0.3	1.4	-	130	-200	-360	-60	-100	-10	-10	40	-10	-170	-0.3		
Q4	-0.8	-0.4	2.0	-	110	-190	-400	-100	-170	-10	-10	260	-30	-170	-0.3		
Q5	-0.9	-0.5	1.4	-	90	-180	-470	-100	-170	-20	-20	160	-40	-140	-0.4		
Q6	-0.9	-0.7	2.0	-	70	-160	-700	-460	-470	-30	-100	120	-50	-140	-0.4		
Q7	-0.9	-0.8	2.2	-	60	-140	-810	-540	-560	-60	-130	100	-60	-140	-0.5		
Q8	-1.0	-1.0	2.4	-	60	-120	-840	-630	-660	-60	-140	110	-60	-140	-0.5		
Q9	-1.0	-1.1	2.5	-	50	-100	-840	-720	-750	-80	-140	110	-60	-140	-0.5		
Q10	-1.0	-1.2	2.7	-	40	-80	-840	-810	-840	-100	-170	110	-60	-140	-0.5		
Q11	-0.9	-1.5	2.4	-	30	-60	-840	-900	-960	-120	-170	110	-60	-140	-0.5		
Q12	-0.9	-1.6	2.2	-	10	-40	-840	-1040	-1080	-140	-210	110	-60	-140	-0.5		
Q13	-0.9	-1.8	2.3	-	10	-40	-840	-1160	-1200	-160	-210	110	-60	-140	-0.5		
Q14	-0.9	-2.0	2.5	-	10	-40	-840	-1270	-1330	-170	-210	110	-60	-140	-0.5		
Q15	-0.9	-2.2	2.6	-	10	-40	-840	-1340	-1410	-170	-210	110	-60	-140	-0.5		
Q16	-0.9	-2.2	2.6	-	10	-40	-840	-1340	-1410	-170	-210	110	-60	-140	-0.5		

Exchange Rate

MR MIDDLETON



cc: Mr Byatt
Mr Bridgeman
Mr Cassell
Mr Shepherd
Mrs Lomax
Mr Odling-Smee
Mr Mowl
Mr Powell
Mr Grice
Mr Spencer
Mr Bell ✓

CITY UNIVERSITY PAPER

I attach drafts of the section on the implicit demand for money function in the monetary model and the annex on changes implemented since the working paper.

MAD, Sr

pp.

C J RILEY

25 April 1979

TABLE 2

The Implicit "Demand" for £M3

(% changes in £M3 following 1% changes in determinants)

Quarter	Financial* Net Wealth	Real** Incomes	Prices**	Long*** Rate	Treasury Bill Rate
1	0.90	-0.15	+0.50	-0.4	+0.3
4	0.45	+0.20	+0.40	-0.9	-0.3
8	0.50	+0.20	+0.45	-1.3	-0.6
12	0.55	+0.20	+0.45	-1.4	-0.6

*The whole of this change relates to the personal sector.

**Equal proportional changes in all prices and incomes.

***Includes a wealth effect insofar as a rise in the long rate affects the market value of existing gilts.

1. Various points need to be noted about these figures. First, the effects of interest rate changes in the current version of the monetary sector of the model differ somewhat from those reported in the recent working paper. Various changes have been made since the working paper in the light of recent experience gained in using the model for forecasting and simulation, and although they are not described in detail here the nature of the more important changes is described in Annex []. The net effect of them is to reduce the interest rate elasticities somewhat, and also the net wealth elasticity (which was not reported in the working paper).

2. Second, care is needed in interpreting the size of the price, income and net wealth elasticities. Apart from a high initial net wealth elasticity, all are significantly less than unity, but this in itself does not mean that £M3 is in any sense an inferior asset in the model. Confusion can arise because whereas in the literature the demand for money is typically related to income, prices and interest rates, our analysis separates the wealth and income/price effects. Generally net wealth is substituted out, but we do not do so partly because that is the way in which the Treasury model is set up and partly because the focus of our attention in this paper is the relationship between the PSBR and £M3 . However it is possible to gain some insight into the implied parameters of a "standard" demand for money function by considering jointly pairs of elasticities in table 2. Thus by adding the price and net wealth elasticities we can obtain a "conventional" price elasticity, assuming a long run unit elasticity between nominal wealth and prices, which after three years is unity. Adding the real income and net wealth elasticities and making the same type of assumption yields a "conventional" real income elasticity of $\frac{2}{3}$ after three years*.

3. The "conventional" price elasticity calculated in this way is consistent with most theoretical work on the demand for money and

*The assumption of a unit elasticity between real income and wealth in this case is a simplification used for illustrative purposes.

with much empirical work. The real income elasticity is, however, somewhat less than implied by some recent empirical studies of the demand for M_3 , particularly those covering the period since the introduction of Competition and Credit Control in 1971**. But one would perhaps expect the structural approach employed in the Treasury monetary sector to yield more reliable answers than simple reduced form functions, particularly over this period. Frequently studies of the demand for money include just one interest rate or, generally with wider aggregates, an interest rate differential, and it is thus difficult to compare the semi-elasticities in table 2 with those in published work. But two relevant points should be made in this context. First, in order to compare the figures in table 2 with those in studies which include only the long rate, eg the Hendry study, it is important to remember that short rates have in the past fluctuated more widely than long rates, and therefore that it is probably necessary to add a multiple (say 2) of the short rate effect to the long rate effect to obtain comparable semi-elasticities. Second, it must be remembered that net financial wealth might be expected to be related to interest rates, but of course the sign of the effect, which most studies solve out, depends on the extent to which changes in interest rates accompany changes in the rates of return on real assets. The situation is further complicated by the fact that the long rate effects quoted in table 2 include a wealth effect resulting from the effect of changes in the long rate on the market value of existing gilts.

**See, for example, articles by Laumas (SJFE, November 1978), Hendry (EJ, September 1978) and Artis and Lewis (Manchester School, June 1976).

ANNEX: CHANGES TO THE MONETARY SECTOR SINCE THE WORKING PAPER

The version of the Monetary Sector of the Treasury model which underlies the results presented in the present paper differs in some respects from that reported in the recently published working paper*. It would be inappropriate to discuss in detail here all the changes that have been made, but the nature of the more important changes are discussed briefly below.

(1) The equation for the demand for gilts by the non-bank private sector (equation E1.5 in the working paper) has been changed so that total non-bank private sector asset holdings feed directly into the demand function and current price TFE does not appear explicitly. The long run elasticity of total gilt holdings with respect to total assets is about 0.9 and total assets were included rather than, say, net worth because the former proved superior in estimation. The present treatment allows shifts in relationship between total financial asset holdings and current price TFE to affect long run gilt holdings directly in a plausible way.

(2) The equation for non-bank holdings of National Savings (equation E1.9) reported in the working paper has broken down since the policy of making them more attractive to investors was introduced in (?)1975. The equation currently in use is an extremely simple one in which 10% of any change in personal sector net acquisition of financial assets takes the form of a change in holdings of the various National Savings instruments.

(3) In the equation system for bank lending to the personal sector (E1.1 in the working paper) the interest rate elasticities have been reduced to take account of the recent apparently muted response of lending to a higher level of rates. The equation being used for bank lending to other financial institutions (equation E1.3) now includes a real income effect and incorporates some other small amendments to the equation in the working paper.

*Spencer and Mowl (1978).

(4) The effects of interest rate levels (as opposed to differentials) on non-bank private sector demands for interest bearing reserve assets (equation E1.12), notes and coin (equation E1.11) and parallel money (E1.15) have been reduced. These changes reflect the recent performance of the equations.

100/100
SIR DOUGLAS WASS

cc: Sir Fred Atkinson
Sir Lawrence Airey
Mr Couzens
Sir Anthony Rawlinson
Mr Byatt
Mr Littler
Mr Bridgeman ✓
Mr Middleton
Mr Unwin
Mr Taylor
Mr Williams
Mr S Bell
Chief Cashier) Bank of
Mr George) England

PAPER BY PROFESSOR NEILD ON GOVERNMENT BORROWING BY DEPOSIT

1. In his stimulating paper Professor Neild questions practically every assumption underlying the way the authorities currently intervene in financial markets, and proposes changes which would involve a radical restructuring of those markets. His particular objection is to the extent to which the Government relies on selling long-dated stock to finance the PSBR; he sees present practices as importing an undesirable element of gambling into the gilts market, since both lenders and borrowers are subject to high risks if inflation diverges in either direction from its expected path, and as possibly involving an unnecessarily large burden of debt service in future years. In order to avoid this situation Professor Neild proposes instead that the Government should borrow through a system of variable rate deposits, with slightly higher rates of interest in effect paid for deposits subject to longer periods of notice before they could be withdrawn.

[REDACTED]

Professor Neild's analysis

2. Professor Neild makes the following main points in presenting his diagnosis of the problem, his remedy and its advantages:-

A The Problem

- (i) For cyclical and structural reasons private sector saving currently exceeds investment. The structural reasons include Government action to stimulate funded pension provision, while a large proportion of "cyclical" savings also accrue to long-term investing institutions.
- (ii) Half of recent Government borrowing has taken the form of stocks maturing in 1990 or later aimed at these institutions.
- (iii) Monetary control requires debt to have an original maturity greater than one year, since otherwise issues would count as reserve assets for the banking system. But this does not justify an original maturity of 10-20 years.
- (iv) Long maturities have been chosen (a) to minimise liquidity, (b) to enable life offices to match liabilities fixed in nominal terms, and (c) in order to exploit investors' appetite for speculative capital gains (Neild dislikes the capital gains tax treatment of gilts which he says is responsible for much of present disorder in the market).
- (v) This introduces a strong element of gambling into long term borrowing by and lending to the Government. People who like to run risks should be encouraged to put their money into industry, which would be more socially useful. Excessive gains or losses are in prospect on long-term bonds with maturities of 15 years or more.
- (vi) Indexation should be avoided, since it could institutionalise accelerating inflation.
- (vii) Variable rate bonds (VIBs) minimise the capital risks without forcing the authorities into more frequent refinancing, or adding to bank liquidity. But VIBs do not appear to have been very favourably received by the gilt market.

- ~~_____~~
- (xv) Life insurance, etc policies would need to be revised to reflect the changed circumstances, to provide minimum amounts plus "profits" which would depend on movements in nominal interest rates.
 - (xvi) Monetary policy would be "de-obfuscated" (Neild's expression); "new gilts issues would cease, open market operations would fade away, and nothing would remain but the setting of a few interest rates and the setting of reserve requirements."

Some comments on the analysis

3. It will be apparent that Professor Neild envisages a root and branch reform of the monetary system and financial markets. New systems of monetary and prudential controls would be imposed on the banking system; institutional investors would be subject to some element of direction of funds; and the gilts and Treasury Bill markets as we now have them would wither away. All this would be highly controversial and the institutional changes involved would be costly, but nevertheless the proposals must be considered on their merits. Among the questions raised by them are:

- a) should the Government borrow by means of variable rate instruments;
- b) should it borrow shorter than at present;
- c) should it borrow solely by means of deposits, with the implied absence of new gilt and Treasury Bill issues;
- d) should monetary control be exercised by means of a monetary base system; and
- e) is direction of institutional funds desirable?

4. Professor Neild does not discuss monetary base control in detail and as this is currently being considered jointly by the Bank and the Treasury in the context of the Review of Monetary Control this note does not discuss the issues involved. Direction of institutional funds was considered in the July report on the Gilt-Edged market, and much the same issues arise in the context of

[REDACTED]

be considerably greater. This would pose serious problems for monetary control in the short run, and would further increase the degree of interest rate variability.

Should the Government borrow shorter?

7. Professor Neild's proposals imply a considerable reduction in the effective maturity of government debt. The nature of the debt would also be changed, and this is discussed below, but it is worth considering whether such a shortening would be desirable even given existing types of debt instrument.

8. If expectations about future movements in interest rates were the same on both sides of the market for Government debt, and if these movements were known with certainty, the costs of borrowing at different points on the maturity spectrum would be identical (in the absence of other market imperfections). The shape of the yield curve would be irrelevant under such circumstances. But the existence of uncertainty ensures that the yield curve in practice slopes upward to a greater extent (or downward to a lesser extent) than pure interest rate expectations would suggest, with longer term securities attracting a higher risk premium, and thus prima facie there is an argument for borrowing short.


9. However the present maturity structure of new financial liabilities results from the interaction of the needs and preferences of Government, financial intermediaries, and private sector lenders and borrowers. Relative yields on gilts of different maturity reflect the fact, for example, that institutions such as the pension funds to some extent wish to match the maturities of their liabilities and their assets and thus wish to hold a sizeable quantity of long term securities. If the Government were to cease to borrow long term this could have a substantial impact on relative yields and thus on the terms available to other borrowers. Lenders would still have an underlying demand for long maturities but would be unable to secure them from the Government, while existing borrowers for relatively short terms would find greater competition for the

[REDACTED]

debt. Professor Neild is very sanguine about this prospect and he may be right to be so, but two points need to be made. First it is by no means certain that institutional investors would just accept the substitution of TDs or other short term assets for long term gilts in their portfolios and it may well be that they would try to offset this to some extent by buying up existing personal sector holdings of equities, gilts and other long term assets. The increase in liquidity could thus be concentrated to a substantial extent in personal sector portfolios with the consequent risk (albeit probably not a great one) of spill-over effects onto expenditure. Second, whatever the precise nature of the effects on personal sector liquidity and the recorded money supply, the interpretation of monetary statistics would be made more difficult and the appropriate policy stance towards the monetary aggregates less clear cut. The precise effects on the demand for any given definition of money consequent upon the gradual phasing out of long gilts would have to be known before an appropriate target could be devised, and at the very least this would cause severe transitional problems.

Should the Government borrow solely by means of deposits?

14. The Neild proposals envisage that both the gilts and Treasury Bill markets would wither away and that these assets would in effect be replaced by a single asset - TDs. It is envisaged that TDs would serve as the residual source of Government finance but at the same time that the authorities would set the interest rates on them. This clearly poses institutional problems which Professor Neild does not address. In particular it is difficult to envisage that any institution or set of institutions would agree to underwrite the TD issue, which since it replaces both gilt and Treasury Bill issues would be very large, at interest rates over which they could exert no direct influence. The implication of his proposals for the operation of financial markets and for Government financing would be much more complex than Professor Neild allows and a good deal of further effort would have to be spent considering the institution implications of them and the costs of changing from the present system.



Conclusion

15. The comments in the sections above suggest that Professor Neild proposed system of Government financing is not self evidently superior to the present system. Indeed it has many problems. The fact that it involves a dramatic narrowing of the range of Government debt instruments available to the institutions and the general public casts doubt on the suggestion that it would substantially reduce the cost of Government borrowing. Monetary control could be made considerably more difficult in the short run. The new system would pose difficulties for the interpretation of existing monetary statistics and the setting of appropriate targets. The cost of finance for industry could be increased. And the institutional ramifications of the system could be profound and would need to be looked at very carefully.

16. I doubt whether it is necessary to go into as much detail as in this note when replying to Professor Neild. In view of the present political uncertainty it would seem advisable to avoid detailed comment on specific proposals for changing the method of Government financing. Accordingly I attach a fairly short comment on the paper in the form of a draft letter which could be sent to Professor Neild.

C. J. Riley

C J RILEY

26 April 1979

DRAFT LETTER FROM SIR DOUGLAS WASS TO PROFESSOR R R NEILD

GOVERNMENT BORROWING BY DEPOSIT

Thank you for showing me a copy of your recent paper on Government borrowing by deposit, which I and a number of others here have read with much interest.

Your paper suggests fundamental changes in the method of Government financing and in the operation of financial markets which would require extremely careful analysis before they could be implemented. The costs of the institutional changes involved would have to be weighed carefully against the possible benefits of your proposals. You will not expect me to comment in detail on all the issues which your paper raises, but I wonder if I might make a few general comments.

First, I wonder whether reducing the range of Government debt instruments available to the general public as your proposals suggest might lead to a substantial offset to the savings in debt servicing costs which your proposals might otherwise procure for the Exchequer. Unless we can rely on others to provide debt instruments of a type which the Government no longer issues but for which there is clearly a demand presumably there would be a tendency for this to happen.

Second, your paper raises the question whether, even given present methods of financing, the Government should try to shorten substantially the average maturity of its debt. You

35/03

H.F.C.S.

MR BRIDGEMAN

cc: Mr Cassell
Mr Middleton
Mr Shepherd
Mr Evans
Mr Odling-Smee
Mrs Lomax
Mr Sedgwick
Mr Bell
Mr Mellis
Mr Mowl
Mr Williams

H.F.C.S.
10 MAY 1979
TREASURY

INTEREST RATES AND A 7-11% TARGET RANGE FOR £M3

You asked me to consider in the light of the latest version of the financial forecast what sort and size of fiscal package might be required to validate a 7-11% target range for £M3 without interest rates rising from current levels. I have interpreted the £M3 target as a rise of 9%. Also I have confined the discussion to 1979-80 because of the greater uncertainty surrounding the forecast for the period after that, because at present there are problems with the financial forecast after 1979-80, and because Ministers are likely to be preoccupied with prospects in the relatively short term. MP2 are currently considering the impact of various fiscal packages and the methodology employed in this note has been agreed with Messrs Odling-Smee and Mowl.

2. The attached table shows the interest rates in 1980 Q1 in the latest version of the financial forecast which are believed to be consistent with 10% growth in £M3 in 1979-80*. The forecast suggests that interest rates would have to rise steadily from current levels in order to meet the target for 1979-80, and thereafter further rises would be necessary to keep monetary growth below the increase in nominal GDP. The table also shows estimates of the interest rate effects of various fiscal policy changes on the assumption that they do not change £M3, and the change in interest rates (assumed to take effect immediately) which would be necessary to reduce the growth of £M3 in 1979-80 by 1%. The estimates of the effects of the policy changes are

*The forecast also assumes that the SSD scheme lapses in September and that no special monetary measures, for example increasing the relative attractiveness of national savings, are implemented.

[REDACTED]

and the greater the reliance on increasing VAT, given the type of public expenditure package considered.

6. But the numbers presented here should be treated with great caution. First, it is very dangerous to add together different ready-reckoners, particularly when the changes involved are as large as those being contemplated here. Second, the forecast is extremely tentative at this stage. And third, effects on "confidence" in financial markets are not easily analysed, and only rather small effects underly the figures in the table. The expectational effects of a very large package could be quite considerable, although I am inclined to believe that special "confidence" effects of this sort tend to be transitory.

7. Finally, I should say that I have not discussed these numbers with Mr Middleton, and you will doubtless want to discuss with him how, if at all, they are to be used. Neither have I discussed with him the possibility of assuming a 7-11% target range for £M3 growth in 1979-80 but assuming also that we aim deliberately at the top end of the range. The implications of such a course of action are in principle derivable from the table, but I doubt that we would wish seriously to suggest a policy of this type.

C. J. Riley

C J RILEY
11 May 1979

INTEREST RATES IN 1980 Q1 AND PSBR IN 1979-80

	Current version of financial forecast	Changes required to reduce £M3 growth in 1979-80 by 1%	Effect of a rise in income tax allowances worth £1 billion in 1979-80	Effect of a rise in VAT on 12 June worth £1 billion in 1979-80	Effect of cuts in public expenditure worth approx. £1.5 billion in 1979-80*
Interest rate on 20 year gilts (%)	14.0	+0.4 to +0.5	+0.4	-0.3	-0.3
3 month inter-bank rate (%)	12.9				
PSBR (£ billion)	10+	negligible	+0.9	-0.7	-1.4

* The composition of the package of cuts assumed is as follows:

<u>Type of Cut</u>	<u>£ million in 1979-80 (current prices)</u>
Sale of Assets	750
Net lending	70
Investment (mainly construction)	250
Subsidies (mainly to consumers)	115
Transfers (Social Security)	300
Special Employment Measures	80
<u>TOTAL</u>	<u>1565</u>

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704/79

MR RILEY

cc Mr Middleton
Mr Bridgeman —
Mr Odling-Smee
Mrs Lomax
Mr Bell

REDUCTION OF 1% IN THE MONETARY TARGET

The Financial Secretary has asked that all ready reckoner estimates of the effects of the Budget, as well as the forecast, should allow for the reduction in the monetary target. In particular he has asked to see a revised version of the table in Mr Unwin's minute of 10 May to the Chancellor including explicitly the effects of the reduction in the target. I attach such a table for your comments. The final submission will include a lot of other material the Financial Secretary has requested and we will probably not show the effect on the 1980/81 money supply.

2. The numbers are based on a recent interest rate simulation (with EG fixed) which Mr Bell has seen but has not yet had a chance to examine in detail. The simulation is little different from the one you used in your minute of 11 May to Mr Bridgeman. I have assumed that both short and long rates change by the same amount from the beginning of 1979 Q3. The increase in interest rates of 0.6 is a little higher than the 0.4 to 0.5 in your minute to Mr Bridgeman. I understand that this is because you assumed that the rise in rates occurred earlier and because you allowed for some improvement in expectations. I do not think we need worry about this small difference as we would probably describe both estimates as 'about ½%' in any covering text.

3. I would be grateful for your agreement by about lunch-time today.

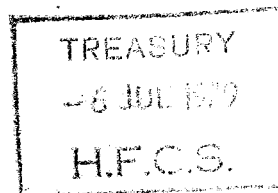
Colin Mowl

COLIN MOWL
17 May 1979

Economic Effects Of the Package

All estimates assume a floating exchange rate

		<i>Reduction of 1970 monetary targets</i>	Public Expenditure	Indirect Tax	Income Tax	Other Inland Revenue	Total
1977 year cost (£m)				-4,280	3,175	390	
First year cost (£m)			-1,565	-2,305	2,410	160	-1,300
PSBR (£m)	79/80	10	-1,420	-1,800	2,160	160	-890
	80/81	110	-1,450	-2,800	2,990	360	-790
Real GDP (%)							
	80 Q1	-0.1	-0.5	-2.4	0.7	-	-2.3
	81 Q1	-0.3	-0.5	-3.2	1.0	-	-3.0
GDP (%) Impact							
	80 Q1	-	0.2	4.4	-	-	4.6
	81 Q1	-	0.1	4.4	0.2	-	4.7
Employment (thous)							
	80 Q1	-10	-50	-190	70	-	-180
	81 Q1	-30	-90	-430	140	-	-410
	82 Q1	-40	-100	-550	170	-	-520
Interest Rates							
	80 Q1	0.6	-0.3	-0.7	0.9	-	0.5
	81 Q1	0.6	-0.3	-0.7	0.9	0.1	1.1
Money Supply							
79/80			-1.0	-	-	-	-1.0
80/81			-1.5	-	-	-	-1.0



CHANCELLOR OF THE EXCHEQUER

cc Chief Secretary
Minister of State - Commons
Minister of State - Lords
Sir D Wass
Sir L Airey
Mr Littler
~~Mr Bridgeman~~

MONETARY POLICY

As you know, I had lunch with the Governor last Friday. Those present were Hollom, McMahon, Page, Dow, ~~ff~~ ^{ff} ~~ordz~~ ^{ordz}, Goodhart and a couple of others whom I had not met before.

We had quite a full discussion of, inter alia, the question of the monetary target for 1979/80. The Governor and his colleagues were clearly very much in two minds over this. While seeing the great advantages, as a declaration of intent and as a signal, of plumping for 7-11%, they were apprehensive about the possible interest rate consequences and the possible lack of credibility - which pointed to an 8-12% target. There was some support, although not much, for deferring a decision in the sense of letting the present target run on until the six monthly review is due in October, and taking a proper decision then. This would seem to me to be very weak and I would not advise it.

The difficulty in using the 7-11% target is that we start very much at the top end of the 8-12% range. I therefore asked the Governor whether, as a compromise, it would make sense to announce a monetary target of 7-11% for the remainder of the current financial year - ie from mid-June (roughly Budget day) to mid-April 1980, which would provide a signal and declaration of intent, while enabling us to escape the stringency imposed by ^{the excessive} financial growth in the first two months of the current financial year. (In practice 7-11% from Budget day to mid-April 1980 would be roughly equivalent to 8-12% over the whole of the banking year 1979/80). The Governor seemed to think that this would be a workable compromise, and I accordingly commend it to you for serious consideration.

*Keep for audit
with P/E 107*

[REDACTED]

COPY NO 1 OF 11 COPIES

MR LITTLE

TREASURY
31 JUL 1979
H.F.C.S.

cc Sir Douglas Wass
Sir Lawrence Airey
Mr Couzens
Mr Barratt
Mr Hancock
Mr Middleton
Mr Unwin
Mr Riley

MONETARY TARGETS AND INTEREST RATES

The Bank have just received the "first shot" at the May banking figures. £M3 is estimated to have grown by 1% in May - significantly more than we had allowed for in the 3 month forward look. This would bring growth in the last 6 months equivalent to an annual rate of more than 13%.

2. Perhaps more seriously the bank lending figure is £900 million, seasonally adjusted, indicating that bank lending is still running well ahead of the provisions in the forecast.

3. I understand that the Governor indicated to the Chancellor at lunch on Tuesday that:-

- i. given that £M3 is currently growing at or above the 8-12% for £M3, and the reaction time to changes, a range of 7-11% for the 12 months to mid-April 1980 is probably both unrealistic and unlikely to be believed;
- ii. an alternative would be to apply 7-11% to a year from mid-June, or to announce now that it would apply from mid-October: the Chief Cashier prefers the latter;
- iii. although they thought that the markets might react favourably initially to the Budget - with a boost of gilt sales, they did not see either bank lending being constrained or gilt sales sustained through the

coming months at current levels of interest rates, particularly given the inflation forecast to be published in the PSBR;

- iv. if interest rates were going to rise, there would be advantage in their doing so clearly, rather than their drifting upward - the advantages would both be political and market management;
- v. the Bank were therefore considering whether to recommend a change in MLR to be announced in the Budget.

4. The Chief Cashier remarked to me that Mr McMahon's assessment was that the combined effect of the Budget and of an MLR rise would be to put upward pressure on sterling, initially at least.

5. You may think that it would be useful to have a meeting with Mr Fforde and his supporters before we decide on our respective advice.

J. M. B.

J M BRIDGEMAN

30 May 1979