The Development of the Financial Sector in Ireland 1949-72

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In the past decade or so there has been a considerable growth of interest in monetary economics Part of this growth in interest can be attributed to the publication of important official enquiries in the US and the UK – the Commission on Money and Credit and the Radcliffe Report Another important factor was, perhaps, an inevitable swing back from the excesses of the post-Keynsians who relegated money to a very minor role in the macro-economic process In recent years also the problems of monetary policy in open economies have been the attention of considerable research and, in a world of internationally mobile capital, balance of payments positions are examined from a monetary, rather than a purely trade-oriented, standpoint Many of the insights obtained from an analysis of monetary economics in a relatively closed economy like the US can be used to examine the role of money in more open economies where capital movements and trade imbalances are likely to have an important, if not dominant, influence on the behaviour of the monetary sector

Although Ireland has had a Central Bank since 1944 which amongst other things published a statistical series of important monetary aggregates

on a continuous basis, there has not been, until quite recently, a great deal of published research into the Irish monetary sector Of course for much of the fifties this charge could be levelled against many other branches of economics since the extent of economic research was quite limited at that time Perhaps also would-be commentators had exhausted themselves by voluminous contributions to the 1938 Commission on Money and Banking Certainly a brief perusal of the volumes and presentations to the Commission suggests that in Ireland, as elsewhere, there is an almost pathological concern with monetary matters

Thus in preparing this paper I was not overburdened by the reading required to absorb the results of past research While this has its obvious advantages it makes it difficult to explore the development of official and unofficial thinking on monetary problems in the post-war period It would be quite unfair to assume that the lacuna in published research reflected the absence of any consideration of the monetary problems facing the Irish economy The most noticeable gap, and one which may explain the paucity of empirical research, is the absence of any overview of the growth and development of the post-war financial system It will, I think, be accepted that much of the stimulus to monetary research in the US was due to the provocative historical analyses by Friedman While this paper has no pretensions to the detail and scope of those studies, it is hoped that it will put into some historical perspective current discussions on monetary policy in Ireland

This paper is divided into four sections We begin with an attempt to construct, from national accounts data, the net acquisition of financial assets by sector for the period 1949-1972 As we shall see this series represents, at a net level, the extent to which each sector lends to (borrows from) other sectors In the second section we examine the growth of the money supply, liquid assets and insurance premiums The changes in the portfolio structure of the Associated Banks are also examined and we also look at the non-Associated Banks, Life Assurance Companies and Building Societies The third sector is devoted to an analysis of the role of the Government sector as a financial intermediary and as an important net issuer of financial assets The growth of Government borrowing and lending activities is explored and changes in the structure of public authority borrowing are, within the limitations of available data, examined The final section contains an analysis of the development of monetary policy as revealed through official Central Bank statements and analyses

I NET ACQUISITION OF FINANCIAL ASSETS BY SECTOR 1949-1972

In any given year in the economy two types of transactions are taking place One type of transaction involves the disposition of current output The other involves the re-distribution of existing assets Thus the individuals and households who comprise the personal sector receive income from the production of current output Part of this goes to

finance net taxes (i e excluding transfers) and current consumption The balance is defined as gross saving by the sector However the personal sector can also dispose of existing real assets to other sectors, e g the sale of land to the public authorities or companies It can also receive grants from the Government sector such as housing grants, farm drainage schemes etc At the same time the personal sector undertakes investment by absorbing some of current output in the form of physical capital formation or stock changes It may also acquire existing real assets from other sectors and it also has to pay capital taxes (death duties etc) to the Government The difference between the funds obtained from gross savings, the sale of existing real assets to other sectors and capital grants and the funds expended on capital formation and stocks, the purchase of existing real assets from other sectors and capital taxes is the net acquisition of financial assets by the sector If it is positive then the sector has increased its net financial claims on other sectors If it is negative then the sector has increased its net financial liabilities to other sectors (or equivalently reduced its net financial claims on other sectors)

No data are available at present in Ireland on the inter-sectoral disposition of existing real assets Stamp duty receipts from conveyancing give some idea of the gross transactions in land and real property but part of these represent the disposition of current output, i e the sale of a new house By and large the net inter-sectoral movement of existing real assets is likely to have been quite small in Ireland for most of the post-war period For example McAleese (1972) suggested that sales of land to foreigners would not have amounted to much more than £1 million per annum on average Government purchases of land were only about £3 million per annum in recent years and the average for the period 1949-1972 was almost certainly a great deal less In the last few years the property boom may have increased the amount of transfers of property from the personal to the company sector But it is important to remember that many of the spectacular and well publicised capital gains from property transactions are due to dealings between companies and are thus intra-sectoral dispositions Further, land developed for private housing is subsequently acquired, for the most part, by the personal sector so that no great error can be caused by omitting these temporary inter-sectoral transactions When an unincorporated business becomes incorporated this is equivalent to a sale of the assets of the business by the personal sector to the company sector It is of course matched by an issue of financial liabilities from the company to the personal sector Given that the cost of forming a company has always been relatively low and that no major changes in the relative attractiveness of incorporation have taken place in the post-war period, it is unlikely that large scale transfers of existing real assets have taken place by changes in the legal status of the owners Although a considerable number of new companies are formed each year they do not, for the most part, involve a substantial transfer of real assets

In any event it was decided, because of the absence of any data on which to form even the crudest estimate, to ignore net inter-sectoral

transactions in existing real assets Thus we are concerned here with the disposition of current output alone By ignoring existing real assets we can summarise the discussion in earlier paragraphs by writing the net acquisition of financial assets for each sector as follows

Net Acquisition of Financial Assets = Saving *plus* Government Grants *less* Fixed Capital Formation *less* Stock Changes *less* Capital Taxes

This identity holds for both the personal and company sectors although in the case of the latter no capital taxes are payable since they are levied on individuals For the Government sector Capital Grants are a use rather than a source of funds while the opposite is true for Capital Taxes Therefore the signs are reversed on these items Further, the Government sector is assumed to have no investment in stock changes

The net acquisition of financial assets by the overseas sector is a residual and is identical to the balance of payments deficit Therefore the identity above is not used to obtain this data It will be immediately obvious that the sum across sectors of the net acquisition of financial assets by each sector must equal zero If, for example, the Government sector's use of funds exceeds the resources available from within the sector then it must acquire outside finance by issuing financial liabilities Similarly with the other sectors When these liabilities are issued they represent an acquisition of financial assets by some other sector and this ensures that the identity holds at all times Of course there are no direct behavioural implications in this treatment of saving and investment any more than a GNP identity implies particular behaviour by agents in the economy Thus the fact that for much of the post-war period the Government sector's net issue of financial liabilities exceeded the financial surplus of the personal sector after it had "financed" the company sector so that external finance via a balance of payments deficit was required does not mean that the Government borrowing was the cause of the payments deficit It could be equally validly argued that the deficit was due to excessive borrowing by the company sector or the inadequate surplus of the personal sector Further we cannot say, at this level of analysis, how the net position of the personal sector was distributed between net claims on the other sectors To do this we would require, as we shall see later, a gross flow of funds analysis

However in spite of the limitations of such a summary statistic we have attempted to reconstruct the information in the published National Accounts to obtain the net acquisition of financial assets by sector The results are shown in Table A1 in the appendix where the methodology adopted is also described The omission of transactions in existing real assets combined with the fact that the constraints of National Accounts identities were met gives perhaps a false impression of accuracy In the UK National Accounts there is a significant unallocated residual item which arises when the net position of each sector is built up from information about gross flows

Perhaps the most striking feature of Table A1 is the importance of the personal sector as a source of finance With the exception of 1951 the net position in each year was positive which means that the personal sector was a net provider of funds to the other sectors Both the company and Government sectors had financial deficits in all years and in all but three years, 1957, 1961 and 1967, these deficits exceeded the surplus available from the personal sector so that foreign resources were required There has been a considerable rise in the amount of net lending by the personal sector and net borrowing by the other sectors The rise in the personal sector's lending is due mainly to a considerable rise in the supply of resources from saving Although capital formation and investment in stocks increased quite rapidly also the faster growth in saving meant that more was available to finance the other sectors

It would be of interest to examine the ability of each sector to finance its own capital expenditure and the changes that have taken place over the post-war period This is done in Table 1 where the average share of internal and external sources and uses of funds is given for each sector for the two periods 1949-1960 and 1961-1972

TABLE 1

Average share of internal and external components of sources and uses of funds by sector 1949-1960 and 1961-1972

	Personal		*Company*		*Government*	
	1949-60	*1961-72*	*1949-60*	*1961-72*	*1949 60*	*1961 72*
			Per Cent			
Sources	*100 0*	*100 0*	*100 0*	*100 0*	*100 0*	*100 0*
Internal	91 3	91 5	65 2	65 0	20 5	26 9
External [1]						
(a) N A F A	—	—	31 2	27 5	68 6	65 1
(b) Other	8 7	8 5	3 6	7 5	10 9	8 0
Uses	*100 0*	*100 0*	*100 0*	*100 0*	*100 0*	*100 0*
Internal	60 3	55 4	100 0	100 0	79 4	68 3
External [1]						
(a) N A F A	33 6	40 5	—	—	—	—
(b) Other	6 1	4 1	—	—	20 6	31 7

1 An external source for the personal and company sectors is government grants An external source for the government sector is capital taxes Corresponding capital grants are an external use by the government sector and capital taxes an external use by the personal sector For the borrowing sectors the net acquisition of financial assets (NAFA) is a source of funds while for the lending sector it is a use

Source See Table A1

As may be seen from Table 1 the personal sector had on average net lending of 33 6 per cent of the total resources available to it between 1949

and 1960 The balance was used to pay capital taxes, 6 1 per cent, and for capital formation and stock changes, 60 3 per cent Of the resources available to the sector 91 3 per cent was provided by internal saving (including depreciation) and the balance was from capital grants by the Government In the later period, 1961-1972, the lending share had risen quite substantially to 40 5 per cent of available resources and the proportion devoted to capital formation and stock changes had fallen to 55 4 per cent on average The relative contributions of saving and Government grants to total resources were unchanged in the second period

For the company sector, which used all available resources in capital formation and stock changes, external borrowing accounted for 31 2 per cent of the funds available A further 3 6 per cent was provided by capital grants and the balance came from internal saving and depreciation In the second period the borrowing share had dropped but internally provided resources still only provided 65 per cent of funds used However the increase in Government grants to the sector raised the share of this source of finance to 7 5 per cent Thus increased Government support for companies has tended, on balance, to replace borrowing from other sectors rather than to reduce internally provided finance

This rise in capital grants by the Government is reflected in the sources and uses breakdown for the sector On average between 1949 and 1960, 20 6 per cent of available resources went to other sectors while the balance was used in capital formation In the later period the share going to other sectors via capital grants had risen to 31 7 per cent with a corresponding fall in the capital formation share However a greater degree of saving by the sector in the second period, which accounted for 26 9 per cent of resources compared to 20 5 per cent for 1949-60, meant that the proportion of capital expenditure that had to be financed by other sectors declined from 68 6 per cent to 65 1 per cent on average Those familiar with the National Accounts treatment of public authorities' receipts and expenditure will note that the net acquisition of financial liabilities by the Government sector is considerably less than the borrowing requirement identified in the national accounts The reason for this is that the latter includes borrowing by the public authorities to finance net lending to other sectors or to redeem existing financial liabilities It is clear that the public authorities' net position is unaltered by these transactions since borrowing for debt redemption merely changes the structure of existing liabilities but not the total while borrowing to lend to other sectors results in a rise, of equal magnitude, in both assets and liabilities

In recent years there has been considerable discussion in the US over the appropriate treatment of Government lending activities The budget deficit that emerges from a national accounts treatment of the Government sector excludes the intermediation activities of the Government and is similar to the item we have defined as the net acquisition of financial assets In a Brooking's study (Lewis 1968) Okun argues that the national accounts deficit is more appropriate as a measure of the impact of Government activity on the economy When lending activities are included the total is "not properly additive to income-generating expenditures" On

the other hand fiscal conservatives such as Stein would argue that Government intermediation in the US, where good capital markets exist, is only necessary when the would-be borrower is unable to secure funds competitively Thus there is a large measure of subsidy involved in the Government provision of loans which can only be taken into account if lending activities are included in the Government accounts

Although capital markets in Ireland are far from perfect it is likely that a significant proportion of Government lending is "uneconomic" in that the private market would be unwilling to provide a similar volume of funds on the same terms This is particularly true of loans to many state companies where the prospect of repayment of capital is slight However in the context of the recent monetarist debate over the "crowding out" effects of Government deficits it seems clear that the most appropriate measure of the Government borrowing requirement is the net acquisition of financial assets The crowding out argument, as suggested and tested by Anderson and Jordan (1968), is that increases in Government borrowing are matched by reductions in expenditure in the private sector Thus an increase in the deficit will only change the composition of aggregate demand but it will not alter the level This possibility has been suggested in the Irish context by Ryan (1972) where it is argued that

> "with increased borrowing from the non-bank public with no change in the money supply the fall in private (and mainly investment) expenditures will be of the same order as the additional funds borrowed " (p 4)

However it is also argued that if the public authorities have recourse to the banking system for funds then it is possible that flexibility in the banks' liquidity ratios will ensure that there is no reduction in private expenditure In either event it is clear that in so far as the Government re-lends the borrowed funds back to the private sector there are no grounds for assuming a fall in private expenditures Distortions in the efficiency of new investment may of course occur but that is a separate issue

It is not possible, and in this author's view it would not be appropriate, to test these propositions *a la* Anderson and Jordan for the Irish economy However, we can examine how changes in the net financial deficit of the public sector affect the net position of the other sectors As Professor Kaldor wrote in a letter to *The Times* of 30 March 1973

> "By the laws of arithmetic a £3,000 million financial deficit in the public sector must have its exact counterpart in the net acquisition of financial assets by the personal sector, the company sector and the overseas sector "*

*Quoted in *National Institute Economic Review* May 1973

Thus, in the Irish context, if a rise in Government borrowing crowds out private expenditures by absorbing available resources, then the net acquisition of financial assets by the personal and company sectors will rise (in fact the net issue of financial liabilities of the company sector would fall) If no crowding out occurred then the extra financing would come via a balance of payments deficit

The sectoral effects of a financial deficit by the public sector were explored by a test suggested in the National Institute Economic Review (1973) If the impact is on the domestic sector then we would expect a high negative association between the net acquisition of financial assets by the public sector (G) and the net acquisition of financial assets of the personal sector (P) or company sector (C) or both If, on the other hand, the effect was mainly on the balance of payments, then there would be a close association between G and the payments deficit (E) If we assume that the financial deficit of the public sector, G, is the active agent and that a linear relationship of the form $S=a+bG+u$ exists between it and the other sectors, where S represents the other sectors in turn we can attempt, by examining the coefficient b and the relevant R^2 to isolate the sectoral impact of the deficit The results of the tests are shown in Table 2 for the period 1953-72 and for the sub-period 1961-1972 The starting point of 1953 was adopted in order to avoid the likely association between G and E due to the ECA loans It seems probable that the Government deficit at this time was based on the availability of these resources, so that a specification which implies G, rather than E, as the active determinant would be inappropriate for this period

TABLE 2

*Coefficients of equation $S=a+bG$, where G is public sector and S one of the other sectors, 1953-1972 and 1961-1972**

S		*b*	R^2	*SE*	*F*
P (Personal)	1953-72	−0 51 (1 78)	0 38	013	3 16
	1961-72	−0 25 (0 57)	0 18	01	0 33
C (Company)	1953-72	0 68 (3 27)	0 60	009	10 70
	1961-72	0 99 (3 16)	0 71	007	10 04
E (Foreign)	1953-72	−1 16 (3 16)	0 59	017	10 00
	1961-72	−1 75 (2 96)	0 68	014	8 75

*t—statistic in parentheses

In order to avoid an association due to a common trend all variables were divided by GNP at current market prices

It is clear from Table 2 that there is a close association between changes in the balance of payments deficit and Government borrowing Indeed for the period 1953-72 the results would suggest that a £1 increase in Government borrowing given the level of GNP, results in an increase of foreign lending by slightly more than £1 On the other hand personal lending increases by £0 5 while company borrowing increases by £0 7 Thus there is no evidence, on the basis of this test, for presuming that Government borrowing tends to reduce private expenditure Rather does the pressure caused by increased borrowing escape into the foreign sector with a consequent rise in the external deficit The effect on the company sector is somewhat surprising since the results indicate that borrowing is increased, rather than reduced, by changes in public sector borrowing This may be a reflection of the growth of public sector capital grants to companies which provide only part of required funds, the remainder being provided by the company It could also reflect the dynamic effect of stimulatory fiscal policy on investment and expectations

In the later sub-period 1961-1972 the results imply an even greater impact of Government borrowing on the balance of payments deficit with the coefficient on company borrowing rising to near unity and the coefficient on personal lending, which in neither period was significant at the 5 per cent level, falling

Too much should not, of course, be read into these findings In the first place the estimates are reduced form estimates and the coefficients may conceal a complicated set of interactions within the economy Further the net acquisition of financial assets by the public authorities may be exogenous neither in the policy nor statistical sense of De Leeuw and Kalchbrenner (1969) Finally it is difficult to isolate autonomous from induced effects since the data used are *ex post* and are subject to the constraint that the sum across sectors equals zero However, as Wallich (1969) concluded this may not be so serious for open economies where the balance of payments takes the strain of any large *ex ante* changes in the surpluses and deficits of other sectors

What the results do indicate is that there is a close association between the Government deficit and the balance of payments such that there is little evidence that increases in Government borrowing crowd out private expenditures of the same amount It should be noted that this still leaves unresolved the question raised by Ryan as to whether the form of Government borrowing, e g from the banking system, non-bank public, or abroad, is as important as the magnitude of such borrowing To investigate this would need a far more sophisticated model with the gross flows between sectors identified and with the portfolio behaviour of the banking system specified

Indeed, without information on the gross flows between sectors it is impossible to translate the saving behaviour or the net acquisition of financial assets by each sector into movements in monetary aggregates such as liquid assets, Government securities, etc It is clear, for example, that the net acquisition of financial assets by the personal sector represents the net amount of financial resources provided by the sector Part of this

will probably go to the acquisition of company securities through the stock exchange and the balance to acquiring Government debt, liquid assets and insurance premiums But a given net position is compatible with any number of gross flows so that the 1972 financial surplus of the personal sector of £140 7 million is compatible with gross lending by the sector of £1,140 7 million and gross borrowing of £1,000 million or with gross lending of £240 7 million and gross borrowing of £100 million Since the data which are available for most financial assets and liabilities are gross we can see that it is difficult to relate the net position of each sector to gross changes in some, or all, financial assets In Table A2 we have set out the net saving of the personal sector and the net acquisition of financial assets for 1949-1972 It is clear that while both series move quite closely in line with each other there can be considerable discrepancy between the year to year movements Thus, for example, in 1968 personal saving rose by £10 7 million while the net acquisition of financial assets fell by £10 5 million Given that it is difficult to relate the net acquisition of financial assets to gross changes in particular types of financial holdings it is obvious that it is even more difficult to so relate personal saving which is not the relevant net source of funds flowing into financial markets

Thus it is quite inappropriate to define changes in, say, deposit accounts with the Associated Banks and the Post Office Savings Bank as saving Such changes could be a result of portfolio substitutions by the non-bank sector and may be reflected in the holdings of other financial assets This point is raised mainly because of the tendency in Central Bank *Reports* to view the flow of resources into deposit accounts as monetary saving As we shall see later, this viewpoint is a reflection of the emphasis on the importance of the narrow money supply, currency plus current accounts with the Associated Banks, in the determination of nominal income

While it is possible to construct a gross flow of funds table for the economy identifying only the private non-bank sector, the banking sector, the public authorities, and the overseas sector, it is doubtful if this would yield significant returns By and large the results give only a usable series for the structure of Government borrowing from domestic and foreign sources This can be obtained by a direct analysis of Government borrowing without the need for a complicated table of gross transactions If financial data were classified by sector, i e personal, company, Government and overseas, then a gross flow of funds table would be of some use since it would reveal the type of debt instruments being issued and acquired by each sector It might be pointed out that at present the banks are required to classify advances into 20 separate cells so that a four-way sectoral classification would be a considerable simplification Of course before any moves were made towards providing the data base on which to construct a gross flow of funds table it is well to remember that significant problems are likely to arise because of the difficulty of separating the personal and company sectors and of identifying direct financial transactions between them (Bain 1973)

Although we cannot relate the saving behaviour and the financial

surplus (deficit) of each sector to available monetary aggregates it might be worthwhile to examine one form of financial savings, albeit at a gross level In any given year debt is being repaid under an agreed contract and assurance premiums are being paid as part of a long-term arrangement By and large we would expect this flow of payments to be relatively stable from year to year, perhaps growing over time as assurance became more widespread and the volume of debt increased In Table A2 we have set out the estimated volume of contractual saving for each year from 1956 to 1969 The bank strike and the absence of insurance data for 1972 prevented the extension of the series It is composed of several elements, repayments of mortgages to building societies, repayments of house loans and land annuities to the public authorities, repayments of hire purchase debt and net premiums (i e less claims and redemptions) paid to assurance companies Since the repayment of mortgages to assurance companies and other financial institutions was excluded the identified contractual saving is almost certainly an underestimate Further, with the introduction of term lending by the Associated Banks, it seems probable that the flow of contractual saving will have increased substantially in recent years Unfortunately no data are available in respect of such repayments

Of course these contractual payments are offset by the issue of new mortgages and loans but they do give a measure of the saving that would occur in the event of no new issues of debt Further since they depend on past commitments these payments are relatively easy to predict so that if they bear a stable ratio to personal saving or the net acquisition of financial assets they may provide a basis for estimating these flows From Table A2 it can be seen that in all but one year, 1958, contractual saving was less than personal saving, while for most years it was greater than the net acquisition of financial assets by the personal sector If we take the period 1961-1969 as being the most relevant for the present situation, we can compare the stability of the ratio of contractual saving to personal saving and the ratio of contractual saving to financial asset acquisition This is done in Table 3 below where the mean and standard deviation of the two ratios are set out

TABLE 3

Ratio of contractual saving to personal saving and to the net acquisition of financial assets by the personal sector 1961-1969

	Contractual Savings as a percentage of	
	Personal Saving	*Net Acquisition of Financial Assets*
Mean	61 8	115 1
Standard Deviation	4 1	22 8

Source See Table A2

It can be seen that contractual saving bears a far more stable relationship to personal saving than to the net acquisition of financial assets It is also interesting to note that the ratio of contractual saving to the latter is on average greater than one indicating that the increase in other financial assets falls short of the increase in liabilities in most years Perhaps with a more comprehensive definition of contractual saving an even more stable ratio might be obtained, but in the meantime these results would indicate that information on contractual saving might be useful as a consistency check on estimates of personal saving

II THE GROWTH OF LIQUID ASSETS AND FINANCIAL INSTITUTIONS

Although it is not possible to relate the information in Table A1 to changes in financial asset holdings it would still seem worthwhile to explore the growth of certain types of assets in the post-war period The private sector tends to hold a significant proportion of its financial assets in liquid form while incurring liabilities by bank credit In Table 4 we have set out the private non-financial sector's holdings of certain financial

TABLE 4

Holdings of certain assets and liabilities by the private non-financial sector, 1971 and 1972

	1971		*1972*		*Change in Year*	
	£ *million*	% *Share*	£ *million*	% *Share*	£ *million*	% *Share*
Assets	2291 8	*100 0*	2620 8	*100 0*	329 0	*100 0*
Government Long-Term Debt	372 0	16 2	402 6	15 4	30 6	9 3
Liabilities of Assurance Co	300 0e	13 1	340 0e	13 0	40 0e	12 2
Liquid Assets	1619 8	70 7	1878 2	71 8	258 4	78 5
Liabilities	924 5	*100 0*	1216 0	*100 0*	291 5	*100 0*
Building Society Mortgages	88 0	9 5	120 7	9 9	32 7	11 2
Hire Purchase*	34 2	3 7	41 5	3 4	7 3	2 5
Life Assurance Mortgages and Loans	70 0e	7 6	75 0e	6 2	5 0	1 7
Bank Lending	732 3	79 2	978 8	80 5	246 5	84 6

e Estimated

*Excluding bank instalment credit and hire purchase

Sources Central Bank *Report* Department of Industry and Commerce Statements of Assurance Business

assets and liabilities for 1971 and 1972 The change between the two years is also set out as are the relevant shares The data for Government long term debt is a March figure, March 1972 holdings were used for 1971 and March 1973 holdings for 1972, while other data relates to end-December Since the Life Assurance returns for 1971 and 1972 were unavailable the entries for assets and liabilities in this respect were estimated on the basis of trends since 1965 Further no balance sheet data is available for the Irish holdings of foreign assurance companies so it was assumed that their lending on mortgages and policy loans was of the same order of magnitude as Irish companies

It can be seen that liquid assets account for a very high proportion of the total identified assets being four to five times larger than holdings of long term Government debt or assurance companies' liabilities This is hardly surprising since the main role of financial intermediaries is to issue liquid liabilities while purchasing less liquid assets If bank creditors, mortgage holders, etc could offer lenders adequate liquidity there would be little need for financial intermediaries The desire on the part of asset holders for liquidity has been well explained in the literature and need not be explored here Of course it is possible that a change in the structure of interest rates would alter the relative flow of new funds into liquid assets or change the composition of liquid asset holdings But, one suspects, it would require a fairly substantial and sustained change in the structure of interest rates to alter significantly the preference of the non-bank public for liquidity

Similarly the liability structure of the private non-financial sector is dominated by bank lending This may reflect the absence of other sources of funds and the importance of the banking system in Ireland Companies do not tend to issue debt securities to finance trade credit or hire purchase transactions or indeed to finance longer-term expansion Thus the limited range of debt instruments in Ireland tends to lead to a significant share of the banking system in both total assets and liabilities

Table 4 overstates the net asset position of the private sector in that liabilities to the Government in the form of mortgages and loans are excluded as are equity liabilities of companies to the financial sector which may be substantial It is however interesting to note that the change in the net position between 1971 and 1972 of £37 5 million is of the same order of magnitude as the 1972 net acquisition of financial assets of the personal and company sectors combined, viz £55 1 million

It is also clear that private holdings of liquid assets are offset to a relatively greater extent by liabilities than, say, holdings of Government debt In spite of these reservations it seemed valuable to examine the growth of liquid assets in the post-war period to see if it reflects, broadly speaking, the rise in the net acquisition of financial assets by the personal sector Accordingly we have set out in Table 5 the average annual rate of growth of total liquid assets and various components of the total for the periods 1949-61 and 1961-72

For the same periods nominal GNP rose at an annual average rate of 5 3 and 10 7 per cent respectively It is clear therefore that the growth of

TABLE 5

Average annual growth rates of liquid assets 1949-1961 and 1961-1972

	1949–1961	*1961–1972*
	%	%
Currency	4 2	7 9
Current Accounts	4 9	9 3
M_1	4 7	8 8
Deposit Accounts – Associated Banks	3 2	14 3
M_2	3 7	9 9
Deposit Accounts – Non Associated Banks	18 5	38 7
Building Society Shares and Deposits	5 9	21 1
Government Small Savings	8 2	6 0
All Liquid Assets	4 8	10 7

Source Central Bank *Reports*

liquid assets is closely related, over the long period, to the growth of nominal income If it can be supposed that wealth and income are closely related then this close relationship between the growth of income and liquid assets suggests that a fairly stable proportion of wealth holdings are in liquid form Of course since the relevant wealth concept to relate to income is net wealth it may not be appropriate to assume that net liquid holdings have tended to maintain a constant share

In comparing the growth rates of various types of liquid assets we can see that significant differences occur both within and between sub-periods In the first period the growth of deposits in Government institutions (Post Office, prize bonds, etc) was far higher than the growth of total deposits Thus the share of the public sector increased between 1949 and 1961 mainly at the expense of deposits in the Associated Banks Too much emphasis should not be placed on the growth of deposits in non-Associated Banks between 1949 and 1961 There were very few institutions in this category and total deposits in 1961 only amounted to an estimated £5 8 million compared to £0 8 million in 1949 * It will be seen that deposit growth in the Associated Banks for 1949-61 was the lowest of all the categories identified and substantially lower than the growth of total liquid assets On the other hand building societies has a faster than average growth rate of 5 9 per cent per annum, well above the overall growth rate although lower than that of Government institutions

The contrast in the 1961-72 period is quite marked, particularly with respect to deposit accounts in the Associated Banks Total liquid assets grew at an annual average rate over twice that of the earlier period However, currency growth only rose from 4 2 to 7 9 per cent per annum

*Data on the non Associated Banks were first published in 1967 by the Central Bank However from information on file at the Central Bank it was possible to construct a reasonably comparable series for the years prior to then

and current accounts grew at 9 3 per cent per annum compared to 4 9 per cent in the first period On the other hand deposit accounts with the Associated Banks grew at 14 3 per cent per annum on average of over four times the 1949-61 growth rate Building societies continued to increase their share in total liquid asset holdings with an average annual growth rate of 21 1 per cent, over twice the rate for all holdings Deposits in the non-Associated Banks continued to grow rapidly and rose to £210 million in 1972 or about 30 per cent of Associated Banks' deposits

Deposits and holdings in Government institutions had a very poor record in the 1961-72 period with the rate of growth falling substantially and being well below the overall growth of liquid assets Indeed the performance might have been even worse were it not for the 1970 bank strike which led to a substantial inflow of resources into the Post Office Savings Bank, not all of which was returned to the banking system at the end of the dispute This factor was also important in pushing up the average growth rate of building societies in the later period Because of the divergences between the growth rate of current and deposit accounts in the Associated Banks in both periods the longer-run trends in the broad and narrow money supply differ considerably As shown in Table 5 the narrow money supply (M_1) grew at 4 7 per cent per annum on average in the first period and on average at 8 8 per cent per annum in the 1961-72 period However, the money supply including deposit accounts with the Associated Banks grew at an annual average rate of only 3 7 per cent in the 1949-61 period and at 9 9 per cent per annum in the later period Thus the growth of the narrow money supply was closer to the growth of nominal income than the growth of the broad money supply in the first period while the opposite was true for 1961-72 Of course this is hardly a surprising finding given the marked increase in the average rate of inflation From 1949-1961 the implicit price of private consumption increased at an annual average rate of 3 4 per cent compared to 5 6 per cent from 1961-1972 As is well known the direct cost of holding currency and non-interest bearing current accounts is the rate of inflation while the opportunity cost is the interest rate on alternative assets which, to some extent, tends to reflect the current rate of inflation Therefore it would not be surprising to find a tendency for deposit accounts to be substituted for currency and current accounts in periods of high interest rates and inflation Of course such substitution is likely to take place at the margin since the transactions demand for money makes deposit accounts less than perfect substitutes for the narrow money stock Thus the extent of substitution might be reflected in changes in the rate of growth of holdings rather than the level of holdings Without a full econometric model of the monetary sector, which specifies both the supply and demand schedules for money, it is not possible to assert that the demand for money, broad or narrow, is sensitive to changes in the rate of interest In a recent article Thom (1974) has suggested that the money supply responds positively (negatively) to increases (decreases) in the rate of interest But his conclusions rest heavily on a number of unproven *a priori* assumptions and his econometric results, since they are reduced

form estimates, are compatible with a large number of underlying structural relationships Here we are content to point out a suggestive relationship between the demand for narrow money and the rate of interest over the longer term Substantial empirical work will be required before it can be argued that the demand for money is sensitive to the rate of interest

One of the main impediments to econometric analysis of the monetary sector is the endogeneity of the money supply It has been known since Hume that external transactions could affect the domestic money supply This approach has been developed in the modern context, by Alexander (1952), Johnson and Mundell (1961) and recently by Caves and Reuber (1971) The argument is that an excess demand for money will lead to foreign inflows either through a current balance of payments surplus or inward capital movements responding to the higher interest rates cause by the excess demand Similarly an excess supply of money will be dissipated through a current payments deficit or capital outflows In the absence of Central Bank action or portfolio adjustments by the Commercial Banks the domestic money supply will be increased (reduced) by the inflow (outflow) of foreign resources due to these external transactions

In Ireland current account deficits, unless offset by capital inflows, reduce the domestic holdings of current and deposit accounts and the foreign asset holdings of either the Commercial Banks or the Central Bank In either case the liquidity of the banking system is reduced in the short-term, although the sale of other foreign assets could subsequently restore the desired level of liquidity If however banks wish to hold a constant ratio of liquid assets to current liabilities and to maintain the existing level of foreign earning assets the money supply will contract as advances are reduced to restore the desired liquidity ratio On the other hand if banks are willing to reduce their holdings of foreign assets, particularly Government investments, in order to replenish their liquidity there may be no fall in the money supply Similarly a deficit which is more than offset by capital inflows need not affect the domestic money supply if the portfolio response of the banks is to use their augmented liquidity to acquire foreign assets

In recent years money supply analysis has utilized the concept of the monetary base which is defined as currency outstanding and Central Bank liabilities to the banking system Many earlier text books implied that the expansion of the money supply in the wake of an inflow of reserves into the Commercial Banks depended only upon the required reserve ratio and leakages into currency holdings by the non-bank public It is now recognized that while banks are prevented from holding less than the legal amount of reserves there is nothing to prevent them from holding more reserves than legally required, since the holdings of excess reserve by the banks will depend, *inter alia,* on the structure of interest rates particularly the interest rates on reserve deposits and commercial loans and advances Work by Burger (1972) and Brunner and Meltzer (1964) has shown that in the US the money supply is some multiple of the monetary base but that the multiplier is sensitive to interest rates How-

ever movements in the base multiplier are quite small and it appears to be quite a stable aggregate being reasonably predictable from year to year

There are considerable problems in applying the concept of the monetary base to the Irish monetary system To a large extent the concept is derived from an institutional structure where the banks are required to hold a proportion of their liabilities in the form of deposits at the Central Bank This was not the case in Ireland until 1973 so that for the period 1949 to 1972 there was no obligation on the Commercial Banks to keep deposits with the Central Bank nor to keep a minimum proportion of their liabilities in specified assets This does not, of course, mean that the banks do not wish to hold a certain fraction of their liabilities in the form of highly liquid assets to protect themselves against sudden withdrawals Rather does it suggest that, because of the absence of legal obligations, the liquidity position of the Irish banks is due mainly to portfolio decisions which may be sensitive to changes in interest rates, loan demand, etc We might, however, expect this ratio to be relatively stable from year to year since the liquidity is required, in the main, as a precaution against deposit drains

There is still the problem of defining the relevant monetary base in Ireland given the absence of legally required reserve ratios One definition suggested by Hoare (1969) was currency outstanding plus Central Bank deposits by the Associated Banks plus the net external assets of the Associated Banks This differs from the definitions used in Italy where the base is defined to include the foreign reserves of the Central Bank and certain liquid liabilities of the Government (bills and post office bank deposits) which by convention or in practice can be converted into monetary claims on the Central Bank (see OECD 1973) If this approach were adopted for Ireland the base would be expanded considerably However the net changes in the base would be much the same under both definitions so that the narrower definition was adopted for Ireland In Table A3 we have set out the monetary base, as defined by Hoare, for the years 1949 to 1972 We have also shown the broad money supply (M_2) and the base multiplier obtained by dividing the base into the money supply

It is obvious from the Table that the multiplier has increased fairly steadily over the period doubling between 1949 and 1969 This means that the amount of monetary base required to support a given level of private current and deposit accounts has been halved during the period It also suggests that the relative liquidity of the banking system has been substantially reduced over the period

In Table A3 we have also tried to take into account the effect of base changes and multiplier changes on the money supply The base effect set out in the table is the change in the money supply in any given year that would have occurred if the multiplier of the previous year had been applied to changes in the base The multiplier effect is defined as the difference between the actual change in the money supply and the base-induced change If bank portfolio behaviour was such that changes in

the multiplier occurred in order to offset changes in the base then we would expect the two series to be negatively related It can be seen from Table A3 that, broadly speaking, this is the case particularly for the 1950s Of course given that the bank wishes to ensure a growth in the money supply the movements in the multiplier will not exactly offset the effects of base changes on the money supply When the base contracted the rise in the multiplier tended to exceed that required to maintain the existing money supply – the exception being 1955 when the contraction of the base would, with an unchanged multiplier, have led to a fall of over 14 per cent in the money supply Similarly when the base expanded the multiplier did not necessarily contract to offset this rise Indeed in several years the multiplier rose when the base rose thus adding further to the increase in the money supply

It will be noted that the marked secular rise in the multiplier, which suggests a fall in the relative liquidity of the banking system,* is at variance with the view expressed earlier that in so far as liquidity is desired by the banks as a precaution against deposit withdrawals the multiplier would tend to be relatively stable This might suggest that at the beginning of the period the Associated Banks had liquidity far in excess of their needs and that the rise in the multiplier reflects the adjustment towards a more desirable ratio of liquid assets to domestic current and deposit account liabilities Yet this would imply an adjustment period of over twenty years which does not seem at all plausible Another, more reasonable, explanation for the rise in the multiplier is that the definition of the base used above does not correspond to the set of liquid assets that the banks wish to hold as a reserve against withdrawals It is well known (Meenan 1971) that the Irish Banks have viewed their portfolio *in toto* although the Central Bank's main concern is with the domestic portion of the balance sheet Thus the concept of the net external asset position is rather meaningless for the banks, except in so far as Central Bank advice directs them to take it into account The level of net external assets is not a measure of the banking system's liquidity particularly from the bankers standpoint If, to take a slightly implausible example, the Associated Banks' external liabilities were all deposits on one year's notice and their external assets consisted of money at call and short notice then the banks would be in a highly liquid position even if net external assets were zero One can equally imagine a counter example where in spite of a large net external portion the banks were highly illiquid with demand liabilities far outstripping liquid assets

In order to examine the proposition that the Associated Banks have tended to maintain a relatively constant ratio of all liquid assets to all current and deposit accounts, we have set out a number of ratios in Table A4 The most obvious definition of liquidity is cash (including balances with the Central Bank and other banks) and money at call and

*The multiplier could also rise if the non bank public's desire to hold currency fell relative to its desire to hold current and deposit accounts Although the share of currency in M_2 has fallen since 1961 it could not account for more than a very small rise in the multiplier

short notice The ratio of this aggregate to total deposit and current account liabilities is given in Column 1 of Table A4 No distinction between internal or external assets or liabilities is made The stability of this ratio is quite marked and in contrast to the multiplier discussed earlier The mean value for the period 1949-1969 was 0 20 with a standard deviation of only 0 013 Changes in the definition of current and deposit accounts has made the construction of comparable ratios for 1971 and 1972 difficult However the data indicate a sharp rise in the liquidity of the banks in the last quarter of 1972, a factor which is hardly unconnected with the substantial growth in lending in the last quarter of 1972 and the first quarter of 1973 If a wider concept of liquidity is adopted by the banks, then government bills would form part of liquid assets given that there is always the possibility of obtaining cash by rediscounting Column 2 in Table A4 sets out this broader liquidity ratio and it can be seen that this has also been relatively stable throughout the period showing no secular trend The mean ratio for 1949-1969 was 0 24 with a standard deviation of 025 indicating that this ratio was slightly less stable than the narrower liquidity definition

It could be argued that the Irish banks inherently need less liquidity than other banks since they can readily convert UK government securities into acceptable liquid assets in the London market In a closed economy with reserve requirements the total amount of liquidity available is determined by the monetary authorities Sales of securities by individual banks do not alter the volume of liquidity available but merely transfer the holdings of reserves between banks and/or alters the total liabilities of the banking system But a sale of UK securities by the Irish banks will give them additional liquidity regardless of the policy actions of the Bank of England In Column 3 of Table A4 we have set out the ratio of broad liquid assets plus UK Government securities to total deposit and current account liabilities It can be seen that this ratio has a significant downward trend since 1949 Indeed it reflects very closely the movements in the net external asset ratio shown in Column 4 of Table A4 This indicates that a fall in net external assets is mainly due to a fall in holdings of UK Government securities by the Irish banks and that the net external position is inappropriate as a measure of bank liquidity

One can of course rationalize this portfolio response of the banks to a fall in net external assets As we have discussed, a current deficit, which is not offset by non-bank capital inflows, will reduce the domestic liabilities of the banks and their external assets If the reduction was wholly confined to liquid assets a severe contraction in demand and deposit liabilities would have to take place In order to prevent this contraction longer-term investments are sold to restore liquidity Indeed since the ability of the banks to create money by lending to externs is severely limited there is a strong case for ensuring that no marked fall in domestic liabilities occurs This would mean that sufficient investments would be sold to allow the banks to offset the deficit induced fall in domestic liabilities Thus it is notable that in only one year, 1955, did domestic current and deposit account liabilities of the Associated Banks

decline, and then only by £4 8 million compared to a fall in net external assets of over £35 million

Thus we have seen that the structure of the portfolios of the banks does not depend on the size of the domestic monetary base This was because there was no legal obligation on the banks to hold the base as reserve assets Further the unique nature of the Irish banking system, which operates in two distinct monetary areas, gave them considerable flexibility in offsetting the monetary consequences of a payments deficit We would also argue that the banks' response to such deficits was highly rational and reflected their comparative advantage in money creation with the State

In order to explore further the changes in the portfolio composition of the Associated Banks since 1949 we have set out, in Table 6, the average annual growth rate of certain domestic and external assets for the periods 1949-1961 and 1961-1972

TABLE 6

Average annual growth rates of within-state and external assets and liabilities of the Associated Banks 1949-1972

	1949–1961	*1961–1972*
	%	%
Within-State Assets	6 6	13 4
of which		
Bills, Loans, Advances and Investments (excl Government)	6 5	11 0
Irish Government	10 5	35 1
Liquid Assets	6 4	15 4
External Assets	0 7	4 8
of which		
Bills, Loans, Advances and Investments (excl Government)	6 0	8 9
Government	−2 1	−4 8*
Liquid Assets	1 7	9 1
Total Assets (=Total Liabilities)	3 1	9 9
Within-State Liabilities	3 2	10 0
External Liabilities	2 8	9 8

*Includes the effect of the transfer of securities to the Central Bank under the Basle Agreement

Source Central Bank *Reports*

In the first period the total assets of the Associated Banks grew rather slowly with domestic liabilities increasing only slightly faster than external liabilities In contrast, assets within the State grew at an annual average rate of 6 6 per cent per annum, while external assets were almost unchanged showing only a growth rate of 0 7 per cent per annum Lending to the private sector within the State grew roughly in line with total domestic assets while lending to the Irish Government grew at 10 5 per cent on average per annum although the total lending to the Government only reached £24 million in 1961 Lending to the external private sector also grew at a faster rate than either total assets or external assets and at 6 0 per cent per annum was only slightly below domestic private lending The consequences of maintaining the level of advances by selling external government securities are obvious from Table 6 where it can be seen that external government investments declined at an annual average rate of 2 1 per cent There was a substitution of internal liquidity for external liquidity during this period since internal liquid assets grew at 6 4 per cent per annum on average while external liquid assets grew at only 1 7 per cent per annum

In the second period there was a tripling of the growth of total assets to an average annual rate of 9 9 per cent As before, within-State liabilities grew at a rate similar to external liabilities In the later period, the growth of internal assets continued to outpace that of external assets However, the relative disparity was not so large in that within-State assets only grew at 13 4 per cent per annum, or about 1 3 times the average growth of total assets External assets grew at 4 8 per cent or just under half the rate of total assets Lending to the private sector within the State continued to grow at a rate in excess of total asset growth but the growth rate of 11 per cent was only slightly above that of total assets and was below that for all within-State assets The very rapid growth rate of lending to the Irish Government, an annual average of 35 1 per cent, was undoubtedly a major factor in the *relative* decline of domestic private lending in domestic assets Liquid assets within the State continued to grow rapidly and at a rate in excess of both total assets and external liquid assets reflecting a continuation of the substitution of internal for external liquidity

Lending to the private external sector grew only at 8 9 per cent per annum which was below the growth of external liabilities As in the first period, external government investments declined although at a faster rate However, the effect of the transfer of sterling securities from the Associated Banks to the Central Bank under the Basle Agreement is to overstate the decline in foreign investments and also the growth in domestic liquid assets

The disparities between the growth rates of internal and external assets and liabilities indicate that over the past two decades there has been a significant shift in the asset portfolio of the banks towards domestic assets The similarity of the growth rates of internal and external liabilities shows that there was little change in the relative importance of these

categories in total liabilities so that the brunt of the portfolio changes in asset holdings is reflected in the net external asset position

The effect of the different rates of growth can be seen more clearly in Table 7 where the share in total assets of certain categories of external and internal assets is set out for three years, 1949, 1961 and 1972

TABLE 7

Share of within-state and external assets and liabilities in total assets and liabilities of the Associated Banks, 1949, 1961 and 1972

	1949	*1961*	*1972*
	%	%	%
Within-State Assets	33 5	50 0	70 3
of which			
Non-government Bills, Loans, etc	25 2 (75 2)	37 3 (74 6)	41 5 (59 0)
Irish Government	2 2 (6 6)	5 1 (10 2)	15 9 (22 6)
Liquid Assets	3 8 (11 4)	5 6 (11 2)	9 5 (13 5)
External Assets	66 5	50 0	29 7
of which			
Non-government Bills, Loans, etc	9 5	13 2	11 9
Government	40 2	21 7	4 5
Liquid Assets	15 2	12 9	11 9
Total Assets (=Liabilities)	100 0	100 0	100 0
Within-State Liabilities	68 1	69 2	69 7
External Liabilities	31 9	30 8	30 4

Figures in parentheses represent the share of those assets in total within-state assets
Source As for Table 6

The downward movement in the share of external assets and the stability in the share of external liabilities stand out in Table 7 Thus in 1949 the net external assets of the banks represented 50 8 per cent of domestic liabilities, by 1961 this had declined to 27 7 per cent and by 1972 net external liabilities were equal to one per cent of domestic liabilities The fall in the share of external assets between 1949 and 1961 from 66 5 per cent to 50 0 per cent was due, almost entirely, to the fall in the share of external government investments A similar pattern emerges between 1961 and 1972 although the share of all categories of external assets fell in this period The rise in the share of within-State assets between 1949 and 1961 was due largely to the rise in the share of private domestic lending although domestic liquid assets and lending to the Irish Government also increased their share In the second period, the shares of all categories of internal assets rose with the largest rise occurring in lending to the Government

The effect of this rise in Government lending can be more clearly seen

if the share of private lending, government lending and liquid assets in total domestic assets is examined These shares are set out in parentheses in Table 7 In 1949 and in 1961, private lending accounted for about 75 per cent of total domestic assets Between 1949 and 1961, the share of government lending rose to 10 2 per cent from 6 6 per cent, while the share of liquid assets was almost unchanged at 11 per cent However, by 1972 the share of private lending in total domestic assets had fallen to 59 per cent and the share of government lending had risen to 22 6 per cent Liquid assets also showed an increased share but the bulk of the decline in the share of private lending is reflected in the rise in the share of government lending It is interesting to note that the liquidity ratios introduced at the beginning of 1973 would, under the assumption of a zero net external position, tend to reduce the private lending share still further to 57 per cent (and this would include other assets such as acceptances, etc which represented 4 9 per cent of total domestic assets in 1972) and increase the government share to 31 per cent

So far we have taken no account of the important institutional change that took place in Irish banking in the 1960s, viz the growth of the non-Associated Banks At the end of 1972, non-government domestic lending by these banks totalled £332 9 million or some 51 5 per cent of total private lending by the Associated Banks In 1961, domestic lending by the non-Associated Banks was negligible so that their exclusion from the analysis in the period 1961 to 1972 understates the growth of private lending If account is taken of non-Associated Bank private lending, the annual average growth of total private lending from 1961-72 was 15 0 per cent instead of the 11 0 per cent given in Table 6 for the Associated Banks alone Further, the share of private lending in total domestic assets of the banking system in 1972 was 62 per cent, compared with the 59 per cent shown in Table 7 And this is somewhat of an understatement since the domestic assets of the non-Associated Banks are gross of inter-bank balances If we take the share of private lending in total lending by Associated and non-Associated Banks at end-1972 and compare it with the share of private lending in total lending by the Associated Banks in 1961, we can get some idea of the importance of the growth in government lending In 1961, private lending was equal to 88 per cent of total lending while in 1972 the share had declined to 78 per cent However this fall was less than the decline of 15 7 percentage points indicated in the analysis of the Associated Banks' balance sheets Thus it would appear that the expansion of private lending by the non-Associated Banks has helped to offset the fall in the relative share of private lending by the Associated Banks It would therefore seem worthwhile to examine the recent performance of the non-Associated Banks

The title "non-Associated" is something of a misnomer since a significant proportion of the assets and liabilities of this group are held by subsidiaries of the Associated Banks Indeed a less trusting individual might reflect that much of the growth in the non-Associated Banks took place after 1965 when the Central Bank began to issue credit advice and look at the activities of the Associated Banks with a less than benevolent

TABLE 8

Average annual growth rate of domestic and external assets and liabilities of the non-Associated Banks 1966–1972 and relative shares 1966 and 1972

	Annual Growth Rate	*Share in Total Assets*	
	1966-1972	*1966*	*1972*
	%	%	%
Within State Assets	37 9	70 6	77 1
of which			
Private Lending	35 1	54 2	52 3
Government Lending	19 3	9 3	4 3
External Assets	30 3	29 4	22 9
Total Assets (=Liabilities)	35 9	100 0	100 0
Domestic Liabilities	33 6	60 2	54 3
External Liabilities	39 0	39 8	45 7

Source Central Bank *Reports*

eye It was not until 1969 that the non-Associated Banks were brought within the scope of Central Bank credit advice The non-Associated Banks are a rather heterogenous group of institutions ranging from subsidiaries of multi-national banks to industrial hire purchase companies

The earliest published balance sheet information on non-Associated Banks dates from 1966 At that time, total assets amounted to £101 2 million or less than one-sixth of their level six years later in 1972 Thus no great distortion is caused by our confining the analysis to the period 1966 to 1972

In Table 8 we have set out the average annual growth rate of certain assets and liabilities for the non-Associated Banks between 1966 and 1972 It should be noted that the data include inter-bank deposits which have grown significantly in recent years and thus overstate the growth of total assets It can readily be seen that the growth rate experienced by these institutions was far in excess of that achieved by the Associated Banks and far greater than nominal income growth in the same period Of course the relatively small base in 1966 means that a high growth rate in the early years can reflect small absolute movements in assets and liabilities Thus in 1966 to offset a 10 per cent fall in the Associated Banks' level of private domestic credit, the private lending of the non-Associated Banks would have had to rise by 59 per cent By the end of 1972, a rise of 19 5 per cent in private lending by the non-Associated Banks would have been sufficient to offset a fall of 10 per cent in Associated Bank private lending

It will be seen from Table 8 that domestic assets grew faster than

domestic liabilities so that the net external position of the banks worsened This is indicated by the increase in the share of domestic assets in total assets and the fall in the share of domestic liabilities shown also in Table 8 Thus net external liabilities rose from 14 7 per cent of domestic assets (10 8 per cent of total assets) in 1966 to 29 6 per cent of domestic assets (22 8 per cent of total assets) in 1972

One of the main features of the non-American Banks is their relatively high net external liability position If one combines the net position of the Associated and non-Associated Banks at the end of 1972, the ratio of external *li bilities* to domestic assets was 8 7 per cent compared to a ratio of external *cssets* to domestic assets of 38 2 per cent for the Associated Banks in 1961 – a turnaround of 46 9 percentage points If there had been no growth in the assets or liabilities of the banking system but merely a substitution of domestic assets for net foreign assets, the turnaround from a positive net position to a negative net position between 1961 and 1972 would have allowed domestic assets to expand by 3 6 per cent per annum Similarly the substitution of domestic assets for foreign assets by the Associated Banks between 1949 and 1961 would have allowed a growth of 1 2 per cent per annum in domestic assets even if total assets remained unchanged

This suggests that dependence on foreign bank borrowing (or reduction in net external assets) has been more important in the second period However total domestic assets in the 1949-61 period increased by 6 6 per cent per annum on average as we have seen so that the external contribution of 1 2 per cent per annum was 18 per cent of the total If we ignore the small level of domestic assets held by the non-Associated Banks in 1961 we can obtain an average annual growth rate of total domestic assets (including the non-Associated Banks) of 17 0 per cent for 1961-1972 so that the external contribution of 3 6 per cent per annum was 21 per cent of the total – not all that much above the relative contribution in 1949-1961 What is also clear is that any further contribution by foreign bank borrowing to the growth of domestic bank assets will involve an increase in the net external liabilities of the banks rather than a reduction in their net external assets Whether a significant rise in the proportion of domestic assets financed by foreign liabilities is desirable or not depends on the view taken of the stability of such inflows and the effects of interest payments on the balance of payments It would seem unlikely that at the end of the next ten years the net external liabilities of the banking system would account for 55 per cent of domestic assets, yet this is what would occur if the trend from 1961 to 1972 was continued Therefore we might expect the growth of the domestic assets of the banking system to be more in line with the growth of domestic liabilities Unless the flow of resources into the banking system were to increase more rapidly, this would mean a slow-down in the growth of domestic bank lending with consequences for government or private borrowing or both

Currency and deposits with the banks, Associated and non-Associated, account for the bulk of liquid assets At the end of 1972, for example, these assets represented 72 7 per cent of total liquid assets outstanding

A further 17 8 per cent was in the form of small savings with the government and the balance of 9 5 per cent was shared by other financial institutions We shall discuss the deposits in Government institutions in the next section Of the 9 5 per cent of liquid assets in other financial institutions 7 5 per cent is accounted for by building society deposits Thus these institutions rank third after the banks and the government savings media as a source of supply of liquid assets Indeed we saw earlier that in both 1949-61 and 1961-72 the growth of building society deposits outstripped the growth of total liquid assets

The importance of building societies as financial institutions is not due to their money-creating ability, since they could only expect to receive back in deposits only a small proportion of any advances made, but rather to the particular intermediation activities they undertake By their nature building societies are highly illiquid financial institutions The main assets they hold are long-term mortgages while their liabilities are either payable on demand or on quite short notice This maturity imbalance makes the societies particularly vulnerable to changes in the asset portfolio of the non-bank public If, for example, there is an outflow of funds from the societies, the main impact of this outflow is borne by available liquid reserves As mortgages are repaid these liquid reserves can be replenished assuming the outflow is temporary But the rate of new mortgage advances is likely to be severely affected It is therefore argued that monetary policy has most of its impact on aggregate demand through its effect on mortgage advances by building societies Thus a rise in interest rates on competing assets, or a reduction in the money supply, will tend to slow the growth of deposits in building societies This in turn will lead to a slowdown in the rate of mortgage advances, as well as a rise in the mortgage rate, which will affect investment in private housing

The plausibility of this scenario in the Irish context, leaving aside for the moment the question of whether monetary policy could affect the structure of interest rates or the money supply, depends crucially on a number of factors First, the building societies must be an important source of finance for private housing investment, otherwise variations in the rate of mortgage advances would have a negligible impact on new construction Secondly, building societies must depend on deposit growth for the major share of their annual mortgage advances, if the repayment of existing mortgages was equal to the rate of new advances, then the societies would only be affected by an actual outflow of funds rather than a slowdown in the inflow Finally, the liquidity position of the building societies must be relatively tight, otherwise the effect on mortgage advances of temporary reductions in the flow of new deposits could be offset by a reduction in liquidity

In order to examine whether the factors mentioned above are important in the Irish context we have set out in Table A5 the level of new mortgage advances for each year from 1949 to 1971 The ratio of these advances to total private housing investment is also set out It is clear from the table that building societies do provide only part of the finance for new housing investment Indeed, the proportion for the years 1949-1971 was quite low

although in 1971 advances by the building societies accounted for 45 6 per cent of private housing investment On average for the year 1949 to 1960 inclusive, mortgage advances by the building societies were equal to 21 7 per cent of annual private housing investment There was considerable variation in this ratio which ranged from a high of 42 5 per cent in 1949 to a low of 14 5 per cent in 1956 the standard deviation was 8 2 per cent For the years 1960 to 1971 the average ratio of mortgage advances to private investment in housing was 28 7 per cent with somewhat reduced variability, the lowest ratio being 20 4 per cent in 1965 and the highest being 45 6 per cent in 1971, the standard deviation was lower than in the first period at 6 7 per cent There is no particular evidence of an upward trend in recent years, if 1971 is viewed as an exceptional year because of the impact of the bank dispute, although the average ratio for the second period is higher Between 1966 and 1969 there was considerable stability in the ratio at around 26-28 per cent and it may be that this reflects the more normal experience in the last decade

Table A5 also shows the liquidity position of the building societies which has tended to rise over the post-war period Although in the UK membership of the Building Societies Association requires a liquidity ratio of 7½ per cent, in practice societies there keep well above the prescribed minima (O'Herlihy and Spencer 1972) Therefore the liquidity ratios for the Irish societies are not particularly high with the possible exception of 1970 to 1972 when substantial inflows which might reasonably have been considered temporary accrued to the building societies during the bank dispute and its aftermath

In order to examine whether Irish building societies depend on repayments or new deposits to finance mortgage advances a number of subperiods were selected in 1949-1955, 1955-1961, 1961-1966 and 1966-1971 The sum of mortgage advances for these periods was compared with the increase in mortgages outstanding over the period The lower the ratio of increases in outstanding mortgages to the sum of mortgage advances the less is the dependence of the building societies on increased deposits to finance advances The results of this exercise are set out in Table 9

TABLE 9

Mortgages advances and changes in mortgages outstanding 1949-55, 1955-61, 1961-66, 1966-71

	1949-55	*1955 61*	*1961 66*	*1966 71*
a Changes in Outstanding Mortgages (£ million)	4 6	4 1	19 8	51 7
b Mortgages Advances (£ million)	11 2	13 2	32 9	77 4
c a as percentage of b (%)	41 1	31 1	60 2	66 8

It is clear from the table that in recent years deposit growth has become the most important source of funds for new advances On average in 1966 to 1971 two-thirds of all mortgage advances were financed by increases in deposits whereas between 1955 and 1961 only one-third was on average so financed

This may well explain some of the problems that arose in 1973 with the building societies During the year the growth of deposits was far below previous experience, although that experience did include two bank closures, and the societies ceased accepting loan applications If a similar reduction in deposit growth had occurred in the period 1955-61 the impact on new advances would have been much smaller But without deposit growth the societies could only finance a much reduced level of advances even while reducing their somewhat excessive liquidity

The evidence is therefore, that, particularly in recent years, Irish building societies have had many of the attributes of similar institutions in other economies which render them sensitive to changes in interest rates and portfolio substitutions by the public

The final set of financial institutions which we will treat in this section are the life assurance companies Unfortunately, the absence of economically relevant and comprehensive data makes it impossible to give much more than a cursory glance at the activities of these institutions The life assurance market is divided between Irish companies and foreign companies with the latter accounting for about 60 per cent of assurance liabilities to Irish residents Only since 1965 has a statement of liabilities to Irish residents by assurance companies been published The annual average growth rate of these liabilities from 1965 to 1970 was 10 7 per cent per annum, which was below the growth rate of liquid assets of 13 7 per cent per annum for the same period

The liabilities of assurance companies to Irish residents can increase either by premiums or by earnings on existing assets Between 1949 and 1970 net premiums (i e gross premiums less claims) increased from £3 4 million to £19 11 million, representing an annual average growth rate of 8 6 per cent per annum The net income of assurance companies, i e net premium income plus interest and dividends less commission and management expenses rose from £2 1 million in 1949 to £22 1 million in 1970 – an annual average growth rate of 11 9 per cent Thus the net income of assurance companies has tended, on average, to grow faster than national income as the adoption of private pension schemes becomes more widespread

Given that the life assurance companies had liabilities to Irish residents of £265 8 million in 1970 it would be of considerable interest to know how these resources were used by the companies Unfortunately, balance sheet data is only available for Irish companies and even then the categories of assets are so broad that meaningful analysis is difficult In 1959 the non-Irish companies agreed to ensure that within ten years two-thirds of their liabilities to Irish residents would be in investments within the State In 1969 it was agreed to raise this proportion to 80 per cent It was recently announced that legislation will be introduced to ensure that a

specified minimum proportion of Irish liabilities of assurance companies will be invested in Ireland Although Irish assurance companies probably invest the greater part of their funds within the State, the proportion cannot be ascertained from the published balance sheet information Although the portfolio behaviour of Irish assurance companies may be quite different from that of foreign companies, it still seemed worthwhile to look at changes in the balance sheet of the Irish companies since 1949

TABLE 10

Share of certain assets in total assets of Irish life assurance companies, 1949, 1955, 1961, 1965, 1970

	As a percentage of total assets				
	1949	*1955*	*1961*	*1965*	*1970*
Loans	9 9	11 6	10 9	8 7	4 7
Mortgages	5 8	13 5	12 8	19 2	19 4
Government Securities	45 3	24 8	29 3	27 8	21 5
Stock, Shares, Debentures	26 2	35 4	28 9	29 4	31 2
Land, Property	7 0	11 0	13 8	12 2	13 6

The most noticeable feature of Table 10 is the rise in the share of mortgages in total assets particularly between 1949 and 1965 In 1965 mortgages held by Irish assurance companies totalled £14 2 million or about 45 per cent of mortgages held by building societies If we assume that foreign companies had the same proportion of domestic liabilities in mortgages as Irish companies, then all assurance company mortgages would have exceeded mortgages held by building societies in 1965 By 1970, mortgages held by Irish assurance companies were only 38 per cent of building society mortgages, and on the assumption of similar portfolio behaviour of foreign companies, total assurance mortgages would have been only about 90 per cent of building society mortgages Given the rapid growth in building society mortgages in 1971 and 1972 and the greater activity by assurance companies in the property market, it seems likely that the mortgage share of assurance companies has declined further Of course, the assumption that foreign companies hold assets in the same proportion as Irish companies may be unreal – they would presumably tend to hold a lower proportion of Irish assets

Investment in property and stocks and shares has risen quite considerably over the period In 1949 such assets accounted for only 33 2 per cent of the total, while by 1970 they represented 44 8 per cent of all assets It may well be that this proportion has increased as inflation in the last couple of years has made fixed interest securities decidedly unattractive

The most significant decline has been in the share of government fixed

interest securities However, most of the decline occurred between 1949 and 1955 (and correspondingly the rise in the share of equities was greatest in that period) There was a rise in the share of government securities between 1955 and 1961 but a further fall between 1961 and 1970

It is regrettable that the quality of information on assurance companies is so poor Perhaps the forthcoming legislation on the required minimum of domestic liabilities of assurance companies that must be invested in Ireland will lead to an improvement Certainly the importance of the assurance companies as a source of finance is likely to grow in the future and the information gap caused by the present unsatisfactory nature of the statistics is likely to widen

III THE GOVERNMENT SECTOR

In Section I we noted the substantial rise in government borrowing, as measured by the net acquisition of financial liabilities, since 1949 Indeed it is significant to note that from 1949 to 1960 the average level of government borrowing per annum of £18 2 million was significantly higher than the average annual borrowing of the company sector of £12 1 million Again between 1960 and 1972 average government borrowing was greater than company borrowing although the relative disparity was smaller, the figures being £49 7 million for government borrowing per annum and £41 6 million for companies When it is understood that these data for government borrowing exclude borrowing required to finance loans to the company sector, while company borrowing includes borrowing from the public sector, the importance of the financial activities of the government sector can be readily recognised

Thus, although it was argued earlier that the net acquisition of financial liabilities is the appropriate measure of true public sector borrowing, this does tend to underestimate the extent to which the government has to seek funds in financial markets each year Part of the funds raised each year by the public authorities go to repay past borrowing The balance, net borrowing, is used to finance capital grants, loans to other sectors and the shortfall between public sector savings and capital formation In Table A6 we have disaggregated the gross borrowing requirement of the public authorities into its various components for each year from 1949 to 1972

Own account borrowing set out in Table A6 is equal to the borrowing required by the public authorities before any financial transactions with other sectors take place Of course in so far as debt redemption is a legal requirement of the public sector it could be argued that it should be included in own account borrowing Against that it must be remembered that debt redemption is in respect of all past borrowing and not just borrowing to finance the deficit between public authorities savings and capital formation It can be seen that own account borrowing is normally substantially less than either net or gross borrowing and that in the period 1957-1959 it was extremely low

When capital transfers, as defined earlier, are added to own account

borrowing, this gives the net acquisition of financial assets by the public sector which was set out in Table A1 Net lending equals loans made and share capital acquired by the public authorities plus overseas lending to the IMF etc less the repayment by other sectors of past borrowing It is, to some extent, a measure of the intermediation activities of the public authorities It will be seen that the level of this category has varied substantially from year to year although it was at a higher level during 1961 to 1972 than during the earlier period It is also interesting to note that since 1967 capital transfers have exceeded lending whereas for most earlier years public sector lending was considerably greater than capital transfers This suggests that in recent years the public authorities have preferred to give outright capital grants to other sectors than to make loans Combining net lending with the net acquisition of financial assets gives the net borrowing requirement of the public authorities which has increased more than six-fold since 1949

In recent years debt redemption has been extremely high, in part reflecting the maturity of loans floated in the early fifties When this is added to net borrowing we obtain the gross borrowing requirement In Table 11 we have set out the average shares of each of the categories described above in gross borrowing for the periods 1949-60 and 1961 to 1972

TABLE 11

Average share of components in gross borrowing by public authorities 1949-60 and 1961-72

	As a Percentage of gross Borrowing	
	1949 60	*1961 72*
Own Account Borrowing	39 8 (47 4)	32 3 (39 0)
Capital Transfers	17 4 (20 7)	30 7 (37 1)
Net Lending	26 7 (31 8)	19 9 (24 0)
Debt Redemption	16 1	17 2
Gross Borrowing	100 0	100 0

Figures in parentheses are as a percentage of Net Borrowing
Source See Table A6

It is somewhat surprising to find that, on average, the share of own account borrowing in recent years is well below that for the earlier period Indeed even if debt redemption is added for the 1961-72 period the share is still below 50 per cent Thus on average over half the gross borrowing since 1961 went to finance the activities of other sectors If we exclude debt redemption we can see from the data in parentheses in Table 11 that own account borrowing declined from 47 4 per cent of net borrowing

on average in the first period to 39 per cent in the second Thus the average share of net borrowing passed on to other sectors rose in the later period Since the average share of net lending by the public authorities in both net and gross borrowing declined in the later period, the rise in the share of capital transfers accounted for all the rise in other sectors' share of government receipts from borrowing

These results suggest that account must be taken of the uses to which government borrowing is put before any attack on the level of such borrowing can be sustained There can be little doubt that a high level of gross borrowing combined with substantial capital transfers and loans to other sectors will tend to change the composition of investment spending and may well reduce the marginal efficiency of new investment But whether the compositional change in investment caused by government borrowing is desirable or not depends in the short run at least on the macro-economic effects of such a change It may well be that the multiplier effects of government aided investment, such as housing, are greater than those on investment that would have taken place in the absence of government borrowing And we have suggested earlier that the main impact of public sector borrowing may be on the balance of payments rather than on investment by other sectors While the results in Section I can only be considered suggestive, they indicate that borrowing by the company sector is stimulated by government borrowing, as measured by the net acquisition of financial assets This may be due to the fact that many capital grants are partial and are given on the basis of the balance of funds being provided by the recipient

It would be desirable if we could relate the gross borrowing (or net borrowing) of the public authorities to the issue of government securities, deposits in government savings media etc Unfortunately this is not possible since the information provided in the *Finance Accounts* on Government Debt is not directly comparable with the National Accounts definitions of borrowing It seems incredible that at this time there is not available an economically meaningful breakdown of government borrowing by type of security issued It would seem to this author that the provision of information on changes in the balance sheet of the public authorities compatible with the National Accounts borrowing definitions should have a high statistical priority

In the event, it was decided to attempt to reconcile the information in the *Finance Accounts* and elsewhere with the National Accounts definition of public authorities' borrowing The results of this exercise are set out in Table A7 The methodology adopted is explained in the notes to the table It should be noted that no information was available on borrowing by the local authorities except by way of security issues in the fifties The subsequent redemption of these securities, if any, was not taken into account Also, the more frequent use of tap issues in recent years meant that a change in methodology was required for 1969 and after The post-1969 approach is inherently more acceptable but the absence of data prevented its use for earlier years Since the financial year for the public authorities did not always coincide with bank return dates or available

information on changes in Departmental Funds, the timing of identified flows may not match exactly and this could have resulted in error Further, large movements in bank balances in recent years may reflect in part items in transit and thus influence the identified borrowing total

The results for most years are plausible and close to the National Accounts borrowing item However in 1969 and 1970 identified borrowing exceeded the National Accounts definition quite substantially and it was not possible to identify the source of error One possibility may be the bank dispute which meant that the banks were closed on 31 March 1970 thus affecting the construction of government bank balances The total identified borrowing in Table A7 since 1949 was £1,178 2 million, whereas the National Accounts borrowing total was £1,101 9 million If 1969 and 1970 are excluded the average error is less than 3 per cent which is well within reasonable bounds given the omission of information on local authorities bank balances and debt redemption

In Table 12 we have summarized the information in Table A7 for the two periods 1953-1960 and 1961-1972 It was decided to omit the years before 1953 from the summary analysis because of the effect of the US counterpart loan It is unlikely that the data in the years 1949-52 represent a normal structure of government borrowing

TABLE 12

Average share of types of debt in total borrowing by public authorities 1953-1960 and 1961-1972

Type of Debt	*As a Percentage of Total Borrowing*	
	1953–1960	1961–1972
Long Term (incl Local Authorities)	47 5	64 9
Small Savings	30 7	21 3
External	3 6	13 5
Bills	9 2	10 6
Other	5 1	6 5
Reduction in Bank Balances	3 8	−16 6
Total	100 0	100 0

Source As for Table A7

It will be seen that substantial shifts in the average composition of government borrowing took place between the periods Long-term borrowing (including local authority borrowing in the 'fifties) increased its share from 47 5 per cent to 64 9 per cent although "long-term" is something of a misnomer because many of the securities issued were short-dated stock In March 1973, 28 per cent of government securities were within three years of maturity Also in 1961-72 bills were frequently converted by the issue of a short-dated stock hence the share of bills in

total borrowing is somewhat understated in the second period It would be desirable to know who was acquiring this long-term debt but unfortunately statistics on holders of government debt are available only from 1969 Between March 1969 and March 1973, government securities outstanding to the private sector increased by £349 6 million but the holdings of the non-financial sector (i e excluding banks, building societies and assurance companies) increased by only £132 2 million On the other hand the holdings of the Associated Banks increased by £119 7 million Thus it seems fairly certain that the rise in the share of long-term debt does not reflect a relatively greater acquisition of this debt by the non-financial public

The share of small savings, which include deposits in the Post Office Savings Bank, prize bonds, savings certificates, etc fell in the second period The bank disputes in 1966 and 1970 helped the growth of this category of deposits and without them the share might have been lower External borrowing increased as a proportion of the total in the more recent period During the earlier period most of the external borrowing was in the form of a reduction in external departmental holdings while in the 1961-72 period it was mainly due to direct government overseas borrowing, mainly in non-sterling securities There was a remarkable turnaround in the share of total borrowing accounted for by a reduction in bank balances In the first period, this reduction made a modest contribution to overall borrowing but in the later period 16 6 per cent of total borrowing was devoted to increasing bank balances As we mentioned earlier the data on bank balances are probably the least reliable but it is fairly clear that there was an upward movement in government bank deposits since 1961 This would be in keeping with a constant transactions demand but if the public authorities have to borrow the funds to increase bank balances an analysis of the borrowing figures alone may give a false impression of the extent of government activity

In the last section we suggested that the domestic assets of the banking system are more likely to grow in line with domestic liabilities in the future – otherwise the proportion of such assets financed by foreign liabilities would reach quite high levels This may mean a slower growth in total borrowing by the public authorities We have seen that "own account borrowing" has increased rapidly in recent years as have capital transfers The distortions involved in the public sector reserving the bulk of investment resources for its own purposes (including transfers to other sectors) may become more serious if the private sector is unable to find external sources of finance In other words, in the future, the banking system is unlikely to be able to meet the needs of both the public and private sector if they continue to grow at present rates, unless substantial external liabilities are incurred By and large this will mean that the private sector will be forced to seek funds in external markets, the share of the Irish banking system in total domestic credit will fall, capital inflows will occur and some private investment may be crowded out These possibilities suggest that in future far more attention will have to

be paid to the relation between government borrowing, capital inflows, the balance of payments and private investment

IV MONETARY POLICY

In this section we deal with the development of monetary policy by the Central Bank Broadly speaking, we can divide monetary policy in the post-war period into three distinct phases pre-1965 when there was no overt policy action by the Central Bank, 1965 to 1972 when the Central Bank regularly issued credit advice to the Associated Banks and latterly to the non-Associated Banks, and 1973 when formal liquidity requirements for the banking system were announced It must be acknowledged that this subdivision is based on published reports of the activities of the Central Bank It may well be that prior to 1965 credit advice was offered privately to the banks by the Central Bank and no doubt the question of bank lending frequently arose at the regular meetings between the banks and the Central Bank Further, it is fairly clear that bank behaviour prior to 1973 was conditioned by the knowledge that liquidity controls were going to be introduced since discussions on the nature of such controls were taking place since 1969

In the pre-1965 period, a reading of the reports of the Central Bank gives little evidence that the Bank viewed as one of its functions the control of credit and money supply within the economy Certainly in the 'fifties, the stated aim of the Bank was to preserve the external value of the Irish pound which apparently involved a frequent inveighing against the growth of government expenditure and borrowing Long before the reports of the Capital Advisory Committee, the Bank's Annual Reports were making the distinction between "productive" and "unproductive" investment although almost all government investment, in its view, fell into the latter category In a sense the policy adopted by the Bank was not a monetary policy but a policy of opposition to fiscal ease This was natural for an institution which, since its inception, held more powers than its board might have wished and which was "content to carry on the functions relating to the note issue much as they had been performed for the previous fifteen years by the Currency Commission" (Moynihan 1969) Many of the board members had sat on the 1934 Banking Commission which tended to agree with Per Jacobsson's view of the Bank as a counter-weight to the fiscal authorities (Jucker-Fleetwood 1972)

Of course, in this period, important institutional changes took place From 1955 the Bank began to rediscount bills and from 1958 Dublin bank clearing was settled by cheques on the Central Bank which meant a growth in bank deposits at the Central Bank But such changes hardly represent an active monetary policy Thus the Central Bank felt itself powerless to intervene in 1955 when there was an excessive expansion in credit and a fall in the banks' external assets except to provide additional liquidity via rediscounting As Gibson (1957) pointed out, it was some-what anomolous for a Central Bank to be warning of the dangers of excessive credit creation and government borrowing without taking any

policy action to present such an occurrence He suggested that the Central Bank should hold all the external reserves of the economy and impose liquidity ratios Since at that time the probability of destabilizing effects through capital inflows from non-bank sources was small, such a policy might well have given the Central Bank substantial control over the expansion of credit and the money supply It need hardly be said that the advice was not taken until over a decade had elapsed

In the early 'sixties the Bank began to expand its statistical coverage of the monetary sector and to issue more weighty comments on the economy on a quarterly basis It is also noticeable that the criticism of government expenditure and borrowing was more muted although still present

In 1965, to quote the exquisitely diplomatic phrase of the then Governor "the Central Bank availed itself of an opportunity provided by a request from the Associated Banks to assume the role of advisor on credit policy" This was after a rapid increase in bank credit The early advice was tendered in the form of a minimum Central Bank ratio to be observed by the banks But since 1966, a quantitative indication of the growth in bank lending was included in the advice In the Annual Report of the Central Bank for 1968-69, there is a lengthy discussion of credit policy examining the relationship between the advice offered and the eventual outcome and explaining to some extent the methodology employed in determining the quantitative advice tendered The conclusion was that for the most part the advice was not carried out in practice However, the Bank argued that monetary policy decisions are essentially based on "judgments of a qualitative order and the numerical expression is not intended to have a strict arithmetical connotation" Thus the advice is merely a guideline open to revision as circumstances change in the course of the year Unfortunately, the report does not attempt to explain the difference between the advice and outcome in terms of changed circumstances

However, one can understand why the Bank might have been reluctant to impose strict adherence to its quantitative guidelines given the manner in which the guideline was constructed Although no explicit model was developed, one can, by reading between the lines, ascertain the model used by the Bank Basically, the Bank held that the income velocity of the narrow money supply was stable and that imports were a fairly constant proportion of income Thus, by predicting exports, non-bank capital inflows, the rise in the Associated Bank deposits and the level of nominal income, the desired level of bank credit is obtained It would be quite difficult to forecast with any degree of certainty the future level of any one of the aggregates let alone all four, nominal income, exports, non-bank capital inflows and Associated Bank deposits Hence the reluctance to impose too strictly the targets emerging from the estimations procedures -

It is clear that the target variable of credit policy was "net credit creation" which was defined as the difference between bank lending and bank deposit accounts It was a measure of the extent to which bank

TABLE A1

Net acquisition of financial assets by sector – 1949 to 1972

	1949	1950	1951	1952	1953	1954	1955	1956	1957	1958	1959	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972
PERSONAL SECTOR																								
A. Savings	22·9	20·6	20·2	36·2	41·0	34·8	29·4	31·8	42·8	18·2	43·1	40·6	57·7	60·4	55·8	81·4	85·5	85·0	93·5	104·2	120·1	147·0	175·8	275·0
B. Depreciation ...	6·9	7·6	8·3	8·9	9·8	10·4	11·0	12·3	12·9	13·6	14·2	14·9	16·3	17·9	19·0	20·5	22·0	23·3	24·6	26·7	29·6	32·6	35·6	38·8
C. Capital Grants ...	1·0	0·9	1·6	2·7	6·5	6·1	5·9	5·5	5·1	4·0	4·6	4·9	4·9	5·9	6·8	8·7	9·0	10·3	13·9	16·3	17·9	16·8	20·1	22·4
Sources	30·8	29·1	30·1	47·8	57·3	51·3	46·3	49·6	60·8	35·8	61·9	60·4	78·9	84·2	81·6	110·6	116·5	118·6	132·0	147·2	167·6	196·4	231·5	336·2
A. Fixed Capital Formation	9·7	14·1	18·6	21·9	23·2	26·8	28·4	27·0	25·3	24·2	26·5	28·4	32·3	36·5	41·0	50·7	56·6	55·4	61·4	69·2	77·4	88·5	104·7	133·3
B. Stock Change	6·6	11·2	16·2	−0·1	4·8	−4·9	9·3	−0·7	0·3	−2·2	16·9	6·8	3·6	9·2	8·6	17·5	24·6	10·3	−2·6	13·5	19·7	23·4	14·7	49·0
C. Capital Taxes	3·7	2·5	2·4	2·6	2·8	3·0	3·3	2·3	2·7	2·9	3·0	3·2	2·9	3·5	3·5	4·4	4·7	4·6	6·0	7·6	7·7	6·3	9·0	13·2
Uses	20·0	27·8	37·2	24·4	30·8	24·9	41·3	28·6	28·3	24·9	46·4	38·4	38·6	49·0	52·7	72·6	85·9	70·3	64·6	91·1	104·8	118·2	128·4	195·5
Net Acquisition of Financial Assets ...	10·8	1·3	−7·1	23·4	26·5	26·4	5·3	21·0	32·5	10·9	15·5	22·0	40·1	35·0	28·5	38·0	30·6	48·3	67·4	56·9	62·8	78·2	103·1	140·7
COMPANY SECTOR																								
A. Savings	12·7	14·7	14·6	12·0	13·7	15·3	14·4	13·6	9·9	11·6	12·4	22·5	22·6	22·5	25·4	24·7	29·2	22·6	42·3	50·8	55·3	45·8	57·1	69·0
B. Depreciation ...	5·5	6·4	6·9	7·3	8·6	9·7	10·3	13·1	14·5	15·4	18·0	19·7	22·9	28·0	33·3	37·4	42·3	45·7	52·2	62·8	78·0	87·2	95·6	108·2
C. Capital Grants ...	2·2	0·1	0·2	0·2	2·4	0·2	0·2	2·4	2·7	4·0	1·1	0·9	2·1	2·5	4·3	4·7	5·2	6·3	8·3	10·6	17·6	21·7	30·4	23·7
Sources	20·4	21·2	21·7	19·5	24·7	25·2	24·9	29·1	27·1	31·0	31·5	43·1	47·6	53·0	63·0	66·8	76·7	74·6	102·8	124·2	150·9	154·7	183·1	200·9
A. Fixed Capital Formation	26·0	28·8	34·6	34·8	35·0	36·8	40·4	41·4	37·4	38·7	39·5	44·6	55·9	68·3	77·9	86·1	99·7	102·2	110·8	134·8	188·9	200·3	246·3	253·5
B. Stock Changes ...	−0·2	6·8	13·2	−2·8	−1·0	−1·4	3·7	−0·3	0·4	−6·2	7·2	6·8	9·3	7·5	7·9	13·3	8·0	7·5	7·1	19·5	31·7	25·0	23·4	33·0
Uses	25·8	35·6	47·8	32·0	34·0	35·4	44·1	41·1	37·8	32·5	46·7	51·4	65·2	75·8	85·8	99·4	107·7	109·7	117·9	154·3	220·6	225·3	269·7	286·5
Net Acquisition of Financial Assets ...	−5·4	−14·4	−26·1	−12·5	−9·3	−10·2	−19·2	−12·0	−10·7	−1·5	−15·2	−8·3	−17·6	−22·8	−22·8	−32·6	−11·0	−35·1	−15·1	−30·1	−69·7	−70·6	−86·6	−85·6
GOVERNMENT SECTOR																								
A. Savings	0·7	0·5	−7·5	2·2	1·7	0·7	0·4	1·1	5·5	7·0	6·2	0·7	−1·1	1·1	3·5	3·2	3·5	15·9	17·4	19·1	18·9	15·5	16·9	1·0
B. Depreciation ...	2·2	2·5	2·8	3·1	3·4	3·6	3·9	4·3	4·5	4·8	5·1	5·5	6·0	6·3	6·8	7·5	8·4	9·2	10·4	11·5	13·8	15·5	18·1	20·0
C. Capital Taxes ...	3·7	2·5	2·4	2·6	2·8	3·0	3·3	2·3	2·7	2·9	3·0	3·2	2·9	3·5	3·5	4·4	4·7	4·6	6·0	7·6	7·7	6·3	9·0	13·2
Sources	6·6	5·5	−2·3	7·9	7·9	7·3	7·6	7·7	12·7	14·7	14·3	9·4	7·8	8·7	13·8	15·1	16·6	29·7	33·8	38·2	40·4	37·3	44·0	34·2
A. Fixed Capital Formation	18·5	21·6	24·3	24·8	23·2	22·7	23·1	23·2	17·5	17·1	17·6	18·1	22·1	25·9	30·5	38·5	43·8	42·4	48·7	54·4	67·1	71·7	81·0	99·2
B. Capital Transfers ...	3·2	1·0	1·8	2·9	8·9	6·3	6·1	7·9	7·8	8·0	5·7	5·8	7·0	8·4	11·1	13·4	14·2	16·6	22·2	26·9	35·5	38·5	50·5	46·1
Uses	21·7	22·6	26·1	27·7	32·1	29·0	29·2	31·1	25·3	25·1	23·3	23·9	29·1	34·3	41·6	51·9	58·0	59·0	70·9	81·3	102·6	110·2	131·5	145·3
Net Acquisition of Financial Assets ...	−15·1	−17·1	−28·4	−19·8	−24·2	−21·7	−21·6	−23·4	−12·6	−10·4	−9·0	−14·5	−21·3	−25·6	−27·8	−36·8	−41·4	−29·3	−37·1	−43·1	−62·2	−72·9	−87·5	−111·1
Net Acquisition of Financial Assets by The Overseas Sector	9·7	30·2	61·6	8·9	7·0	5·5	35·5	14·4	−9·2	1·0	8·7	0·8	−1·2	13·4	22·1	31·4	41·8	16·1	−15·2	16·3	69·1	65·3	71·0	56·0

Source: See Notes to Table A1.

lending augments the narrow money supply which alone was supposed to affect aggregate expenditure There is no doubt that this emphasis on the narrow money supply owed much to the work of Oslizlok (1963) who excluded deposits from any definition of money The case for excluding deposits in the Associated Banks from the definition of the money supply was made more recently by the present Governor when it was argued that a "large proportion of deposits represents genuine undisturbed savings so that a narrow definition of the money supply is more appropriate" (Whitaker, 1969) However, although a large part of these deposits remain undisturbed, it does not follow that movements from year to year are influenced by considerations of saving alone It is quite likely that with rising interest rates and inflation, which increase the cost of holding the narrow money stock, that transactions balances may be transferred in part from current to deposit accounts But even if that were not the case, it seems excessively monetarist to look only at transactions motives for holding money balances

The third phase of Central Bank policy was the introduction, last year, of liquidity ratios These had been promised for some time in order to improve Central Bank control and promote efficiency It would appear that the Bank was heavily influenced by "Competition and Credit Control" published in the UK which recommended an end to credit ceilings and their replacement by fairer liquidity controls I have discussed elsewhere the 1973 experience with liquidity control* and will merely summarize my views here In 1973 bank liquidity was greatly increased by a rundown of government bank balances and substantial capital inflows, some of which were via borrowing by State companies Thus the restrictive measures the Central Bank had hoped to adopt in February of 1973 were offset and the Associated Banks were able to reduce their borrowing on rediscounts as well as expand credit at a rapid rate This experience shows the basic problem of liquidity ratios as a form of monetary control, how is the liquid base to be controlled? It also points to the need for closer co-operation between the monetary and fiscal authorities if monetary policy is ever to hope to succeed

Of course in recent years Central Bank policy, as distinct from monetary policy, has developed quite considerably In less than five years, the external assets of the banking system have been transferred to the Central Bank, a new Central Bank Bill was passed giving greater powers to the Bank, the government account was transferred to the Bank and the Bank has been active in creating a short-term market for funds in Dublin following, in spirit if not in the letter, the recommendations of the Money Market Committee (1969) Thus, if the achievements in the area of monetary policy and control seem slight, they must be put beside the considerable growth in other, appropriate, Central Bank activities

However we are here mainly concerned with monetary policy Yet the problem is how to define monetary policy in a meaningful way The 1968-69 Central Bank Report defined credit policy as that which would maintain monetary stability which in turn was defined, rather opaquely,

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as "being maintained when decisions in the sphere of incomes, of government revenue and outlay, and of credit result in aggregate expenditures being met from available resources at reasonably stable prices " A terser, more theoretical, concept is that adopted by Tobin where monetary policy is designed to alter the terms on which real capital is held and acquired

In this latter sense, the question of whether monetary policy is practical in Ireland has not yet been resolved In the first place, the open nature of the Irish economy reduces the extent to which the Central Bank can control monetary aggregates Second, the open nature of the economy may reduce the effectiveness of whatever control the Central Bank possesses With regard to control, it is clear that movements on external account or through changes in the government's Central Bank deposits can affect the monetary base and hence the money supply Only if the liquid base is controlled or if the Bank makes frequent adjustments to the reserve ratio will banks' liquidity be controlled One possibility that could improve control is the issue of Reserve Assets, the volume of which is determined by the Central Bank each quarter, which can be traded between banks No movements in other liquid assets could influence the volume of reserve assets since they are not supplied on demand but rationed by the Central Bank Whether such a rigid control system is desirable, given the known problems of selecting the right monetary target, is debateable But it may be an improvement on the present situation where it is suggested that the target is known but no way of getting there exists

But even if the Central Bank could control domestic monetary aggregates, would this have any effect on the real sector? In an open economy, domestic borrowers will seek external finance if domestic finance becomes too expensive, due to rising interest rates, or is rationed by the banking system If this borrowing from external sources offsets the effects of rising interest rates or credit rationing, then monetary policy cannot hope to achieve much Davis (1971) has suggested in the US context that credit rationing is likely to discriminate between borrowers, with large customers who have alternate sources of funds being fully supplied while smaller customers are squeezed out It is likely that similar discrimination takes place in Ireland so that the firms or individuals rationed out of the market would not have ready access to the desired level of funds in the UK market Hence expenditures may be effected As Tobin and Brainard (1963) have shown, as long as monetary policy has some effect it can be used to achieve a desired target But the uncertainty question is considerable in Ireland where the relationship between credit policy and credit rationing is unknown as is the relationship between credit rationing and aggregate demand

Thus this paper ends, as it began, regretting that there has been so little research into monetary economics in Ireland I would hope that this paper has raised some issues which others would want to research and then perhaps dispute More controversial statements by the author might have been appropriate if the advancement of monetary economics by confrontation, so beloved by Yale and Chicago, was to be the goal

TABLE A2

Personal saving, net acquisition of financial assets by the personal sector and contractual saving 1949-1972

Year	£ million			As a percentage of personal disposable income		
	Personal saving	*Net acquisition of financial assets*	*Contractual saving*	*Personal saving*	*Net acquisition of financial assets*	*Contractual saving*
1949	22 9	10 8		7 1	3 4	
1950	20 6	1 3		6 2	0 4	
1951	20 2	−7 1		5 6	−2 0	
1952	36 2	23 4		9 3	6 0	
1953	41 0	26 5		9 7	6 3	
1954	34 8	26 4		8 2	6 2	
1955	29 4	5 3		6 5	1 2	
1956	31 8	21 0	18 5	7 0	4 6	4 1
1957	42 8	32 5	19 4	9 0	6 9	4 1
1958	18 2	10 9	20 3	3 8	2 3	4 3
1959	43 1	15 5	22 2	8 5	3 1	4 4
1960	40 6	22 0	26 6	7 6	4 1	5 0
1961	57 7	40 1	34 2	10 0	6 9	5 9
1962	60 4	35 0	37 1	9 7	5 6	6 0
1963	55 8	28 5	38 6	8 5	4 3	5 9
1964	81 4	38 0	44 8	10 9	5 1	6 0
1965	85 5	30 6	48 7	10 8	3 9	6 2
1966	85 0	48 3	53 4	10 2	5 8	6 4
1967	93 5	67 4	58 9	10 5	7 6	6 6
1968	104 2	56 9	64 3	10 3	5 6	6 4
1969	120 1	62 8	76 1	10 5	5 5	6 6
1970	147 0	78 2		11 4	6 1	
1971	175 8	103 1		12 2	7 2	
1972	275 0	140 7		16 0	8 2	

Note Contractual Saving is defined as the sum of mortgage repayments (including SDA loans), hire purchase repayments, life assurance premiums and repayments of land annuities (excluding interest) Data on hire purchase only available since 1956 The 1970 bank dispute makes it impossible to obtain data for 1970 and 1971 while assurance premium data for 1972 is not yet available

TABLE A3

Monetary base, money supply and the base multiplier 1949-1972

Year	£ Million		Multiplier	£ Million	
	Base	M_2		Base Effect	Multiplier Effect
1949	197 4	299 2	1 516		
1950	187 1	309 9	1 656	−15 6	26 3
1951	174 8	315 1	1 803	−10 4	25 6
1952	190 6	325 4	1 707	+28 6	−18 3
1953	202 4	347 8	1 718	+20 1	2 3
1954	200 8	366 0	1 823	−2 8	21 0
1955	166 3	358 0	2 153	−62 8	54 8
1956	168 0	359 7	2 141	3 7	−2 0
1957	174 4	376 2	2 157	13 7	2 8
1958	191 2	390 7	2 043	36 2	−21 7
1959	187 9	398 0	2 118	−6 8	14 1
1960	192 7	419 9	2 179	10 1	11 8
1961	206 8	449 7	2 175	30 7	−0 9
1962	218 8	481 7	2 202	26 2	5 8
1963	217 3	507 1	2 334	−3 2	28 6
1964	232 6	555 1	2 387	35 8	12 2
1965	229 8	582 5	2 535	−6 6	34 0
1966	252 2	642 5	2 548	+56 8	3 2
1967	286 3	712 0	2 487	87 0	−17 5
1968	283 4	811 7	2 864	−7 2	106 9
1969	278 7	879 1	3 154	−13 5	80 9
1970	n a				
1971	341 0	1,017 0	2 982	+196 4	−58 0
1972	291 0	1,144 8	3 934	−149 2	277 0

Notes The *Base* is defined as currency outstanding plus the deposits of the Associated Banks in the Central Bank plus the net external assets of the Associated Banks M_2=Currency plus private current and deposit accounts with the Associated Banks The *Base Effect* is defined as the change in the money supply due to the change in the base with an unchanged multiplier The *Multiplier Effect* is defined as the difference between the actual change in the money supply and the base effect

Source Central Bank *Reports*

TABLE A4

Ratio of certain assets of the associated Banks to current and deposit account liabilities 1949-1972

Year	(1) Cash and Call Money	(2) (1)+Govt Bills	(3) (2)+UK Govt Inv	(4) Net External Assets
1949	0 21	0 21	0 67	0 39
1950	0 19	0 19	0 62	0 36
1951	0 19	0 19	0 56	0 30
1952	0 23	0 25	0 59	0 32
1953	0 20	0 22	0 59	0 32
1954	0 20	0 22	0 58	0 30
1955	0 18	0 22	0 51	0 22
1956	0 22	0 27	0 52	0 21
1957	0 21	0 27	0 51	0 22
1958	0 21	0 24	0 51	0 21
1959	0 21	0 23	0 48	0 23
1960	0 21	0 24	0 45	0 21
1961	0 20	0 25	0 46	0 21
1962	0 19	0 23	0 45	0 21
1963	0 18	0 21	0 42	0 17
1964	0 19	0 23	0 40	0 15
1965	0 20	0 26	0 43	0 13
1966	0 18	0 25	0 42	0 13
1967	0 20	0 26	0 44	0 15
1968	0 20	0 25	0 41	0 14
1969	0 21	0 28	0 39	0 02*
1970	n a			
1971	(0 18)			
1972	(0 26)			

*Reflects transfer of external assets to the Central Bank under the Basle Agreement

Notes Col (1) is the ratio of cash (including balances with other banks) and short notice money (both within the State and elsewhere) to total current and deposit account liabilities (again within the State and elsewhere)

Col (2) includes UK and Irish Government Bills, while Col (3) includes UK Government securities All data relate to the average of the last quarter in each year

Since 1971 the definition of current and deposit accounts has changed due to the elimination of offset The figures in parentheses are based on an approximation of the magnitude of such offsets for 1971 and 1972 to give comparability

Source Central Bank *Reports*

TABLE A5

Mortgage advances etc of the building societies, 1949-1972

Year	*(1) Mortgage advances £ million*	*(2) (1) as percentage of private investment in housing*	*(3) Total assets £ million*	*(4) Investments and other assets as percentage of total assets*
1949	1 7	42 5	8 6	9 9
1950	1 8	31 0	9 5	9 5
1951	1 9	22 1	10 4	9 6
1952	1 7	15 3	11 2	10 7
1953	1 5	15 5	12 1	14 0
1954	2 1	20 8	13 4	14 9
1955	2 2	19 0	14 5	15 2
1956	1 9	14 5	15 0	14 7
1957	1 5	14 9	15 4	15 6
1958	1 5	17 6	15 9	16 4
1959	2 3	22 3	16 9	17 2
1960	3 1	24 8	17 8	13 5
1961	2 9	21 5	18 7	12 3
1962	4 3	26 5	21 6	13 9
1963	6 5	32 8	26 0	12 7
1964	8 1	31 4	32 3	13 3
1965	6 5	20 4	36 4	13 2
1966	7 5	26 4	42 0	13 8
1967	9 5	26 9	49 2	14 4
1968	10 8	27 9	57 2	15 2
1969	11 1	26 2	66 6	18 3
1970	16 2	30 2	87 1	23 5
1971	29 8	45 6	111 3	21 0
1972	n a	n a	152 2	21 3

Sources *Report of the Registrar of Friendly Societies* (various issues), *National Income and Expenditure* Central Bank *Reports*

TABLE A6

Net and gross borrowing by public authorities 1949-1972

	1949	1950	1951	1952	1953	1954	1955	1956	1957	1958	1959	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972
A. Own Account Borrowing	11·9	16·1	26·6	16·9	15·3	15·4	15·5	15·5	4·8	2·4	3·3	8·7	14·3	17·2	16·7	23·4	27·2	12·7	14·2	16·2	26·7	34·4	37·0	65·0
Plus																								
B. Capital Transfers ...	3·2	1·0	1·8	2·9	8·9	6·3	6·1	7·9	7·8	8·0	5·7	5·8	7·0	8·4	11·1	13·4	14·2	16·6	22·2	26·9	35·5	38·5	50·5	46·1
Equals																								
1. *Net Acquisition of Financial Assets* ...	15·1	17·1	28·4	19·8	24·2	21·7	21·6	23·4	12·6	10·4	9·0	14·5	21·3	25·6	27·8	36·8	41·4	29·3	37·1	43·1	62·2	72·9	87·5	111·1
Plus																								
C. Net Lending ...	4·9	5·7	7·0	12·5	9·3	8·9	4·2	10·4	7·7	3·9	9·8	15·6	13·9	14·4	13·8	17·3	18·6	9·4	10·2	25·3	30·0	8·6	10·5	16·2
Equals																								
2. *Net Borrowing* ...	20·0	22·8	35·4	35·4	33·5	30·6	25·8	33·8	20·3	14·3	18·8	30·1	35·2	40·0	41·6	54·1	60·0	38·7	47·3	68·4	92·2	81·5	98·0	127·3
Plus																								
D. Debt Redemption ...	1·5	2·2	6·2	2·2	2·9	6·8	5·9	5·8	5·5	5·7	7·1	8·4	5·4	6·2	6·7	6·0	7·4	9·2	15·9	17·9	15·7	28·0	17·6	26·7
Equals ...																								
3. *Gross Borrowing* ...	21·5	25·0	41·6	34·5	36·4	37·4	31·7	39·6	25·8	20·0	25·9	38·5	40·6	46·2	48·3	60·1	67·4	47·9	63·2	86·3	107·9	109·5	115·6	154·0

Notes: Own account borrowing is required borrowing before any transactions with other sectors. Combined with capital transfers it equals the net acquisition of financial assets, shown here as a positive item (i.e. net acquisition of financial liabilities). Net lending is defined as loans and share capital plus overseas capital payments (under Bretton Woods etc.) less loan repayments and other capital receipts. Adding this to net acquisition of financial assets gives the net borrowing requirement. When repayment or redemption past borrowing is taken into account this gives the gross borrowing requirement.

Source: *National Income and Expenditure* (various issues).

TABLE A7

Distribution of public authority borrowing by category 1949-1972

Type of Debt	*1949*	*1950*	*1951*	*1952*	*1953*	*1954*	*1955*	*1956*	*1957*	*1958*	*1959*	*1960*	*1961*	*1962*	*1963*	*1964*	*1965*	*1966*	*1967*	*1968*	*1969*	*1970*	*1971*	*1972*
1. Long Term	4·8	12·3	−7·3	19·0	19·8	14·0	8·9	7·4	6·5	9·1	6·7	8·5	14·5	31·5	17·3	14·7	37·8	40·6	11·6	56·0	91·3	31·9	56·6	99·8
2. Small Savings ...	6·7	5·1	6·8	5·8	7·1	7·1	5·7	4·8	11·9	6·7	10·8	9·7	10·3	11·3	11·7	14·1	7·7	8·3	12·9	6·5	13·1	28·5	32·8	21·4
3. External Borrowing ...	8·9	6·8	32·1	10·0	−1·3	−0·9	5·3	14·3	3·6	−7·3	−5·3	−0·8	3·9	−1·0	3·9	13·8	5·9	10·9	−1·7	5·8	14·7	20·4	17·7	18·8
4. Bills	—	—	—	2·5	—	2·0	—	8·0	4·5	−4·5	3·2	6·0	8·7	−5·3	9·4	17·0	4·7	−8·9	28·0	0·9	−1·6	22·5	12·7	0·6
5. Other	—	—	—	—	1·0	−1·0	—	0·2	2·8	0·5	3·5	3·6	0·6	3·2	4·1	5·4	7·8	—	−8·3	14·1	15·0	12·0	−1·6	0·7
6. Local Authority Debt	—	4·5	5·9	—	5·6	4·9	7·4	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
7. Reduction in Bank Balances	—	—	8·0	−4·5	−1·1	2·6	−3·5	0·9	−0·8	7·5	−1·1	3·3	0·7	−0·9	−9·4	−6·3	−1·1	−18·5	−8·0	−6·8	−18·2	−10·9	−39·3	−15·3
Total	20·4	28·7	45·5	32·8	31·1	28·7	23·8	35·6	28·5	12·0	17·8	30·3	38·7	38·8	37·0	58·7	62·8	32·4	34·5	76·5	114·3	104·4	118·9	126·0
Borrowing (less Debt Redemption) ...	20·0	22·8	35·5	32·3	33·5	30·6	25·8	33·8	20·3	14·3	18·8	30·1	35·2	40·0	41·6	54·1	60·0	38·7	47·3	68·4	92·2	81·5	98·0	127·3

Sources: See Notes to Table A7.

Notes to Table A1

The Irish National Accounts do not classify depreciation or investment in fixed capital and stocks by sector Net saving is however classified Thus in order to derive the net acquisition of financial assets by sector, it was necessary to distribute the aggregates, depreciation, fixed capital formation and stock changes between the three sectors The following approach was adopted

(a) *Depreciation* From national accounts data the depreciation attributable to the public sector can be derived Since 1956 data on agricultural depreciation has been available and was estimated on the basis of subsequent trends for pre 1956 years Both these totals were subtracted from total depreciation leaving a balance to be divided between the company and personal sectors Geary and Pratschke (1968) published a series for company depreciation from 1958 65 based on information in CSO files This series was regressed on total depreciation less public authorities and agricultural depreciation This yielded the following equation (t statistic in parentheses)

$$\log \text{Company Depr} = -0\ 871 + 1\ 1565 \log \text{Total Depreciation (adjusted)} \quad (46\ 03)$$

with an adjusted R^2 of 0 997 and an f value of 2,118 5 This equation was applied to the adjusted total depreciation data for the entire period 1949 1972 and the level of company depreciation estimated The residual was added to agricultural depreciation to give personal sector depreciation

(b) *Investment in Fixed Capital* Fixed Capital formation by the public authorities can be obtained directly from the national accounts From the UN classification of fixed capital formation it is possible to isolate investment in dwellings and in agriculture From the total of these two items was subtracted public authorities fixed capital formation in dwellings and agriculture, yielding a series for private investment in these areas It was decided to allocate all private housing investment to the personal sector and the agricultural sector is assumed to be wholly within the personal sector also When investment by public authorities and investment in housing and agriculture by the personal sector is subtracted from total fixed capital formation, this yields a series for private investment to be distributed between the personal and company sector Again, use was made of data in Geary and Pratschke on fixed capital formation by companies from 1958 to 1965 A regression yielded the following equation

$$\text{Log Company Investment} = -0\ 187 + 1\ 032 \log \text{Private Invesemtnt (adjusted)} \quad (80\ 45)$$

with an adjusted R^2 of 0 999 and an f value of 6,471 8 Applying this equation to the private investment series, as adjusted, yields the estimated company investment The remainder when added to personal investment in housing and agriculture gives total personal investment

(c) *Stock Changes* In the national accounts net saving is given prior to any adjustment for the increase in value of existing stocks Therefore it was necessary to adjust the sectoral saving figures for the sectoral appreciation in the value of stocks However, rather than doing this it was decided to combine the changes in value of stocks with the value of changes in the volume of stocks and distribute this between the sectors Thus, for example, in 1972, the value of physical changes in stocks was, from the national accounts, estimated at £41 million while the adjustment for stock appreciation was £31 million Thus it could be argued that funds applied to stock changes equalled £72 million and this approach would view stock appreciation as an application of available resources rather than a reduction in resources From the net point of view, it makes no difference whether stock appreciation is subtracted from saving and only the value of physical changes in stocks is considered as investment or whether both saving and investment include the stock appreciation figure

The value of changes in the number of livestock on farms was assigned to the personal sector and the balance distributed between the personal and company sectors In the absence of any information on the disposition of stock changes (value and volume) the

distribution was wholly arbitrary It was decided to apply 40 per cent of the change in 1949 to the company sector rising, by equal steps to 75 per cent in 1972 In this way it is hoped that the increasing importance of the company sector, particularly in retailing and wholesaleing, could be taken into account

(d) *Capital Transfers* Capital grants to households from the public authorities, as detailed in the national accounts, were assigned to the personal sector while capital grants to enterprises, excluding grants to agriculture, which were assigned to the personal sector, were attributed to the company sector

Sources *National Income and Expenditure 1972* (and earlier issues)
MSS on public authorities revenue and expenditure 1949-1958, kindly supplied by Dr K A Kennedy
Geary and Pratschke, *Op Cit*

Notes to Table A7

The distribution of public authority borrowing was constructed as follows

(a) *Long Term Debt* From the Finance Accounts the net change in outstanding liabilities on national debt was estimated for each year Purchases of debt by departmental funds and conversion of ways and means advances were excluded Since 1969 the Central Bank has published estimated holdings of long term government securities at the end of each financial year Thus for 1969 and subsequent years the long-term borrowing of the public authorities was estimated from this data (again excluding changes in departmental holdings) This change in methodology was essential since in these years the the conversion of ways and means advances into long term debt was substantial This debt was tapped out to the financial market over the years but such transactions are not included in the Finance Accounts No account was taken of foreign holders of this debt

(b) *Small Savings* This is the sum of the changes in the liabilities of the Post Office Savings Bank, Saving Certificates, Prize Bonds and Tax reserve certificates

(c) *External Borrowing* This is comprised of two parts (i) changes in net liabilities to foreigners (excluding IMF transactions) and (ii) changes in the external holdings of Departmental Funds Borrowings from ECA funds were allocated to the year in which they were utilized rather than when made available by the US authorities Thus movements between the Central Bank and the public sector on this account were ignored Changes in departmental funds were available only on a December to December basis for earlier years Thus they do not correspond exactly with the end March to end-March borrowing requirement of the National Accounts

(d) *Bills* As far as possible holdings by departmental funds were excluded As in the case of long term debt no account was taken of foreign holders of government bills

(e) *Other* This includes temporary borrowing as identified in the finance accounts and transactions (including borrowing) with the Central Bank under the Bretton Woods Agreement

(f) *Local Authority Debt* This represents only the long-term debt floated by Cork and Dublin local authorities The data is from the Central Bank's annual table of new capital issues

(g) *Reduction in Bank Balances* This was estimated from the returns of the Associated Banks and the Annual Reports of the Central Bank Prior to 1964 the bank return date was mid-March so that changes in bank balances could be substantially upset by large net payments into and out of the Exchequer Account in the last two weeks of March This should be borne in mind when interpreting the figures Central Bank balances are at end of March No information was available for 1949 and 1950 so changes were assumed equal to zero, as noted earlier transactions with the Central Bank in respect of the ECA funds from 1949-1952 are ignored as they are included in external borrowing

Since 1969 there has been a transfer of the Government's account to the Central Bank It would appear that this has caused a sharp rise in "items in transit" at the

bank return date of end March Thus the end year balances may be overstated although the year to year changes should not be so severely affected

The Bank dispute made it impossible to obtain information on Government accounts with the Associated Banks for March 1970 and March 1971 The following procedure was adopted The February 1969 to February 1970 change was used for 1969, the February 1970 to April 1971 change was used for 1970 and the April 1971 to April 1972 change was used for 1971 Government accounts with the Central Bank were available for March dates and changes in these calculated as for previous years

Sources Central Bank *Reports* (various issues)
Finance Accounts (various issues)

REFERENCES

Alexander, S , The Effects of a Devaluation on a Trade Balance , *International Monetary Fund Staff Papers* Vol 2, No 2 (1952)

Anderson, L C and Jordan, J L , Monetary and Fiscal Actions A Test of their Relative Importance in Economic Stabilization , Federal Reserve Bank of St Louis *Review* November 1968

Bain, A D , Flow of Funds Analysis A Survey , *Economic Journal* December 1973

Brainord, W C and Tobin, J , Financial Intermediaries and the Effectiveness of Monetary Controls , *American Economic Review* Papers and Proceedings, May 1963

Brunner, K and Meltzer, A H , Some Further Investigations of Demand and Supply Functions for Money *Journal of Finance* May 1964

Burger, A E , Money Stock Control , Federal Reserve Bank of St Louis *Review* October 1972

Caves, R E and Reuber, G L , *Capital Transfers and Economic Policy Canada 1951 1962* Harvard, 1971

De Leeuw, F and Kalchbrenner, J , Monetary and Fiscal Actions A Test of their Relative Importance in Economic Stabilization Comment , Federal Reserve Bank of St Louis *Review* April 1969

Davis, R An Analysis of Quantative Credit Controls and Related Devices' , *Brookings Papers on Economic Activity* No 1, 1971

Gibson, N , An Amended Irish Monetary System , *Journal of the Statistical and Social Inquiry Society of Ireland* Vol XIX 1955 57

Geary, R C and Pratschke, J , Some Aspects of Price Inflation in Ireland , *Economic and Social Research Institute* Paper No 40, Dublin

Hoare, T , Nature and Functions of an Irish Money Market , *Journal of the Statistical and Social Inquiry Society* Vol XXII, Part II 1960-70

Jucker Fleetwood, E , The Irish Banking Commission 1934 1938 , Central Bank of Ireland *Quarterly Bulletin* Winter 1972

Lewis, W (ed), *Budget Concepts for Economic Analysis* The Brookings Institution Studies of Government Finance (1968)

McAleese, D , Capital Inflows and Direct Foreign Investment in Ireland 1952 70 ', *Journal of the Statistical and Social Inquiry Society of Ireland* Vol XXII, Part IV 1971 72

Meenan, J , *The Irish Economy since 1922* Liverpool, 1970

Moynihan, M , *The Central Bank of Ireland* John Busteed Memorial Lecture (1968)

Mundell, R , Flexible Exchange Rates and Employment Policy , *Canadian Journal of Economics and Political Science* November 1961

National Institute of Economic and Social Research, *National Institute Economic Review* May 1973

OECD *Monetary Policy in Italy* Paris 1973

O Herlihy, C St J and Spencer, J E , Building Societies Behaviour 1955-1970 , *National Institute Economic Review* August 1972

Oslizlok, J , "Survey of Sources of Monetary Supply in Ireland", *Journal of the Statistical and Social Inquiry Society of Ireland* Vol XXI, Part I, 1962 63
Ryan, W J L , Fiscal Policy and Demand Management in Ireland 1960 1970 in Tait, A A and Bristow, J (eds), *Ireland Some Problems and a Developing Economy* Dublin 1972
Wallich, H , Uses of Financial Accounts in Monetary Analysis' , *Review of Income and Wealth* Series 15, December 1969
Whitaker, T K , Monetary Policy ' in Central Bank of Ireland *Quarterly Bulletin* Winter 1969
Thom, D R , Money, Interest and Economic Activity in Ireland , *Economic and Social Review* January 1974

DISCUSSION

Professor J E Spencer Madam President, ladies and gentlemen, it is my pleasant task to propose a vote of thanks to Mr Dowling for his paper on the Development of the Financial Sector in Ireland I should like to begin by complimenting the author on his extremely useful and painstaking survey on this topic My comments will be confined to the earlier part of the paper, leaving it to subsequent speakers, more qualified than myself, to discuss the author's interpretation of recent Irish monetary policy I shall also confine myself to some suggestions and points of criticism since the good qualities of the paper are obvious The paper begins by attempting to construct, from national accounts data, the net acquisition of financial assets by sector for the period 1949-1972 Let us denote these by F_i, $i=1,$ 4, there being four sectors, personal, company, foreign and public The definitions are such that $\Sigma F_i=0$ One would have liked an independent check on the accuracy of the constructed series, since, as the author points out, there is a large difference between the two methods of calculation of personal saving used in the UK – indeed this difference has often been larger than the lesser of the two UK estimates

It is doubtful if much insight into the sectoral effects of a financial deficit by the public sector can be gained by the author's regressions of F_1, F_2, F_3 in turn on public sector acquisition, F_4 Admittedly, this is debatable, but the relations do appear over-simplified and take no account of lags, for example It is obvious, by the way, from the algebra of simple regression that the sum of the slope coefficients must be —1

For $b_1=\frac{\Sigma f_1 f_4}{\Sigma f_4^2}$ $b_2=\frac{\Sigma f_2 f_4}{\Sigma f_4^2}$ $b_3=\frac{\Sigma f_3 f_4}{\Sigma f_4^2}$

where the lower case letters denote deviations from means

Hence $\Sigma b_i=\frac{\Sigma f_4 (f_1+f_2+f_3)}{\Sigma f_4^2}=\frac{-\Sigma f_4^2}{\Sigma f_4^2}$

from the identity $F_1+F_2+F_3+F_4=0$, so that $\Sigma b_i=-1$ Similarly, the sum of the estimated constant terms must be zero

Incidentally in Table 2, if the author wishes to hypothesize structural breaks at 1960, a simple Chow or dummy variable test could have been employed

It is a pity that information on the gross flows is not available Rather than discussing rather arbitrary relations between net flows, we really need to know and understand the gross flows We could then try to translate autonomous fiscal deficits and monetary actions into portfolio, interest rate and income charges through the economy

In discussing the growth of liquid assets and other financial institutions, it would have been interesting if the growth rates had been compared with those in other countries Some similarities might have been found which might, in turn, have suggested insights into the Irish monetary system For example, Table 5 shows that building societies are one of the fast growing institutions This experience is repeated elsewhere Dividing assets of building societies in 1971 by the 1954 assets, we find a figure of 8 3 for the Republic, 7 0 for the UK and 6 5 for the US All these figures are relatively large in the countries concerned, and are surprisingly similar

It might be worth pointing out a mistake which the author makes in common with other monetary economists When considering whether the demand for money is sensitive to the rate of interest, it is not, in general, necessary to form a "full econometric model of the monetary sector" It is sufficient to decide which variables would be endogenous and which predetermined in a full model and then estimate the demand for money equation alone, using the Geary-Reiersol instrumental variables method of estimation Also, in common with other monetary economists, the author uses the term "reduced form" in a misleading way The reduced form, as correctly defined, is found by solving for the endogenous variables in a model as functions of the set of predetermined variables involved in the model It is not an equation expressing an endogenous variable as a function of a more or less arbitrary set of predetermined variables

Referring to Table 9, it is a tautology to point out that c 1 increase in ratio c is equivalent to a statement that the rate of increase of mortgage advances exceeds that of repayments It is not very helpful to state that without deposit growth, building societies could only finance a much reduced level of advances, even while reducing liquidity The important questions relate to why building societies grow fast, to what extent are they influenced by other interest rates, to what extent are they willing to accept fluctuations in their liquidity ratios, to what extent can they survive squeezes by increasing both their lending and borrowing rates, etc

Finally, I should say that these comments and criticisms do not do justice to a thorough piece of work which will be of great value and stimulus to other workers in the field It, therefore, gives me great pleasure to end by again thanking the author for an excellent paper

Dr P. draig McGowan I would also like to thank Mr Dowling for his wide ranging survey of the main developments in the financial sector of the Irish economy over the past twenty-five years Such surveys are useful

as they help to identify secular trends which may not be obvious when we confine ourselves to much shorter periods of a few years or so

In the first section of his paper he has exposed the difficulties in reconciling savings as measured in the national accounts and savings as portrayed in financial statistics, particularly the growth in liquid claims on the financial sector I fully support Mr Dowling in his plea for further development of national statistics to highlight gross flows between sectors, for a statement of the sources and uses of funds by the public sector and for better statistics on the role of assurance companies in collecting and disbursing funds It is fitting that these suggestions should be made in a paper read to a meeting of this society and consideration should be given to further improvements to our financial statistics and to compiling data on capital or wealth for the various sectors of the economy

Turning to the other three sections of the paper, there are a number of issues with which I do not agree My reasons for this are partly due to differences in interpretation, but, more importantly, because I feel that Mr Dowling did not seem to be aware of a number of facts which ought to be taken into account

As it is getting late I will confine my remarks to the treatment of bank liquidity and liquidity ratios, one of the main themes in the paper One of the findings is that the liquidity of the banking system declined over the past twenty-five years I fully accept that this occurred, because banks may have been holding excess liquidity after the last world war, because of more efficient management of portfolios, and especially because of the emergence of better prospects for lending in Ireland However, I feel that the extent of the decline in liquidity has been overstated In Appendix Table 4 some account should have been taken of the growing holdings of Irish Government Paper as the banks' holdings of British Government Paper were falling In this regard I recognize that Irish Government Paper was not as marketable as British Government Paper but it must also be recognized that large amounts of British Government Paper could not be sold except at a fairly large loss Furthermore, I suggest that it would also be appropriate to take some account of the increase in the holdings of Irish Government Paper in computing the Monetary Base and Base Multiplier in Appendix Table 3 The results of including Irish Government Paper would show a slower decline especially during the 1960s in liquidity than portrayed and a smaller increase in the multiplier than suggested by Mr Dowling

I would now like to move to a much more important matter namely the treatment in the closing pages of the paper of the recently established official liquidity ratios As I was directly concerned with the design of this new system I would like to clarify a number of matters relating to it

In considering the liquidity ratios we were influenced by the arrangements used in a number of countries, Britain, US, South Africa, but particularly in Canada We also drew on the theoretical literature from W F Crick and J E Meade in the 1920s and 1930s and to the work of Harry G Johnson published in the Autumn 1968 issue of the Journal of Political Economy We were also influenced by the need to introduce a

system that suited Irish conditions and took account of the implications of establishing a domestic liquidity base for a banking system that traditionally held most of its liquidity outside this island and which viewed its portfolio both north and south and across the water as a single unit

As far back as 1968 we were fully aware that the day was fast approaching, as the repatriation of the external assets of the banks was being completed, when it would be necessary to introduce liquidity ratios We had a number of discussions with the banks about this Indeed, we were ready for the introduction of the ratios in 1970/71 and this was foreshadowed in the Governor's talk to the Economics Society, U C D , February 1970, but it had to be postponed because of the bank dispute that occurred that year I think I have said enough to demonstrate that we in the Bank were not "heavily influenced by *Competition and Credit Control* published in the UK" in May 1971 I remember well when *Competition and Credit Control* was announced, a number of my colleagues foresaw that it would be suggested that we relied heavily on it Admittedly Mr Dowling could not have been aware of some of these facts

This leads me to my final point and it is concerned with the question of the degree of control by the Central Bank over the base of the banking system Although there is scope for improvement in the Central Bank's control over the influences that determine the base, I think we have much more control than has been suggested by both Mr Dowling and Mr Murphy

No system of liquidity ratios can be operated without taking account of recent and expected movements in the base of the banking system The main factors that influence the base can be classified as follows

(i) Movements in Government Balances at the Central Bank,
(ii) Changes in non-bank holdings of currency,
(iii) Changes in the Central Bank's portfolio of domestic assets,
(iv) Foreign borrowing by the Government and State Bodies,
(v) Developments in External Trade,
(vi) Net capital inflows through licensed banks, and
(vii) Net non-bank private capital movements

Taking the three domestic factors first, we know from our discussions with the Department of Finance the broad magnitude and direction of the changes in the Government Balances at the Central Bank over the year Last spring we expected that, as in earlier years, they would decline between April and November 1973 and increase between November and February last Similarly we are also able to predict the movements in holdings of currency and in the Central Bank's domestic portfolio

As regards the four external factors, we have indications of the magnitude and timing over a year ahead of external borrowing by the Government and State Bodies We also project developments in external trade, in inflows through the banking system (which is relatively easy with the 50 per cent deposit requirement) and finally in the difficult area

of non-bank private capital inflows By aggregating the forecasts of the various factors that influence the base we project the movements in it for a year ahead and also for the quarter ahead and keep these projections under review

The decision, whether to change the primary liquidity ratio or leave it unaltered, is made from time to time on the basis of these projections of the base of the banking system and also by reference to current developments in the economy such as the emergence of a far higher rate of growth in 1973 than envisaged Moreover, in deciding on the rediscount rate to be applied to the rediscounts at the end of each month, account is again taken of recent and expected changes in the base of the banking system, of the present and expected level of interest rates, of the recent movements in the monetary aggregates as well as the major overall developments in the economy As regards rediscounting, which has a direct impact on the size of the base, it is relevant to note that the amount of rediscounts fell from £60 million at end-March 1973 to £15 million in November 1973 They have since increased to £40 million at end-February 1974 because of the implications of the oil crisis for the economy, particularly the external reserves, the need to maintain essential supplies and also because of seasonal movements in the base of the banking system

I conclude by saying that it is very diff cult to forecast the movements in the base of the banking system and fully accept that there is scope for improvement It must also be recognized that no policy maker has full control However, we take account of a far wider range of factors and have more control over the base than is being suggested by Mr Dowling and Mr Murphy

Dr M G Ccsey I would like to thank Mr Dowling for a monumental paper which sheds a great deal of light on the changing profile of the financial sector in Ireland It would be impossible to do justice to it all in the time available and I am forced to confine my comments to the section on monetary policy or more specifically to Mr Dowling's interpretation of how the monetary policy targets are estimated in the Central Bank The econometric model published in the 1972-73 Annual Report of the Central Bank is one of the methods used This model is estimated in two ways, one using a narrow definition of money and the other using a broad definition Contrary to Mr Dowling's opinion it is the latter which is now employed in the calculations, the former serving only as a cross-check This being the case it is not quite correct to say that Associated Bank deposits are forecast explicitly and that *net* credit creation is the target variable *Tot l* credit creation or bank lending is, in practice, the target variable Neither is it correct to suggest that it is only the narrow money supply which is supposed by the bank to effect aggregate expenditure Transactions motives are not the only ones considered

On the question of forecasting other variables before the target variable of bank lending can be derived, the correct number of these variables is three and not four These are gross domestic expenditure, exports and net capital inflow through the non-bank sector As mentioned already

Associated Bank deposits do not have to be forecast since the target variable is bank lending and this emerges as a residual In a wider sense, however, many more forecasts have to be made in order to forecast gross domestic expenditure This, in fact, involves forecasting the national accounts *in toto* I admit this is a difficult task, made more difficult by the paucity of and delays in the publication of official leading indicators as well as by the likelihood of significant revisions to national accounts data The Bank, however, can only use the information that is available and I am sure that Mr Dowling is not suggesting that the task should not be attempted merely because it is difficult Having discussed some of the difficulties of forecasting the target variable Mr Dowling suggests later on that the "target is known" and that the problem is achieving it This appears to be an inconsistency

With regard to his criticisms of the assumptions of a constant velocity of circulation and of a constant marginal propensity to import, I would like to make the point that these assumptions are built into the structural equations of the model but because these equations are in terms of absolute values or first differences of the variables while the reduced form equation is in terms of percentage changes, it is not at all clear that these assumptions are built into the reduced form equation, the one that is actually used In practice, the forecasts derived from the model hardly ever imply constancy of velocity or of the propensity to import The changing values of both are in fact examined separately to see if they appear consistent with the expected economic climate

I would also like to make the point that the model published by the Bank is not the only one that is used There are at least three others which are used as cross-checks These are demand for money equations and consumption and investment functions, the latter two containing monetary variables It should also be said that the econometric results are never accepted automatically They serve only to augment in a very general way, the detailed approach outlined by Dr McGowan

In concluding I would like to say that the Bank wholeheartedly welcomes debate on the whole area of monetary policy and I fully endorse Mr Dowling's plea for further research The Bank is quite aware of the debate on the ultimate influence of monetary aggregates on expenditure flows, real and nominal, and on the parameters within which the Bank's control, given its existing range of powers, can operate I make this point merely to suggest that criticism of a negative sort is not very helpful, especially when it is being "preached to the converted" and that academics and full-time researchers of Mr Dowling's calibre undoubtedly have the talent to be much more constructive