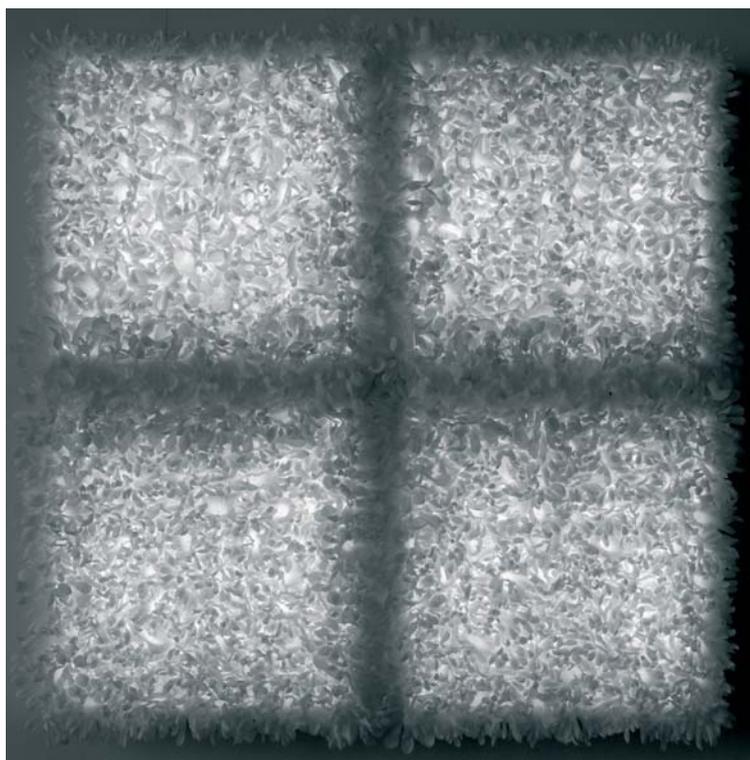


# The rise of the new export economy: What does it mean?

By Roger Bowden

*Our economy is broadening its income base via the export services sector, but will this promote national saving? The outcomes could include higher short-end interest rates.*



Niki Hastings McFall, White Sunday, 2003, Perspex lightbox with fabric flowers, Chartwell Collection, Auckland Art Gallery Toi o Tamaki

The new century ushers in a NZ economy that is already looking a lot different from the old. Substantial broadening of the income generation base via the export services sector has diversified international exposures and spread risks through time. The business cycle will likely become less ‘stop-go’ and more ‘go’, which will aid corporate planning. But unless the same developments lead to enhanced national saving, an outcome could be generalised expenditure inflation, reflected either in measured inflation or more probably in a real exchange rate appreciation over the longer term. Government saving and transfer expenditure, the National Super fund, the baby boomers and other influences, will all influence the macroeconomic balance, both internal and external. The probable outcome is a stronger and more stable secular real exchange rate, and chronically higher short end interest rates relative to the rest of the world.

## Introduction

Coping with fluctuating and unpredictable exchange rates is an uncomfortable fact of life for many NZ businesses. This is naturally so for export and import operations, but indirectly so for others, who inherit an exposure to the business cycles that follow from exchange rate readjustments, or to policy induced interest rate responses. Long term corporate planning is difficult without some degree of certainty about the future path of exchange rates and interest rates. Shorter term production and hiring is subject to the episodic stop-go associated with a pronounced business cycle. Hedging decisions designed to smooth earnings or cash flow exposures have instead precipitated corporate crises. Business concern at the instability has given rise to study

initiatives on common currencies.<sup>1</sup> However for the foreseeable future, the NZ dollar will remain the OECD's smallest freely traded currency and business will have to live with it.

At the same time, the NZ economy has in very recent years been going through some changes of potential significance for the future course of exchange rates, interest rates and the business cycle. These changes initially rise from the changing nature of NZ's export base, and in particular, the rise of the new export services sector, which involves altered linkages both to the external world and back into the NZ domestic economy. This paper sets out to explain what these are, and what the changes might mean for the future path of NZ exchange rate and interest rates.

### **The real exchange rate, and why it is important for business**

As far as most business is concerned, exchange rates as such (or nominal rates) are of less significance than the real exchange rate, for it is the latter that has the closer relationship with the value of the firm. So it is logical to start by explaining just what the real exchange rate is, and why it is important for operating cash flows.

#### **The real exchange rate**

The real exchange rate comes in two forms:

(a) The *dynamic* version of the NZD real exchange rate measures the extent to which nominal exchange rate changes compensate for inflation rate differentials. To compute it, take the nominal % appreciation of the NZ dollar and add the difference between the NZ inflation rate and that of our partner. So if the NZ inflation rate is 3%, the US inflation rate is 1.5% and the Kiwi is appreciating at 4% a year, then the NZD/USD real exchange rate is appreciating at  $(4\%) + (3\% - 1.5\%) = 5.5\%$ . The dynamic real exchange rates can also be regarded as the difference between the NZ inflation rate and the foreign inflation rate, where the latter is converted to NZD terms.

(b) The *levels* version of the real exchange rate converts the % changes to an index relative to some given base level; say 100 at a designated base year.

The theory called purchasing power parity says if a country runs a rate of inflation that is above that of its neighbours, one would expect its currency to be depreciating by just that amount. In terms of the above definition, this would mean that its real exchange rate should stay just the same. In practice, however, this does not hold. If a country's currency is instead static, and inflation is still higher than its trading partner, then its real exchange rate is said to be increasing. In such a case, NZ dollars might be certainly worth less in NZ, but I can still take them to New York and buy goods at the same price, once I have converted at the

unchanged exchange rate to USD. So my Kiwi dollars are worth more in terms of their command over real goods and services. In reality, departures of this kind from purchasing power parity are pronounced. The real exchange rate varies a considerable amount over the business cycle, being roughly pro-cyclical. It can also change over the longer run. Figure 1 and 2 plot the NZ real exchange rate against the trade weighted index (TWI) and the US dollar, respectively. Over the past 20 years, it has, if anything showed a slightly rising trend against the TWI, whereas the nominal exchange rate has weakened. A trend is hard to detect against the USD. One or two other countries also show real exchange rate trends against their TWI's, such as Japan (rising); Australia (falling), while most others are roughly stationary.<sup>2</sup> Finally it is as well to remember that exchange rates are a two way price, and can move because of developments in the partner economies.<sup>3</sup> The analysis that follows is concerned only with domestic NZ developments.

Precisely which currency the manager should be concerned with is a matter of the currencies in which revenues and costs are effectively accrued. Most agricultural and forestry products are priced in USD, while costs are in NZD. For exports to Japan it would be the Yen v. NZD real exchange rate. A policy maker concerned with the broad picture would choose the TWI. Issues of the functional and reporting currency can also arise.

#### **Why the real exchange rate is important for business**

Exporters complain about a rising real exchange rate. It typically reflects an appreciating nominal currency – so they get less for their product – and rising costs at home, via the rate of inflation. In this respect, an ongoing benchmarking debate in the dairy industry has compared the parvenu giant Fonterra to the silvertail minnow *Tatua*, usually to the detriment of the former. But as very recent events have shown, the payout margin has more to do with who has happened to hedge the USD exposure at the right time, and less to do with product mixes or managerial rectitude. It is the reverse for importers, who benefit from a rising real Kiwi dollar, which magnifies their competitive advantage against home producers, or against importers from Australia if the real Australian Dollar (AUD) rises along with the Kiwi.

Likewise if a NZ firm sets up business offshore, it becomes exposed in various ways to real exchange rate movements. If the Kiwi strengthens against the Australian dollar but the price they charge in AUD for their product cannot rise, then the NZ exporter feels the pinch. Ideally they would want Australian inflation compensating for the depreciating Australian dollar, which is just another way of saying they would like the real exchange rate to stay put, or even go the other way. Of course, they can do one or two things to protect themselves,

FIGURE 1: New Zealand TWI real exchange rate since 1984

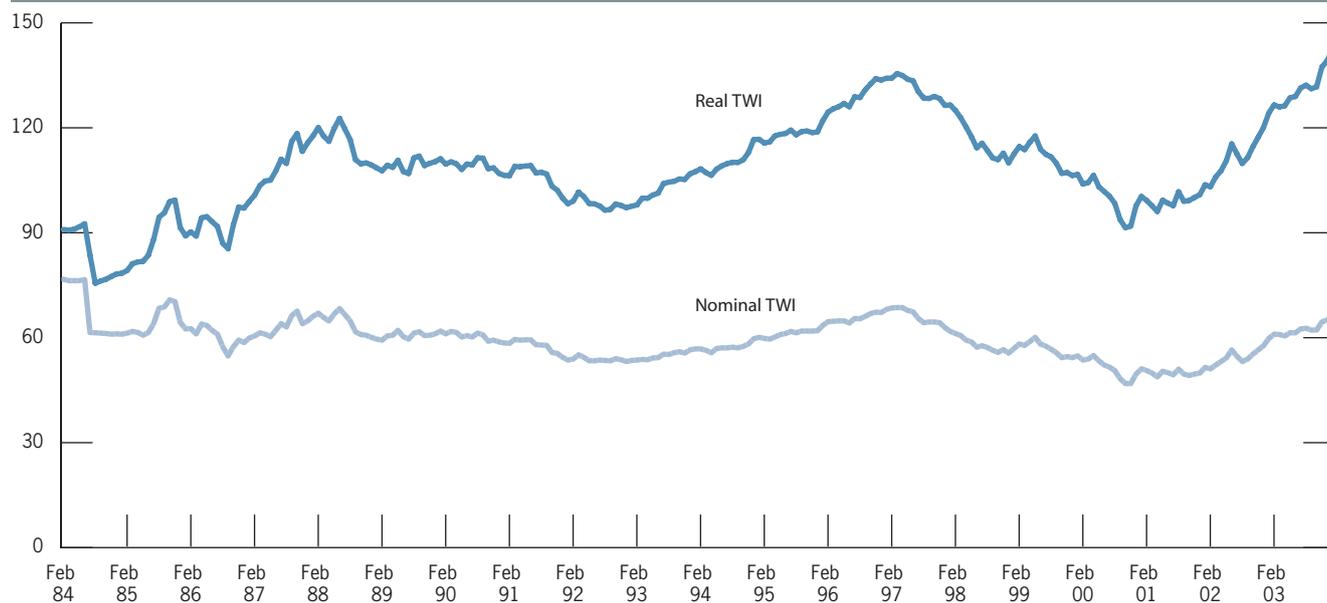
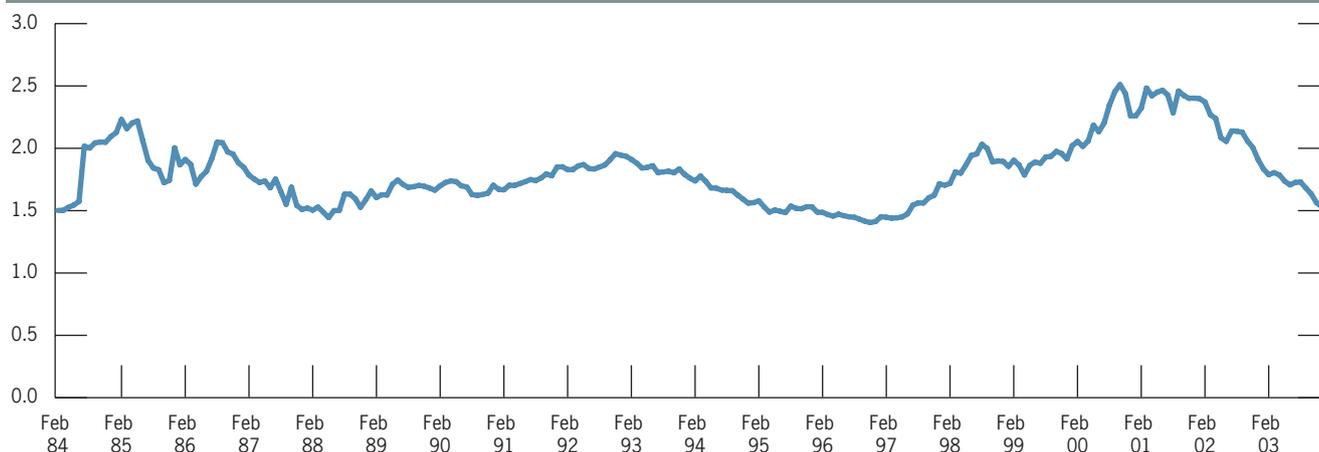


FIGURE 2: Real exchange rate New Zealand v. US



like borrow in AUD rather than NZD, but even this is easier said than done – how do they know what is going to happen to the respective currencies and inflation 3-5 years out?

The above are said to be economic exposures, or sometimes real operating cash flow exposures. Firms can also protect themselves over the shorter term against nominal exchange rate exposures by hedging with instruments like forwards and options (“transactional exposures”); but again, there is a judgement call that can at times go spectacularly wrong. The then NZ Dairy Board booked a charge of \$495.6 million against its 1998 earnings from a hedge that turned bad, though subsequently made the fortunes of its successor Fonterra by selling USD receipts forward while the Kiwi was at a low. The Solid Fuels Corporation and the then NZ Apple and Pear Marketing Board provided further chastening case histories at about the same time, namely the fallout from the Asia Crisis of 1997-8. Academic textbooks some-

what insouciantly treat the whole issue of when to hedge as a technical exercise, ignoring that all-important issue of when to do it and when not to do it.

There are plenty of qualifications to the issue of how to handle cyclical exposures. If one was fairly sure that the real exchange rate was a mean reverting series, one could simply ride out the waves. When the real Kiwi is weak exporters do well, and when it is strong exporters do poorly, but it all balances out over the longer run. The above figures point up several problems with this idea. First the cycles can last a fairly long time, 4-6 years, and even worse, one is not sure just how long. Second, there may in the future develop a real exchange rate trend. It would be very damaging to a prospective offshore operation if the real Kiwi continued to rise long term. The problem is that one does not know whether or not it will. So in all cases, the real exchange rate is a source of much potential trouble.

Even if the business is not concerned with imports or exports as such, there is always a cyclical exposure, especially for 'aggressive' cash flows that cohere positively with the business cycle – building, entertainment, media and many more. The NZ business cycle is driven above all by its external sector. Exports are the lead sector, eventually after a lag of 1-2 years flowing through to other sectors via industrial supply linkages and in turn leading to asset price rises, house prices and new building. Income generation and expenditure in the economy as a whole inherit the exposure to

## “The NZ business cycle is driven above all by its external sector”

real exchange rate movements.

Thus if the economy could collectively find some 'invisible hand' way of smoothing the cycles in real exchange rates, industry as a whole would benefit. It would make the corporate planning process a lot simpler, and in the process mitigate some of the uncertainty that ultimately depresses business investment and new business ventures, whether offshore or onshore. A smoother and more predictable real exchange rate would also entail less periodic pressures on the inflation front, arising from the cycles of boom and bust in industrial capacity. This introduces some important issues like the relationship between inflation and the real exchange rate, so we are not yet quite finished with economics.

### Can we explain the real exchange rate?

A number of conceptual frameworks exist that attempt to provide insight into why a country's real exchange rate might move. Most of them can be cast into a reasonable concordance with the following. The two primary determinants of the real exchange rate are:

(a) The price ratio between non-traded and traded goods and services. Non-traded means that the product or service is produced and supplied here in NZ but not exported or imported. Hence the price of non-traded goods and services are very much set here at home. Examples are as diverse as haircuts, electricity, many building costs, transport, university fees and others. Traded goods have their prices set primarily overseas, though if we are a large supplier this will also play a role. To a first approximation we can think of the offshore prices of traded goods as being beyond our control.

(b) The terms of trade, as the ratio between the price of exports and the price of imports.

Both the above price ratios have to be expressed relative to those of our partners. Thus if either or both our non-tradables: tradables or terms of trade (export: import price ratios) increase, then our real exchange rate will appreciate.

Most of the action probably takes place on the first ratio, with the terms of trade playing a supporting role. The same action also influences the general rate of inflation. As earlier

mentioned, export prices and volumes set the NZ business cycle in motion. In the upswing of the cycle, consumer and investment expenditure accelerate, creating what used to be known as expenditure inflation, as distinct from price inflation, which is merely one possible outcome. Formerly we used to have a model in which expenditure inflation led automatically to price inflation. According to this story, excessive expenditure – and ipso facto deficient saving – led to inflation in non-tradable goods. It also sucked in more imports, and this led to a depreciation in the NZD exchange rate. Hence the prices of imports also increased. As a result, price inflation.

However in more recent years, we have come to see things differently. The same events that produced expenditure inflation also lead to a demand for credit. Because saving is deficient, this has to come from offshore; overseas savers from Europe or Japan are financing our home building and credit binge. Hence there is an accompanying inflow of money to support mortgages and other borrowing. In addition, there may be inward flows of direct and indirect equity investment to the expanding economy. And although the current account of the balance of payments is deteriorating, all is well, because the inflow on the capital account is financing it quite nicely. Indeed over the last cycle, it more than compensated as Auckland house prices soared and so did offshore financing. Thus one could get the apparently perverse result of a profligate current account and a strengthening Kiwi dollar, not a weakening, as the old story assumed.

In turn, a stronger NZD means lower import prices. And this helps to counterbalance the higher non-tradables prices, meaning that observed inflation is actually quite moderate, if not low. However the ratio of non-tradable to tradable prices has certainly changed and this is manifested in the rising real exchange rate. Another way of looking at the same thing is that offshore savers are perfectly willing to invest in NZ and by implication to finance our spending habits. Macroeconomic balance theories<sup>4</sup> say that the real exchange rate will increase if the desired capital account balance is more than ready to finance the current account deterioration. Of course, there may be inflationary implications down the track if they become less willing to do so, but that is a separate story.

In addition there are the long-term effects. Changes in the terms of trade are often raised in this connection. Increasingly, however, it becomes difficult to measure price changes when so much of the action is taking place in the exports of services rather than merchandise. In addition, the tradables to non-tradables price ratio is affected by long-term (secular) productivity movements that may well differ between the two sectors. Personal services like haircuts show much less of a productivity gain relative to the dairy industry. So the non-tradable to tradable price ratio can rise over the long term in country where this relative or 'biased' productivity trend exceeds the world norm.

The cyclical nexus between expenditure inflation and a rise in the real exchange rate can be broken. Expenditure reducing policies and interest rate rises that encourage domestic saving will have this effect. Alternatively, one could try to smooth the business cycle in some way and hence to reduce the pressure on domestic supply of non-traded goods and services. The problem has specifically been one of stop-go. In the downturn, supply capacity is laid off. When the upturn comes, it is suddenly hard to find building workers (for example). The cost of building soars and so does the price of non-tradables. One reason that the real exchange rate cycle is so pronounced in NZ is that we have had such a cyclic economy as a whole.

In turn, the cyclic economy has its origins in a cyclic external income base. In the past the NZ export sector has been predominantly<sup>5</sup> primary sector merchandise, notably dairy products, meat and associated products like sausage casings, wool, forestry and fishing. Given the earlier remarks about the driving role of the export sector, a narrow export base means a correspondingly narrow income generation base for the economy as whole. To the extent that many of these products cohere in their demand and pricing, shocks in one tend to be associated with shocks in all – there is an inadequate spreading or diversification. In practice, prices for primary products do not always move together; the demand for dairy products and forestry originate from different consumption or industrial niches and to some extent different geographical origins.

Nonetheless, evidence from commodity studies shows that the food group does cohere reasonable well, so that one can expect dairy and meat prices to move in tandem, if not always the case.

Geographical destinations have certainly changed over the longer term, with a reweighting from the UK to the US and Europe, but up to recently were still quite heavily concentrated at any one point in time. In particular, two of the most important historical destinations (post 1984), namely Australia and the US, formed part of the so called ‘dollar block’<sup>6</sup> which show a considerable degree of coherence in their national business cycles.<sup>7</sup> It is therefore not too surprising to find that the economy of NZ has reflected our cyclical dependence on that of these larger economies. The economies of the dollar block have been those most closely correlated with the prices of the food group of commodities.

### Diversification and economic risk management

In Finance, diversification carries connotation of risk spreading, as when one starts with a portfolio of financial assets and rebalances them to achieve a desired point in the trade-off between risk and expected reward. If one regards national income in the light of dividend or coupon returns on the national wealth, the analogy can be moderately useful. In macroeconomics and industrial economics, however, things are a bit more complicated.



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(a) As a potential downside, industrial diversification can conflict with a nation's comparative advantage, so that in drawing resources away from their most effective economic use, diversification can create economic losses or opportunity costs. This counter argument has certainly been raised<sup>8</sup> in New Zealand's past. It is essentially associated with the comparative advantage or Hecksher-Ohlin theory of international trade, which says that a country should identify what it is best at doing, relative to other industrial sectors, and stick to its knitting. There is still much to this argument. But in recent years, there has been more attention given to intra-industry trade theories, which identify an increasing amount of trade in the *same* industrial categories rather than in different ones. Things like wine and motorcars are traded between countries that may be equally as good at producing them. In order for such trade to survive and prosper, the goods or services concerned must be differentiated in some way – thus French wines are not the same as Californian wines. Product differentiation also implies a useful ability to price the products, as distinct from having to take a world price, though naturally there are limits to this.<sup>9</sup> NZ has been part of this trend. In summary, this is not diversification according to some programmed recipe cooked up in Wellington, it works because there is a stand alone competitive niche in world markets and a Kiwi firm has managed to discover it.

(b) The risk spreading over time is involved in a more essential way than in the textbook capital markets story. The convexity effect in finance refers to the dampening effect of volatility on the continuously compounded rate of return<sup>10</sup> (here, read growth). But in economics, uncertainty also dampens investment and hiring plans. The economic manager is looking for exposures that smooth the business cycle and create benefits to the rest of the economy in doing so. If that is the case, then there is an implicit valuation element to such activities not immediately apparent in a balance of payments table, or in financial terms, a synergy element.

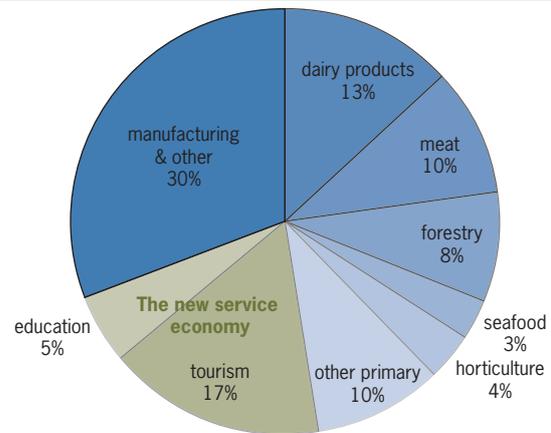
(c) There should be a spread of geographical exposures. The business cycles of different countries do not coincide. Up to now, OECD business cycles have tended to fall into different primary blocks,<sup>11</sup> namely the dollar block (the US, Canada, Australia, NZ and Singapore), the Euro/EEC block, the UK, and Japan. Moreover, the economic fortunes of different countries wax and wane. China and India have been the standout waxers, while the Nippon sun has waned of late, although there are signs that the clouds are passing.

The above should not be taken to indicate that diversification is always and everywhere a good thing. As both forecasters and policy makers we have to remain conscious of both sides to the story, the downside as well as the upside.

### Diversification and the export base

From the mid to late nineties onwards, we started to observe some significant changes in the NZ export base, both in terms of products and destinations. The first was the rise and/or refocusing of the export services sector. A second

FIGURE 3: The export pie: year ended March 2003



was the increased emphasis on intra-industry trade. And third was a geographical reweighting of China and the larger European economy including Russia. In what follows we shall look at each of these in turn.

### The exports of services

International trade in services was the growth sector of the nineties for most OECD countries, with annual rates of growth of the order of 8%. It came later than most for New Zealand – we were slow off the rank in the education boom, even compared with our neighbours Australia. Even today, it is not readily apparent that the share of export services has materially changed. Between 1983 and 1999, export services was fairly constant at about 24% of NZ export income<sup>12</sup> and even the 2003 figure was only slightly larger at 28%. However 2003 was also a year of high international commodity prices for dairy and meat products, so in trend terms, the share of export services was probably understated in 2003. One of the difficulties is that it is hard to measure very precisely the value of some important export services.<sup>13</sup> For a start there are issues of delivery modes, e.g. whether the services are to be provided offshore or locally via the 'presence of natural persons' in the terms of the GATT conventions for services (GATS). For education services provided here in NZ, expenditure should include student support costs as well as tuition fees. In the case of tourism, no direct figures are available that split tourism expenditure into that from locals and that from international tourists. Thus a bit of guesswork is inevitable, with corresponding margins for error.

What the figures do show is the radical shift that took place in the composition of export services, with a major re-weighting of the tourism sector, and from 1998 onwards, the rise of education services as a major export industry. By June 2004 the imputed share of tourism (covering travel and transportation) had grown to be NZ's largest single item at 17.8% of export income, overtaking Dairy (14%), while Education at 5.5% was in fifth place.

The broad picture should not change with any reasonable alternative methodologies, and the figure above represents how the 2003 pie of \$44 billion of export income was divided

up.<sup>14</sup> The primary produce industries are placed on the right hand side, while the 'new service sector', namely tourism and education, are placed to the left together with the remainder incorporating mainly manufacturing, also other services such as telecommunications, and a variety of smaller items.

#### Intra-industry trade

A case could be made that tourism is part of the intra-industry trade trend: NZ tourists like to go to the US just as much as US tourists come to NZ. Other sectors to share in the 'intra experience' are information technology, mainly in applications related software; a resurgence in apparel manufacture centred on designer markets for fashion or sportswear, and of course, films. None of these sectors reach even halfway to the billion-dollar club, but they do collectively. The film industry has a nicely synergistic relationship with the tourism industry, for wherever one might think about the artistic merit of its recent productions, there can be no doubting their economic value as two hour travelogues. Further film synergies are with the IT sector.

Education services, on the other hand, are probably more firmly rooted in absolute advantage terms, with perceptions that NZ is a good place to learn English, to get that all important foreign degree, and perhaps to open a real option for future residence via the visa points system. To the extent that some of these factors may change over time, education serv-

ices may be a more fragile future source of foreign exchange. Tighter immigration regulation has already dampened demand a little, and it may be that perceptions of NZ institutional superiority will fade away. But although the glory days of growth might well be over, education should continue to remain a major export earner.

#### Geographical and demographic diversification

Older destinations like Australia, the US and Japan remain the most important, in that order. However, the end of the nineties saw the exponential growth of mainland China as a major export market, now not far behind Japan. This occurred in both merchandise exports and export services, but particularly in the latter, due almost entirely to educational services. In 1998, there were 1370 Chinese international students here, over all types of institution. By March 2004 this had grown to 37,098, an annualised compound rate of growth of 60% p.a. over the seven years. Korea was the other major growth source, the second biggest country of origin at 12,119 in 2004. Such figures reflect the economic fortunes of these countries over that period, with the massive economic boom in China, and Korea recovering from the Asian crisis. Coming up fast on the rails is India, which grew from 86 in 1998 to 2,350 in 2005, reflecting partly the accelerated economic growth in that country and partly increased marketing attention from NZ institutions seeking their own diversification.

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The economic geography of exports has two points of reference for our current enquiry. First we have apparently managed successfully to expose ourselves to someone else's growth. Second, even should this mature, it will provide exposure to a different business cycle from that of the dollar block. One might even add a third, namely that we can take advantage of third party business cycle problems. For example, the preferred destination for Chinese students has been the US and the UK in that order.<sup>15</sup> However with the strength of the UK pound in particular,<sup>16</sup> this has become an expensive option, and this has helped to account for the popularity of New Zealand as a destination.

Macroeconomic demography is not a discipline, but it surely ought to be. The patterns of spending and saving that arise at various times from the habits or needs of specific groups like the baby boomers, the gay community, and teenagers, have all occupied the attention of market researchers in recent years. The tourist boom in NZ has much of its recent origin in those who are near or at retirement age – the baby boomers are now about 4-5 years away and some have retired early already. Baby boomers and younger adventure travellers from other countries will continue to provide a firm basis for the NZ tourist industry for years to come, a source relatively independent of the fortunes of the US economy, saving a major collapse in the US stock market and their retirement funds.

### Industry linkages

Export services like tourism and education have another important difference with some of our more traditional exports, namely that they are more intensive in labour services. By way of contrast, farming tends to be a more capital-intensive industry, much of the physical capital taking the form of traded goods such as farm equipment or fertiliser. It is able to draw on productivity-enhancing technical progress the more readily, as we have seen in the case of dairy and sheep breeding, and in farm management practices. It is hard to make direct comparisons off the available figures, but Tourism as whole supports about 10.3% of total NZ employment, or 100,000 people in direct employment, with a further 68,000 indirectly linked,<sup>17</sup> while the labour force in agriculture, forestry and fishing in the March 2004 Labour Force Survey was collectively about 8%. One might therefore expect that as matter of input-output table linkages, the new export services are more strongly linked to the non-traded sector than are primary products, though both will show a significant input.<sup>18</sup> If this is so, it will mean that rising demand for export services will flow into the demand for non-traded goods and services.

### Implications for the real exchange rate

One could summarise all the foregoing by remarking that following deregulation and the structural changes of the late eighties, the NZ economy has come through the refiner's fire suitably transfigured. The manufacturing sector is now a smaller and leaner export base, better adapted to the world market in which it has to compete. The gap has been taken up

by the new export services sector, mainly comprising tourism and education services. The new sector has provided us with a substantial growth potential for national income generation, if properly managed. However the new export services have Achilles heels of their own. They have demand and supply fragilities, for example education services currently look to be slowing. Moreover, they are linked more closely to the rest of the economy via non-traded inputs.

The good news is that the new export services economy does create jobs and economic growth. In addition, there is a beneficial payoff arising from diversification, both in business cycle profiles and in the coupling to additional engines of offshore economic growth: the US baby boomers, and the Chinese and Indian economies. As a result, the impact of external shocks is carried by more channels and therefore likely to be more evenly distributed over time. Intertemporal spreading of income generation and input demands can mitigate the impact of stop-go on the non-traded sector, allowing better labour recruitment and supply planning and therefore less pressure on non-tradables prices. This should help to control episodes of excessive rises in the real exchange rate of the kind we saw in 1994-5 and again in 2002-3. Diversification diminishes cyclical real exchange rate instability.

The growth of the new export services sector will need a corresponding long term growth in labour resources to service their demands and that of the non-traded sectors with whom they compete. The bad news is that if immigration or training cannot make up the difference, then non-tradable prices will have to rise and there will be either price inflation; or else a secular rise in the exchange rate and lower import prices, so that the real exchange rate will be strong or stronger. In the latter case, expect larger ongoing current account deficits in the balance of payments, notwithstanding the benefits of the new exports. The capital inflow of debt financing and hot money needed to sustain this will be supported by high interest rates as the Reserve Bank struggles to contain the endemic inflationary pressures. This will cement our reputation as the OECD's highest interest rate country.

Much also depends upon whether the validating generalised expenditure inflation can be held in check by means of national saving. To some extent, there is an automatic governor in the form of government budget surpluses, which in pursuit of fiscal responsibility have become an important form of saving. Enhancing this role is the reservation of part of these surpluses in the form of contributions to the National Superannuation Fund. Because its administrative limits on NZ investment have been largely reached,<sup>19</sup> the Fund will be sending an increased proportion of its investment monies offshore in the next 5-10 years. Other things being equal, this has a depressing influence on the nominal exchange rate. If a new National led government does decide to abolish the Fund, it will be important to replace it with some form of tax driven encouragement for personal saving. Waitangi settle-

ments are another form of saving. On the debit side, we are witnessing calls for more public infrastructure investment. However, this could be part of the fiscal strategy for smoothing residual influences on the NZ business cycle, pointing to a more active governmental role in this respect.

### Conclusions: Find me a one armed economist!

President Truman's famous remark might well have been extended to: "Bring me a one armed economist who is also an optimist!" A reasonable assessment is that the NZ economy is in good shape, better than at any time in living memory, but it does suffer from some endemic weaknesses.

The downside is that we may have just passed through a transition zone in which the long run NZ real exchange rate has ended up at about 5-10% higher against the TWI, and possibly also a smaller rise against the USD. In addition, we can expect to see endemically high NZD interest rates in the future, especially at the short end of the maturity spectrum. Such trends create economic challenges, and motivations for offshore production sourcing. To some extent we have seen it in place already, for example with NZ apparel companies like Canterbury licensing production in China.

On the upside, however, the same forces have led to a significant diversification of the export base, which in turn will help to buffer the cyclical exposure of the real exchange rate and business activity in general. That is good for business, for it creates an easier corporate planning environment, and a more stable evolution of productive capacity. In addition, we have managed to latch on to some of the major engines of world economic growth. This can only be good for business and good for the community as whole.

*Acknowledgement: Thanks from the author for some useful comments go to Bob Buckle and Brendan O'Donovan, without implicating them in what follows.*

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2. For useful graphs of comparative real exchange rate histories see Cashin, P. and C.J. McDermott (2001) 'An unbiased appraisal of purchasing power parity', IMF/RBNZ working papers, pcashin@imf.org
3. A recent instance is the decline in the value of the USD, precipitated in part by the decisions of the Chinese and Indian governments to repatriate US dollar reserves or to diversify to the Euro.
4. For general discussions of real exchange rate determinants, see Neary, P.J. (1988) 'Determinants of the equilibrium exchange rate', *American Economic Review*, 78, 210-15;. Driver, R.L. and P.F. Westaway (2001) 'Concepts of equilibrium real exchange rates', Bank of England: International Economics Division.; and for the NZ macroeconomic balance approach, Brook, A-M and D. Hargreaves (2000) 'A macroeconomic balance measure of New Zealand's equilibrium exchange rate', RBNZ Discussion Paper DP2000/09, Wellington. The role of non-traded goods is nicely set forth in De Gregorio, J. and H.C. Wolf (1994) 'Terms of trade, productivity, and the real exchange rate', NBER Working Paper No. 4807, Cambridge, Mass; The role of credit and other capital flows were raised in this context in Bowden, R.J. (2004) 'McHouse prices, capital hoovering, and real exchange rate exposures', School of Economics and Finance, Victoria University of Wellington, New Zealand Economic Papers, forthcoming.
5. The largest single item among merchandise exports in 1990 was listed as manufactured goods, at about 25% of the total, compared to the next biggest, meat at 17% and dairy at about 14%. The subsequent decline of 'manufactured goods' may be apparent, due to the reclassifications or changes in items. It may also reflect the later stages of adjustment to the wholesale dismantling of trade protection and subsidy regimes from the mid 'eighties, which for good or ill, effectively dismembered a significant part of NZ's industrial base.
6. The other members are Canada and Singapore and, of course, New Zealand.
7. Bowden, R.J. and V.L. Martin (1995) 'International Business Cycles and Financial Integration', *Review of Economics and Statistics*, 1995, 77, 305-20.
8. The high priest of industrial-based export diversification in the 'sixties was the controversial figure of Dr Bill Sutch, at that time head of Industries and Commerce. Counter argument came from Treasury and academics. Dr Sutch did not have the benefit of the newer intra-sector theories of trade, which might have provided a more satisfactory philosophical underpinning.
9. Economists will recognise the model as one of monopolistic competition.
10. For a given expected drift upwards in value  $\mu$ , the long term compounded rate of growth is  $\mu - 0.5\sigma^2$ , where  $\sigma$  is the volatility per unit time period.
11. The classifications as given are based on a study by Bowden and Martin (1995), but there seems to be a widely accepted conventional wisdom as to the cyclic coherence of the dollar block, in particular. Bowden, R.J. and V.L. Martin (1995) 'International Business Cycles and Financial Integration', *Review of Economics and Statistics*, 1995, 77, 305-20.
12. Statistics NZ: Key Statistics, Nov.1999 article on price indexes for service exports and imports.
13. For a good discussion on this, NZ Trade Consortium (2000) 'New Zealand Exports of Education Services', Working Paper No. 8, Ministry of Foreign Affairs and Trade / New Zealand Institute of Economic Research (NZIER).
14. The data used is a compendium assembled from various sources: Statistics NZ, NZ Trade and Enterprise, Ministry of Economic Development, Tourism Satellite Account (Ministry of Tourism), Education NZ.
15. Canada, Australia and NZ come next. It is an interesting economic speculation as to why the NZ numbers are so heavily biased towards female students.
16. The Chinese Yuan is fixed against the USD, but the USD has declined against the GBP. The UK exposure arose because British tertiary fees for international students are much higher than NZ, so that even if the NZD was also higher against the USD, we benefited from the size of the exposure for the budgets of Chinese parents.
17. Tourism Satellite figures, Statistics NZ & Ministry of Tourism.
18. On a technical note, activities like education exports contribute to various elements of the final demand vector of input - output analysis. The immediate impact might be small in terms of the 'bums on seats' effect inside Universities - just pack in a few more to the lecture theatre, run a summer semester, or hire a few more contract tutors. However, the students have to live somewhere, and hence a contribution to capital demand and building activities, especial in centres like Wellington. Building activity is intensive in non-traded inputs.
19. The Fund cannot assume a controlling interest - normally regarded as 30% - in any listed NZ company. In early 2004, less than 10% of the Fund's assets were devoted to listed NZ equity.