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Foreign Debt: Perceptions, Experiences and Issues

by

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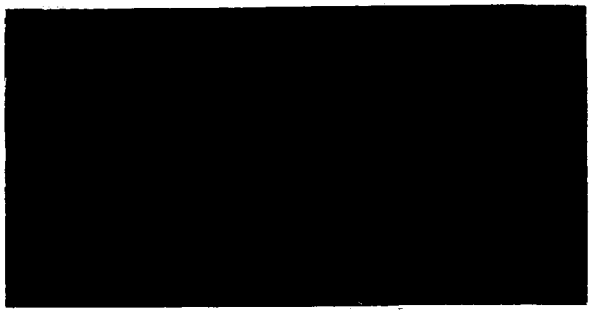

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Abstract

Three features are emphasised; the role and impact of foreign debt, Australian experiences since the beginning of the 'eighties, and the implications of the growth of foreign debt. Aggregate data on foreign debt is provided along with classifications by users, maturities and currencies. The dominant role of banks in intermediating private sector foreign borrowings is spelt out. The significance of this foreign debt is analysed in conventional macroeconomic terms to stress the instability likely when that debt grows rapidly in relation to national output. A strongly market-oriented view rejects that interpretation. However, instability should not necessarily be attributed to foreign debt alone because foreign portfolio investment exhibits some similar features to debt.

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Foreign Debt: Perceptions, Experiences and Issues

1. Introduction[1]

This contribution is directed to three matters. First, an examination of the main features in the analysis and understanding of the role and impact of foreign debt. Secondly, an assessment of the Australian experiences with foreign debt since the initial worries of the middle 'eighties. Thirdly, to judge what is significant for an understanding of the implications arising with the growth of foreign debt. A careful scrutiny of the ways in which foreign debt has been accumulated is essential to any understanding of what it means for the stability of the economy.

Extensive analyses and debates about foreign debt were advanced in the latter half of the 'eighties when worries about the rapid accumulation of foreign debt had become a major policy concern. These provide the bases for contemporary appraisals of the topic. Hindsight confers some advantages for these appraisals because it is possible to check the expectations expressed in those years against the recent experiences. Suffice it to say that there is nothing wrong in drawing upon foreign savings to expand the growth of productive capacity in Australia, or any other country, beyond what might be achieved with domestic savings alone. What has been and remains worrying in the Australian situation is the way those foreign borrowings may have been used to sustain consumption spending (Daniels, 1992).

Moreover, this treatment of foreign debt must be viewed in light of the strategic changes in economic and financial arrangements in the first half of the 'eighties. Comprehensive views of the circumstances leading up to the abandonment of qualitative as well as quantitative control on banking activity,

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[1] I am grateful for assistance with data, compilations and calculations as well as related source material provided from time to time by Alison Harvie, Susan King and Jack Towe. Help from officers of the Australian Bureau of Statistics is acknowledged most of all for cautionary notes on the interpretation and use of data. This contribution is a development of a paper under the same title presented at the 24th Conference of Economists in Adelaide on 24 September, 1995.

the ending of controls on foreign exchange transactions, reduction of barriers on entry into banking and restructuring of financial intermediaries have been advanced (Grenville, 1991 and Hogan, 1992). The complex set of influences bearing upon discussions about financial deregulation and then its determination, can be all too easily overlooked. Most important for any appraisal of foreign debt and foreign investment generally was the opening up of foreign exchange markets from the end of 1983 and the opportunity for Australian institutions to participate fully in international capital markets and the associated derivatives and swaps markets in which to manage exposures.

While the main thrust of this contribution is about foreign debt, the ties between debt accumulation and Australia's international investment position generally must be noted. Treating foreign debt alone may be misleading in its impressions because of the much more complicated set of foreign economic and financial relationships which have been developed by Australian companies and entities since the middle 'eighties. In Table 1 the total foreign investment position into and out of Australia for each year between 1976 and 1995 is shown. Foreign debt at the end of June 1995 was recorded at $222.6 billion being 56.3 per cent of total foreign investment in Australia. The balance of Australia's foreign liabilities is held in some form of other of equity investment mainly in direct involvement in companies or portfolio participation through the stockmarket. Australian investment overseas has taken a different form with the great bulk in the form of equity participation; as Table 1 shows that type of investment has been 68.9 per cent of the total.[2]

There are a further five sections to this paper. The next one examines competing views on the impact of foreign debt. Then follows a detailed analysis of its growth and structure. The fourth section looks very briefly at foreign exchange marekts. The fifth one is about qualifications to conclusions drawn from analyses

[2] Implications of the sharp distinctions in the structure of foreign investments into Australia and by Australian entities abroad cannot be explored here. Suffice it to state that portfolio diversification by Australian funds managers would be one important explanation for outflows from Australia.

of foreign debt. The sixth section turns to foreign equity. There is a brief concluding note.

TABLE 1: INTERNATIONAL INVESTMENT, AUSTRALIA; 1976-1995

($MILLION)

	In to Australia			Out of Australia			
End of June	Equity	Debt	Total	Equity	Debt	Reserve Assets	Total
1976	6969	5978	12947	2131	493	3086	5710
1977	7632	7812	15444	2298	612	3312	6222
1978	8689	10133	18822	2975	753	3225	6953
1979	9935	12651	22586	3236	836	3885	7957
1980	26381	13498	39879	6912	954	5681	13547
1981	31567	15219	46786	7409	957	5709	14075
1982	30745	24350	55095	8716	1286	6517	16519
1983	35044	35892	70936	10011	1760	10748	22519
1984	37772	44101	81873	12499	1791	12417	26707
1985	44145	67473	111618	17495	2748	13517	33760
1986	48037	92550	140587	26277	3982	13024	43283
1987	72731	107417	180148	41491	3686	17594	62771
1988	77671	123121	200792	47747	6691	20182	74620
1989	94815	146717	241532	59997	9008	20410	89415
1990	103771	162770	266541	64655	9144	21871	95670
1991	111794	179250	291044	62595	12421	24047	99063
1992	117707	191267	308974	70450	15463	22240	108153
1993	128965	208420	337385	77803	20278	20823	118904
1994	164336	205927	370263	87491	22029	20661	130181
1995	172742	222577	395319	93303	21908	20184	135395

SOURCE: Australian Bureau of Statistics,
Australia's International Investment Position, Cat. Nos. 5306,5363

2. Methodological Themes

The issues in contention with assessments of Australia's foreign debt are well recognised (Hogan, 1995). One view of long-standing is directed essentially to the sustainability of a growing debt. Queries are mainly about the capacity to service and finance the debt owing to the twin volatilities of interest rates and foreign exchange rates in international markets and also instability with commodity prices in export markets. The alternative view reflects propositions that market participants are no less informed than policy-makers and seek optimal outcomes in lending and borrowing including a capacity to adapt to changing percpetions of risk.

a) Conventional View

Most analyses bearing upon the sustainability of foreign debt lie in a macroeconomic setting. Assessments reflect the standard or conventional view of a balance of payments constraint which effectively limits the rate of growth of real output and employment owing to the exposure to market and credit risks of all borrowers resident in the country. In effect the existence of a persistent current account deficit is to be interpreted or judged as exposing an economy to international systemic problems.

The one proviso to this general stance on foreign borrowings arises when authorities pursue counter cyclical funding to cover current account deficits during periods of export prices lower than trend (or "normal"). The justification for this shorter term policy is to avoid real domestic adjustment costs which would not be called for in a medium term perspective[3] . The implications of this policy are straightforward; first, the shorter term characteristics of the immediate economic situation can be readily identified and then, secondly, the borrowings will be repaid as soon as an upturn in export prices is secure.

Setting aside this one proviso, a major difficulty with tests for sustainable debt positions is the lack of consistency in measures such as the various debt to GDP ratios or the ratio of the current account deficit to GDP, to indicate critical positions. There is much evidence on variability in these and other measures between countries sufficient to call into question just what effective information can be extracted (Rider, 1994). The critical trigger points with these and other ratios are not obvious. Cross country comparisons on foreign debt must be viewed

[3] This stance is well illustrated in the comment from the 1988 Annual Report of the Reserve Bank of Australia: "While the rise in commodity prices is very welcome from Australia's viewpoint, it cannot be taken for granted that the levels of mid 1988 will cintinue for long. The higher prices should be regarded as a windfall which provides the opportunity to reduce markedly the balance of payments deficit. It would be tragic if they were absorbed in an overly rapid increase in domestic demand, with the pressures that would unleash, or if we were deflected from the long-term task of adjusting the structure of the economy." (1988, p.8)

cautiously. Hence generalisations about critical measures of instability thresholds are fraught with difficulty. Perceptions of the current policy stance rather than the ratios themselves may explain relative standings in currency and interest rate markets at any one time.

The implications of the conventional interpretation of the impact of foreign debt are that servicing costs in face of volatile export income bring liquidity problems for corporate borrowers with heightened risks of insolvency over what would apply in national markets where there is no currency risk. The negative externalities arising in this situation are in the refinancing of borrowings and shorter term costs to all borrowers as interest charges are raised to reflect foreign exchange risk and not just credit risk (Stewart, 1994).

b) Market-Oriented Perspectives

Another view, a market-oriented one, takes a much different stance emphasising the effectiveness of decisions by borrowers and lenders (Pitchford 1989 & 1990). Distinctions between international and domestic capital markets fall away even if the additional feature of exchange rate relativities complicates the individual transaction. Moreover there are many hedging opportunities to contain market risks through various financial instruments such as options, futures and swaps (Saunders 1994). In effect financial markets provide opportunities as well as disciplines on borrowers so that sustainability worries are largely misplaced.

The alternative view, with its stress upon market determinations, reflects a clear distinction between borrowings in the market sector of the economy from those undertaken by government. In the former case participants choose their own funding arrangements so that the decisions are optimal for both borrowers and lenders. The choices before government are determined not just by spending programmes but also taxing capacities and powers. The latter are the sources of financial strength for guarantees provided by government to its enterprises and

affiliated ones. For the market sector of the economy the basis of foreign borrowing is that it is undertaken for investment purposes. This means that the decision to borrow is made on the best judgement of the expected rates of return. The feature of this stance is that government, whether in its political or administrative leadership, is not better placed to make those judgements.

What does this revamping of ideas mean? Foremost, the significance of the constraint arising from persistent deficits in the balance of payments is called into question. With borrowings by market participants optimal and committed to expand productive capacity, then conventional macroeconomic interpretations fade substantially, perhaps there may be short-term possibilities of disturbance arising from mistiming of market participation.

However, there are complications with this analysis of foreign borrowings. The assessment is confined to the activities of companies producing goods and services. The argument tends to ignore the role of governments and their related entities by assuming perhaps that they behave in the same way as business. The optimality assumption may be challenged on the evidence of whether or not foreign borrowings by government increase investment outlays.

c) Appraisal

There are strong assumptions underlying the optimality propositions. They relate to a number of market issues but for most purposes the two most important are the existence of perfectly competitive markets and constant returns to scale. The same strictures do not apply to information. Questions about the availability of information and its quality are as applicable to government decision-makers as they are to market participants.

Beyond those queries are others bearing upon the short-term instability of international capital markets which can frustrate re-financing of existing debt as

well as handicap funding of new debt. Repercussions for exchange rate relativities and domestic interest rates may also arise.

Nevertheless, and while admitting some reservations arising from these questions raised, what the critics are taking issue with is the conventional view of excessive borrowings in the face of likely future income earnings and volatility. This macroeconomic perception leads to the analysis of impacts in terms of various ratios such as gross debt to gross domestic product. In some ways this approach can lead to conclusions that borrowings in the normal course of business related to the level of activity in the economy, can be deemed too high (Makin, 1989).

The market-oriented view of foreign debt accumulation denies the scope for borrowings by industrial and commercial entities to sustain consumption rather than expand productive capacity. That possibility can arise with government borrowings when, for whatever reason, expenditures are for consumption goods and services directly or through transfer payments to individuals.

3. Foreign Borrowings and Lendings

The growth of Australia's foreign debt was spectacular in the 'eighties even if a significant proportion is explained by the devaluation of the Australian dollar especially between 1981 and 1986. Weakness in the balance of payments and slowing in real activity within the Australian economy, the two not being independent of each other, has meant a most rapid growth in the ratios of debt to GDP.

a) General

Series on Gross and Net Foreign Debt, along with Australia's Foreign Lending, from 1975-76 to 1993-94 are set out in Table 2. Reference to foreign lending can be easily misinterpreted. These are loans comprising of two distinct components. The first one consists of loans by Australian resident companies and

financial institutions to legal entities, mainly banks and companies, resident in other countries even though some may be subsidiaries or affiliates of Australian groups. The second component is Australia's foreign exchange reserves held by the Reserve Bank of Australia (RBA). Equity holdings of Australian resident companies and institutions in foreign entities are not included.

Most analyses are couched in terms of the Net Debt/GDP ratio. That Australia's foreign assets may be readily balanced against gross foreign debt to derive a net estimate of total commitments as the real measure of the constraint on economic activity and policy choices in Australia is mistaken. Much of those foreign assets are represented by foreign exchange reserves necessary for the day-to-day management of foreign exchange, trade and payments. Moreover, foreign assets other than those of the RBA would not necessarily be held by the same companies having liabilities outside Australia. Thus implicit in the Net Debt concept is provision for compulsory mobilisation and, potentially at least, enforced repatriation. All this is the antithesis of the thrust of economic strategy towards an internationally competitive and deregulated economy[4]. Hence, the Gross Debt/GDP ratio is the measure bearing upon policy prospects in the absence of exchange controls.

Expansion started during 1982, not surprising in view of problems with export prices for commodities plus drought affecting export supplies. The increase was inexorable up to the end of the 'eighties as has been the growth in the Debt/GDP ratio, whether measured gross or net. No attempt was made to treat the initial borrowings as part of some counter cyclical policy to be reversed with improving markets and restored supplies.

[4] In light of the evidence presented in Table 1 on the relatively high proportion of Australia's investment abroad held in equities, then mobilisation of foreign assets would encompass them as well as debt instruments. This gives a much different view about net obligations. However, the Net Debt Concept is a hangover from a by-gone fixed rate regime with exchange controls even if the latter were largely dormant.

The potential strains of this foreign debt accumulation became evident in 1984-85 when the implications of the burgeoning debt commitments were to be seen in the rapidly growing Debt/GDP ratios in face of a worsening balance of payments. This evidence of rapid expansion of foreign obligations between 1981-82 and 1984-85 meant a more than doubling of the Debt/GDP ratio whether measured gross or net. The pattern of debt accumulation witnessed during the past decade was established fully by that time. Reliance on foreigners' savings to sustain real activity and employment was not to be speedily reversed.

Table 2: Australia's Foreign Debt: Gross and Net: 1976-1995

End of June	Gross Debt $bn (1)	Foreign Assets $bn (2)	Net Debt $bn (3)	Gross Debt/GDP Ratio (4)	Foreign Assets/GDP Ratio (5)	Net Debt/ GDP Ratio (6)
1976	5.98	3.58	2.40	7.8	4.6	3.1
1977	7.81	3.92	3.89	8.9	4.4	4.4
1978	10.13	3.98	6.16	10.6	4.2	6.5
1979	12.67	4.72	7.93	11.6	4.3	7.2
1980	13.50	6.64	6.86	10.8	5.3	5.5
1981	15.22	6.67	8.55	10.8	4.7	6.1
1982	24.35	7.80	16.55	15.2	4.9	10.3
1983	35.89	12.51	23.38	20.7	7.2	13.5
1984	44.10	14.21	29.89	22.5	7.3	15.3
1985	67.47	16.27	51.21	31.2	7.5	23.7
1986	92.55	17.01	75.85	38.3	7.0	31.4
1987	107.42	21.28	86.14	40.5	8.0	32.5
1988	123.12	26.87	96.25	41.2	9.0	32.3
1989	146.72	29.41	117.29	43.6	8.8	35.0
1990	162.77	31.02	131.75	44.4	8.4	36.3
1991	179.25	36.47	142.78	47.6	9.7	37.8
1992	191.27	37.70	153.56	48.9	9.7	39.7
1993	208.42	41.10	167.32	51.0	10.1	41.4
1994	205.93	42.69	163.23	48.1	9.9	38.1
1995	222.58	42.09	180.48	49.8	9.3	39.9

Source: Australian Bureau of Statistics, Australia's International Investment Position, Cat. No. 5306.0. Reserve Bank of Australia Bulletins (various)

The inheritance of interest charges on existing debt accumulations means that there was going to be a continued passive accumulation of further debt

arising from the impact of interest charges on the balance of payments on current account (Dixon & McDonald, 1986). This was relieved in the early years of the 'nineties by the fall in nominal interest rates.

The resurgence in the rate of expansion of the two debt ratios in the three years from June 1990 is explained by the declining value of the Australian dollar. Those valuation effects represented $16,595 million of the total rise in gross foreign debt of $44,346 million from the end of June 1990 to the same month in 1993. Net of valuation effects, the gross debt was $190,888 millions rather than the $207,480 millions in June 1993 recorded in Table 2. The Gross Debt to Gross Domestic Product ratio would be 47.1 per cent rather than the 51.1 per cent shown in Table 2, column 4. By the same way Australian lending abroad would have been reduced from $38.7 billion to $36.9 billion to reduce the ratio to GDP from 9.6 to 9.1 per cent. Thus the Net Debt/GDP ratio would drop from 41.6 per cent to 38.2 per cent. That points to a debt position a lot more stable than an initial review of the series would suggest.

However, the experience was reversed in 1993-94. The strengthening of the Australian dollar relative to other currencies means that the debt series net of valuation effects would be $6,132 millions higher than the $204,073 millions shown at the end of June 1994 in Table 2. This means that the Gross Debt/GDP ratio would rise to 48.8 per cent and the net measure to 39.2 per cent.

The point to be made is not that the debt problems are now no worse than they were perceived to be a decade ago (Whitelaw & Howe, 1992). Rather it is to stress the significance of valuation effects, especially those arising from depreciation of the Australian dollar. The potential effects of currency volatility on debt servicing charges, as measured in domestic currency, and then further rebounding on valuations in currency markets because of perceived weaknesses arising from these increased debt servicing commitments are ever present. However, the worst fears offered in the latter half of the 'eighties on this possibility have not been realised.

b) Borrowers

The structure of this foreign debt changed through the 'eighties. The proportion of the gross debt held by the government sector fell initially in the early years but, since then, has increased to around 40 per cent by 1983-84. The major change has been in the borrowings by public agencies, mainly state government's authorities. In recent years, they have been as much as 20 per cent of the gross debt whereas in the early 'eighties they were about 12 per cent. Data on the structure of this debt is shown in Table 3. These series are for the main components of gross foreign debt and Australian lending overseas. This latter item and foreign exchange reserves comprise Australia's foreign lending as depicted in Table 2, column 2. As is evident from Table 3, column 4, Australian private foreign lending is relatively small compared with total foreign assets, even if growing quite rapidly during the past four years. In 1980-81 these foreign assets were just over 11 per cent of the private sector's foreign debt but were down to 9.1 per cent in 1989-90. A shift to a higher proportion of foreign holdings relative to foreign debt being 15.57 per cent at the end of June 1993 and 18.1 per cent a year later, shows the greater emphasis on penetration of foreign markets and diversification of investment portfolios beyond equities by domestic funds managers over recent years.

What is important to appreciate is the mechanisms by which borrowings were generated. The transmission was by way of the banking system. If it had not been for that intermediation the capital inflow to other than government and government enterprises would have stagnated in the past decade. With deregulation of the financial sector and the abandoning of most exchange controls, the banks asserted their traditional role as financial intermediaries between Australian and foreign capital markets from which they had been largely excluded since the beginning of World War II.

Table 3: Major Components of Foreign Debt 1980 - 1994

(A$ billion)

End of June	Governments	Government Enterprises	Private Sector	Total Debt	Memorandum Item: Banks Borrowings
	(1)	(2)	(3)	(4)	(5)
1980	5.69	1.50	6.31	13.50	0.60
1981	4.82	2.00	8.40	15.22	0.66
1982	5.69	3.57	15.09	24.35	0.82
1983	7.68	6.53	21.68	35.89	1.47
1984	8.87	8.91	26.32	44.10	1.83
1985	14.88	14.98	37.61	67.47	4.14
1986	23.60	19.01	49.93	92.55	10.84
1987	30.36	19.59	57.47	107.42	15.79
1988	33.12	23.74	66.26	123.12	20.06
1989	36.84	28.01	81.87	148.72	28.67
1990	39.44	32.53	90.80	162.77	35.28
1991	41.86	33.54	103.85	179.25	44.42
1992	45.27	33.53	112.47	191.27	51.08
1993	59.43	34.63	114.36	208.42	55.46
1994	62.47	32.44	111.01	205.93	61.20

Source: Australian Bureau of Statistics, Cat. No. 5306.0, Australia's International Investment Position

Identified borrowings by Australian banks rose from $4,142 million at the end of June 1985, to $55,461 million at the end of June, 1993, a rise of $51,319 millions. Over the same period the growth of gross private sector debt was $77.13 billion. Hence banks provided the great bulk of funds arising from their issuance of debt in various forms of deposit-creating liability or related instruments such as subordinated debt. The proportion was 66.4 per cent of the increase. During 1993-94 year the foreign funding activities by banks have expanded greatly. By the end of June 1994 the rise in borrowing abroad by banks amounted to $57,074 million which is 77.72 per cent of the rise in gross private sector debt since the end of June 1985. However this result appears to be an excessively high ratio reflecting a combination of falling foreign debt and increased bank borrowings abroad.[5]

[5] Preliminary data for 1995 points to a reduction in the ratio towards the two-thirds recorded between 1985 and 1993. When complete data for 1995 is available, the entire series will be recalculated.

At the end of June 1994 the Australian banks had funded $9,230 million of foreign activity or about 46 per cent of all non-official foreign assets. This prominence in international financial intermediation requires careful interpretation. Some part of the rapid expansion in this intermediation during the past three fiscal years is explained by the actions of many of the new banks authorised to conduct business during 1985. Whatever the misgivings about this method of financing domestic lending, especially for the conduct of domestic monetary policy, it has meant a ready access to foreign sources for that capital inflow to offset the current account deficit. When these activities of the new banks are combined with the expanded intermediary role of the established ones there can be no doubt about the marked change in the structure of the Australian capital account since 1984-85.

The significance of this intermediary role of the banking system should be understood. For the bulk of gross private sector foreign debt, there is no direct connection between the leader and the final user of those funds. There is no obvious nexus between the initial borrowings and their utilisation to expand productive capacity. Bank lending practices may lead to their use in funding consumption spending. That possibility weakens the market-oriented view of the role of foreign debt with its stress on optimality and investment spending.

c) Currencies

No less revealing is the pattern of currencies in which foreign debt has been incurred. The Australian dollar rose to prominence in the latter part of the 'eighties. At the end of June, 1985 the proportion of foreign debt denominated in Australian dollars was under 19 per cent according to the limited data available for Australian foreign debt domiciled abroad. By the same month in 1990 foreign currencies were the currency of denomination for just 57.4 per cent of the foreign debt. That sharp switch in just five years says much for the widespread acceptance of Australian dollar-denominated securities in international capital

markets. The Australian Government has been the major issuer of Australian dollar-denominated debt, being about 40 per cent of the total amount on issue. Afterwards there was a mild weakening with the proportion denominated in foreign currencies rising to 60.25 per cent at June 1993. In the next twelve months the upward trend was reversed with that ratio falling to 58.06 per cent. Despite the harsh conditions in many national capital markets as well as the eurocurrency ones, the Australian dollar has been a durable currency for denomination of assets and liabilities.

The data shown in Table 4 on the currency composition of foreign debt is from June 1987. This data is for all foreign debt and not just that domiciled abroad. At June 1995 some 17.87 per cent of foreign debt was domiciled in Australia. However, the differences between the series is minute. As is evident from Table 4 the proportion of foreign debt denominated in Australian dollars was higher than ever before during the June quarter 1995.

If the Australian dollar has gained acceptability as a currency of denomination in international capital markets then the striking feature of the recent Australian experience is the extent to which there has been a growing concentration on two currencies in debt raisings, namely the United States dollar and the Japanese yen. At the end of June 1993 these two currencies comprised over 87 per cent of the foreign currency denomination of Australian debt; the U.S. dollar being by far the most dominant at 73.3 per cent and the yen at 14.3 per cent. It should be no surprise to learn how these two ratios were 69.1 per cent and 17.9 per cent respectively at the end of June 1995. Switches in currencies of denomination in response to relative real earnings are readily forthcoming when maturities of financial instruments are short.

This situation is much different from about a decade ago. At the end of June, 1985 when a much higher proportion of foreign debt was denominated in foreign currency, the proportion in U.S. dollars was 68.0 per cent while for the yen

TABLE 4 :FOREIGN DEBT, CURRENCY COMPOSITION.
($ MILLION)

	Jun-87	*Jun-90*	*Jun-93*	*Jun-95*
United States Dollar				
Amount	52451	58280	91927	81353
Percentage	48.83	35.81	44.11	36.55
Swiss Francs				
Amount	5212	4816	2917	2655
Percentage	4.85	2.96	1.4	1.19
Deutsche Marks				
Amount	3933	3350	1485	2379
Percentage	3.66	2.06	0.71	1.07
Pounds Sterling				
Amount	3846	3197	2102	2186
Percentage	3.58	1.96	1.01	0.98
Japanese Yen				
Amount	9997	13155	17902	21036
Percentage	9.31	8.08	8.59	9.45
Other				
Amount	5378	10930	9115	8077
Percentage	5.01	6.71	4.37	3.62
Australian Dollar				
Amount	26601	69041	82972	104891
Percentage	24.76	42.42	39.81	47.13
Total	**107417**	**162770**	**208420**	**222576**

Source: Australian Bureau of Statistics, Australia's International Investment Position,Cat.Nos. 5306, 5363

it was 9.01 per cent. At that time the Swiss Franc was of not much less ranking than the yen at 7.36 per cent. By June 1990 the spread across currencies was wider mainly because of the relative decline in standing of U.S. dollar-denominated debt, a lapse soon to be reversed.

Changes in the currencies of denomination for Australia's foreign debt bring out the rapidity with which shifts can be made in debt denomination. An explanation for this phenomenon resting solely on the deregulation of foreign exchange markets so allowing any foreign currency denominated financial instrument to be traded at an appropriate risk premium does not impress because a volatile currency would deter lending owing to difficulties in assessing the risk premium. Moreover there is abundant evidence on the inability to devise effective forecasting of short-term exchange rate movements. This experience bears upon the maturity structure of the debt as well as the liquidity of markets in which

they are issued and the liquidity of the intermediaries borrowing the funds and then making the loans.

d) Maturity Structure

The analysis developed in preceding sections has dealt with aggregates for foreign debt whether measured net or gross. No less important is the structure of the debt held by foreign lenders. The shorter the maturity, the more exposed is the borrowing country, and individual borrowers within it, to the volatility of foreign capital markets. Most analyses of foreign debt in prior decades were predicated on the assumption that there will be no difficulty in rolling over, or replacing with new borrowings, the existing debt when it comes to maturity. Experiences across international capital markets would not suggest this as an easy assumption or one that, if realised, might not be gained other than at high interest costs.

Detailed information on the maturity structure of Australia's foreign debt is available only for debt which is not domiciled in Australia. Estimates for the maturity structure of that gross debt as the end of June in 1985, 1992, 1993, 1994 and 1995 are shown in Table 5. The estimates suggest that about 17 per cent of gross debt had a maturity within a year at the end of June, 1985. By June 1993 the proportion of debt maturing within the year was 46 per cent though it had fallen back to nearly 43 per cent in June 1995. Thus the refinancing of debt seemed to be open to any short-term dislocation of markets which might impede refinancing or impose higher interest changes.

The striking shift in the maturity structure of Australia's foreign debt in the decade years from June 1985 should have attracted much comment and generated worries about the re-financing of maturing debt. A maturity structure whereby 46 per cent or more of that debt had a maturity less than one year would have been considered unstable in the earlier decades. The expectation would have been for some disturbance in international capital markets to have triggered a

liquidity crisis sufficient to curtail investment and spending plans as well as a sharp devaluation of the currency.

Table 5: Foreign Borrowings Domiciled Abroad: 1985-95

Maturity of Levels Outstanding

Maturity	*June 1985*		*June 1992*		*June 1993*		*June 1994*		*June 1995*	
	$bn	%	$bn	%	$bn	%	$bn	%	$bn	%
Less than 1 Yr	10.4	17.1	66.8	41.9	82.2	46.4	77.5	45.3	78.0	42.7
1 Yrs< 2 Yrs	4.2	6.9	12.5	7.8	13.0	7.4	12.8	7.5	14.11	7.7
2 Yrs < 5 Yrs	10.0	16.5	28.8	18.1	32.1	18.1	31.8	18.6	38.4	21.0
5 Yrs < 10 Yrs	16.6	27.5	28.2	17.7	27.9	15.8	28.8	16.8	34.2	18.7
10 Yrs or more	11.5	18.9	5.1	3.2	5.9	3.3	4.4	2.6	5.8	3.2
At call up to 1 Yr	0.6	0.9	5.8	3.6	3.1	1.8	1.9	1.1	3.7	2.0
1 Yr or More	4.5	7.4	12.0	7.5	11.7	6.6	12.0	7.0	9.3	5.1
Unallocated	2.9	4.8	0.3	0.2	1.1	0.6	1.9	1.1	-0.7	-0.4
Total	60.6	100.0	159.5	100.0	177.1	100.0	171.2	100.0	182.8	100.0

Source: Australian Bureau of Statistics, Australia's International Investment Position, Cat No. 5306.0.

That this has not happened points to the major changes during the 'eighties in the nature and structure of international financial markets, most obviously in the growth of international securities markets and related swaps and derivatives activities. The effect of these developments has been to offer to both borrowers and lenders opportunities for the hedging of the risks associated with these transactions. Those possibilities for hedging market risks are found in interest rate and foreign exchange markets. Some features of those hedging activities are available in futures and options markets conducted by organised exchanges. But the mass of activities are in over-the-counter markets involving foreign exchange exposures and their hedging by way of currency options and swaps along with forward rate agreements. These markets are dominated by banks.

The remarkable strength of these over-the-counter markets must be no surprise owing to the dominance of banks in these transactions as well as in the transmission of funds between national economies. The hedging markets are the reverse of the coin of international capital flows.

The other features to which attention must be directed is the nature of the process whereby exchange rates are determined. The major influences on exchange rates are asset preferences rather than the demand and supply for goods and services in international markets. Foreign exchange markets have been dominated for the past decade by transactions in assets and liabilities being government and corporate financial instruments. Effort to maintain the real value of portfolios is the real purpose of those transactions.

What evidence is there of responsiveness to changing market conditions? There is evidence for market flexibility. Table 6 is an extension of the previous table on maturity structure. It looks at what has happened to the maturity structure during the 1994-95 financial year. From as early as February 1994 there was a lengthening of the maturity structure with borrowers "locking-in" low rates of interest to longer maturities in anticipation of rising rates internationally. This would point to a flexibility in borrowing arrangements.

Table 6: Foreign Borrowings Domiciled Abroad; 1994-95

Maturity of Levels Outstanding

Maturtiy	*June 1994*		*Dec 1994*		*Mar 1995*		*June-1995*	
	$ bn	%	$bn	%	$bn	%	$bn	%
Less than 1 Year	77.5	45.3	63.3	39.1	70.2	40.6	78.0	42.7
1 Year < 2 years	12.8	7.5	13.8	8.5	14.3	8.3	14.1	7.7
2 Years < 5 years	31.8	18.6	39.1	24.2	40.3	23.3	38.4	21.0
5 years < 10 Years	28.8	16.8	27.9	17.2	30.7	17.8	34.1	18.7
10 years or more	4.4	2.6	4.8	3.0	4.9	2.8	5.8	3.2
At call up to 1 year	1.9	1.1	3.8	2.3	3.5	2.0	3.7	2.0
At call more than 1 Year	12.0	7.0	8.8	5.4	9.1	5.3	9.3	5.1
Unallocated	1.9	1.1	0.3	0.2	-0.5	-0.1	-0.7	-0.4
Total	171.2	100.0	161.8	100.0	172.6	100.0	182.8	100.0

Source: Australian Bureau of Statistics, Australia's International Investment Position, Cat. No. 5306.0

4. Foreign Exchange Markets

There is much evidence to support claims that the exchange rate, most often measured in U.S.Dollar-Australian Dollar relativities, has greatly increased in volatility since the floating of the national currency at the end of 1983. However in the balance of the years of the 'eighties the Australian dollar has been less volatile than most major currencies, the Japanese currency being the exception. Nonetheless there are a few exchange rate measures which give a different result (Boulton et al, 1990).

What must be said to counter a singular view of exchange rate impacts following on the floating of the Australian dollar, is that there has been a low volatility of interest rates in the period. The same is true for other domestic financial instruments. Hence the worries for the volatility in foreign exchange markets must be set against the scope for greater flexibility in determining domestic policy arrangements.

There is no questioning the greater volatility of exchange rates from 1983. When the exchange rate series is compared with consumer prices there is little reason for concluding that currency depreciation has been exhausted through higher inflation. This is most obvious in the last few years. What this appears to mean in light of the available empirical evidence is that the nominal exchange rate does produce changes in the real exchange rate and thus switches in resource allocation between domestic and foreign markets. What triggers shifts in the nominal exchange rate is a change in the terms of trade. The gradual accumulation of foreign liabilities reduces the real exchange rate reflecting the greater claim on resources for servicing this expanded foreign obligation. The other major influence is the interest rate differential between Australian securities and those on offer in major foreign capital markets (Blundell-Wignall et al, 1993).

Nevertheless what may be perceived as a set of medium term connections is not necessarily applicable to the shorter term. This is the catch; there are no really satisfactory explanations of short term phenomena in foreign exchange markets (Krugman, 1993). While much more is known about the ways foreign exchange markets work, few dilemmas for policy-making have been resolved.

Fixed exchange rates to be found in monetary unions may bring a welcome stability in currency relativities. Yet that may be achieved at a cost of making domestic structural adjustments just so much more difficult. Flexible exchange rates are claimed to bring unstable units of account with consequent microeconomic costs owing to confusing shifts of price signalling (Krugman 1993, p.20)[6].

Thus there is a fascinating predicament commonplace to all foreign exchange markets. Fixed rate or single currency regimes may impose costs because of failure to adjust promptly to changed international economic circumstances. Flexible ones have their similar costs as well. Destabilising currency speculation can impose a misallocation of resources.

Indeterminacy cannot be resolved owing to an inability to treat clearly short-term impacts. That there may be destabilising speculation cannot be ignored. There are challenging hypotheses about sluggish adjustment (Gruen & Menzies). What can be said is that some national governments have been able to devise and then implement policies which have secured real growth of output and employment along with low inflation. Such achievements are reminders of the importance of policy settings in a symbiotic relationship with markets and their participants.

[6] With a world of fiat money in place for the past two decades since the abandonment of the last vestiges of a monetary standard with the collapse of the Bretton Woods system, it is incomprehensible to think that exchange rate volatility is the cause of unstable units of account. Rather, because national currencies have only relative value to each other, exchange rate volatilities reflect efforts to shift into those assets denominated in currencies perceived as most likely to rise relative to other currencies. The underlying problem is the lack of a monetary standard to provide a stable unit of account. Without it discussions and analyses of foreign exchange and capital markets will be inconclusive and thus interminable.

One matter is certain, perhaps the only one of significance for understanding what is happening in foreign exchange markets. This is the huge scale of transactions estimated to be about US$832 billion per day in April 1992 and now well in excess of US$1 trillion. These transactions are not about receipts and payments for international transactions in good and services. That type of activity would not amount to 5 per cent of these transactions. The main activity in foreign exchange transactions is about maintaining the real value of assets while hedging against surges in the real value of liabilities. How these asset markets work in the foreign exchange sphere is not well explained for their influences on the determination of real and nominal exchange rates.

5. Cautionary Notes

Rapid changes in the international financial environment fostered the growth in activity of international markets for debt securities especially eurocurrency ones. A major explanation for this growth lies in the need for a supply of effective securities and derivatives based on them in which banks and other financial institutions are able to fund customers needs but sustain hedging strategies as part of asset and liability management (FRB Kansas City, 1986). The difficulties with explanations of exchange rate behaviour in this country is not disheartening even though the bright expectations associated with the floating of the Australian dollar are much dimmed. There are salutary reminders in the experiences of foreign exchange activities that market performances are not always consistent or efficient in the use of information[7].

This point stands as a cautionary note for the analysis of the impact of foreign debt. The market-oriented interpretation of the decisions taken by borrowers in foreign capital markets offers an impressive explanation in terms of

[7] Questions about appropriate strategies for intervention in foreign exchange markets are raised by this circumstance. While the topic is one well beyond the reach of this paper, it is well to note that the complex interrelationships between underlying instruments and their derivatives enhance the prospects for successful intervention with the right timing.

optimising resource allocation across markets. Less satisfactory is the link to government borrowings though their use for sustaining or expanding government consumption spending seems at odds with the market-oriented approach and the sustainability themes from the conventional macroeconomic approach.

The uncertainty about what determines exchange rates does point to a role for macroeconomic policy in the management of foreign debt. So long as market participants cannot devise means by which to determine immediate exchange rate relativities they will be faced with higher transactions costs arising from hedging risk as well as the costs of managing in potentially volatile markets exposed to currency and interest rate changes with their implications for liquidity problems and default by counterparties.

Banks are the managers of much of the foreign debt. With their historical role in international financial intermediation restored, the banks borrow in foreign markets to fund domestic lending. This exposure as with other market risks and credit risk are subject to supervision by the Reserve Bank of Australia. The costs of managing that foreign exchange exposure are embodied in the margin between borrowing and lending rates as with any other type of exposure. There is no obvious tie between the funding activities of banks in foreign capital markets and allocation of their asset portfolios. Thus foreign lenders have relatively few direct ties with Australian borrowers, the exceptions being the very large companies issuing debt directly into those capital markets. The quality of Australian banks and their skills in risk management are the basis on which Australia's foreign debt is deemed acceptable because the banks are subject to international agreements on the prudential supervision and monitoring by the Reserve Bank of Australia.

When the Australian experiences with an expanding foreign debt from the middle years of the 'eighties are scrutinised, the sharp distinctions between the market-oriented and macroeconomic policy views are blurred. There are two firm reasons for this interpretation. Shorter term foreign exchange rates are subject to

much uncertainty. The great bulk of foreign borrowings are raised by banks and not companies dealing directly with foreign lenders.

6. Foreign Equity

The analysis of foreign debt and its management by the banking system does not suggest a situation in which there is likelihood of an acute and gross loss of confidence in the currency. The misgivings about currency instability and domestic interest volatility, usually tied to foreign debt exposures, may be directed wrongly. There is an extensive exposure to foreign equity investment in Australia. Some assessment of the links between foreign equity flows and domestic financial and economic activity is required. If it is deemed reasonable to conclude that sustained reliance on foreign borrowings may bring exposure to relative rise in interest rates compared to other similarly placed economies owing to scale of borrowings, their foreign holdings of equity may be sensitive to similar relative risk appraisals.

In Table 7 the position with foreign equity investment in Australia is stated for the end of June in each year between 1976 and 1995. The total for foreign equity investment in Australia at the end of June 1995 is shown in Table 1 as $172,472 millions. In Table 7 this is divided between Direct Equity investment in companies or branches and the faster growing Portfolio Equity which is dominated by Corporate Equity Investment. Whereas Portfolio Equity investment was just 49.2 per cent of Direct Equity investment in Australia at the end of June 1985 the ratio was 68.7 per cent at the same time in 1995.

Foreign Equity investment may be looked at in a variety of ways. Distinctions might equally be made between the re-investment of earnings - retained earnings - and inflows of new funds. Thus the impacts of foreign equity flows on the economy would reflect a variety of influences including the level of activity and the rates of return. When quarterly flows of direct and portfolio

TABLE 7: FOREIGN EQUITY INVESTMENT, AUSTRALIA, 1976-1995

	Direct Equity			Portfolio Equity	
End of June	Total:	of which		Total:	of which
		Corporate	*Branches*		*Corporate*
1976	5645	3206	1361	1324	725
1977	6196	3511	1270	1436	734
1978	6816	3933	1456	1873	769
1979	7765	4401	1710	2170	860
1980	18718	14950	1917	7663	6348
1981	22229	17705	2631	9338	7794
1982	22933	17507	3235	7812	5647
1983	24915	18648	3980	10129	7970
1984	26472	19660	3997	11300	8564
1985	29587	21845	4249	14558	11468
1986	31576	23795	4007	16461	13351
1987	44300	35299	5737	28431	24254
1988	53047	42396	7236	24624	20585
1989	68671	55182	9961	26144	22268
1990	76975	61981	11810	26796	23564
1991	81631	64398	14202	30163	26770
1992	84476	66957	14326	33231	29582
1993	90042	70099	16617	38923	35375
1994	99913	78881	17729	64423	58447
1995	102394	83731	15129	70348	65350

Source: Australian Bureau of Statistics, Australia's International Investment Position, Cat. Nos. 5306, 5363.

equity are compared between December 1986 and March 1995, the variability of the portfolio stream is much higher than for the direct one.

One important question is whether or not such a volatile series influences activity in Australia. The test chosen for examining this possibility was whether or not portfolio equity funding from abroad had an impact on stock exchange activity. Any contribution would not be alone. Influences would stem also from the exchange rate, the price of equities and the money supply.

The focus was to explain quarterly equities turnover measured in millions of dollars on the Australian Stock Exchange. The explanatory variables used are:

i) Portfolio Equity: Quarterly Flows, not seasonally adjusted, $millions
ii) Corporate Portfolio Equity: Quarterly Flows, not seasonally adjusted, $millions
iii) Broad Money: Reserve Bank measures, $millions, not seasonally adjusted
iv) M3: Reserve Bank measures, $millions, not seasonally adjusted
v) Money Base: Reserve Bank measures, $millions, not seasonally adjusted
vi) Trade-Weighted Index: Reserve Bank measures, end of period
vii) US$-A$: not seasonally adjusted, end of period
viii) All Ordinaries Index: Price Index, not seasonally adjusted, average of period.

This experiment reflects ordinary least squares estimation procedures. The results are set out in Table 8 for sixteen separate equations.[8] Quarterly data used in this experiment are shown in the Appendix. The estimated equations pass standard diagnostic tests for the absence of serial correlation and heteroscedasticity, for normality of the residuals and for appropriate functional form. One weakness lies in an interaction of the exchange rate measures with the money ones. This is revealed in relatively high estimates of standard error for the exchange rate variable however it is measured.

That Corporate Portfolio Equity should emerge a little more strongly as an explanatory variable in these experiments than all Portfolio Equity is not surprising. The difference between the two series incorporates some residual activities which might lie equally in the category of Direct Equity. However, there is not much to choose between the two in this exploration.

The signs for the explanatory variables are correct. The negative ones for the exchange rate variable reflect the impact of a higher rate on likely future

[8] I acknowledge the provision of support from Jack Towe with the computations.

returns to the foreign funds manager. The money measures tie growth to value of turnover.

TABLE 8: EXPLANATORY VARIABLES FOR EQUITY TURNOVER, QUARTERLY (1987 Q1 - 1995 Q1)

Equations	Portfolio Equity(-1)	Corporate portfolio Equity(-1)	Broad Money	Money Base	M3	Trade Weighted Index(-1)	US$-A$	US$-A$(-1)	All Ordinaries Index(-1)	Constant	R-Bar Squared	DW
1	0.83 (3.45)		0.03 (1.75)			-605.7 (-3.43)			14.58 (5.26)	20609.6 (1.70)	0.81	1.89
2		0.97 (3.72)	0.03 (1.73)			-587.3 (-3.40)			14.47 (5.34)	19818.7 (1.67)	0.82	1.93
3	1.20 (4.79)		0.03 (1.34)						17.29 (5.56)	-17755.0 (-3.22)	0.74	1.69
4		1.38 (5.08)	0.02 (1.31)						17.06 (5.62)	-17292.9 (-3.21)	0.76	1.69
5	1.15 (4.82)			0.67 (2.37)					15.1 (4.76)	-19972.9 (-3.89)	0.77	1.75
6		1.32 (5.10)		0.65 (2.34)					14.91 (4.84)	-19485.4 (-3.88)	0.78	1.76
7	0.93 (3.78)			0.67 (2.52)			-30116.6 (-2.10)		13.87 (4.56)	4722.4 (0.37)	0.8	1.96
8		1.09 (4.08)		0.65 (2.50)			-29496.6 (-2.12)		13.75 (4.64)	4675.8 (0.38)	0.81	1.99
9	0.77 (3.14)			0.79 (3.12)				-40282.3 (-3.0)	12.98 (4.5)	11768.5 (1.02)	0.82	1.94
10		0.91 (3.37)		0.77 (3.08)				-38666.4 (-2.92)	12.95 (4.58)	10864.0 (0.96)	0.83	1.96
11	0.85 (3.61)			0.53 (2.06)		-521.0 (-2.96)			13.67 (4.80)	14688.5 (1.17)	0.82	1.95
12		0.99 (3.88)		0.51 (2.05)		-505.9 (-2.94)			13.58 (4.89)	14096.5 (1.15)	0.83	1.98
13	0.82 (3.44)				0.03 (1.88)	-564.2 (-3.2)			14.4 (5.21)	20700.3 (1.72)	0.82	1.90
14		0.97 (3.72)			0.03 (1.85)	-547.5 (-3.19)			14.3 (5.29)	19918.8 (1.7)	0.83	1.94
15	1.16 (4.7)				0.03 (1.85)				16.5 (5.34)	-15639.8 (-3.33)	0.76	1.70
16		1.33 (4.98)			0.03 (1.82)				16.3 (5.41)	-15291.1 (-3.33)	0.77	1.71

Note: T statistics are in parentheses

The lag structure with the All Ordinaries Price Index points to rising prices inducing great activity in equities so enhancing the value of turnover. No doubt these same influences explain how the inflow of portfolio equity funds stimulate activity.

The purpose of this experiment is to look beyond the customary linking of foreign debt accumulations to economic instability, most of all as revealed in currency and interest rate instability. Prior sections questioned the strength of arguments which are directed to the sustainability of debt exposures. The market-oriented view of debt exposure is more convincing though subject to substantial qualification owing to indeterminacy within short-term foreign exchange markets and the ways in which the international intermediation process is monitored and supervised.

Questions about the deleterious impacts of foreign investment have turned to become ones about the potential instabilities to be found in equity as much as in debt markets.

7. Concluding Note

The main thrust of this contribution was initially to assess analyses of the role and impact of foreign debt, measure and appraise the size and structure of Australia's foreign debt and determine what is significant in its growth. The results point to a much more complicated situation than was recognised let alone admitted in debates during the latter part of the 'eighties.

Market-oriented interpretations on the role of foreign debt are more compelling than the conventional ones reflecting worries about its sustainability. However, that judgement is subject to substantial qualification owing to uncertainties in foreign exchange markets, supervision of banking activities, and opaque relationships between the liabilities created by intermediation and their application to creation of assets. Macroeconomic policies have roles to play not just in foreign exchange but to the fostering of domestic savings to curtail reliance on foreign trading.

The experiences suggest a need to look at foreign equity participation, or the portfolio equity component of it, if there is to be a balanced appraisal of potential instability arising from foreign financial sources. The experimental evidence points to sharemarket turnover for equities to be sensitive to foreign portfolio participation. Hence liquidity strains and market volatility for asset prices and interest rates (or market rates of return) could just as easily have their origins in equity as in debt markets.

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APPENDIX

Data Base for Regressions

OBS.	Total Equity Turnover	Change in Portfolio Equity	Change in Corporate Portfolio Equity	USD - AUD Exchange Rate	All Ordinaries Price Index
86Q4	12377.0	3572.0	3562.0	.6519	1473.2
87Q1	17107.0	3170.0	3327.0	.6803	1689.8
87Q2	20884.0	2914.0	2626.0	.7129	1765.5
87Q3	27008.0	-2263.0	-2356.0	.7099	2249.2
87Q4	16202.0	-330.0	-603.0	.7011	1318.8
88Q1	10795.0	-766.0	-535.0	.7241	1415.3
88Q2	13629.0	-448.0	-175.0	.7859	1555.0
88Q3	12927.0	-228.0	35.0	.7981	1551.6
88Q4	11507.0	310.0	134.0	.8531	1487.2
89Q1	10494.0	-502.0	-379.0	.8360	1459.6
89Q2	14404.0	1940.0	1893.0	.7655	1521.1
89Q3	18117.0	-283.0	-324.0	.7648	1736.0
89Q4	13622.0	297.0	276.0	.7858	1649.8
90Q1	12654.0	509.0	1115.0	.7615	1535.8
90Q2	12335.0	129.0	229.0	.7697	1500.7
90Q3	14386.0	2407.0	2058.0	.8109	1396.8
90Q4	12046.0	175.0	285.0	.7775	1279.8
91Q1	12311.0	101.0	286.0	.7817	1444.2
91Q2	15763.0	684.0	577.0	.7702	1506.2
91Q3	15569.0	1271.0	1264.0	.7873	1562.0
91Q4	16483.0	1011.0	864.0	.7761	1651.4
92Q1	14900.0	-908.0	-864.0	.7576	1582.6
92Q2	16103.0	1694.0	1548.0	.7557	1644.7
92Q3	15729.0	-1451.0	-917.0	.7239	1485.0
92Q4	15516.0	1604.0	1247.0	.6886	1549.9
93Q1	19385.0	2633.0	2355.0	.6934	1667.4
93Q2	22060.0	2906.0	3108.0	.6869	1738.1
93Q3	28037.0	11631.0	10295.0	.6607	1964.4
93Q4	30080.0	8812.0	7889.0	.6673	2173.6
94Q1	38929.0	2035.0	2433.0	.7099	2053.1
94Q2	31318.9	3022.0	2455.0	.7259	1989.1
94Q3	29249.0	1296.0	2407.0	.7404	2028.7
94Q4	29903.5	-1588.0	-1576.0	.7621	1912.7
95Q1	27369.3	755.0	673.0	.7419	1906.5

Data Base for Regressions

OBS.	Broad Money	Money Base	Money Supply M3	Reserve Bank TWI
86Q4	172220.0	13551.7	105870.3	54.4300
87Q1	176476.0	13703.7	109192.7	54.1000
87Q2	178808.3	14029.3	113402.3	55.6300
87Q3	186546.0	14306.3	117746.3	55.5700
87Q4	192404.0	15144.3	122738.0	52.0000
88Q1	195819.3	15241.3	124841.7	53.1300
88Q2	199638.3	15603.7	127700.0	57.9700
88Q3	207694.3	16186.7	133490.7	60.9300
88Q4	219859.0	16629.3	143148.0	62.6700
89Q1	231259.3	16583.0	153404.0	62.8300
89Q2	237432.7	16611.0	161537.7	59.4000
89Q3	247226.3	16897.3	174409.3	59.2000
89Q4	253478.0	16961.0	179736.0	60.7300
90Q1	258711.0	16922.7	184321.0	59.4000
90Q2	260198.3	17476.0	188111.7	60.4700
90Q3	264757.7	17862.7	194313.7	61.1300
90Q4	270483.7	18074.3	201205.3	57.1300
91Q1	268894.0	18183.3	200447.7	58.3700
91Q2	265171.3	18524.3	200604.0	59.4700
91Q3	267317.3	18659.7	204005.7	60.4000
91Q4	270256.0	18997.7	206180.3	58.0700
92Q1	270007.3	18975.7	206995.0	57.0700
92Q2	269734.3	19105.3	207087.3	56.6700
92Q3	273104.3	19457.7	219423.0	52.6700
92Q4	274695.3	20093.0	221640.3	52.0300
93Q1	277061.7	20137.7	226245.0	52.4000
93Q2	277095.0	20456.0	226768.7	50.4000
93Q3	280200.0	20733.7	231249.0	48.6700
93Q4	284102.3	21430.3	235346.0	49.7700
94Q1	290457.3	21610.7	241961.0	53.2300
94Q2	294082.7	21916.0	244952.7	53.4000
94Q3	300041.0	22499.7	249704.0	53.7300
94Q4	309599.3	23129.3	258066.7	54.9300
95Q1	313798.7	23246.7	261271.7	52.7000

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