

THE TREATMENT OF INTEREST AND FINANCIAL INTERMEDIARIES IN THE NATIONAL ACCOUNTS OF AUSTRALIA

BY BRYAN HAIG

Australian National University, Canberra

This paper is divided into two main sections. The first part summarises briefly the main points which have arisen in the lengthy debate over the treatment of banking intermediaries in the national accounts. The discussion emphasises the method adopted in the early Australian accounts when banks were treated in the same way as the general government. It is argued that this method is simpler and provides a more realistic account of the functions of banks than the current SNA proposal.

The second part of the paper examines the functions of banks in Australia. It uses data of interest and administration cost for separate banking institutions to examine the incidence of bank costs. It is concluded that the costs do not fall on borrowers or lenders but are a charge in providing a communal service in the establishment and maintenance of the financial system.

1. INTRODUCTION¹

The treatment of interest and banking has been one of the most widely debated issues in the Australian national accounts. In recent years, at least four major contributions have been made to this debate [1, 3, 10, 13]. In all cases, they represent a reaction to the conventions proposed by the SNA. An early contribution, by H. P. Brown, criticised the first SNA approach largely on the grounds that it did not provide a realistic picture of the activities of banks [3]. The more recent articles have commented on particular difficulties raised by the current SNA approach.

Reflecting the interest in the treatment, the Australian Statistician has adopted three different methods to handle the activity of banks in the official estimates of national income and expenditure. In the early estimates, for 1946 and 1947, banks were treated in a similar fashion to other businesses. Interest has always been treated as a transfer item, and this method of handling banks led, therefore, to a negative product of banks. In a comment on the first official estimate it was suggested that this resulted from the failure to charge bank costs against the income of trading businesses, and it was noted that a major objection to this approach was that it was not possible to sub-divide total product into industries or sectors [3, p. 87].

The method was changed in 1948 and a new approach was adopted which treated banks in the same way as governments. The contribution of banks to

¹I am grateful to Ross Harvey, Director of National Accounts, Australian Bureau of Statistics, for help with data for this paper, and to A. R. Hall, Jonathan Pincus and T. K. Rymes for comments on an earlier draft. This paper incorporates material from Owen Covick [10] (in part 2, below) and Brown [3]. In this paper "banks" include other financial intermediaries similar to banks, such as finance companies, building societies and credit unions.

national income was measured by the payment of wages, and national expenditure included an item for “the net expenditure of financial enterprises”. It was explained that banks were regarded as “providing financial services to the economy as a whole, comparable in type to a number of government services such as the administration of justice” [4, p. 5]. In a subsequent paper, the then Director of National Accounts, H. P. Brown, spelt out at some length the reasons for this approach [3].

Finally, in 1973 the then Australian Statistician adopted a treatment similar to the current (1968) SNA treatment. This approach divides interest into a pure interest component and a service charge for organising funds. Part of the service charge (on consumer debt) is treated as final expenditure and included in personal consumption. The remainder (the imputed bank service charge) is treated as a cost of a nominal industry, which has a negative operating surplus of this amount.

The changeover in 1973 to the UN System provoked an exchange of views in the Economic Record [13, 14, 23]. The author of the present paper suggested that the previous approach adopted in the Australian accounts had a number of advantages over the new treatment, and that no reasons were given for the change in treatment. In reply to criticism of the change it was argued that one factor was the need for international comparability, but it was also claimed that the new approach correctly treated bank cost as an intermediate expense of business.

However, comparison shows that there is little difference between the new proposal and the first Australian treatment of banks. The product of industries is the same and GNP is not very different. The difference is that in the early Australian treatment, banks earned a negative product which was not distributed to industries whereas in the new SNA treatment the negative income of banks is avoided but only by showing a negative income for another (imaginary) industry.

The more recent criticisms fall into two main groups. First, it has been claimed that the imputation of bank costs complicates the interpretation of the national accounting figures and does not reflect the function of banks. Secondly, it is argued that the deduction of the imputed bank service charge (IBSC) from total product reduces the usefulness of the accounts. It has been pointed out, for example, that the neglect of any final output from banking understates GDP², and that this understatement has become relatively more important, leading to an error in the trend of product.

It has also been argued that the present treatment has resulted in errors in estimating product of particular industries and sectors [10]. The lack of an industry or sector division of the IBSC has led to the total amount being charged against the product of a particular sector. This has resulted in a large error because the deduction includes the final expenditure component as well as amounts attributable to other sectors. In a recent calculation made by the Australian Treasury, for example, all the IBSC was attributed to and deducted from the product of the non-farm marketed sector of the economy. It was subsequently estimated that the amount deducted was nearly 50 percent greater than the *total* interest

²See, for example, Arndt [1].

paid by the sector [10, p. 184]. The results of the calculation made by the Treasury have been used in annual wage determinations by the Australian Arbitration Court, and the error therefore had implications for economic policy. Not only was the deduction for the IBSC greatly overstated, but the trend in the resulting product of the sector was also incorrect.

A final criticism is that the present SNA treatment reflects only one activity of financial enterprises—that of organising funds for borrowers. Arndt, for example, has proposed that banks perform three major functions, comprising services rendered to the community at large, services to depositors and services to borrowers.³

“It would seem obvious that banks perform all three functions and, more particularly, provide services to both depositors and borrowers. Ideally, therefore, one would look for an allocation of the imputed bank service charge between these two main categories of bank customers and then, within each category, between services which meet final demand and thus contribute to GDP, such as those rendered to households, and those which enter into the costs of production of enterprises (and government) and should therefore be excluded from GDP as intermediate products. If this makes unmanageable demands on statistical services, it becomes a question of which simplification is conceptually to be preferred.”

In addition to the theoretical and conceptual issues raised in the treatment of banks, the practical considerations have become very important. It has been noted earlier that the current treatment leads to misinterpretation and errors in using the data of product of industries. To the extent, also, that the current treatment understates final output of banks it leads to error in measurement of the growth of GDP. In recent years the Australian financial sector has increased significantly. In 1949, when the question of the treatment of banks was first raised, financial intermediaries accounted for about 5 percent of GNP; now they account for about 14 percent. In recent years the annual rate of increase in employment of the financial intermediaries has been about 20 percent, compared to about zero change for the non-farm sector of the economy as a whole.⁴ The financial enterprise sector is now nearly half the size of the government sector. The financial sector will, relatively and absolutely, increase in the near future as a result of further changes envisaged in the scope of the sector⁵ and a resolution of the various problems encountered in the present treatment is of some urgency.

In this paper I renew the criticism of the various SNA proposals. It is argued that neither proposal reflects the function of the banks. It is proposed that an evaluation of the service provided by banks leads to the conclusion reached, in 1949, by H. P. Brown, and used in the 1950s and 1960s in the Australian National Accounts. That is, that banks provide a communal service and their cost cannot either in principle or in practice be allocated to users of bank services.

³[1], see also M. Mamalakis [18].

⁴[10, between 1972 and 1979].

⁵Including, for example, the introduction of off-shore banking.

The next part of this paper reviews briefly the various methods proposed for handling banks in the national accounts. The following part considers the types of activities undertaken by banks and the allocation of the cost of these activities.

2. THE TREATMENT OF INTEREST AND FINANCIAL INTERMEDIARIES

The crux of the problem of evaluating the contribution of banking enterprises to aggregate output lies in the fact that typically the services of banks are not sold to customers at clearly recognisable market prices. Banks (and other financial enterprises) levy various charges and commissions, but the excess of these receipts over the relevant enterprises' expenditure on goods and services purchased from other enterprises is typically small and generally insufficient to cover their wages, salaries and supplements payments. As the notes to the British National Accounts explain:

The reason for this peculiarity is that banks derive their income by lending money at a higher rate of interest than they pay on money deposited with them; payments are regarded as transfers and not as receipts and payments for a financial service. This income in a sense subsidises the provision by banks of those services for which inadequate payment is received in the form of bank charges and commissions. Other financial companies are analogous to the banks in the way in which they derive their income, many of them doing so almost entirely from the difference between the rates of interest which they charge and the rates which they themselves pay [19, p. 204].

Hence problems arise in treating the banks as ordinary enterprises. In the discussion of these problems two main approaches have been developed. One proposes the relaxation of the rule that interest is a transfer. It is proposed that interest is a factor cost (as with wages), or a charge for services [28, 30]. In this case the net administrative cost is a difference between "real" transactions. The alternative approach is to adapt various approaches (or models) used to incorporate expenditure of other activities which are financed by transfers.

The various treatments proposed to handle banks may therefore be classified first according to the treatment of interest, and secondly, according to types of models available in the national accounting conventions for different views of interest. A classification along these lines is set out as follows.

1. Interest as a transfer:
 - (a) the non-profit model, e.g. Kuznets [17], SNA [26];
 - (b) the government model, e.g. Brown [3].
2. Interest as a cost:
 - (a) a service cost
 - (i) part only, e.g. SNA [33];
 - (ii) fully, e.g. Ruggles [27], Sunga [30];
 - (b) a factor payment.

The basic distinction is between interest as a cost and as a transfer item. If interest is a cost there is no problem in measuring the output of banks—the

treatment of banks follows that used for other businesses (although there are problems in recording the transactions in the social accounts—see Sunga [31]. If interest is a transfer, then it is necessary to look to other models used in national accounting to record expenditure financed by transfers. These models fall into two groups, depending on whether the activity can be regarded as benefiting specific transactions, or whether the activity provides a communal benefit (or results in a communal cost). In the former case, the model is “non-profit making bodies”; in the latter case it is “government”. At various times national accountants have treated interest as a cost (at least in part) and have also adopted the two different models where interest is viewed as a transfer.

1. The arguments for and against treating interest as a transfer are well known. The main arguments in favour of the transfer convention are as follows: First, it is difficult to have one rule for some interest payments and a different rule for others. But if government and household debt interest payments are treated as expenditure on services, gross product estimates will be distorted according to the extent of the National Debt and of consumer indebtedness existing during the particular period—characteristics, it is argued, of past financing decisions rather than of the current level of “production”.⁶ Secondly, there is the problem of where to draw the line distinguishing an enterprise’s interest payments from its dividend payments.⁷ Thirdly, there is the question of trying to keep the level of production recorded for an enterprise or industry invariant with respect to the method by which that enterprise or industry is financed.⁸ Fourthly, differences between interest rates are often arbitrary, as “many circumstances associated with the payment of interest are largely conventional and dependent upon the institutional framework of a particular place and time” [3].

1(a) The non-profit making model for banks has a long history, dating from the estimates of bank output by King and including the early estimates by Kuznets [17]. The 1958 SNA treatment also follows this model, with the expenditure of banks being allocated jointly to various sectors depending on holdings of bank deposits. This treatment was developed from an analysis of the activities of deposit banks. It was argued that these banks provided free services to depositors which were balanced by the omission of interest payments on deposits.

The approach has been criticised as applying only to deposit banks, and for the method of allocating administrative costs according to deposits. It has been argued that the free services of banks (keeping accounts, and so on) are related

⁶See [24] and the references cited therein.

⁷“Interest on overdrafts would clearly be regarded as interest while ordinary dividends would clearly be regarded as disposition of a surplus. But is the dividing line between interest and dividends to be drawn somewhere between ordinary and preference shares and, if so, what precise type of preference share? Is it to be drawn between preference shares and debentures and, if so, what is the real difference between a small preference share issue by a company with a large amount of ordinary capital and a large debenture issue by a company with a small amount of ordinary capital; or is the line to be drawn somewhere between debentures and bank overdrafts and, if so, where is the line drawn in the range of private and inter-company loans?” [3, p. 78].

⁸“(A) second observation, and one which is of central importance to the issue being considered, is that if the alternative approach were used, an industry’s value added would vary with the use of borrowed funds. The output of an enterprise would depend on whether it used more or less borrowed funds, compared with equity funds; and would vary with changes in this distribution.” [12].

to the turnover of accounts rather than the size of the balance at any time. Some writers have also objected to the imputation procedure particularly since there are no prices available for comparable products. This point is discussed below where it is argued that banking services are a public good and the valuation at cost price must be treated as an arbitrary valuation.

1(b) The government model was adopted by Brown, and formed the basis of the early Australian treatment. Brown considered that the operating costs of banks could not be allocated to either borrowers or lenders, but were a communal service, the provision of a banking system, which was equivalent to the communal services provided by governments.

Brown reached his conclusion after a careful analysis of the functions of banks (see also Part 3, below). His objections to the previous SNA approach were similar to those referred to in 1, above. However, he also argued that imputed charges were only realistic in the case of deposits held in deposit banks. His analysis is even more relevant in the light of the recent growth and diversification of banking activities, at least in Australia (see Part 3, below).

The secondary thrust in Brown's case was that the value of financial enterprises' services should be assessed at their costs to the financial enterprises themselves. Thus no allowance was to be made for any property income to originate in the financial enterprise sector. Although still in conformity with the general government model, Brown's argument here implicitly borrowed from the model of non-profit organizations serving persons. In the same way as any surpluses realized by these organizations are treated, Brown argued that the "profits" of financial enterprises should be regarded as "merely the channel through which some of the surplus of trading enterprises and interest paid by governments is passed on to shareholders" [3, p. 84].

Brown's method has received little attention in the literature. The analogy between the activities of financial intermediaries and government has been noted by various writers, with the implication, however, that it is the treatment of governments rather than the intermediaries that is inappropriate. However, the government model has been suggested by Jaszi [15, pp. 63-68 and p. 213] and it has been adopted in the official statistics of several countries, including Norway and Sweden [32, p. 163 and 21, p. 248], as well as Australia. Officers of the Australian Bureau of Statistics commented, in 1969, that "Our treatment of net expenditure of financial enterprises has long irritated many people, including some in the Bureau, particularly since the sector was made larger in 1962" [37, p. 23]. But they went on to say they found the system preferable to the "old SNA" approach and talked of Australia "being the only country in step!"

One modification frequently proposed is to include bank profits in the value of output, and this has been described as the "augmented Brown" or Jaszi method.⁹

2. Both these approaches (the old SNA and Brown's method) depend on the assumption that interest is not a cost for services or the payment to a factor of production. Granted that the current convention for the treatment of interest developed out of debates over several decades, however, it should not be lightly

⁹[10, p. 20]. This does, however, complicate the deflation of bank expenditure.

abandoned. In fact, however, the 1968 SNA treatment does involve the treatment of interest (at least in part) as a service cost. It is suggested that the difficulties which have arisen over this treatment are at least partly due to a mistaken view of the nature of the activity of banks.

It is proposed that the conventional view of interest as a transfer is the correct one. The arguments which have been put forward to justify a change are unconvincing. They amount often to little more than the assertion that a change in treatment of interest is necessary in order to solve the banking problem. Examination of the effects of the alternative method suggests, however, that they are likely to lead to other problems in other areas of the national accounts, including the treatment of government activities.

2(a)(i) In the 1968 SNA interest is regarded as comprising a pure interest component and a service component. The IBSC measures the service component which is imputed as a cost to trading enterprises. It has been claimed that the imputation of banking cost improves the measurement of product of banks and of total product and leads to a more useful division of product between industries.¹⁰ The current SNA convention does not seem to have any of these advantages, however, as compared to the Brown treatment or, in fact, to the earlier SNA approach.

It could be objected that the imputation is a highly imaginary notion, which cannot be implemented because neither business firms nor banks regard interest as being divided into a service component, along the lines proposed, and a residual pure interest component.

While it does treat bank costs as an intermediate expense it overstates this cost by ignoring sales to final buyers. The Brown method, on the other hand, treats all the costs as an addition to GDP, and hence overstates GDP by the amount of intermediate costs. Compared to the earlier SNA approach the current SNA approach does alter the measurement of GNP and the product of industries, but it is not clear whether the new estimates are more accurate than the previous totals.

2(a)(ii) Treating all of interest as a service cost alters the product of industries and total product, but the effect on product compared with the earlier SNA approach is, however, not clear. The main objection to this approach is that it overturns several well-established conventions—in particular the measurement of value added of industries and the treatment of government interest. On the other hand interest receipts and payments are now widely regarded as current account transactions, if not fully accepted as a receipt and a payment for services rendered. In Australia the taxation treatment puts them into a different category to receipts and payments of dividends and undistributed income. The deduction of interest as a business cost would also conform to Marshall's view of business income, as quoted in Keynes [16], as conforming to the practices of the Income Tax Commissioners, and including [16, p. 29]

“as income whatever they, with their experience, choose to treat as such.”

In Australia, the deduction of interest as a business cost has also been seen as

¹⁰[15, p. 64]. This comment was made about the earlier SNA approach but it probably reflects the general view of imputations of bank cost.

an alternative to the SNA adjustment [7]. Finally, as an item of receipt by banks the label "interest" now covers an increasing proportion of miscellaneous items, including rent and profit margins on trading securities and foreign exchange.¹¹

The main objection would seem, particularly in the case of Australia, to be the treatment of interest paid by governments as a cost of production [3].

2(b) The treatment of interest as a factor payment would also avoid the problem of the bank imputation and would seem to conform to long-standing national accounting views of the concept of value added of industries. It raises, however, problems in distinguishing the payment of interest to persons and for this reason this approach seems to have been discarded [15, p. 121].

To summarise briefly, the problem raised in the treatment of interest and banks raises a number of issues. They concern (1) the nature of interest flows; (2) the meaning of total product and value added of industries; (3) the use of the national accounts, and (4) the need for simplicity in recording transactions in contrast, in particular, to the complexity raised by imputation.

The case for the Brown approach is that it does less damage to the long established convention that interest is a transfer, the estimates of industry product are based on the conventional view of value added, and while total product is overstated, this is no greater than in the case of government expenditure. Finally, it focusses attention on the role of banks in maintaining the financial system and the method is easy to implement and easy to understand.

3. THE ALLOCATION OF ADMINISTRATIVE COSTS

The financial sector in the Australian accounts comprises banks, life insurance and general insurance, superannuation funds, and a range of miscellaneous banking institutions. In the early 1950s these miscellaneous institutions accounted for about 5 percent of assets of all financial business, and they were not covered in the financial sector of the national accounts. In the early 1980s they accounted for nearly 50 percent of the total assets of financial businesses. The growth has been due to both the expansion of existing businesses and the establishment of new financial institutions (e.g. private savings banks, merchant banks, short-term money market dealers, unit trusts and special purpose banks).

The major changes in the character of the sector have resulted from the effects of regulations on activities of banks over the period to the early 1980s, the relaxation of regulations in the 1980s and the adoption of computer methods for customer payments, account keeping and the transmission of funds. The strict regulation of banks fostered the growth of non-bank financial activities. Foreign banks were not permitted but foreign banking interests were able to operate money market corporations (merchant banks). There were restrictions on the ability of banks to accept short-term deposits and interest rates were fixed on deposits and loans. These regulations led directly to the growth of non-bank financial intermediaries, which in many cases were owned or controlled by banks or foreign banking interests. The controls have been dismantled in the 1980s and the main restrictions now on the activities of banks are the rate of interest which

¹¹See Part 3, below.

trading banks may charge on housing loans and small overdrafts. In the 1980's banks have expanded and the non-bank financial intermediaries (other than life and casualty insurance businesses) have diversified into non-banking activities. One consequence is that a higher proportion of revenue of banks etc. is now fees for services.¹²

(a) *The General Functions of Financial Intermediaries*

There is no doubt that governments and official bodies (including the main financial institutions themselves) see the role of financial intermediaries as facilitating economic activity in general. The Report on the Australian Financial System [6] stated that the financial system

- enables transactions to take place without reliance on a process of barter;
- facilitates the transfer of funds and financial assets between savers and borrowers; and
- assists investors to balance risk, liquidity and returns.

At the same time, however, it noted that the efficiency of a financial system may be judged primarily in terms of its ability to

- provide an effective and certain payments mechanism;
- fully mobilise savings;
- channel those savings into fields of investment which generate the highest return (consistent with the risk involved);
- offer a suitable range and diversity of financial instruments and intermediaries;
- operate at minimum cost in terms of resources used per unit of service provided.

It recognised the importance of government regulation and interference “in order to achieve the government’s economic and social goals and to maintain confidence in and efficiency of the financial system.”

And this simply repeated the views of an earlier Commission [7, p. 201]:

“The general objective of an economic system for Australia should be to achieve the best use of our productive resources, both present and future Since the monetary and banking system is an integral part of the economic system, its objective will be to assist with all the means at its disposal in achieving these ends.”

(b) *The Functions of Banks*

As noted above there have been major changes in the structure of the Australian financial system since the late 1940s, when the treatment of banking activities was widely debated. At that stage the predominant unit was the trading (cheque paying deposit) banks. The earlier SNA treatment may have been relevant then, but now these banks are less important. The relative share of administrative costs of different financial intermediaries in 1972 and 1982 is shown in Table 1.

There has, moreover, been a change in the nature of the deposits and advances of the trading banks. Non-interest paying deposits have fallen from four-fifths

¹²As predicted by Rymes [22].

TABLE 1
FINANCIAL INTERMEDIARIES:
DISTRIBUTION OF NET ADMINISTRATIVE COST
(PERCENTAGES)

	1972/73		1982/83	
Banks	71.1		67.5	
Merchant banks	0.8		3.9	
Finance companies	20.3		17.0	
Building societies	5.6		7.5	
Credit unions	1.0		2.9	
Money market dealers	0.3		0.2	
Investment companies and trusts	0.7		1.1	
All banks, etc.	100	59.0	100	65.9
Life offices		15.3		11.7
Casualty insurance		25.7		22.4
All	100		100	

of all deposits in 1950 to less than two fifths. There has also been a large fall in the share of business accounts. Finally, an increasing proportion of assets are represented by short-term bills. There have been other changes in assets and liabilities, but these indicate the extent of the change in the functions of these banks in recent years.

Apart from trading banks, "banks" include the Note Issue Department of the Reserve Bank, the Reserve Bank proper, and Savings Banks. Consideration of the type of activity of these institutions suggests that the administrative charges cannot be allocated to either borrower or lender, or to a combination of both.¹³

If we consider the Note Issue Department of the Reserve Bank we find a section of the banking system which receives money on deposit for which it gives a security in the form of a note which is comparable to a current deposit. With the proceeds it purchases government securities. The profit of the note issue is large in relation to its costs which consist merely of the printing of notes (comparable to the keeping of books by trading banks). The service of the note issue is rendered to the community as a whole and it could hardly be said that the largest holder of notes in his pocket receives the greatest service. Nor could it be argued that a service is rendered to the borrowers from the note issue, in other words, the government—since actual lending to the government involves the note issue in negligible costs.

The Central Bank Division of the Reserve Bank, on the other hand, receives deposits from the other banks and invests the funds in government securities. Transaction costs are negligible and it would be difficult to base an argument for imputation of the margin between interest received and paid to either borrowers or lenders. The margin is purely a profit arising from the existence of interest differentials.

The position of savings banks, again, is somewhat different in that, although transaction costs are appreciable (since money is received in very small amounts)

¹³The following paragraphs draw on [3].

there is little cost associated with what might be described as cheque facilities, and the greater part of the available funds have traditionally been lent to governments. The service of savings banks is, if anything, rendered primarily to depositors since the savings bank provides a convenient means of accumulating savings but very limited bookkeeping facilities. This service itself, however is largely necessary because of the lack of internal security either from theft or fire and because it is unsafe to accumulate savings in the form of gold or notes. The service of savings banks is in this way comparable to the service of internal security provided by governments and it is noticeable that in fact all savings banks have been public authority owned, until recently.¹⁴

Moreover, as with trading banks there has been a big change in their functions in recent years. A much smaller proportion of their assets are now held as claims on the Commonwealth Government, the Reserve Bank, and on local and semi-government authorities and some savings banks have introduced trading bank facilities. The changes are a direct result of changes in housing policy and associated regulatory requirements.

Finance Companies

This is the second most important group of financial intermediaries, and they account for about 20 percent of total administrative costs. As with other intermediaries, finance company business has responded to changes in the character of bank regulation and has reflected borrower needs. An earlier emphasis on consumer instalment credit changed in the 1960s to a more balanced portfolio of business and consumer loans. Some finance companies make substantial advances (and investments) in real property (which has sometimes proved disastrous); more recently the emphasis has been on the provision of lease finance to business, and consumer and personal loans. Finance companies obtain their funds predominantly from the household sector by issuing debentures and unsecured notes. The service they render has changed from channelling funds between households to the investment of household savings in fixed assets and property. A substantial part of their expenditure now is accounted for by depreciation, and income includes leasing fees and rents.

Merchant Banks

These banks borrow locally from corporate and institutional sources. In addition to lending they trade in securities and provide financial advice and services such as underwriting and placement for semi-government clients. As shown in Table 2, the explicit charges have risen in recent years, and the proportion of revenue earned as a margin on trading in securities has increased, although detailed information of this amount is not available.

Other Financial Intermediaries

These account for about 10 percent of the administrative costs of all intermediaries. They comprise largely building societies and credit unions, which

¹⁴See the discussion in [3].

TABLE 2
FINANCIAL INTERMEDIARIES: EXPLICIT CHARGES
AS PERCENT OF GROSS ADMINISTRATIVE COST

	1972/73	1982/83
Banks	25	26
Merchant banks	10	25
Credit unions		33

predominantly channel funds from lenders to borrowers, and perform a function similar to the personal finance operations of trading banks and finance companies. The deposits, however, are largely at call and the low interest rate paid is, as with deposits of savings banks, partly offset by the security and convenience of the deposits.

This analysis suggests that attempts to apportion banks' costs to users would require an extremely detailed analysis of the precise functions of individual banking institutions. Banks do not simply borrow and lend. The costs of some banks could be allocated to a particular class of customer, but a large proportion of costs could not be allocated in this way. For example, some of the revenue of banks (particularly merchant banks) arises from trading margins. For costs which could be allocated to depositors or borrowers, moreover, a very detailed cost accounting would be needed of the volume of transactions of borrowers and lenders [3]. Finally, costs of special institutions, such as the Note Issue Department of the Reserve Bank, can only be regarded as a cost to the community as a whole.

Furthermore, the functions of banks have changed markedly in recent years. Any method of allocating costs would therefore need to be revised at frequent intervals in order to take into account these changes in their functions.

TABLE 3
FINANCIAL INTERMEDIARIES: NET ADMINISTRATIVE COST AS A PERCENT OF INTEREST

	Percent of Interest Received		Percent of Interest Paid	
	1972/73	1982/83	1972/73	1982/83
Banks	50	40	100	61
Merchant banks	22	11	21	12
Finance companies	35	34	55	30
Building societies	21	18	26	22
Credit unions	48	39	50	44
Money market dealers	5	5	7	6
Investment companies and trusts		12		17
All banks, etc.	41	31	71	40
Life offices	46	36		
Casualty insurance	420	156		
All	55	119	39	60

(c) *The Allocation of Costs*

Table 3 shows the ratio of administrative costs to interest for the main types of banking intermediaries.

We might expect that the ratio of net administrative cost to interest received or paid will be larger: (1) the smaller the size of the loan; (2) the longer the duration of the loan; (3) the greater the difference in size and duration for amounts borrowed and lent; (4) the amount of fees charged, and (5) as a result of institutional factors, for example, whether borrowings and lendings are confined to a group, as in the case of credit unions, or are dispersed more widely. The following table very briefly summarises the size and duration of borrowings and lendings.

	Lendings		Borrowings	
	Size	Duration	Size	Duration
Merchant banks	Large	Small	Large	Small
Finance companies	Small	Medium	Medium	Medium
Building societies	Large	Large	Small	Small
Credit unions	Medium	Medium	Small	Small
Money market dealers	Large	Small	Large	Small

For those lendings in the largest units, the ratios of administrative costs to interest are uniformly low. There does not seem to be much relationship, however, between the ratio and the duration of loans. The ratios also tend to be lower where the borrowings are relatively large amounts, as in the case of merchant banks and money market dealings. For building societies, however, the amounts borrowed are relatively small, but the ratio is about average size. As with lendings, there is no obvious relationship between the ratio and the duration of the loan.

There is also some correlation between the ratio of administrative costs and the difference in the size of borrowings and lendings. The two groups of intermediaries which channel relatively large amounts of short duration (the merchant banks and money market dealers) have the lowest ratio of administrative costs to interest received or paid.

Finally, the effects of explicit charges would not alter these results. As shown in Table 2, charges are a small proportion of administrative expenses for merchant banks, and for the only other intermediary which levies significant charges, credit unions, the effect of grossing up administrative costs would simply add to their already high ratio of administrative costs to interest.

The main point in looking at data of administrative cost relative to interest is to assess whether differences in rates of interest can be explained by differences in administrative costs. If administrative costs are attributable to lenders then one might expect that there would be less dispersion in the rates of interest after deducting administrative costs, than the gross amount; similarly, if administrative costs provide a benefit to borrowers then we might expect less dispersion in interest rates after adding in administrative costs, than in the rate of interest. As shown in Table 4, however, this is not the case. Expressing the result in terms

TABLE 4
FINANCIAL INTERMEDIARIES: INTEREST AS PERCENT OF TOTAL ASSETS

	Interest		Interest less/plus Administrative Costs	
	Received	Paid	Received	Paid
<i>1972/73</i>				
Banks	4.8	2.4	2.4	4.8
Merchant banks	1.7	1.8	1.3	2.2
Finance companies	7.9	5.0	5.1	7.8
Building societies	6.8	5.6	5.4	7.1
Credit unions	5.8	5.5	3.0	8.2
Money market dealers	6.9	5.0	6.6	5.4
$S^{(a)}$				
\bar{X}	0.416	0.345	0.493	0.399
<i>1982/83</i>				
Banks	8.5	5.5	5.1	8.9
Merchant banks	13.8	11.9	12.3	13.4
Finance companies	10.1	11.5	6.7	14.9
Building societies	13.1	10.4	10.8	12.7
Credit unions	10.5	9.5	6.4	1.4
Money market dealers	10.9	9.1	5.3	1.5
$S^{(a)}$				
\bar{X}	0.142	0.116	0.369	0.767

^(a)Coefficient of variation. Excludes banks.

of coefficients of variation (standard derivation divided by the mean) we find that the coefficients are very much lower for interest rates than for interest rates adjusted for administrative costs.

(d) *Financial Services as a "Public Good"*

The distinctive features of free "public goods" provided by governments have been widely analysed by statisticians and economists. Public goods are supplied in large amounts to the community as a whole, and not in separate units to individual consumers. In the case of consumption goods, the actual valuations will vary across individuals and are generally not observable, and national accountants value them at their cost of production, rather than attempt to estimate their value as consumption goods. The typical cases are, of course, defence and internal order provided by governments. In general, the value of aggregate consumption will exceed the cost of production of a public good if it is supplied in less than optimal amounts; and fall short of cost if it is supplied in more than optimal amounts. Although we cannot attempt any quantitative assessment, there are some reasons on balance to expect that the former situation—too small a supply—is often the case for public goods, including those supplied by banks. As noted earlier, the expansion of the financial sector in the 1960s and 1970s occurred despite strict regulations, and in the 1980s, the rapid expansion has benefited from deregulation.

In the case of unpriced intermediate input, there will be an increase in GDP which appears in private factor prices or rents. In particular, the maintenance of a framework within which specialisation of economic activity can take place can greatly increase GDP or GDP per capita. It is recognised that the conventional treatment, which is to count them as final expenditures, nonetheless can understate their true contribution. Imputations of the value of bank services may be as misleading as imputations of the value of services provided by governments, and in any event there is some ground for an equivalent treatment, recognizing the arbitrary nature of the valuation of financial services and government output.

4. CONCLUSION

This paper reviewed briefly the types of models which are available to deal with financial intermediaries where interest is a transfer, and discussed some of the problems involved in applying the models. It referred briefly to the complications which are raised where interest is treated as a factor cost or service. It also presented some brief statistical evidence to suggest that variations in administrative costs do not explain differences in rates of interest between major sectors of financial intermediaries. To this extent, there seems little justification for distributing administrative costs on the basis of borrowings or lendings. The conclusions of this paper are that there are conceptual advantages in treating banks in the same way as governments, and that administrative costs seem to be a general overhead cost of intermediaries instead of being allocatable to borrowers or lenders.

REFERENCES

- [1] Arndt, H., Measuring Trade in Financial Services, *Banca Nazionale del Lavoro Quarterly Review*, No. 149, June 1984.
- [2] Australian Bureau of Statistics, *Australian National Accounts, Concepts, Sources and Methods*, 1981.
- [3] Brown, H. P., Some Aspects of Social Accounting—Interest and Banks, *Economic Record*, 25, Supplement, August 1949, 73–92.
- [4] Commonwealth of Australia, *National Income and Expenditure, 1947/48*. Australian Government Printer, Canberra 1948.
- [5] Commonwealth of Australia, *National Wage Case, May 1980, Submissions by the Commonwealth Government*, Australian Government Publishing Service, Canberra 1980.
- [6] Commonwealth of Australia, *Australian Financial System Interim Report of the Committee of Enquiry*, Australian Government Publishing Service, Canberra 1980.
- [7] Commonwealth of Australia, *Report on Inflation and Taxation, 1976*.
- [8] Commonwealth of Australia, *Royal Commission on Banking, 1936*.
- [9] Copeland, M. A., Some Problems in the Theory of National Income, *Journal of Political Economy*, 40, February 1932, 1–51.
- [10] Covick, O. E., Productivity-Geared Wages Policies: Some Problems Arising from the Growth in Financial Enterprises, *Journal of Industrial Relations*, June 1982.
- [11] Geary, R. C., Reflections on National Accounting, *Review of Income and Wealth*, 1974, 221–251.
- [12] Goldberg, S. A., The Treatment of Interest in the National Accounts—A Review, prepared for the IARIW 19th General Conference, 1985.
- [13] Haig, B. D., The Treatment of Banks in the Social Accounts, *Economic Record*, 49, December 1973, 624–628.
- [14] Haig, B. D., The Treatment of Banks in the Social Accounts: A Reply, *Economic Record*, 51, March 1975, 116–119.
- [15] Jaszi, G., The Conceptual Basis of the Accounts: A Re-examination, in *Studies in Income and Wealth*, Vol. 22, N.B.E.R., Princeton, 1958, 15–145, and subsequent comments.

- [16] Keynes, J. M., *The General Theory of Employment, Interest and Money*, Macmillan & Co., 1936.
- [17] Kuznets, S., *National Income and its Composition, 1919-1938*, N.B.E.R., New York, 1941.
- [18] Mamalakis, Markos J., The Treatment of Interest and Financial Intermediaries in the National Accounts, prepared for the IARIW 19th General Conference, 1985.
- [19] Maurice, R. (ed), *National Accounts Statistics: Sources and Methods*, Central Statistical Office, Studies in Official Statistics 13, HMSO, London, 1968.
- [20] National Accounts Review Committee, The National Economic Accounts of the United States, published in *Hearings before the Subcommittee on Economic Statistics of the Joint Economic Committee*, Washington 1957; reissued as *The National Economic Accounts of the United States: Review, Appraisal, and Recommendations*, National Bureau of Economic Research, New York, 1958.
- [21] Ohlsson, I., *On National Accounting*, National Institute of Economic Research, Stockholm, 1953.
- [22] Rymes, Thomas K., Problems of Interest and Financial Intermediaries in the SNA, prepared for the IARIW 19th General Conference, 1985.
- [23] Roche, A. W., The Treatment of Banks in the Social Accounts: A Comment, *Economic Record*, 51, March 1975, 109-115.
- [24] Rolph, E. R., The Concept of Transfers in National Income Estimates, *Quarterly Journal of Economics*, 62, May 1948, 327-361.
- [25] Ruggles, N. and R. Ruggles, *The Design of Economic Accounts*, N.B.E.R., Columbia University Press, New York 1970.
- [26] Ruggles, R., *National Income and Income Analysis, An Introduction to*. New York, Toronto, and London, 1949.
- [27] Ruggles, N. and R. Ruggles, Integrated Economic Accounts for the United States, 1947-80, *Survey of Current Business*, May, 1982.
- [28] Speagle, R. E. and L. Silverman, "The Banking Income Dilemma", *Review of Economics and Statistics*, 35, 1953, 128-139.
- [29] Stone, J. R. N., Definition and Measurement of the National Income and Related Totals, Appendix to *Measurement of National Income and the Construction of Social Accounts*, published by the United Nations as Studies and Reports on Statistical Methods No. 7, Geneva 1947.
- [30] Sunga, P. S., The Treatment of Interest and Net Rents in the National Accounts Framework, *Review of Income and Wealth*, Series 13, March 1967, 26-35.
- [31] Sunga, P., An alternative to the current treatment of interest as a transfer in the UN and Canadian system of National Accounts, *Review of Income and Wealth*, Series 30, No. 4, December 1984.
- [32] United Nations Statistical Office, *National Accounting Practices in Sixty Countries* (Studies in Methods, Series F, No. 11), New York, 1964.
- [33] United Nations Statistical Office, *A System of National Accounts and Supporting Tables* (Studies in Methods, Series F, No. 2, Revision 2), New York, 1964.
- [34] United Nations Statistical Office, *A System of National Accounts* (Studies in Methods, Series F, No. 2, Revision 3), New York, 1968.
- [35] Warburton, C., Financial Intermediaries and Interest Paid by Business Firms to Banks, in *Studies in Income and Wealth*, Vol. 22, N.B.E.R., Princeton, 1958, pp. 509-521.
- [36] Yntema, D. T., National Income Originating in Financial Intermediaries, in *Studies in Income and Wealth*, Vol. 10, N.B.E.R., New York, 1947, pp. 23-82.
- [37] Youngman, D. V. and R. W. Fergie, The Revised United Nations System of National Accounts and its Significance for Australia, ANZAAS paper, 1969 (mimeo).