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Factor Income Shares, the Banking Sector, the Exchange Rate, and the New Zealand Current Account Deficit

Geoff Bertram*

The clean float of the New Zealand exchange rate exposes financial institutions to potentially undesired volatility of the nominal exchange rate. In the New Zealand exchange-rate adjustment process of 1998-2000 the data seem consistent with the idea that, intentionally or unintentionally, the behaviour of the overseas-owned trading banks amounted to management of the exchange rate (support for the Kiwi) during the adjustment period from 1998 to 2000. Whether this represented the exercise of market power in a coordinated fashion, or was simply a natural decentralised response to market incentives facing the banks, is not clear. The paper suggests that in the absence of large volumes of short-term credit advanced by overseas parents to their New Zealand bank affiliates, the nominal exchange rate would have been under far greater downward pressure during 1998-99, and the economy might have faced a classic financial and exchange-rate crisis in the wake of the Asian meltdown.

1. Introduction

New Zealand has maintained a cleanly floating exchange rate since 1985, and since 1989 has switched its entire sovereign public debt from foreign to local currency. This policy stance is in line with standard proposals for avoiding crises (e.g. Rogoff, 1999). Floating exchange rates, however, are prone to excess volatility, which may adversely affect major financial institutions such as New Zealand's mainly-overseas-owned trading banks. Some implications of the overseas ownership of the banks have recently been discussed by Hull (2002). This paper extends that debate by discussing the potential role of overseas-owned trading banks in stabilising a cleanly-floating floating exchange rate.

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* *Geoff Bertram, School of Economics and Finance, Victoria University of Wellington.*
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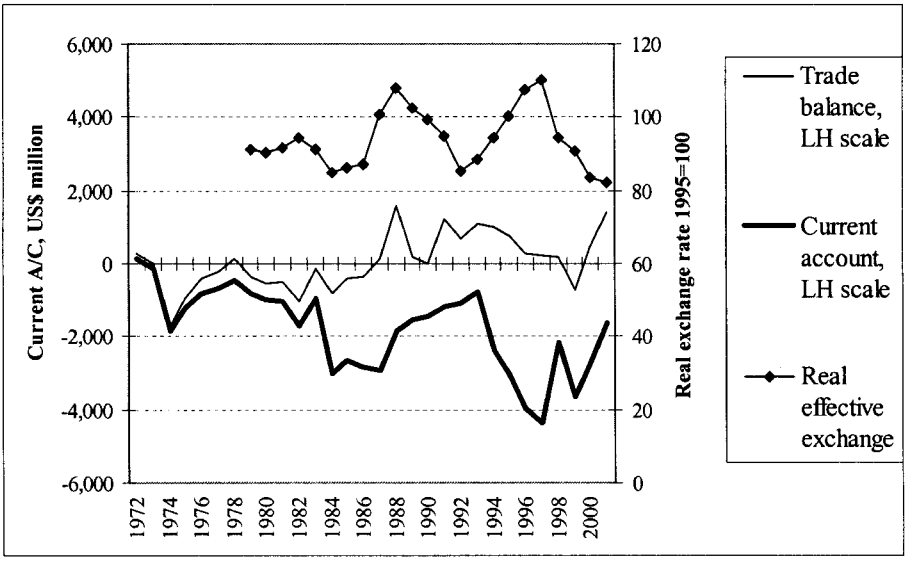
Figure 1: New Zealand's Current Account, Trade Balance (Goods and Services) and Real Effective Exchange Rate, Calendar Years 1972-2001



5Source: IMF *International Financial Statistics*

In the mid 1990s New Zealand experienced a sharp rise in its nominal and real exchange rate, accompanied by a worsening of the current account balance. The economy's net overseas investment position weakened rapidly, and the sustainability of the overseas debt position came into question. The Asian crisis of 1997-98 added to the adjustment problems facing policymakers.

The subsequent events shown in Figure 1 seem to confirm the ability of a floating exchange rate regime to correct an external imbalance, provided monetary policy is not too tight. From over 8% of GDP in calendar 1997, the current account deficit had been reined in to 3% by 2001, due to strong growth in the trade balance on the back of a real exchange rate depreciation of the order of 20%.

This paper explores the anatomy of the worsening current account deficit of the 1990s and the mechanism of adjustment back towards external balance. An important problem for diagnosis of external balance is that the official balance of payments statistics are probably not a good indicator of the extent of net excess demand in the foreign exchange market in the mid 1990s, because of the use of accrual rather than cashflow accounting procedures to measure investment income. It is net flows through the foreign exchange market, rather than statistical accruals, that drive financial crises. In New Zealand's case, the accrual data probably overstate the external cashflows deficit in the mid 1990s but understate it in the two years following the Asian financial crisis of 1997-98.

It will be argued below that overseas ownership of the New Zealand banking sector was a powerful contributor to the smoothness of the adjustment process

during 1999 and 2000, because the market power of the major banks enabled them in effect to manage the floating exchange rate and thus slow the pace of currency depreciation. The proposition here is that the overseas parents of the main New Zealand trading banks had a sufficient stake in exchange rate stability to make them willing to act as external lenders of last resort to the New Zealand economy, plugging what might otherwise have been a critical gap in the balance of payments during the period of downward exchange-rate adjustment[1].

The paper has five sections. The first outlines broad trends in the external balance, government debt, and the real exchange rate, since the mid 1980s. The second reviews data on the changing claims on total product exercised by domestic labour, domestic capital, and overseas capital. The third discusses the balance-of-payments consequences of profit realisation by overseas-owned firms. The fourth section looks at the detail of the balance of payments statistics to see how the current account deficit, and specifically the net investment income deficit, was financed over the decade to 2001. The fifth looks at the role of the banking sector (M3 institutions) in supporting the foreign exchange market during the process of adjustment back from the potentially critical current account deficit of 1997-98.

2. The Background

Over the two decades from the first oil shock in the mid 1970s to about 1998, the New Zealand current account exhibited a secular downward trend overlain by a cyclical pattern of strengthening during downturns of the business cycle and weakening during periods of expansion; see Figure 1. Until 1980 it was generally possible to identify the current account with the commercial balance on goods and services, but from 1984 a wedge opened between the two as New Zealand's overseas indebtedness rose steeply, and servicing costs on external liabilities became a major claim on the economy's external earnings.

While the current account worsened, the real effective exchange rate showed no secular trend through to 1999, although it did exhibit wide swings reflecting the general stance of monetary policy.[2] As of 1997-98 the current account deficit stood at around 8% of GDP; the real exchange rate, though falling, was still in line with its long-run historical level; and there was some prospect of current-account unsustainability.

The pattern shown in Figure 1 up to 1999 is not what one might have predicted *a priori*. In neoclassical macro models embodying an intertemporal sustainability constraint, rising external indebtedness imposes a requirement for the balance of trade to move progressively into surplus in order to fund outflows of profits and interest. With free capital mobility and a floating exchange rate, the required

[1] This proposition admittedly rests on inference from observed behaviour rather than on analysis of primary evidence regarding the banks' motivation. It is therefore an hypothesis for further investigation rather than a settled conclusion.

[2] Tight, and including some explicit elements of nominal exchange rate targeting, during the late 1980s and mid 1990s; looser in the early 1990s and late 1990s when domestic recessions eased inflationary pressure.

adjustment is expected to be achieved via real exchange rate depreciation to produce an appropriate combination of expenditure switching and domestic demand restraint.

Suppose that major participants in the foreign exchange market form expectations of the nominal exchange rate on the basis of some forward-looking view about long-run current-account fundamentals (cf Dornbusch and Fischer 1980). Then, unless New Zealand's domestic inflation rate was expected to outrun the world rate (an unlikely proposition following the Reserve Bank Act 1989), or unless an autonomous sharp acceleration of tradeable-goods-led growth was anticipated (increasingly unlikely as the pattern of post-1984 structural change and the poor payoffs to deregulation became apparent during the 1990s), the nominal exchange rate should have been marked down endogenously at a rate sufficient to strengthen the trade balance as the investment income balance worsened.

Though possibly masked by large inflows of funds in the early-mid 1990s as overseas investors moved in to take control of New Zealand's privatised utility sectors, expectational pressures for downward adjustment of the New Zealand real exchange rate seemed strangely absent prior to the Asia crisis. In Lane and Milesi-Ferretti's cross-country regression analysis of the relationship between the current account and the real exchange rate (Lane and Milesi-Ferretti 2000a Figure 1 p.16), New Zealand appeared as an outlier among industrial economies, with a real exchange rate which had failed to adjust in the usual way to slow real GDP growth and rising international indebtedness between 1975-85 and 1986-96.

In the late 1990s there seemed to be three possible explanations for the observed apparent strength of the real exchange rate in the face of long-run current-account deterioration:

- Rational agents might have been viewing the New Zealand economy as being on an intertemporally-sustainable path, with short-term dissaving expected to be unwound in the future by a shift to trade-account surpluses; hence real exchange rate adjustment was expected to occur in due course, but with a delay, while the current-account deficit widened to accommodate optimal short-run borrowing (Kim, Buckle and Hall 2000). In support of this interpretation it should be noted that the private sector led the run-up of overseas debt exposures throughout the 1990s as Government paid down virtually all its sovereign foreign-currency debt and reduced its total debt exposure[3]. By 1997 virtually all Government securities held by non-residents were denominated in New Zealand currency, with exchange rate risk borne by the holders. Hence in the late 1990s all exchange rate risk exposures were borne by the private sector.
- A second possibility is that the statistics may be misleading. The trade account, which tracked close to long-run balance (Figure 1), may have been a better guide than the current account balance to net excess demand in the foreign exchange market. Indeed, the recorded current account deficit may have been more to do with accrual-based book entries than with actual cashflows – hence

[3] Debt Management Office 2002.

the absence of persistent excess demand in the foreign exchange market which might have driven nominal exchange-rate depreciation. It is possible also that nominal exchange-rate expectations were formed on the basis of the observed trade balance rather than the overall balance of payments; the sharp deterioration in the trade balance which became apparent by the middle of calendar 1999 coincided with the beginning of a sustained depreciation which had brought the nominal exchange rate down 20% by the middle of calendar 2000 (Figure 5).

- Markets may have been holding up the nominal exchange rate on some sort of bubble reflecting non-rational expectations or coordination failure, with the consequent risk of a sharp run on the currency and a possible string of bankruptcies or defaults among companies with foreign-currency-denominated debt

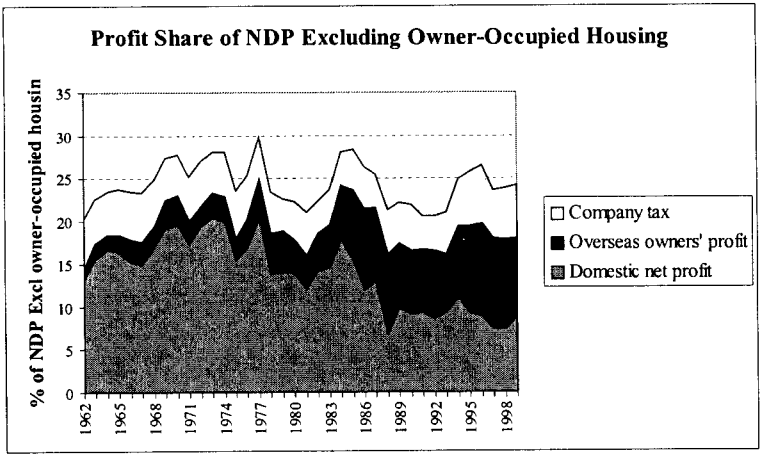
Since 1998, the real exchange rate appears to have made a smooth downward adjustment, the trade balance has moved into surplus, and the current account deficit has pulled back to less than 5% of GDP. The long-run trade surplus required to sustain servicing of the increased external debt may now be in sight, and the chance of an externally-driven financial crisis seems much less than at the time of the Asian collapse.

New Zealand's recent economic performance thus seems to provide support for a freely floating exchange rate as a policy prescription for small open economies with high indebtedness. Under a fixed exchange rate regime New Zealand would arguably have faced much sharper adjustment pressures in the past two years.

3. Factor Shares in the Product

The long-run after-tax share of profits in New Zealand's GDP from 1960 to 1999 was about 30%, with a temporary squeeze during the oil shocks and inflation acceleration of the late 1970s (Bertram 2001 Figure 3 p.22).

Figure 2



While the aggregate gross profit share exhibited no long-run change, the economy's corporate operating surplus shifted dramatically into overseas hands, as Figure 2 shows. Out of an after-tax net profit share (that is, the post-tax gross share minus depreciation) of 20% of Net Domestic Product, the share of New Zealand-resident owners dropped from 14% of NDP in the early 1980s to less than 8% in the late 1990s, while the share of overseas owners rose from under 4% of NDP to nearly 10%[4]. This increase corresponded to an extensive transfer of large enterprises into overseas ownership – especially privatised assets in the non-traded sectors of the economy.

Table 1 sets out the amount of after-tax profit accruing to overseas investors, net of the official New Zealand national-accounts estimate of direct reinvestment of investment income by overseas recipients and net repatriation of investment income from overseas by New Zealand residents. The allocation of this net debit item between repatriation overseas (outward cashflow from New Zealand, requiring overseas-currency funding), and retention in the local economy via acquisition of various New Zealand dollar-denominated financial assets, is of considerable significance in interpreting the foreign exchange market flow implications of the current account.

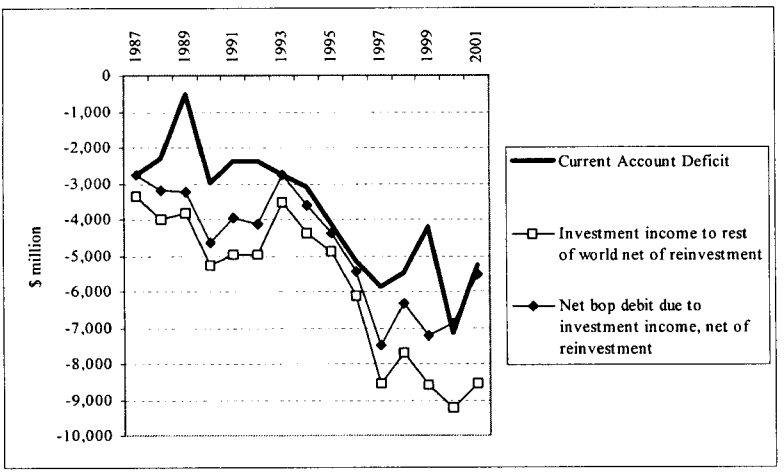
[4] Net rather than gross data are used here because of the difficulty of disaggregating depreciation between locally-owned and foreign-owned assets.

Table 1: Profits Accruing to Overseas Owners of Assets in New Zealand, Net of Reinvestment, As Shown in the National Accounts

	(1) Investment income to rest of world, net of reinvestment, $ million	(2) Investment income from rest of world, net of reinvestment, $million	(3) Overall net balance of payments debit on investment income (1) - (2)	(4) Net investment income debit (column (3)) as % of GDP	(5) Current account Balance $ million
1987	3,375	608	2,767	5.0	-2,747
1988	3,995	788	3,207	5.1	-2280
1989	3,839	610	3,229	4.8	-504
1990	5,263	636	4,627	6.5	-2982
1991	4,975	1,019	3,956	5.4	-2380
1992	4,964	826	4,138	5.7	-2376
1993	3,511	766	2,745	3.6	-2756
1994	4,385	752	3,633	4.5	-3087
1995	4,910	530	4,380	5.0	-4107
1996	6,126	698	5,428	5.9	-5,152
1997	8,548	1,052	7,496	7.7	-5,892
1998	7,722	1,386	6,336	6.4	-5,495
1999	8,604	1,349	7,255	7.2	-4,206
2000	9,253	2,353	6,900	6.5	-7,133
2001	8,535	3,019	5,516	4.9	-5,284

ources: Statistics New Zealand, *Upgraded National Accounts (2000) - Hot Off The Press*, Table 1.4; *National Accounts (Year ended March 2001) - Hot Off The Press*, Table 1.4; INFOS series BOPA.S5AC3.

Figure 3: Overseas Investment Income Compared with the Current Account Balance



Source: Table 2.

Table 1 shows that in New Zealand currency terms, $66 billion of net investment-income debits accrued to the balance of payments between the 1987 and 2000 March years, of which $52 billion accrued after 1990 and $33 billion after 1995. Figure 3 shows that this net debit corresponds very closely in both magnitude and timing with the officially recorded current account deficit, and can be regarded as the primary driver of that deficit given that the goods and services balance (roughly the textbook "trade balance") has been in surplus or in balance throughout the period.

The national accounts data appear to rule out direct reinvestment as a major "absorber" of the investment income debit, except for a brief spell of plowing-back during the early-mid 1990s. This, together with the miniscule size of the redefined capital account in the new balance of payments accounts prepared under the IMF's BOPM5 methodology[5], raises the question of how overseas investors' profits have been realized, and hence how much overseas-currency funding has been required to service these profit debits.

[5] Most of what used to be termed the "capital account" is now recorded in the "financial account" which covers overseas acquisition of financial assets in New Zealand, including company shares and bonds. The "capital account" is now restricted to capital transfers and direct purchase of non-financial non-produced assets. All data used in this paper have been taken from BOPM5 series, which in most cases do not extend back before 1992. The previous BOPM4 methodology does not link well with the new series, especially in the capital and financial accounts.

4. Profit Realisation

Profit accrual as a current-account debit item does not necessarily have the same impact on the flow demand for foreign exchange as items such as imports and debt servicing which require actual cash payments reasonably close to the date of the real transaction.

As the IMF notes[6], "Despite the connotation, the balance of payments is not concerned with *payments*, as that terms is generally understood, but with *transactions*. A number of international transactions that are of interest in a balance of payments context may not involve the payment of money, and some are not paid for in any sense. The inclusion of these transactions, in addition to those matched by actual payments, constitutes a principal difference between a balance of payments statement and a record of foreign payments."

When profits accrue to overseas owners of a New Zealand company[7], these profits are entered as a debit item in the current account on the basis that they represent a claim on the New Zealand economy. How that claim is exercised is not, however, immediately apparent from the statistics. Broadly speaking there are three main ways in which profits and interest may be "realised" by the overseas owners:

- **Direct reinvestment**: the profits are used to fund purchase of fixed assets in New Zealand, increasing the overseas owners' productive stake in the New Zealand economy while requiring no conversion into foreign currency.
- **Purchase of New Zealand dollar-denominated financial assets such as shares, debentures and bank deposits**: the overseas investors hold their accrued profits in liquid or near-liquid form within the New Zealand currency area, which means that a future decision to shift these funds to other countries would involve converting them through the foreign exchange market. Such short-term holdings of financial claims represent a contingent liability carried into the future by New Zealand, and they could be a key source of funding for a run on the New Zealand dollar.
- **Repatriation**: New Zealand dollar profits are converted to foreign currency as they accrue, passing as cash flows through the foreign exchange market.

The economic implications of an increased current account deficit which is driven almost entirely to net profit accruals depend on the behaviour of the overseas owners to whom the profits accrue. So far as economic growth goes, to the extent that these profits are retained in New Zealand and provide finance for the development of productive enterprises in the local economy, the transfer of ownership of a large part of the economy's capital stock into foreign hands might be argued to make little difference to economic performance, except to the extent

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[6] International Monetary Fund, *Balance of Payments Statistics Yearbook 1999* Part I p.xxii.

[7] Only companies owned 25% or more by overseas investors were included in the quarterly survey of investment income up to March year 2000. Thereafter a 10% ownership threshold was used.

that there are wealth effects flowing from the reduced participation of New Zealand residents in the economy's operating surplus[8].

When overseas-owned profits are directly reinvested or otherwise retained in the form of local-currency assets, the investment income accruing as a debit item in the current account will be offset by a credit entry either in the capital account or in the financial account, reflecting overseas agents' acquisition of fixed assets in New Zealand. From the point of view of the balance of payments in terms of payments (cashflows) rather than transactions (accruals)[9], the overall effect on the flow excess demand for foreign exchange is zero, since no actual flows of funds take place through the foreign exchange market. In principle, all of the profit outflows appearing in the balance of payments statistics could be pure book entries with no corresponding cashflows – in other words the entire New Zealand current account deficit of the mid 1990s could have been a statistical artefact of balance of payments accounting, with no immediate requirement for the deficit to be actually financed from any sources external to the firms involved.

A current-account deficit on investment income which is directly plowed back into reinvestment in productive assets - the first realisation channel sketched above - has no effect on the net flow demand for foreign exchange, and hence does not tend to depress the nominal exchange rate.

The second profit-realisation possibility identified above – acquisition by overseas-resident profit recipients of New Zealand-denominated financial assets – is analogous to direct reinvestment in terms of economic growth and the exchange rate. By acquiring local-currency financial assets, the overseas investors potentially provide finance for investment in the New Zealand economy, albeit through financial intermediaries rather than directly on their own account. The current-account debit item corresponding to the accrued profit debit item would then be offset by an equal financial-account credit reflecting portfolio or equity investment (depending on the type of financial assets acquired by the overseas investors). The main difference between this realisation channel and direct reinvestment is the extent to which the funds remain footloose (liquid), as distinct from becoming locked into relatively illiquid sunk-cost investments.

The third possible realisation process is repatriation. If overseas investors choose to realise their current profits in foreign-currency form rather than in the form of a rising stake in the local economy, then profit flows will pass through the foreign exchange market as an incremental flow demand for foreign currency.

Other things equal, one would expect a rising net outflow of realised profit income to put downward pressure on the exchange rate of the local currency, as the

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[8] The widening gap between GDP and GNP over the period since 1985 has meant that hardly any of the (very modest) recorded growth in New Zealand's per capita GDP flowed through to living standards; around 80% of the increment to GDP 1985-1999 accrued to non-residents, and the growth dividend to New Zealanders was correspondingly only about 20% of the increase in output See Philpott (1929) p.4 Figure 1.

[9] To avoid confusion, it may be worth noting that the "Overseas Exchange Transactions" statistical series prepared and published by the Reserve Bank of New Zealand until 1984 corresponds to what are here described as "payments".

mechanism for achieving the required overseas transfer of real purchasing power (Samuelson 1971 p.332). In terms of the long-standing literature on the "transfer mechanism", exchange rate depreciation would have the effect of moving the trade balance into sufficient surplus to cover the repatriation of profits, assuming only that the Marshall-Lerner conditions are satisfied.

The need for real exchange rate depreciation in the face of accelerated profits outflow may be averted or deferred in three particular cases. The first is when some third party stands ready to finance the repatriation of profits as they accrue, at the prevailing exchange rate[10]. The second is when the economic activities from which the profits flow are themselves net incremental earners of foreign exchange[11] to an extent sufficient to self-finance profit repatriation. (This means that the trade surplus required to finance repatriation emerges autonomously without requiring depreciation). The third is a drastic deflation of the domestic economy sufficient to cut net import expenditure by the amount of the required profits transfer (Metzler 1942)[12].

The second outcome above is often assumed in standard models of external borrowing and foreign direct investment, in which initial capital inflow raises the home production of traded goods, and hence subsequent net export earnings, sufficiently to service the resulting increase in international liabilities (Barro and Sala-i-Martin 1995 Chapter 3). This process leaves the home population with undiminished, or possibly increased, levels of material welfare relative to the situation without the capital flows. The initial current account deficit during the period of capital inflow is thus followed by a period of current account balance, within which a balance-of-trade surplus funds the outflow of repatriated profits on the overseas-owned capital stock.

This was not, however, the pattern of overseas investment in New Zealand during the 1990s. The large capital inflows to purchase privatised state enterprises involved the takeover of established, mature industries rather than new investment; and the increased supply of foreign exchange was captured by Government to pay down its overseas-currency debt. Assuming higher returns on overseas-owned equity than on sovereign debt, this privatisation of the economy's external

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[10] As Ohlin (1929) pointed out in his famous debate with Keynes, Germany succeeded in more-than-financing its reparation payments in the late 1920s by borrowing abroad from willing lenders.

[11] Note that this net increment must be the outcome after taking account of second-round and subsequent flow-through effects of the operation of the relevant overseas-financed projects, since the financing requirement for profit repatriation is an increase in the economy's aggregate trade surplus relative to what it would have been without the overseas investment.

[12] The reference to "net imports" is to take account of the possibility that domestic demand deflation may increase export supply at the same time as it reduces import demand; the effect on the trade balance is given by $d(X - Z) = \frac{\partial X}{\partial Y} dY - \frac{\partial Z}{\partial Y} dY = (\frac{\partial X}{\partial Y} - \frac{\partial Z}{\partial Y})dY$, so that both the import propensity and the export propensity of a Keynesian model are relevant to the outcome.

indebtedness must have tended to increase the aggregate debt-servicing burden in the long run.

With the privatisation of state-owned enterprises largely completed by the mid-1990s, new opportunities for overseas investment in the New Zealand economy became fewer and the incentives for overseas investors to repatriate profits increased. Through 1998 overseas holdings of New Zealand dollar-denominated financial assets continued to rise at a pace comparable with the accrual of investment income to overseas holders; but the foreign-held portfolio became increasingly concentrated in short-term assets (see section 5 and Table 8 below), implying increased likelihood of a run on the currency. In overseas financial crises such runs have led either to official support operations by the central bank or to abrupt exchange rate depreciation.

In the New Zealand case there seem to be some grounds for suggesting that such a potentially destabilising run began in late 1997 following the Asian crisis, and continued through 1998. To understand why this did not cause a collapse of the exchange rate, it is necessary to trace the role of the M3 institutions in the face of downward pressure on the nominal exchange rate. This is the task of the next two sections.

5. Funding the Balance of Payments, 1993-2001

As a working identity, the balance of payments constraint can be decomposed as follows:

$$TB + SB + CT - \Pi + KA + DI + RE + PI + OI + EO = 0$$

where

TB	is the trade balance
SB	is the services balance
CT	is net current transfers
Π	is investment income accruing to rest of world
KA	is capital account transactions in the BPM5 format, net credit
DI	is net direct investment inflows excluding reserves
RE	is net disposal of overseas reserve assets
PI	is net portfolio investment credits
OI	is net "other investment" credits
EO	is errors, omissions, and unsurveyed capital transactions

To address the financing of profit transfers to overseas investors we rearrange, to put net investment income accruing to rest-of-world on the left-hand side and the remainder of the balance of payments on the right:

$$\Pi = (TB + SB + CT) + KA + (DI + RE + PI + OI + EO)$$

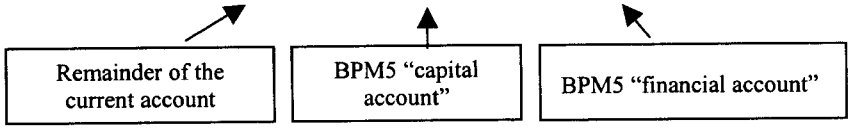


Table 2 shows the data in this form for the period 1993-2000, with the annual accrual of overseas investment income debits in Column 2, and the remainder of the balance of payments in Columns 3-10, giving a sense of how balance-of-payments equilibrium was sustained through the 1990s in the face of the rising accrual of profits to overseas investors. The volatility of several of the series is striking.

For the 1993-2000 period the detailed components of the foreign-exchange flows identity can usefully be grouped into four series, shown in Figure 3:

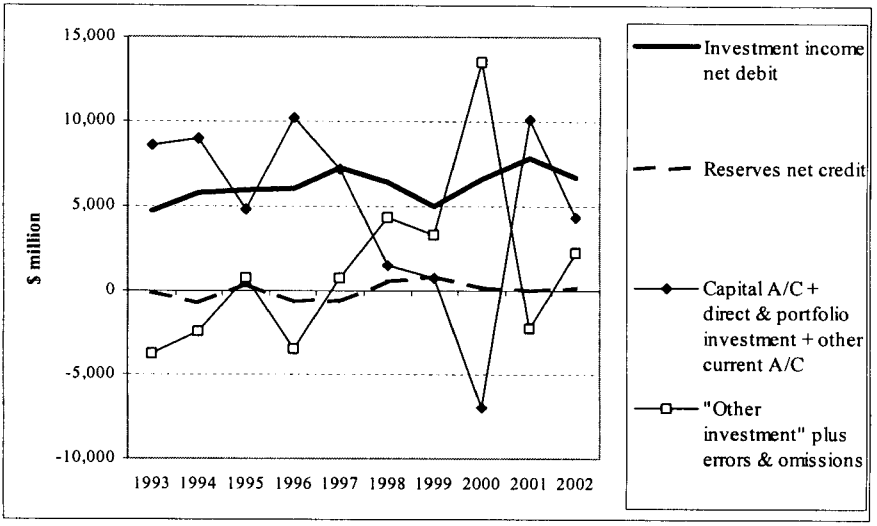
- the gross income to overseas investors, which was to be financed (II, Column 2 in Table 2);
- reserves movements, which are not a significant part of the story (*RE*, Column 8 in Table 2)
- four sources of funding which fell radically over the eight year period before bouncing back in 2001: the capital account balance, net direct investment, net portfolio investment, and the current account surplus excluding investment income outflows (Column 11 in Table 2). These four combined resulted in a net credit of $10 billion in 1996, fell below $23 billion by 1998 and then moved to a deficit of $7 billion in 2000 (the last resulting almost entirely from heavy portfolio disinvestment).
- two sources of short-run or unspecified funding which became dominant in the statistics over the period to 2000 and then fell away sharply in 2001, namely "other investment" and "errors and omissions" (Column 12 in Table 2). These two combined exhibited a net deficit of $3.5 billion in 1996, a surplus of $4 billion by 1998, and a surplus of $13.5 billion in 2000 (see Figure 3).

Table 2: Financing of the Flow of Investment Income Accruing to Overseas Investors, 1993-2000

arch years	(1) Current Account balance	(2) Invest-ment income debit II	(3) Remainder of current account TB+SB +CT	(4) Capital account (BPM5 format) KA	(5) Direct investment net credit DI	(6) Portfolio investment net credit PI	(7) Other investment net credit OI	(8) Reserves net disposal (credit) RE	(9) Errors, omissions and unsurveyed investment EO	(10) Residual balancing item	(11) Current account residual, capital account, direct investment, portfolio investment	(12) Other investment and errors & omissions
BOPA INFOS code	S5AC3	S5AD1B2	(1) + (2)	S5AC4A	S5AC2B1 minus S5AD2B1	S5AC2B2 minus S5AD2B2	S5AC2B3 minus S5AD2B3	S5AD2B5	BOPA.S5AC 4B6	(2)-(3)-(4)-(5)-(6)-(7)-(8)-(9)	(3)+(4)+(5)+(6)	(7)+(9)
1993	-2,756	4,703	1,947	666	6,663	-721	-172	-62	-3,618	0	8,555	-3,790
1994	-3,087	5,753	2,666	1,041	1,025	4,252	-3,857	-738	1,364	0	8,984	-2,493
1995	-4,107	5,956	1,849	1,464	1,625	-140	1,818	379	-1,039	0	4,798	779
1996	-5,152	5,999	847	2,134	7,503	-333	1,142	-675	-4,621	2	10,151	-3,479
1997	-5,892	7,264	1,372	1,446	5,268	-921	287	-614	426	0	7,165	713
1998	-5,495	6,399	904	54	2,661	-2,146	5,192	586	-851	-1	1,473	4,341
1999	-4,207	4,976	769	-403	-250	684	1,556	874	1,745	1	800	3,301
2000	-7,133	6,604	-529	-415	1,622	-7,706	10,082	172	3,378	0	-7,028	13,460
2001	-5,284	7,826	2,542	-184	7,833	-114	-2,353	-8	106	4	10,077	-2,247
2002	-2,672	6,675	4,003	1,392	-81	-990	5,944	84	-3,679	2	4,324	2,265

Source: INFOS *and* Hot Off The Press Balance of Payments for the Year to March 2002.

Figure 4: Components of the New Zealand Balance of Payments



The pattern shown in Figure 4 and Table 2 points clearly to a dramatically accelerating shortfall in the usual sources of funding for the investment income debit during the three years to March 2000. Usually the sum of other current account, capital account, and direct and portfolio investment would have roughly sufficed to cover the realisation of net overseas investment income. A shortfall in these normal funding flows became apparent in the 1998 and 1999 March years, widened sharply in 2000, and then was reversed abruptly by a surge of direct investment in 2001. The March year 2000 (corresponding mainly to calendar 1999) was the time when the adjustment process might have collapsed into financial crisis, as the funding of the balance of payments became dependent upon flows of funds which were either extremely short-dated in character or omitted from the statistical reporting framework altogether.

The key role of "other investment" in the 2000 March year is apparent in Table 2. Some third party evidently entered the foreign exchange market to the tune of some $10 billion dollars in that year - a massive inflow of funds which must have had a significant dampening effect on the pace of exchange-rate depreciation. The magnitude of this item resembles, indeed, the scale of currency support interventions undertaken by central banks in other countries at times when normal investment inflows have reversed. The Reserve Bank of New Zealand, however, undertook no direct support operations during this period. The massive inflow of funds under the "other investment" heading during the adjustment period 1998-2000 came from another source: the major overseas-owned trading banks.

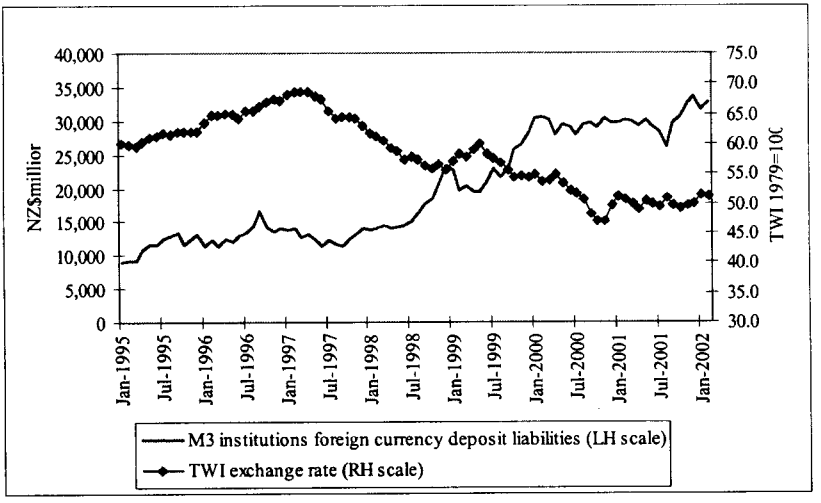
6. The Banks and the Exchange Rate Adjustment

Figure 5 juxtaposes two trends of the late 1990s: a falling nominal exchange rate from December 1997 through June 1998, and the rising short-term foreign-currency liabilities of the M3 institutions.

An hypothesis suggested by these data runs as follows. Up until the end of calendar 1997, profits accruing to overseas investors were realised largely in the form of retained earnings plowed into short-term local-currency bonds, rather than repatriated as flow demand for foreign exchange. Then a potential transfer problem kicked in as portfolio investment in New Zealand slowed and repatriation became the main realisation channel. The nominal exchange rate began to move accordingly to induce real expenditure switching, reflected in the pickup of net exports. However the usual J-curve lag meant that there was a period of funding shortfall in the foreign exchange market, from the beginning of calendar 1998 through to some time in 2000. Whether fortuitously or by design, at precisely this point the M3 institutions injected $10 billion of overseas-currency credit to their New Zealand subsidiaries.

From $12 billion in October 1997, foreign-currency deposits in the M3 institutions by overseas "associates" had risen to $30 billion by September 2000. This could be described as a *de facto* overdraft facility provided to enable profit repatriation to be realised without radically depressing the nominal exchange rate. In effect, the private banking sector undertook the sort of currency support operation which in other countries has usually been initiated by central banks.

Figure 5: Nominal Exchange Rate and M3 Institutions' Foreign-Currency Liabilities 1985-2002



Source: RBNZ Historical Tables B1 and C5

Stock data on the international investment position are consistent with this story. From the mid 1990s there occurred an accelerating shift in the stock composition of overseas investment in New Zealand, away from long-dated assets and equity, and towards liquid financial assets such as currency and call deposits. The trend then abruptly reversed (at least so far as the statistics are concerned) in March year 2001. This is apparent from two sources: the "International Investment Position" statistics produced by Statistics New Zealand, and the "Balance Sheets of M3 Institutions", which appears as Table C4 in the Reserve Bank's *Financial Statistics*.

The RBNZ table divides both assets and liabilities of the M3 institutions (hereafter referred to as "the banks") into New Zealand currency and foreign currency claims. Table 3 shows the breakdown. The key feature is the rise of foreign-currency funded liabilities from 12% of total liabilities at the end of 1996 to 25% by late 2000.

Table 3: Balance Sheets of M3 Institutions: Main Aggregates: $ billion

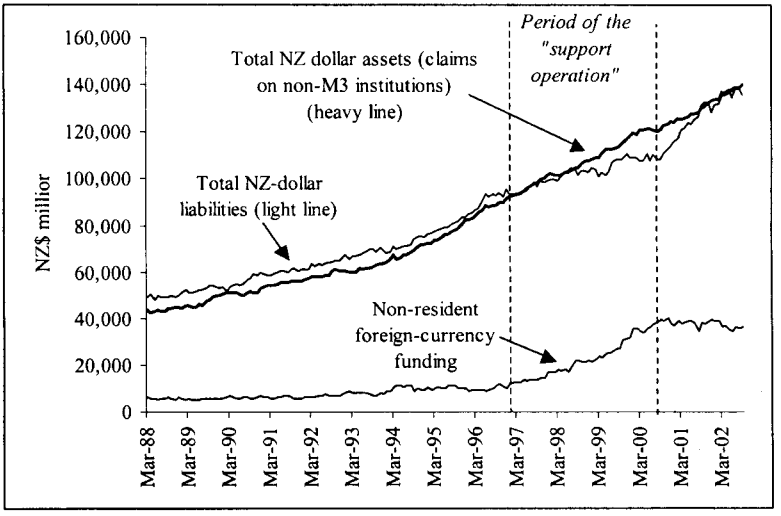
	Total NZ dollar funding	Total Foreign currency funding	Capital, reserves and other liabilities	Total liabilities	NZ Govt bonds & Treasury bills	Total NZ dollar claims	Total foreign currency claims	Other Assets	Total assets
March				Year-end data					
1989	51	10	8	69	5	53	5	4	69
1990	53	11	8	72	5	59	5	1	72
1991	58	9	7	75	6	62	3	1	75
1992	63	9	7	79	8	66	2	0	79
1993	67	10	8	85	9	68	3	2	85
1994	71	13	8	91	8	76	4	2	91
1995	77	12	9	98	6	82	4	3	98
1996	87	12	11	109	3	96	3	5	109
1997	93	16	10	118	2	106	3	6	118
1998	99	21	16	136	4	114	5	11	136
1999	101	28	15	143	7	122	5	9	143
2000	107	37	18	162	5	139	7	10	162
2001	121	42	28	191	6	149	14	21	191
2002	135	39	19	193	5	165	14	8	193

Source: RBNZ Financial Statistics Table C4

As Table 3 shows, between March 1996 and March 2000 the foreign-currency funding liabilities of M3 institutions increased by $25 billion – enough to cover the bulk of the $28 billion of net investment income to the rest of world that accrued during that period (see Table 1). From 1995 to 1998 an increasing share of the counterpart funding for profit outflow came from this increase in the banking sector's foreign currency liabilities, which was dominated by short-term lending from overseas parents to the New Zealand subsidiaries[1]. In 1999 and 2000 the banks carried the entire funding task – effectively providing overdrafts to foreign capitalists to realize and repatriate profits, if one makes the leap to linking these two series in a direct sense. In March year 2001 the response of the trade balance to real depreciation, and of direct investment to the prospect of a stronger economy, removed the pressure, and bank balance sheets stabilised.

The obvious issue here is causality: was the rise in offshore foreign-currency funding of New Zealand bank liabilities a response to an increase in the demand for credit in New Zealand, or was it a supply-side change by the banks in the way they funded their local-currency lending? The time-series data for key M3 balance-sheet variables point to the second of these. Figure 6 shows that the banks' New-Zealand-dollar claims on resident non-M3 borrowers grew steadily throughout the period 1990-2002, while the growth of local-currency funding suddenly fell behind from 1997 to 2000, being largely replaced by foreign-currency funding from offshore affiliates in those years.

Figure 6: Funding the Growth of M3 Institutions' NZ dollar Assets



Source: RBNZ Table HC4

[1] The relevant column in RBNZ Table C4 is headed "Funding from Associates".

There was, in other words, a sharp behavioural change on the liabilities (supply of funds) side of the banks' balance sheets, with no matching change in the trend of asset growth. The sudden inflow of funding from banks' parents in 1998-99 is thus not attributable to demand-side explanations such as the anecdotal surge in home loans at about that time. (The subsequent catch-up of NZ-currency funding was, incidentally, also predominantly sourced from non-residents.)

The other stock data of relevance to our enquiry are the figures on New Zealand's "international investment position". The main components of the international balance sheet are shown in Table 4. The stock of "direct investment" rose rapidly in the mid 1990s, from $23 billion in 1992 to $63 billion by 1998, but then remained static through to 2000 before dropping sharply by March 2001. The stock of "portfolio investment" fell sharply between March 1999 and March 2000 before rising steeply in the following year. The 1999-2000 cessation of growth in the stock of direct and "portfolio investment" was disguised by the sharp pick-up in "other investment" since 1998.

7. Conclusion

New Zealand's clean float of its exchange rate, with the central bank not involved in attempts to manage the foreign exchange market, exposes financial institutions to the possibility of undesired volatility of the nominal exchange rate. Looking at the New Zealand adjustment of 1998-2000, the available data are consistent with the proposition that, intentionally or unintentionally, the behaviour of the overseas-owned trading banks amounted to management of the exchange rate during that period. Whether this represented the exercise of market power in a coordinated fashion, or was some sort of natural decentralised response to market incentives facing the banks, is not clear. What is clear is that in the absence of this large-scale extension of short-term credit by overseas parents to their New Zealand bank affiliates, the nominal exchange rate would have been under far greater downward pressure during 1999. Indeed, one might speculate that, without this private-sector substitute for an activist central bank, the economy might have faced a classic financial and exchange-rate crisis in the wake of the Asian meltdown.

Table 4: Components of New Zealand's International Investment Liabilities - $ million

	Direct investment			Portfolio investment			Other investment					Total
IIPA codes	S5ALA11	S5ALA12		S5ALA21	S5ALA22		S5ALA31	S5ALA32	S5ALA33	S5ALA34		Liabilities
	Equity capital and reinvested earnings	Other capital	Total	Equity securities	Debt securities	Total	Trade credits	Loans	Currency and deposits	Other liabilities	Total	
1992	17,698	5,206	**22,904**	855	25,205	**26,060**	855	15,662	8,997	326	**25,840**	74,804
1993	21,244	6,565	**27,809**	2,473	26,164	**28,637**	933	11,780	13,235	460	**26,408**	82,854
1994	27,220	7,118	**34,338**	1,451	29,830	**31,281**	1,039	10,566	13,211	410	**25,226**	90,845
1995	31,966	7,415	**39,381**	2,283	28,221	**30,504**	1,038	9,859	15,076	136	**26,109**	95,994
1996	40,695	8,518	**49,213**	425	28,118	**28,543**	956	9,887	16,889	115	**27,847**	105,603
1997	43,641	10,279	**53,920**	1,503	27,500	**29,003**	1,064	10,165	18,315	500	**30,044**	112,967
1998	50,618	12,335	**62,953**	376	31,347	**31,723**	1,242	11,999	15,125	1,014	**29,380**	124,056
1999	50,632	12,489	**63,121**	453	32,862	**33,315**	1,132	11,774	17,790	130	**30,826**	127,262
2000	50,969	12,798	**63,767**	817	26,905	**27,722**	1,246	12,222	30,318	177	**43,963**	135,452
2001	39,970	9,711	**49,681**	9,301	49,077	**58,378**	1,433	36,891	9,181	735	**48,240**	156,299
2002	39,500	8,792	**48,292**	9,625	48,591	**58,216**	1,387	45,334	11,594	526	**58,841**	165,349

Source: INFOS : Note: the methodology used to compile these statistics changed between the 2000 and 2001 years; the apparent shift from" currency and deposits" to" loans" is probably a reclassification.

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