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NEW ZEALAND

Selected Issues and Statistical Appendix

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Approved by the Asia and Pacific Department

August 18, 1999

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I. New Zealand's Evolving Approach to Inflation Targeting[1]

A. Introduction and Summary

1. New Zealand was the first country to formally introduce, in 1988, inflation targeting as a formal framework for monetary policy. A relatively strict inflation target (0–2 percent) and a policy horizon of about four quarters were adopted at that time, along with measures to improve the transparency and accountability of monetary policy. The aim was to improve the credibility of the legislated commitment to price stability, and thereby lower the economic costs of achieving and maintaining low inflation. The Reserve Bank of New Zealand (RBNZ) saw the need to adhere to a strict target and react vigorously when inflation approached or breached the edges of the target band in order to demonstrate its commitment to price stability.

2. A number of other countries have since adopted inflation-targeting frameworks, and one of the choices they have faced is how flexible monetary policy should be in trying to control the inflation rate. Given that monetary policy cannot fully control the actual level of inflation, the best it can do is to maintain a policy stance that is consistent—as shown in a conditional inflation forecast—with achieving the inflation target over a certain horizon. If the horizon is short and the target is narrowly defined, then the monetary authority must practice a relatively strict version of inflation targeting, with no leeway to pursue other objectives besides inflation. On the other hand, if the horizon is longer or the target band wider, then inflation can be brought more gradually to its target, allowing monetary policy to pursue additional objectives along the convergence path, such as lower volatility of output or interest rates.

3. Over time, New Zealand's approach to inflation targeting evolved from being relatively strict to being more flexible. The target band has been widened to 0–3 percent and the policy horizon lengthened. The RBNZ is now firmly focused on the mid-point of the target range 1½–2 years ahead and less on reacting vigorously once the edges of the band are threatened. Moreover, the RBNZ is now willing to accommodate greater near-term volatility of inflation as long as inflationary pressure over the policy horizon remains anchored near the mid-point of the target band.

4. Three main factors motivated the gradual change to a more flexible framework. First, the RBNZ built a record of maintaining low and stable inflation over a significant period which improved the credibility of the inflation-targeting framework and lessened the need for a strict target to demonstrate the RBNZ's commitment to price stability. Second, the RBNZ began to put more weight on the indirect effect of movements in the exchange rate on prices (operating through their impact on domestic demand), which take longer to affect inflation and require a longer policy horizon, rather than the direct impact of exchange rate changes on

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[1]Prepared by Michael Sarel.

the price of tradable goods. Third, the RBNZ placed increasing weight on the possible drawbacks associated with a relatively strict approach to inflation targeting—such as higher volatility of output and interest rates.

5. The move to a more flexible framework brings the New Zealand approach closer to those of other inflation-targeting countries. Important differences, however, remain, in particular in comparison with the approach taken by Australia. New Zealand remains more specific in terms of both the width of its target band and the horizon at which it targets the midpoint of the band.

6. This chapter describes the experience of New Zealand with inflation targeting (Section B), and discusses the motives behind the change in its approach toward a more flexible framework (Section C). It also offers some concluding remarks (Section D).

B. New Zealand's Experience With Inflation Targeting

A relatively strict approach to inflation targeting

7. New Zealand's Reserve Bank Act of 1989 established the legislative support for inflation targeting as it gave the RBNZ a high degree of independence and specified price stability as the sole objective of monetary policy. This was in contrast to the preceding period—especially before the mid-1980s—when monetary policy focused on a number of objectives that contributed to a poor track record of high inflation.[2] The single focus on price stability was largely motivated by the view that having multiple objectives reduces the likelihood of any of them being achieved.[3] Other reasons for adopting the single focus approach included: the literature that argued that the Philips curve was vertical in the long-run; the benefits of central bank independence; and the application of the "principal-agent"

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[2]Prior to 1989, the Bank's charter required monetary policy to be directed to multiple objectives, including growth, full employment, and balance of payments equilibrium. Although the sole objective of price stability and the clear responsibility of the RBNZ for achieving it were formally legislated in 1989, the government instructed the Bank as early as 1984 to achieve price stability, and a numerical target for inflation was first announced in April 1988.

[3]Archer (1997, p.8) argues that "In essence, the new monetary policy framework in New Zealand establishes a rule that directs the policy implementers to ignore the short-run output and employment consequences, because the economy will be better off in the long run as a result, and because if the implementers do not ignore those consequences, the desirable long-run position will never be reached."

model which required specification of "outputs" to be produced by each agency across New Zealand's public sector.[4]

8. As required by the new Act, specific annual targets for inflation were adopted for the first time in March 1990, in a public Policy Target Agreement (PTA) between the RBNZ's Governor and the Minister of Finance, creating clear and transparent policy targets and well-defined accountability for achieving these targets. At the outset, the targets focused on achieving annual inflation in the consumer price index of 0–2 percent,[5] with a relatively short policy horizon of about four quarters—this approach is considered "strict inflation targeting."

9. A relatively strict approach to inflation targeting was adopted at the outset in New Zealand in order to demonstrate the authorities' commitment to price stability, despite the potential costs in terms of variability of other key macroeconomic variables (see below). The authorities were primarily concerned that, given the long history of relatively high inflation in New Zealand in the 1970s and 1980s, the costs of achieving, and then maintaining low inflation would be larger if the Reserve Bank's commitment to price stability was questionable. Therefore, the Bank emphasized the need to act aggressively if inflation approached or breached the edge of the target band in order to lower inflationary expectations. The problem of dealing with supply shocks in a strict inflation targeting framework was partly addressed by introducing caveats into the Policy Target Agreement.[6]

10. The New Zealand regime has also emphasized transparency and accountability in order to improve the credibility of the authorities' commitment to price stability. As a result, the RBNZ has evolved into one of the most transparent central banks in the world: it explains publicly the way the Bank formulates its monetary policy stance, it discloses detailed economic projections (as well as the forecasting model and methodology), and it offers critical self-assessments of its approach to monetary policy.

What are the key results of New Zealand's inflation-targeting framework?

11. Since the introduction of the inflation-targeting regime, New Zealand has succeeded in achieving and maintaining low inflation. During the decade preceding the new regime, inflation averaged almost 10 percent (although by 1990, when the new framework was adopted, it had dropped to 5 percent). Following the adoption of inflation targeting, inflation continued to decline quickly, reaching less than 2 percent in early-1992, assisted also by the

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[4]In the case of monetary policy, the "principal" was the government which required the "agent" (the RBNZ) to produce the "output" of price stability (see Sherwin, 1999).

[5]The target was initially somewhat higher than 0–2 percent, but it aimed at achieving 0–2 percent over two–three years (see Sherwin, 1999).

[6]Caveats included significant movements in the terms of trade and natural disasters.

decline in world inflation. Since then, the rate of inflation has been remarkably stable, never exceeding 2¾ percent or falling below 1 percent (Figure I.1).[7]

12. The success on the inflation front, however, was associated with significant real costs. Initially, the very high short-term interest rates in 1990–91 (averaging almost 9 percent in real terms) contributed to the severity of the 1991–92 recession. Later, as the recovery, which started in 1993, proved to be stronger than expected and created inflationary pressures, the RBNZ had to tighten policy significantly. Real short-term interest rates increased from an average of 4½ percent in 1992–94 to about 7 percent during the period from early-1995 to mid-1997. In addition, the real exchange rate appreciated strongly over this period (Figure I.2).[8] The maintenance of relatively high interest rates was required in order to keep inflation within the target band, but this exacerbated the slowdown in growth caused by the Asia crisis and the drought in the first half of 1998.

13. A comparison of New Zealand's performance with that in a sample of other inflation-targeting countries—that generally took a more flexible approach, especially in Australia[9]—also suggests costs in terms of higher output volatility (see Brooks, 1998). Table I.1 shows that inflation variability has been reduced considerably in New Zealand during the 1990s, as in other inflation-targeting countries. Growth variability, however, has increased in New Zealand while in most other countries it has been reduced. This suggests some cost to the adoption of a relatively strict regime in New Zealand, although this cost may have been needed to establish the credibility of the framework, and may have been higher than in other inflation-targeting countries owing to New Zealand's relatively high inflation rate at the start of the inflation-targeting period.

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[7]The inflation measure used here is the four-quarter change in consumer prices excluding credit services (adjusted for GST rate changes), consistent with the current policy target. Before 1997, the inflation target was defined in terms of "underlying" inflation, a measure calculated by the Reserve Bank, which excluded, in addition to credit services, a number of other items affecting headline inflation (with the exclusions differing from quarter to quarter depending on the extent of their impact on inflation). Underlying inflation was maintained inside the target band of 0–2 percent until 1995, but marginally exceeded the target for several quarters during 1996, before the band was widened to 0–3 percent.

[8]The real effective exchange rate appreciated by 17 percent over this period, following an additional 14 percent appreciation over the preceding two years.

[9]Where the inflation target was defined as achieving underlying consumer price inflation of 2–3 percent, on average, over the business cycle.

Table I.1. Inflation-Targeting Countries: Inflation and Real GDP Growth

Country and Period 1/	Annual Inflation 2/ Mean	Annual Inflation 2/ Std. Deviation	Real GDP Growth 3/ Mean	Real GDP Growth 3/ Std. Deviation
	(In percent)			
New Zealand				
1980–89	9.9	3.9	1.9	2.6
1990–98	2.1	1.1	2.0	3.2
Australia				
1980–92	7.2	2.4	2.8	2.8
1993–98	2.0	1.6	4.1	1.1
Canada				
1980–90	6.4	3.1	2.9	2.8
1991–98	1.9	1.6	2.0	1.9
Finland				
1980–92	6.6	3.0	2.0	3.8
1993–98	1.2	0.7	3.7	2.8
Spain				
1980–93	9.0	3.8	2.4	2.0
1994–98	3.4	1.3	2.9	0.8
Sweden				
1980–92	7.8	3.2	1.5	1.8
1993–98	1.7	1.8	1.9	2.3
United Kingdom				
1980–92	6.9	3.8	1.7	2.7
1993–98	2.8	0.3	2.8	1.1
Average for inflation targeting countries				
1980 to adoption of targets	7.7	3.3	2.2	2.6
Adoption of targets to 1998Q4	2.2	1.0	2.8	1.9

1/ Data for the period 1980 to the adoption of targets and from that point to 1998Q4 are presented.

2/ Year-on year consumer price inflation, measured quarterly, based on headline indices for Canada, Finland, Sweden and Spain; and underlying indices for Australia (Treasury's underlying measure), New Zealand (CPI excluding credit services) and the United Kingdom (Retail Trade Price Index, excluding mortgage interest rates).

3/ Year-on-year real GDP growth, measured quarterly.

C. The Adoption of a More Flexible Approach

14. In the second half of the 1990s, New Zealand's approach to inflation targeting evolved from being relatively strict to being more flexible. A formal change was made in December 1996, when the inflation target band was widened from 0–2 percent to 0–3 percent as part of the post-election coalition agreement. Another important change took place in December 1997, when a new Policy Targets Agreement explicitly recognized that there can be significant temporary shocks which mask the underlying trends in prices and that the RBNZ should respond to these disturbances "in a manner which prevents general inflationary pressures emerging," thus allowing a greater amount of flexibility than in the past.

15. The changes to the framework can be attributed to three main factors: (i) gains in the credibility of the RBNZ's commitment to price stability, which has enabled a more medium-term approach to be adopted without undermining public confidence in price stability; (ii) a reassessment of the effectiveness of using the direct (short-term) effects of movements in the exchange rate on prices for the purpose of inflation targeting; and (iii) increased concerns that the strict approach to inflation targeting was contributing to volatility of other macroeconomic variables;

Gains in credibility

16. Since the adoption of the inflation-targeting regime, the credibility of the target appears to have grown. This is suggested by a sizable decrease in the surveyed level of private sector inflationary expectations, which fell from about 6–7 percent in the late 1980s to less than 2 percent by early 1999. Yields on long-term bonds also dropped, from about 13 percent in the late 1980s to less than 6 percent in early 1999, partly reflecting the decline in inflationary expectations.

17. The gains in credibility strengthen the case for a more flexible medium-term approach to inflation targeting. Enhanced credibility implies that the RBNZ will not need to react as vigorously to transient influences on inflation which are unlikely to alter medium-term inflation expectations. The RBNZ has stated that a key reason it has been able to move to a more flexible approach has been the rise in public confidence that low inflation is the norm, not the exception.

A reassessment of the effectiveness of using the direct exchange rate effects

18. At the outset of inflation targeting, the direct effect of exchange rate changes on prices was relied on heavily by the RBNZ to achieve its inflation target but confidence in the magnitude of these direct effects fell over time. Brash (1999, p. 30) argues that by the mid-1990s the Reserve Bank's "confidence that a 1 percent movement in the trade-weighted exchange rate would produce a change in consumer price inflation of about 0.3 percent within about 12 months began to wane, as first the depreciation of 1991 and then the appreciation of 1993–97 produced a much smaller impact on inflation than previous research had suggested." The reasons are likely related to the increased prevalence of hedging of

exchange rate changes in the private sector, which is now very widespread in contrast to the early-1990s.

19. In addition, the experience gained during 1997–98—when the exchange rate depreciated sharply as a result of a drop in export demand due to the Asia crisis—provided some evidence that shifts in the exchange rate are often caused by real factors as opposed to shifts in portfolio preferences. Therefore, the direct price consequences of exchange rate movements are likely to be transitory and, for that reason, best ignored. This left indirect effects of the exchange rate on inflation through aggregate demand as the main channel that could be relied upon. The RBNZ's simulations suggest that this channel operates with a longer lag than the direct effects, therefore supporting the adoption for a longer policy horizon and a wider target band.

An increased awareness of the short-term policy trade-off

20. Concerns about the potential real costs of strict inflation targeting increased in the late 1990s. In part, this stemmed from experience with inflation targeting in several countries that suggested that more flexible approaches had been successful in maintaining low inflation with less output volatility than in New Zealand. Further evidence of the extent of the policy tradeoff came from research by the RBNZ using simulations of policy responses to various shocks. Deterministic and stochastic simulations were undertaken by Drew and Orr (1999) in an attempt to quantify the costs and benefits of the degree of strictness of New Zealand's inflation-targeting framework.

21. In the deterministic simulation experiments, the RBNZ's model of the New Zealand economy was subjected to different shocks, and the simulations analyzed how the economy would respond, under each scenario, to alternative policy rules. Several conclusions emerged from these simulations. First, there are clear benefits to recognizing quickly "surprises" and reacting to them. If the initial policy response to rising demand takes place at an early stage, the duration of the upward pressures on interest and exchange rates would be significantly shorter and output volatility would be lower. Second, there are benefits—in terms of output volatility—to focusing on medium-term (say a six–eight quarter horizon), rather than short-term (say three–five quarters), price stability.

22. In the stochastic simulations, the RBNZ's model suggested that relatively short policy horizons and narrow target bands increased volatility in key macroeconomic variables (Figure I.3). The figure shows that a very short-term horizon (point A) is clearly not efficient, given that a more forward-looking rule can reduce output and interest rate variability, as well as inflation variability. These simulations suggest that a superior outcome can be achieved by being more forward-looking. However, it is also evident that as the policy horizon is extended beyond 6–8 quarters (point C), not much is to be gained in terms of output and interest rate variability, while inflation volatility increases markedly. This suggest an optimal policy horizon in the vicinity of point C.

D. Conclusions and Challenges Ahead

23. New Zealand's approach to inflation targeting has evolved from a relatively strict approach in the early-1990s to a more flexible approach in the latter part of the decade. As a result, the Reserve Bank now has a longer policy horizon and is more willing to accommodate near-term volatility in inflation as long as inflationary pressure over a 1½–2 year policy horizon looks to be anchored near the midpoint of the target band.

24. There were three main reasons for this evolution: an increased awareness of the short-term policy trade-off between inflation volatility and variability of other macroeconomic variables; gains in credibility; and a reassessment of the effectiveness of using the direct (short-term) effects of movements in the exchange rate on prices for the purpose of inflation targeting.

25. Overall, the shift to a more flexible approach should have benefits in terms of improving macroeconomic stability. Of course, a longer policy horizon does not imply that monetary policy can afford to take a "wait and see" approach when faced with unexpected shocks—it still requires policy to quickly identify the nature of the shocks, and to react swiftly if they are expected to have a lasting effect on the economy. In addition, there are limits to how flexible an inflation targeting framework can be without compromising credibility: "If central banks go too far down the road of flexibility, that is, if the horizon they are aiming for is too long, or the rate at which they bring inflation back to target is too slow, reasonable doubts about the commitment to the inflation target may arise. Then the credibility of the inflation target may suffer, and inflation expectations may fail to be stabilized around the inflation target" (Svensson, 1997, p. 10).

26. The challenge for New Zealand and for other inflation-targeting countries is to strike an appropriate balance between flexibility and the need to preserve credibility. New Zealand's recent move to adopt a more flexible approach to inflation targeting has a good prospect of achieving this balance. This prospect is in large part helped by the high degree of transparency and accountability of New Zealand's policy framework.

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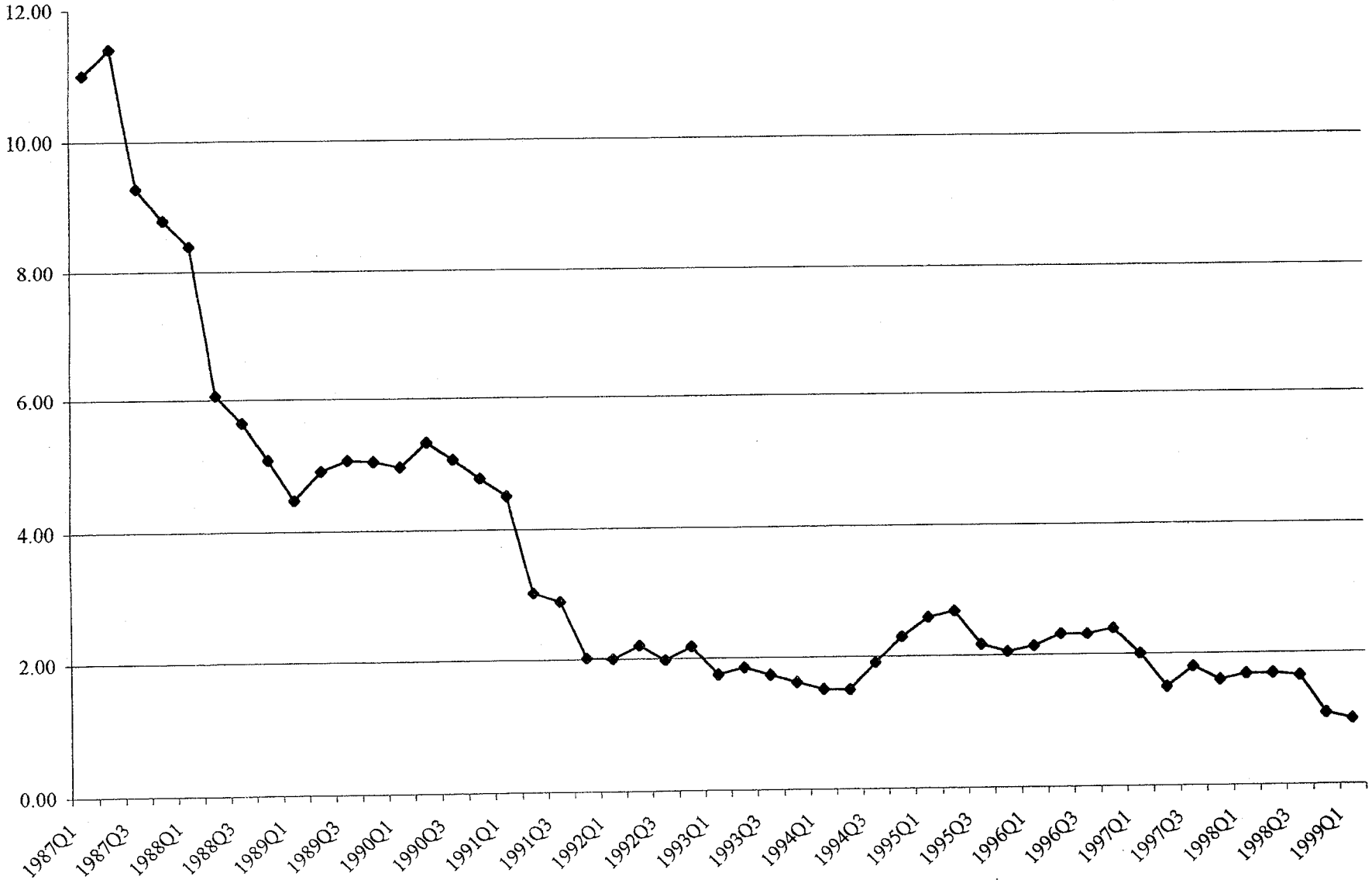
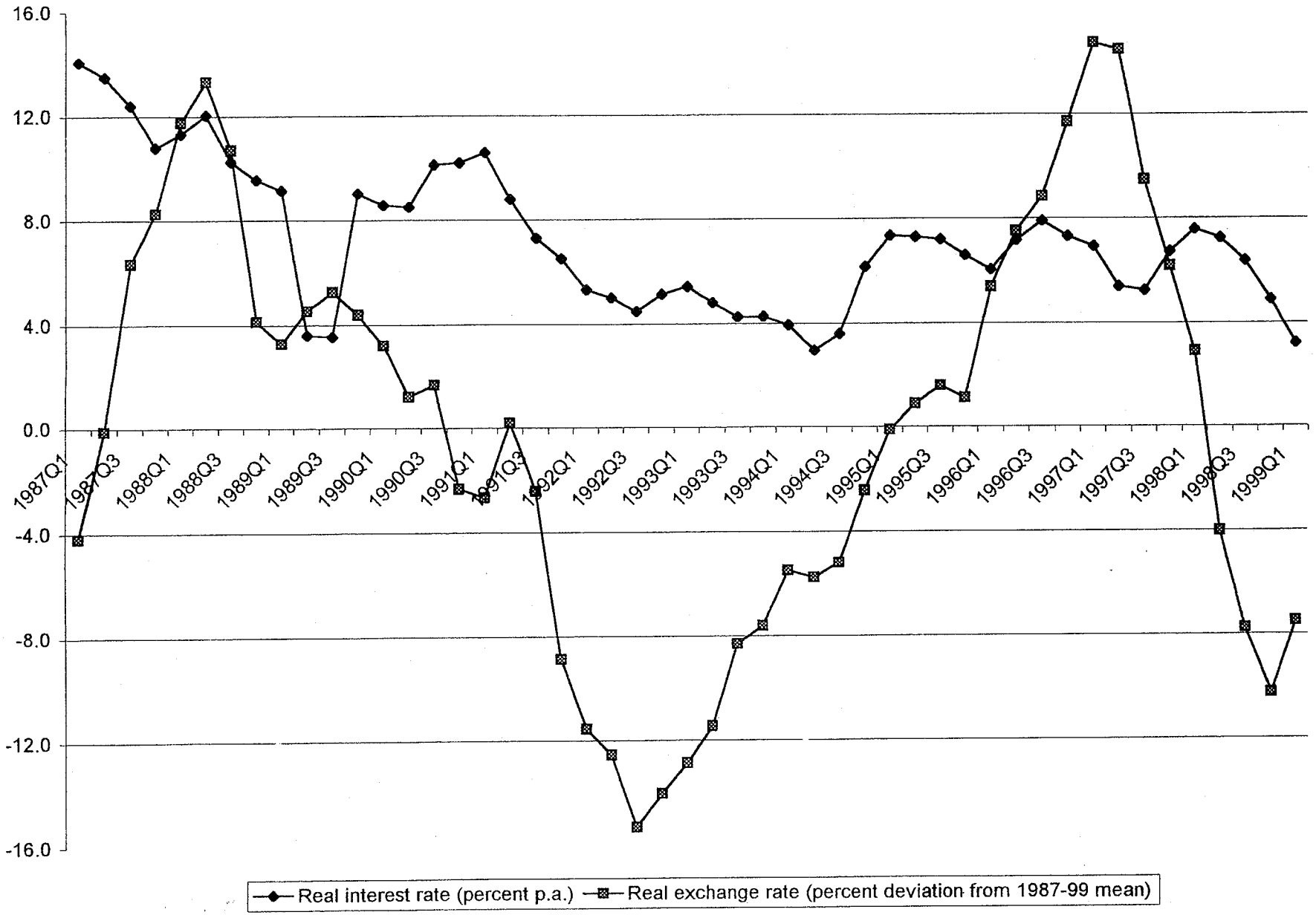
Figure I.1. New Zealand: Inflation, 1987–99 1/



Sources: Statistics New Zealand; and Fund staff estimates.

1/ Annual inflation of consumer prices excluding credit services (CPIX), adjusted for changes in GST rates in 1987 and 1989.

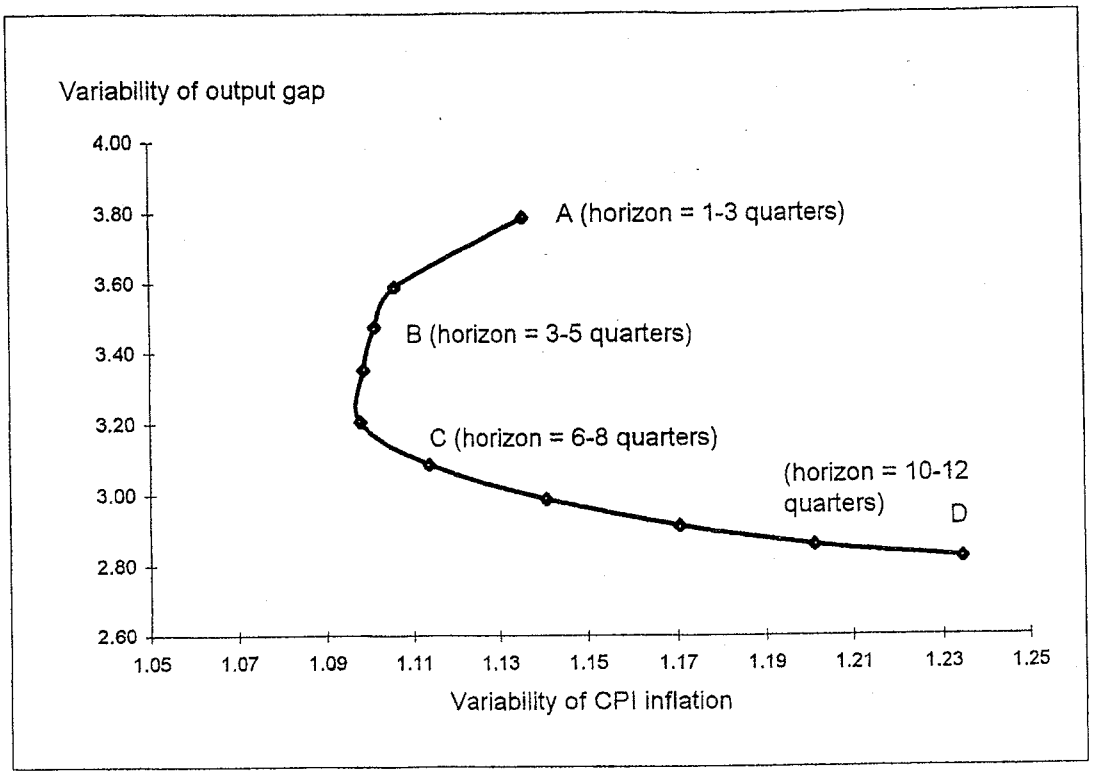
Figure I.2. New Zealand: Monetary Indicators, 1987–99 1/

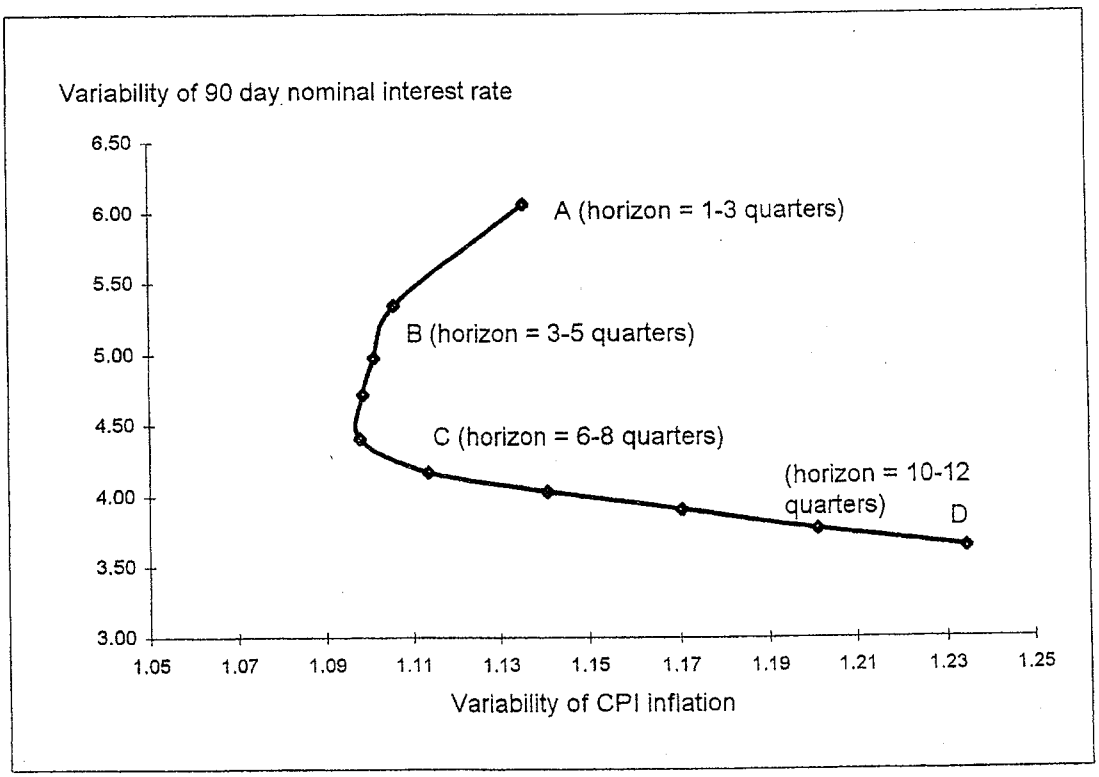


Sources: Reserve Bank of New Zealand; and Fund staff estimates.

1/ Real interest rates are defined as 3-month rates less CPIX inflation during the 3-month period; real exchange rates are calculated by the IMF INS.

Figure I.3. New Zealand: Policy Trade-offs





Source: Drew and Orr (1999).

II. A Note on New Zealand's Exchange Rate Cycle During the 1990s[10]

A. Introduction

27. The New Zealand dollar in the 1990s went through three distinct phases—a depreciation from 1990 to 1992, followed by a long and sustained appreciation during 1993-mid-1997 and then, in the wake of the Asian crisis, a steep decline. Over this period, the peak-to-trough variation in both the nominal and real effective exchange rate was about 35 percent.

28. What were the main factors behind this cycle? Was it unusual, either from the perspective of New Zealand's own history or with respect to the experience of other countries? What were the main consequences? Did variability in the exchange rate contribute, for example, to greater macroeconomic volatility? Should changes to the existing policy framework to reduce the amplitude of the exchange rate cycle be considered? These are some of the questions to which this chapter seeks to provide tentative answers. They are also issues the authorities have been concerned with recently.[11]

29. The remainder of this chapter is organized as follows. Section B discusses the main features of New Zealand's exchange rate cycle during the 1990s. The third section analyzes some of the potential causes of exchange rate variability, and this is followed by a section on the effects of variability on other macroeconomic variables. Section E discusses the appropriateness, in the case of New Zealand, of three policy options—capital controls, sterilized intervention, and countercyclical fiscal policy—that could be used to moderate exchange rate volatility. Section F concludes the chapter.

B. Exchange Rate Variability in the 1990s

30. The New Zealand dollar, in both real and nominal terms, has undergone three distinct phases during the 1990s: first, a depreciation from 1990 to 1992 of about 18 percent in the real effective rate (REER) and 13 percent in the trade weighted index (TWI); second, a long and sustained appreciation of about 34 percent in the REER and 30 percent in the TWI over the period 1993-mid-1997; and third, in the wake of the Asian crisis, a depreciation of about 21 percent in the REER and 16 percent in the TWI (Figure II.1). The peak-to-trough variation in the REER and TWI cycles were 34 percent and 38 percent, respectively, during this period. In terms of volatility, at the monthly and quarterly frequencies, most of the fluctuations clustered around –1 and +1 percent.

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[10] Prepared by Jahangir Aziz.

[11] See, for example, Brash (1999).

Table II.1. Exchange Rate Volatility in Selected Countries, 1990-99

	Real Effective Rate			Nominal Effective Rate		
Country 1/	Amplitude 2/	Monthly 3/	Quarterly 3/	Amplitude 2/	Monthly 3/	Quarterly 3/
Australia	30	2.1	3.3	23	2.2	3.4
Canada	45	1.3	2.2	36	1.1	1.7
Chile	43	2.0	3.3	38	1.1	1.8
Finland	44	1.6	3.0	38	1.6	2.8
New Zealand (1985-89)	39	3.1	4.8	19	2.9	4.4
New Zealand	35	1.5	2.8	38	1.5	2.8
Singapore	21	0.9	1.5	31	0.8	1.4
Sweden	34	1.8	3.4	34	1.7	3.3
United Kingdom	31	1.8	3.4	26	1.7	3.1

Sources: INS and staff estimates.

1/ All countries, except New Zealand (1985-89) and Singapore, adopted an inflation-targeting framework for most of the period under consideration.

2/ The difference between the peak quarter rate and the trough quarter rate as percentage of the trough.

3/ Standard deviation of monthly or quarterly percent changes.

31. When compared to experiences of currencies in a sample of open industrial economies, many of which also adopted inflation-targeting regimes in the 1990s, the amplitude of New Zealand's real exchange rate cycle was around the median of the sample (Table II.1). In terms of its own past experience, the amplitude of the REER cycle was about the same in the inflation-targeting period as in the monetary-targeting era.

32. Although the amplitude of the nominal exchange rate cycle[12] in New Zealand during the 1990s was at the high end of the sample of countries in Table II.1, it was not unusually so. Relative to its own past experience, however, the amplitude of the NEER in New Zealand during the inflation-targeting period was about twice that during the monetary-targeting era.

33. In terms of higher frequency variations, the standard deviations of both the real and nominal New Zealand dollar, at the monthly and quarterly frequencies—although at the higher end of the spectrum—were not exceptions.

34. To sum up, the amplitude of New Zealand's real exchange rate cycle and the volatility of the nominal and real exchange rate at higher frequencies in the 1990s do not appear to be unusual, either by international comparison or relative to New Zealand's earlier

[12]For the purpose of cross-country comparison, the nominal effective exchange rate (NEER) is used instead of the TWI. Both the TWI and NEER for New Zealand during the period since 1985 behaved very similarly.

experience. However, the amplitude of the nominal exchange rate cycle was larger in the inflation-targeting period than in the earlier—monetary-targeting—era.

C. What Caused the Exchange Rate Cycle?

35. The confluence of a number of factors is likely to have contributed to New Zealand's exchange rate cycle during the 1990s, including: the relative cyclical positions of the domestic and trading-partner economies; large inflows of foreign capital to finance the investment and consumption streams engendered by economic reforms; the strictness of the inflation-targeting regime which could have accentuated the nominal exchange rate cycle; and the impact of the Asian crisis on external demand and international prices, which likely contributed to the depreciation of the New Zealand dollar since mid-1997.

36. First, the relative cyclical position between New Zealand and its trading partners underwent substantial changes during the 1990s which were likely partly reflected in the behavior of the exchange rate. Between 1990 and 1992, with the domestic economy in a recession and trading-partner growth robust, the New Zealand dollar remained weak (Figure II.2). As the domestic cyclical position began to improve from 1993 onwards and the recovery gathered momentum, inflationary pressures emerged. Moreover, some of New Zealand's trading partners by then had moved into a cyclical downturn, such that the country's overall relative cyclical position improved and, along with that, both the real and nominal exchange rates began to strengthen. Next, however, the Asian crisis brought about a sharp decline in external demand and the terms-of-trade that warranted a sizeable depreciation of the currency. In the wake of the crisis, the appreciation of the New Zealand dollar between 1993 and mid-1997 was almost entirely reversed.

37. Second, by the mid-1990s, the reforms of the previous decade had taken root, making the country an attractive destination for foreign investment. Reforms also led to an improvement in residents' expectations about their future income growth and, together with other factors, contributed to a steady decline in the household saving rate, thereby widening the gap between saving and investment. The confluence of these forces contributed to an increase in the current account deficit, a surge in capital inflows, and a steady strengthening of the New Zealand dollar from early 1994 to mid-1997.

38. Third, the strictness of the inflation-targeting regime through late 1996 may also played a part in accentuating the appreciation phase of the nominal exchange rate cycle. During the initial phase of the inflation-targeting regime—with a relatively narrow target band and comparatively short policy horizon—the burden of adjustment to shocks fell on the exchange rate through its direct effects on the price level (see Chapter I). Given the overheating pressures emanating from the domestic economy during this period, the New Zealand dollar had to appreciate substantially to prevent a breach in the inflation target. A wider inflation band might have reduced the need for as large an appreciation of the nominal exchange rate, and thereby moderated the amplitude of the nominal exchange rate cycle. However, increased flexibility of the inflation-targeting regime would likely have had little

effect on the behavior of the real exchange rate, given that reduced nominal variability would likely have been associated with somewhat greater inflation variability over the cycle.

D. Implications for the Economy

39. What have been the main macroeconomic effects of New Zealand's exchange rate cycle? It is difficult in the case of New Zealand, perhaps more so than in other countries, to separately identify the effects of exchange rate variability on other macroeconomic variables, given the structural reforms the economy went through during the 1990s. Keeping this caveat in mind, however, prima facie evidence suggests that macroeconomic volatility was actually lower in the 1990s than in the earlier monetary-targeting period (Figure II.3).

40. First, the volatility in the inflation rate fell dramatically in the 1990s, in line with the objectives of the inflation-targeting regime, but possibly also reflecting the decline in inflation volatility worldwide during the 1990s. Second, variability in both nominal and real interest rates decreased markedly under the inflation-targeting regime. Third, there was a discernible downward shift in the volatility of output especially in more recent times. Fourth, both real exports and imports shed much of their high volatility of the mid-1980s. Fifth, moreover, the volatility in external shocks, as proxied by the variability in the terms-of-trade and external demand, was roughly similar in the 1990s to that in the second half of the 1980s, so lower macroeconomic volatility does not prima facie appear to be due to lower volatility of external shocks. Finally, however, the appreciating phase of the cycle may nevertheless have had an adverse impact on the economy by raising the current account deficit and increasing the economy's vulnerability to external shocks.

E. Policy Options

41. While the amplitude of New Zealand's exchange rate cycle in the 1990s was not unusual either by international comparison or relative to its own past experience, specific sectors (for example, exports) may, nevertheless, have been adversely affected by the appreciating phase of the real exchange rate cycle. As previously mentioned, moreover, the latter was likely a key contributing factor to the increase in New Zealand's current account deficit, the level of which increases the economy's vulnerability to external shocks. This section discusses three kinds of supplementary measures—price-based capital controls, sterilized intervention, and countercyclical fiscal policy—in order to provide a preliminary assessment of their potential usefulness in reducing the amplitude of the exchange rate cycle.

Capital controls

42. As capital markets became increasingly integrated in the 1990s, several small open economies, such as Chile and Colombia, imposed price-based controls on short-term capital inflows. However, for a variety of reasons, the arguments that have typically been used to justify imposition of capital controls in emerging market countries are unlikely to apply to New Zealand.

43. One such argument is that underdeveloped and poorly regulated financial markets are incapable of intermediating large inflows of capital efficiently. Consequently, capital controls are needed as a transitional arrangement, to prevent large scale financial disruptions in the economy. This argument is unlikely to apply to New Zealand, given its level of economic development, the sophistication of its financial market, and the health of its banking sector.

44. A second consideration relates to possible market reaction to the imposition of capital controls in New Zealand. Through the 1990s New Zealand has earned an international reputation for liberalized markets and transparency in policymaking. This has not only opened up investment opportunities but also made New Zealand a safe place for foreign lenders to invest. If at this point, capital controls were imposed, they could signal to foreign investors the authorities' inability to manage the economy, and might even trigger significant capital outflows that would lead to difficulties in financing the current account deficit.

45. Third, although in some cases price-based capital controls can be used selectively to curb short-term inflows, it is likely that in a sophisticated financial market such as New Zealand's, maturity-based distinctions could be easily circumvented by investors. While controls could attempt to discourage short-term flows without hindering the more stable forms of inflows such as direct investment, access to secondary and derivative instruments would likely make maturity-based distinctions largely irrelevant for investors.

46. Fourth, capital controls can do little to alter a structural imbalance between saving and investment—which is likely to be at the root of New Zealand's current account deficit—except possibly at a very high cost. Tax based capital controls are intended primarily to change the cost structure of borrowing from abroad, such that residents shift current consumption into the future, thereby raising domestic saving and lowering domestic investment. However, the level of taxes required to generate sufficient disincentives to borrow from abroad is likely to depend, inter alia, on the degree of intertemporal substitution in consumption. For New Zealand, estimates of this elasticity range from around 0.66 to 2.65.[13] For an elasticity of 1.3 (which is about half way in the range of available estimates), Reinhart and Smith (1997) show that the tax rate on a one-year foreign loan required to reduce net capital flows by 5 percent of GDP at the end of a 24-month period can be as high as 60 percent.

Sterilized intervention

47. Another option that, in principle, could be used to moderate exchange rate variability, is sterilized intervention. Such a strategy, however, poses a number of difficulties of its own.

48. First, when a country faces appreciation pressures induced by large capital inflows, sterilization operations prevent domestic interest rates from falling in response to the inflows

[13]The first estimate is from Cashin and McDermott (1999), while the second is from the Reserve Bank of New Zealand's FPS model.

and thus tend to maintain the yield differentials that gave rise to them in the first place. While possibly effective in the short run, therefore, over time the impact of such operations tends to diminish.

49. Second, sterilization can contribute to significant quasi-fiscal losses arising from the differential between interest earned on foreign reserves and that paid on domestic debt. Such losses are likely to make sterilization efforts costly to sustain beyond short periods.

50. Third, interventions in the exchange market are generally guided by a target zone that reflects the tolerance limits of exchange rate fluctuations. Even if there is not an explicit band, interventions by the central bank, over time, reveal these exchange rate limits to the market. This can cause significant disruption when the exchange rate comes close to the outer limits of the band.

51. And fourth, interventions to smooth out fluctuations may distort the public's perception of exchange rate risk. In particular, they could lead to a much lower perceived risk of exchange rate changes than the true market risk, which in turn could attract even larger speculative capital inflows. In this respect, a pure floating exchange rate has the advantage of incorporating in its variations changes in market risk, earlier and more fully.

Countercyclical fiscal policy

52. Countercyclical fiscal policy, by design, is aimed at moderating cyclical fluctuations in activity and, therefore, in principle, could reduce the need for large changes in the exchange rate to maintain inflation targets. However, there are several constraints that stand in the way of increasing the cyclical sensitivity of fiscal policy.

53. First, fiscal policy in New Zealand is mainly guided by medium-term objectives. Imposing short-term objectives, such as managing cyclical fluctuations in activity, could lead to conflicts which might impair the overall integrity of fiscal policy.

54. Second, through automatic stabilizers, fiscal instruments include elements that impart a countercyclical bias to the budgetary position. The problem with increasing the cyclical sensitivity of such stabilizers is that the tax structure would typically need to become more progressive (or the welfare system more generous), which could create incentive problems.

55. Third, apart from automatic stabilizers, discretionary spending or tax changes could also be used to make fiscal policy more countercyclical. However, these are fraught with problems of their own. Increases in discretionary spending or tax cuts during downturns become politically difficult to be scaled back during upturns. Similarly, during upturns, when the public sector may be enjoying surplus balances, there are strong political pressures to cut taxes or increase spending, adding to the existing overheating pressures. Furthermore, discretionary fiscal policy changes could be difficult to implement quickly, so as to have their effects within the desired time frame, given the uncertain lags between fiscal policy and aggregate demand.

F. Conclusions

56. During the inflation-targeting period of the 1990s, the amplitude of New Zealand's real exchange rate cycle and the higher-frequency volatility of the New Zealand dollar were not unusual either by international comparison or relative to its own experience. Moreover, the period of inflation-targeting has been associated with a decline in macroeconomic volatility generally, which does not appear to be explained by reduced variability in terms-of-trade or partner-country growth. However, the appreciating phase of the exchange rate cycle is likely to have contributed to the rise in the current account deficit since the mid-1990s, and amplified somewhat the economy's vulnerability to external shocks.

57. This chapter discussed three supplementary measures—capital controls, sterilized intervention, and countercyclical fiscal policy—to reduce exchange rate variability, but found all of them to be fraught with problems. In particular, the effectiveness of capital controls was likely to be reduced in a sophisticated financial market such as New Zealand's, while market reaction to the imposition of controls could signal to foreign investors the authorities' inability to manage the economy within their established policy framework. Sterilized interventions could generate sizeable quasi-fiscal costs, and lower perceived exchange rate risk, thereby attracting even larger speculative capital inflows. Lastly, increasing the countercyclical sensitivity of fiscal policy could impair the integrity of the medium-term budgetary framework, while creating disincentives to work and saving efforts. In addition, discretionary countercyclical measures could be difficult to implement quickly enough to have an effect within the desired time frame given the uncertain lags between fiscal policy and aggregate demand, and could be politically difficult to scale back when cyclical considerations so warranted.

58. Finally, the appreciating phase of the exchange rate cycle was in part driven by the large capital inflows required to finance the increase in investment engendered by economic reforms in the presence of a declining household saving rate. Supplementing the inflation-targeting regime with capital controls or other measures considered above would have done little to alter a structural imbalance between private saving and investment, except possibly at very high cost. Instead, reforms that removed potential disincentives to private saving—including those that could result from the welfare, pension, and tax systems—would likely be more effective in addressing the saving-investment imbalance in a fundamental way than the measures considered in this note.

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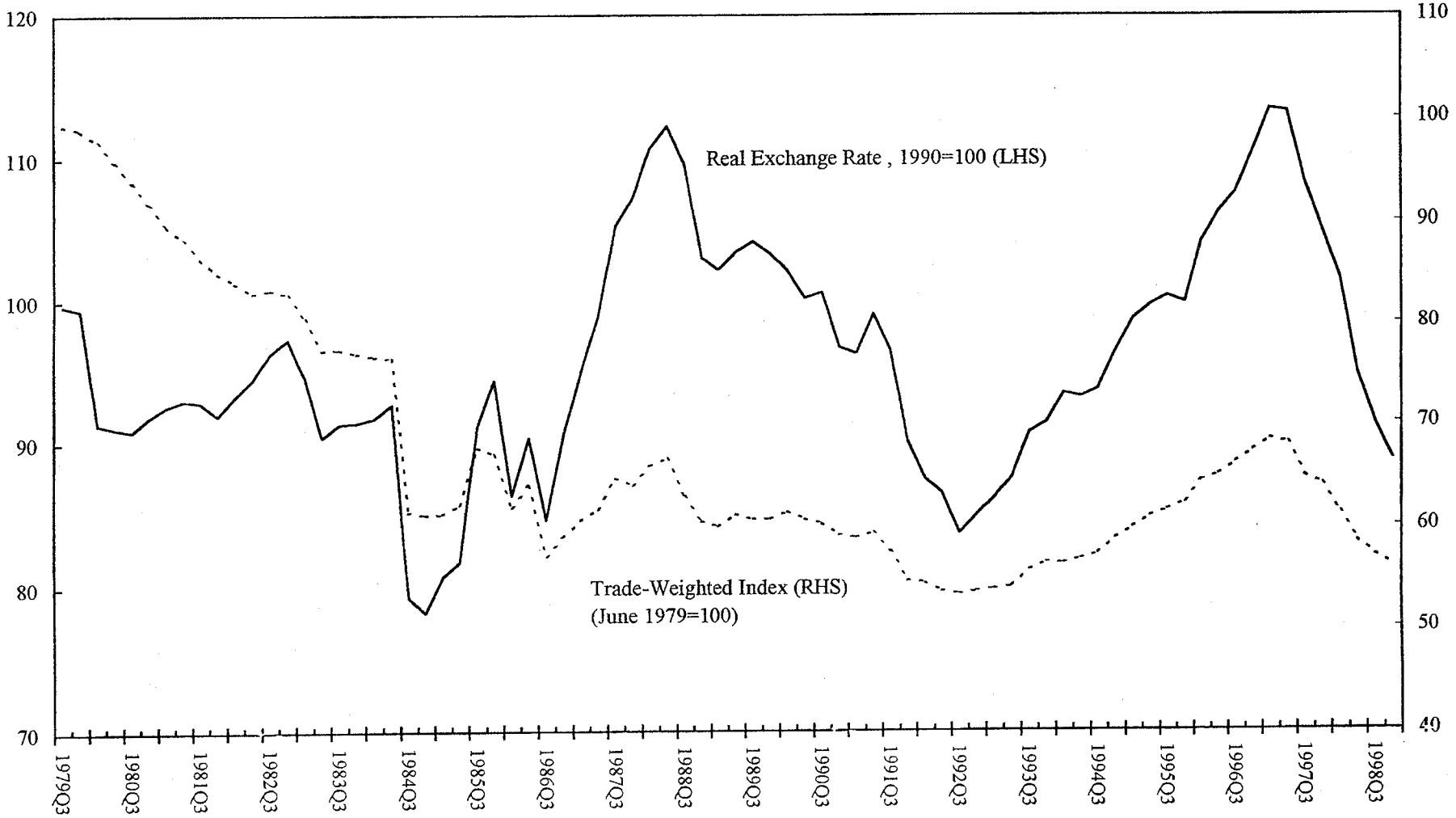
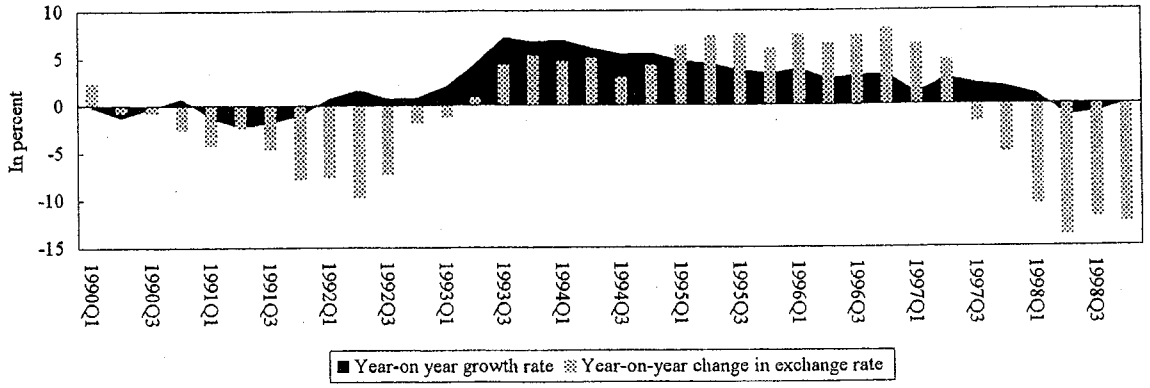
Figure II.I. New Zealand: Exchange Rate Movements, 1979-98



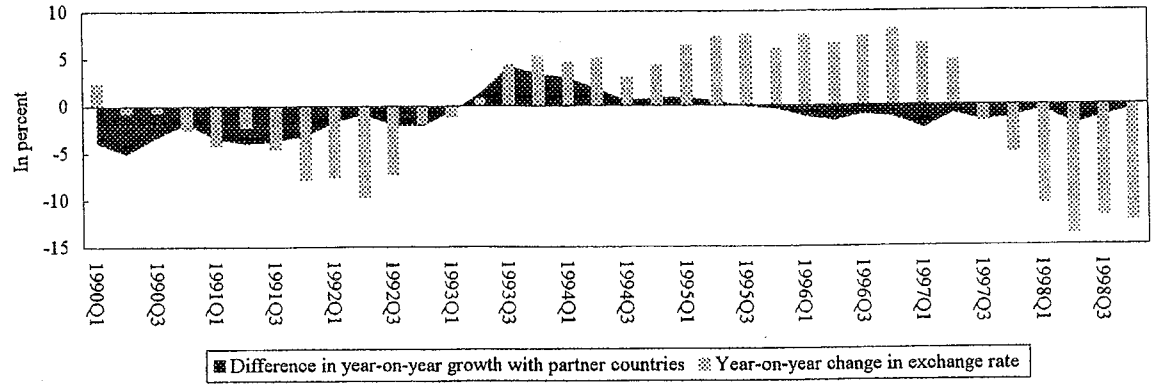
Sources: INS; data provided by the authorities; and staff estimates.

Figure II.2. New Zealand: Correlates of the Exchange Rate Cycle

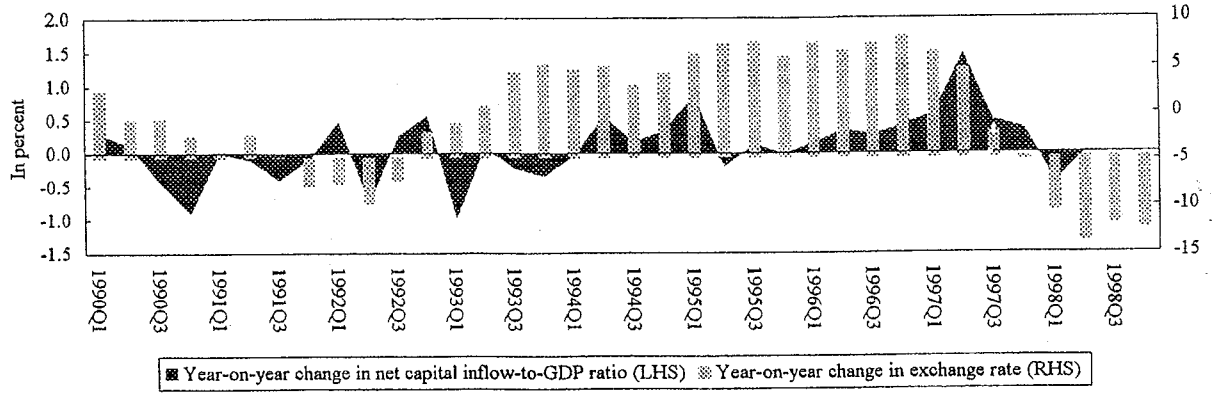
Changes in the Domestic Cycle



Changes in Relative Cyclical Position

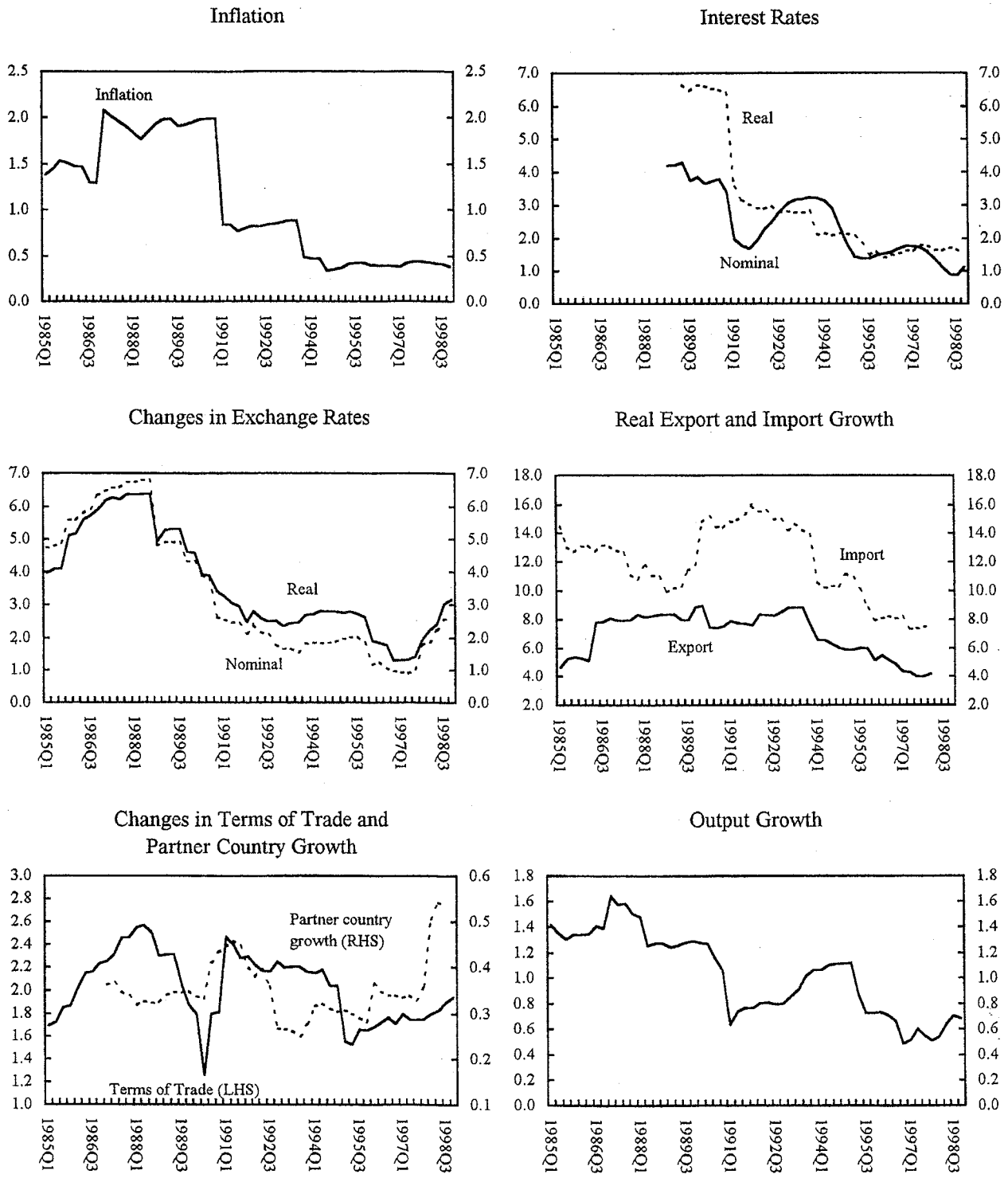


Changes in Capital Inflow



Sources: INS, data provided by authorities, and staff estimates.

Figure II.3. New Zealand: Aspects of Macroeconomic Volatility, 1985–98
(16-quarter rolling percent standard deviation.)



Sources: INS, data provided by authorities; and Fund staff estimates.

Table 1. New Zealand: Gross Domestic Product by Sector, 1994–99

(1991/92 prices, percentage change from previous year)

	1994	1995	1996	1997	1998	1997				1998				1999
						Mar.	Jun.	Sep.	Dec.	Mar.	Jun.	Sep.	Dec.	Mar.
Gross domestic product	6.0	4.0	3.2	2.0	-0.3	1.2	2.9	2.1	1.8	1.0	-1.3	-0.9	0.0	1.4
Agriculture	5.8	1.6	8.1	5.4	-3.1	8.3	7.8	3.3	3.2	-3.1	-2.9	-1.7	-4.3	-2.4
Other primary 1/	-0.7	0.4	3.6	3.8	-9.4	3.7	7.1	-2.5	7.4	-9.8	-16.2	-10.7	0.5	9.4
Manufacturing	6.3	3.5	0.7	1.9	-2.8	-0.3	2.8	2.6	2.3	1.8	-4.8	-3.4	-4.5	-3.2
Electricity, gas, and water	3.6	2.9	0.2	0.0	-2.2	0.4	2.8	1.5	-4.5	-2.4	-3.2	-1.7	-1.5	-1.7
Construction	9.2	11.9	2.8	1.6	-7.6	6.9	1.8	3.8	-5.4	-7.9	-3.6	-14.6	-3.8	-4.0
Trade, restaurants, and hotels	8.3	4.0	1.4	1.5	0.8	-0.7	2.3	1.9	2.3	3.8	-0.6	-1.0	1.2	2.7
Government services 2/	1.5	1.4	3.1	1.3	0.4	0.7	1.8	2.3	0.4	0.8	-0.1	0.7	0.2	1.0
Other services 3/	5.2	2.1	-0.3	-1.1	-0.9	-2.5	-0.8	-0.8	-0.2	-0.7	-2.5	-0.7	0.1	1.7

Source: Statistics New Zealand.

1/ Forestry, fishing, and mining.
2/ Central and local government services.
3/ Transportation, communication, and business and personal services.

Table 2. New Zealand: Selected Indicators of Economic Activity, 1994–99

	1994	1995	1996	1997	1998	1997				1998				1999
						Mar.	Jun.	Sep.	Dec.	Mar.	Jun.	Sep.	Dec.	Mar.
						(Percentage change from the previous year)								
Volume of retail sales 1/	5.5	8.1	3.2	1.1	1.1	-2.3	0.8	0.2	1.0	2.2	-1.1	0.2	1.5	2.3
New automobile registrations	26.8	18.4	20.9	-12.2	-1.0	0.8	-5.5	-18.5	-24.2	-23.0	-20.6	13.8	33.2	38.3
Building permits for new dwellings	8.1	22.3	-10.2	5.5	14.0	-6.7	3.0	32.0	13.3	8.9	-21.4	-32.9	-18.7	0.6
Total real GDP 2/	6.0	4.0	3.2	2.0	-0.3	1.2	2.9	2.1	1.8	1.0	-1.3	-0.9	0.0	1.4
						(In percent)								
Capacity utilization 3/	90.6	90.8	89.9	88.7	87.5	90.7	87.7	88.0	88.2	88.5	87.2	86.9	87.5	88.5
Ratio of stocks to sales:														
Manufacturing	50.8	51.5	50.0	49.4	50.3	49.3	49.9	53.4	44.9	50.6	51.5	53.4	45.6	...
Retail trade	36.9	37.1	37.7	36.3	35.7	38.2	36.7	37.2	33.4	37.1	36.3	36.5	33.1	36.3

Sources: Data provided by the Statistics New Zealand; and the New Zealand Institute for Economic Research (NZIER), Quarterly Survey of Business Opinion.

1/ Seasonally adjusted, in constant March quarter 1995 prices.
2/ Production measure, at constant 1991–92 prices.
3/ Based on the median capacity utilization index for the manufacturing and building and construction sectors, as estimated by the NZIER (seasonally adjusted).

Table 3. New Zealand: Expenditure on GDP, 1994–99

	1998		1994	1995	1996	1997	1998	1999 Q1
	($NZ mn., at current prices)	(In percent of GDP)	(Percentage change from previous year; in constant 1991/92 prices)					
Expenditure on GDP	98,257	100.0	6.1	3.5	2.4	3.0	-0.8	2.3
Total domestic demand	97,711	99.4	6.9	5.1	3.9	3.4	-0.1	2.5
Consumption	78,912	80.3	4.2	4.3	4.0	3.6	1.1	1.8
Private	63,865	65.0	5.6	4.6	4.4	2.9	1.6	1.0
Public	15,047	15.3	-1.0	2.9	2.4	6.2	-1.0	5.1
Gross fixed investment	18,734	19.1	16.7	12.0	6.2	3.1	-1.4	8.4
Private	15,451	15.7	22.3	10.8	6.7	-44.8	-0.6	5.9
Residential construction	4,936	5.0	13.1	1.3	2.9	6.6	-16.3	-5.0
Business investment	10,515	10.7	26.6	14.6	8.0	-62.4	14.7	9.1
Public	3,283	3.3	-7.2	19.1	3.4	260.3	-2.0	27.3
Changes in stocks 1/	263	0.3	0.4	-0.6	-0.6	-0.1	-0.7	-2.0
External balance 1/	545	0.6	-0.6	-1.5	-1.5	-0.4	-0.6	-0.2
Exports of goods and nonfactor services	29,706	30.2	10.3	3.7	3.7	2.9	1.3	7.8
Imports of goods and nonfactor services	29,161	29.7	13.2	8.9	8.3	4.0	3.1	8.7
Memorandum item:								
GDP deflator (1991/92=100)	112	...	1.5	2.6	1.9	0.0	1.6	-0.3

Source: Statistics New Zealand; and Fund staff estimates.

1/ Percent contribution to growth in expenditure on GDP.

Table 4. New Zealand: Prices and Wages, 1994–99

(Percentage change from previous year)

	1994	1995	1996	1997	1998	1997				1998				1999
						Mar.	Jun.	Sep.	Dec.	Mar.	Jun.	Sep.	Dec.	Mar.
Consumer prices excluding credit services	1.8	2.4	2.3	1.7	1.5	2.0	1.5	1.8	1.6	1.7	1.7	1.7	1.1	1.0
Headline CPI	1.8	3.8	2.3	1.2	1.3	1.8	1.1	1.0	0.8	1.3	1.7	1.7	0.4	-0.1
Producer prices 1/														
Input prices	1.3	0.8	0.6	0.4	0.7	0.1	0.1	0.5	0.9	0.4	1.3	0.8	0.1	-0.2
Output prices	1.9	1.3	0.6	0.7	0.6	0.5	0.6	0.6	1.2	0.6	0.9	0.9	0.2	-0.2
GDP deflator	1.5	2.6	1.9	0.0	1.6	0.2	-0.3	0.1	0.2	1.1	2.1	1.5	1.6	...
Export prices	-4.0	-1.7	-3.5	-2.7	4.8	-6.3	-4.2	-2.8	2.9	4.8	5.6	6.2	2.5	-1.5
Pastoral and dairy products	-5.7	-3.8	-0.3	-2.9	7.2	-6.3	-3.9	-4.6	3.7	4.9	6.7	11.2	5.9	1.5
Farming inputs price index	0.9	-2.9	-0.3	2.4	0.8	2.1	2.4	2.6	2.7	1.3	1.2	0.7	0.1	0.3
Nominal average weekly earnings 2/	2.4	2.6	3.1	3.3	2.2	3.8	3.7	3.3	2.3	1.9	1.8	2.5	2.7	2.8
Real average weekly earnings	0.6	-1.1	0.8	2.1	1.0	2.0	2.6	2.3	1.5	0.6	0.1	0.8	2.3	2.8

Sources: Data provided by Statistics New Zealand; and the Reserve Bank of New Zealand.

1/ Input prices are for all industries, including commodity taxes paid and subsidies received by the producer. Output prices are for all market groups based on factory door prices before addition of commodity taxes or deduction of producer commodity subsidies.

2/ Earnings include bonuses, all allowances, overtime pay, and special payments of all sectors.

Table 5: New Zealand: Manufacturing Productivity and Labor Costs, 1994–99

(Percentage change from previous year)

	1994	1995	1996	1997	1998	1997				1998				1999
						Mar.	Jun.	Sep.	Dec.	Mar.	Jun.	Sep.	Dec.	Mar.
Real GDP in manufacturing	6.3	3.5	0.7	1.9	-2.8	-0.3	2.8	2.6	2.3	1.8	-4.8	-3.4	-4.5	-3.2
Hours worked in manufacturing	4.7	4.2	0.2	-1.4	-4.2	-2.8	0.1	-0.4	-2.4	-1.1	-5.9	-4.1	-5.5	-4.4
Labor productivity 1/	1.5	-0.6	0.5	3.3	1.5	2.6	2.7	3.0	4.8	2.9	1.2	0.8	1.0	1.3
Salaries and wages per hour	6.3	6.4	3.9	1.4	-1.4	-0.5	2.8	0.8	2.4	2.3	-3.2	-0.7	-3.7	-0.9
Output price index in manufacturing	0.9	0.0	-0.8	-1.3	0.9	-1.7	-0.9	-1.9	-0.9	-0.5	0.4	2.3	1.3	0.9
Real salaries and wages per hour 2/	0.7	2.2	4.6	4.2	2.0	4.1	3.6	3.1	5.9	3.9	2.5	1.2	0.6	2.7
Labor cost index 3/	1.1	1.5	2.0	2.3	1.9	2.6	2.7	3.0	4.8	2.9	1.2	0.8	1.0	1.3

Source: Data provided by Statistics New Zealand.

1/ Defined as real GDP in manufacturing divided by hours worked in manufacturing.
2/ Deflated by the output price index in manufacturing.
3/ Covers wage and nonwage labor costs but controls for quality and quantity of work and, therefore, does not fully reflect productivity.

Table 6: New Zealand: Labor Market Developments, 1994–99

	1994	1995	1996	1997	1998	1997				1998				1999
						Mar.	Jun.	Sep.	Dec.	Mar.	Jun.	Sep.	Dec.	Mar.
						(In thousands of persons at end of period)								
Working age population	2,708	2,764	2,812	2,845	2,868	2,824	2,831	2,836	2,845	2,853	2,857	2,860	2,868	2,872
Not in the labor force	949	947	958	973	992	966	976	984	973	980	1,000	1,008	992	989
Labor force	1,759	1,817	1,854	1,872	1,876	1,858	1,855	1,852	1,872	1,872	1,857	1,852	1,876	1,883
Employment	1,629	1,705	1,744	1,748	1,735	1,731	1,734	1,730	1,748	1,732	1,716	1,717	1,735	1,741
Unemployment	130	112	110	124	140	127	121	122	124	141	141	135	140	142
						(Percentage change from previous year)								
Working age population	1.9	2.1	1.7	1.1	0.8	1.5	1.4	1.3	1.1	1.0	0.9	0.8	0.8	0.7
Labor force	3.5	3.3	2.0	0.9	0.2	1.7	1.4	0.2	0.9	0.8	0.1	0.0	0.2	0.6
Employment	5.4	4.7	2.3	0.2	-0.7	1.2	0.6	-0.3	0.2	0.0	-1.0	-0.8	-0.7	0.6
Unemployment	-15.6	-13.8	-1.6	12.3	13.4	9.2	14.2	8.6	12.3	11.1	16.3	10.4	13.4	0.6
						(In percent of labor force)								
Labor force participation rate 1/	65.0	65.7	65.9	65.8	65.4	65.6	65.8	65.6	65.5	65.4	65.2	65.1	65.1	65.4
Unemployment rate 1/	7.4	6.2	5.9	6.6	7.5	6.5	6.6	6.8	6.7	7.1	7.6	7.5	7.7	7.0

Source: Data provided by Statistics New Zealand and the Treasury.

1/ Quarterly participation and unemployment rate figures are seasonally adjusted.

Table 7: New Zealand: Employment by Sector, 1994–99 1/

	1994	1995	1996	1997	1998	First Quarter 1999
	(In thousands of persons)					
Total employment	1,629.4	1,705.2	1,744.3	1,747.8	1,735.2	1,741.1
Agriculture, hunting, forestry, and fishing	167.5	165.6	164.2	153.5	153.5	168.7
Mining and quarrying	5.3	5.7	4.9	3.9	4.1	3.8
Manufacturing	297.6	310.7	282.4	282.4	292.0	284.8
Electricity, gas, and water	10.5	13.2	12.7	10.3	9.1	9.6
Building and construction	99.3	106.3	117.3	119.4	110.1	106.5
Wholesale and retail trade	349.4	365.8	369.5	390.2	377.2	373.5
Transportation, storage, and communications	94.2	97.0	104.0	109.0	104.7	109.9
Financing, insurance, real estate, etc.	168.8	185.7	211.1	209.9	207.2	214.2
Community, social, and personal services	434.5	454.2	472.4	462.1	472.3	468.0
Other	2.2	1.1	5.7	7.0	4.9	2.2
	(Annual percentage change)					
Total employment	5.4	4.7	2.3	0.2	-0.7	0.6
Agriculture, hunting, forestry, and fishing	-4.4	-1.1	-0.8	-6.5	0.0	10.3
Mining and quarrying	55.9	7.5	-14.0	-20.4	5.1	-13.6
Manufacturing	12.3	4.4	-9.1	0.0	3.4	-4.1
Electricity, gas, and water	10.5	25.7	-3.8	-18.9	-11.7	-13.5
Building and construction	19.2	7.0	10.3	1.8	-7.8	-5.9
Wholesale and retail trade	6.2	4.7	1.0	5.6	-3.3	0.6
Transportation, storage, and communications	4.8	3.0	7.2	4.8	-3.9	4.2
Financing, insurance, real estate, etc.	11.4	10.0	13.7	-0.6	-1.3	3.9
Community, social, and personal services	-0.3	4.5	4.0	-2.2	2.2	0.8
Other	-26.7	-50.0	418.2	22.8	-30.0	-61.4
	(In percent of total)					
Total employment	100.0	100.0	100.0	100.0	100.0	100.0
Agriculture, hunting, forestry, and fishing	10.3	9.7	9.4	8.8	8.8	9.7
Mining and quarrying	0.3	0.3	0.3	0.2	0.2	0.2
Manufacturing	18.3	18.2	16.2	16.2	16.8	16.4
Electricity, gas, and water	0.6	0.8	0.7	0.6	0.5	0.6
Building and construction	6.1	6.2	6.7	6.8	6.3	6.1
Wholesale and retail trade	21.4	21.5	21.2	22.3	21.7	21.5
Transportation, storage, and communications	5.8	5.7	6.0	6.2	6.0	6.3
Financing, insurance, real estate, etc.	10.4	10.9	12.1	12.0	11.9	12.3
Community, social, and personal services	26.7	26.6	27.1	26.4	27.2	26.9
Other	0.1	0.1	0.3	0.4	0.3	0.1

Source: Data provided by Statistics New Zealand.

1/ Based on Household Labor Force Survey.

Table 8. New Zealand: Summary of Central Government Budget, 1994/95–1998/99

	1994/95	1995/96	1996/97	1997/98	Budget Est. 1998/99
	(In billions of New Zealand dollars)				
Revenue	33.6	35.1	34.8	35.6	36.5
Tax revenue	30.2	32.3	31.9	33.0	32.4
Direct taxation	19.8	21.3	20.5	21.3	20.5
Indirect taxation	10.4	11.0	11.4	11.7	11.9
Nontax revenue	3.4	2.8	2.9	2.6	4.1
Expenditure	30.4	31.7	33.0	34.2	35.3
Social security and welfare	11.7	12.2	12.6	13.0	13.4
New Zealand Superannuation	5.0	5.1	5.1	5.1	5.1
Other	6.7	7.2	7.5	7.9	8.3
Health	4.9	5.2	5.6	6.0	6.6
Education	4.8	4.9	5.3	5.7	5.9
Defense	1.0	1.0	0.9	1.1	1.0
Finance costs	3.8	3.7	3.1	2.8	2.5
Other	4.2	4.7	5.4	5.6	5.9
Revenue less expenses	3.2	3.3	1.8	1.4	1.2
Net surplus from SOEs and Crown entities	-0.6	0.0	0.1	1.2	1.0
Operating balance 1/	2.6	3.3	1.9	2.5	2.2
	(In percent of GDP)				
Revenue	38.1	38.0	36.3	36.3	36.7
Tax revenue	34.3	35.0	33.3	33.6	32.6
Direct taxation	22.5	23.1	21.4	21.7	20.6
Indirect taxation	11.8	11.9	11.9	12.0	11.9
Nontax revenue	3.9	3.0	3.0	2.7	4.1
Expenditure	34.5	34.4	34.4	34.9	35.5
Social security and welfare	13.3	13.3	13.2	13.3	13.5
New Zealand superannuation	5.6	5.5	5.3	5.2	5.1
Other	7.6	7.8	7.8	8.1	8.4
Health	5.5	5.7	5.9	6.1	6.6
Education	5.4	5.4	5.6	5.8	6.0
Defense	1.1	1.1	1.0	1.1	1.0
Finance costs	4.3	4.0	3.2	2.9	2.5
Other	4.8	5.0	5.6	5.7	5.9
Revenue less expenditure	3.6	3.6	1.9	1.4	1.2
Net surplus from SOEs and Crown entities	-0.6	0.0	0.1	1.2	1.0
Operating balance 1/	3.0	3.6	2.0	2.6	2.2

Sources: New Zealand Treasury; and Fund staff estimates.

1/ Equals revenue less expenditure plus net surplus attributable to state-owned and Crown entities.

Table 9. New Zealand: Central Government Balance Sheet, 1995–99 1/

	1995	1996	1997	1998	Budget Est. 1999
	(In millions of New Zealand dollars)				
Crown balance (net worth)	-3,159	3,344	7,470	9,921	5,456
Assets	54,487	58,921	57,968	62,356	55,674
Cash and bank balances	210	344	196	171	135
Marketable securities and deposits	6,523	9,062	7,581	10,285	9,773
Advances	4,782	3,457	2,871	3,367	3,779
Receivables	4,453	4,782	5,091	5,040	5,045
Inventories	326	336	295	302	314
State-owned enterprises and Crown entities	16,420	18,487	18,483	19,022	12,049
Other invesetments	223	211	214	261	187
Physical assets	13,432	13,925	14,502	14,962	15,453
Commercial forests	646	551	505	573	500
State highways	7,454	7,759	8,210	8,359	8,436
Intagible assets	18	7	20	14	3
Contigency capital provision	0	0	0	0	0
Liabilities	57,646	55,577	50,498	52,435	50,218
Payables and provisions	3,824	4,070	4,457	4,639	4,261
Currency issued	1,620	1,675	1,741	1,809	2,023
Borrowings	44,096	41,500	35,972	37,892	36,056
Pension liabilities	8,106	8,332	8,328	8,095	7,878
	(In percent of GDP)				
Crown balance (net worth)	-3.6	3.6	7.8	10.1	5.5
Assets	61.8	63.8	60.4	63.6	56.1
Cash and bank balances	0.2	0.4	0.2	0.2	0.1
Marketable securities and deposits	7.4	9.8	7.9	10.5	9.8
Advances	5.4	3.7	3.0	3.4	3.8
Receivables	5.0	5.2	5.3	5.1	5.1
Inventories	0.4	0.4	0.3	0.3	0.3
State-owned enterprises and Crown entities	18.6	20.0	19.3	19.4	12.1
Other invesetments	0.3	0.2	0.2	0.3	0.2
Physical assets	15.2	15.1	15.1	15.3	15.6
Commercial forests	0.7	0.6	0.5	0.6	0.5
State highways	8.5	8.4	8.6	8.5	8.5
Intagible assets	0.0	0.0	0.0	0.0	0.0
Contigency capital provision	0.0	0.0	0.0	0.0	0.0
Liabilities	65.4	60.2	52.7	53.5	50.6
Payables and provisions	4.3	4.4	4.6	4.7	4.3
Currency issued	1.8	1.8	1.8	1.8	2.0
Borrowings	50.0	45.0	37.5	38.6	36.3
Pension liabilities	9.2	9.0	8.7	8.3	7.9

Sources: New Zealand Treasury; and Fund staff estimates.

1/ As of June 30 of each year.

Table 10. New Zealand: Central Government Tax Revenue, 1992/93–1998/99

	1992/93	1993/94	1994/95	1995/96	1996/97	1997/98	Est. 1998/99
	(In millions of New Zealand dollars)						
Total Taxation	25,812	27,705	30,213	32,233	31,916	32,982	32,356
Income Tax	16,591	17,585	19,843	21,255	20,489	21,260	20,490
Goods and Services Tax (GST)	6,000	6,779	6,809	7,262	7,725	8,030	8,215
Excise Duty	1,856	1,829	1,867	1,875	1,796	1,906	1,993
Customs Duty	587	658	780	843	909	750	540
Other Taxes	778	854	914	998	997	1,036	1,118
	(In percent of GDP)						
Total Taxation	34.1	33.6	34.3	34.9	33.3	33.6	32.6
Income Tax	21.9	21.4	22.5	23.0	21.4	21.7	20.6
Goods and Services Tax (GST)	7.9	8.2	7.7	7.9	8.1	8.2	8.3
Excise Duty	2.5	2.2	2.1	2.0	1.9	1.9	2.0
Customs Duty	0.8	0.8	0.9	0.9	0.9	0.8	0.5
Other Taxes	1.0	1.0	1.0	1.1	1.0	1.1	1.1

Sources: Statistics New Zealand; and Fund staff estimates.

Table 11. New Zealand: Central Government Expenditure, 1992/93–1998/99

	1992/93	1993/94	1994/95	1995/96	1996/97	1997/98	Est. 1998/99
	(In millions of New Zealand dollars)						
Total Expenses	31,429	29,639	30,400	31,743	32,953	34,211	35,256
Social security and welfare	12,071	11,479	11,724	12,240	12,620	13,003	13,367
Education	4,539	4,627	4,803	4,949	5,335	5,714	5,910
Health	4,168	4,602	4,886	5,228	5,626	6,001	6,577
Core government services	1,464	1,723	1,340	1,565	1,667	1,562	1,714
Law and order	1,173	1,150	1,190	1,234	1,281	1,345	1,527
Defence	1,054	1,049	1,013	970	946	1,065	1,031
Transport and communication	781	815	796	821	888	948	1,018
Economic and industrial services	744	711	673	977	763	840	898
Primary services	372	299	309	304	351	423	342
Heritage, culture, and recreation	310	241	233	247	277	297	328
Housing and community development	260	39	46	40	47	29	45
Other	236	14	181	48	68	167	30
Finance costs	3,961	3,788	3,757	3,703	3,072	2,804	2,520
Net foreign exchange losses/gains	296	-898	-551	-603	12	13	-51
	(In percent of GDP)						
Total Expenses	41.6	36.0	34.5	34.4	34.4	34.9	35.5
Social security and welfare	16.0	13.9	13.3	13.3	13.2	13.3	13.5
Education	6.0	5.6	5.4	5.4	5.6	5.8	6.0
Health	5.5	5.6	5.5	5.7	5.9	6.1	6.6
Core government services	1.9	2.1	1.5	1.7	1.7	1.6	1.7
Law and order	1.6	1.4	1.3	1.3	1.3	1.4	1.5
Defence	1.4	1.3	1.1	1.1	1.0	1.1	1.0
Transport and communication	1.0	1.0	0.9	0.9	0.9	1.0	1.0
Economic and industrial services	1.0	0.9	0.8	1.1	0.8	0.9	0.9
Primary services	0.5	0.4	0.4	0.3	0.4	0.4	0.3
Heritage, culture, and recreation	0.4	0.3	0.3	0.3	0.3	0.3	0.3
Housing and community development	0.3	0.0	0.1	0.0	0.0	0.0	0.0
Other	0.3	0.0	0.2	0.1	0.1	0.2	0.0
Finance costs	5.2	4.6	4.3	4.0	3.2	2.9	2.5
Net foreign exchange losses/gains	0.4	-1.1	-0.6	-0.7	0.0	0.0	-0.1

Sources: Statistics New Zealand; and Fund staff estimates.

Table 12. New Zealand: Public Debt, 1993–98 1/

	1993	1994	1995	1996	1997	1998
	(In millions of New Zealand dollars)					
Gross public debt	47,478	46,429	44,096	41,500	35,972	37,892
Held in foreign currency	19,866	16,864	13,045	9,753	6,347	8,041
Held in U.S. dollars	9,514	8,878	6,171	5,110	2,976	4,088
Held in other foreign currencies	10,352	7,986	6,874	4,643	3,371	3,953
Held in domestic currency	27,612	29,565	31,051	31,747	29,625	29,851
Net public debt	37,111	35,423	32,581	28,637	25,324	24,069
	(In percent of GDP)					
Gross public debt	62.8	56.4	50.0	45.0	37.5	38.6
Held in foreign currency	26.3	20.5	14.8	10.6	6.6	8.2
Held in U.S. dollars	12.6	10.8	7.0	5.5	3.1	4.2
Held in other foreign currencies	13.7	9.7	7.8	5.0	3.5	4.0
Held in domestic currency	36.5	35.9	35.2	34.4	30.9	30.4
Net public debt	49.1	43.0	36.9	31.0	26.4	24.5

Sources: Statistics New Zealand; and Fund staff estimates.

1/ As of June 30 of each year.

Table 13: New Zealand: Interest Rates and Yield, 1994–99

(End of period; in percent)

	Call Money Market Rate	Ninety-Day Commercial Bill Rate	Yields on Government Securities on Secondary Market			Yield Gap 1/	Housing Mortgage Rate 2/	Bank Base Lending Rate
			One Year	Five Years	Ten Years			
1994	8.4	9.6	9.6	8.8	8.7	-0.7	10.2	10.9
1995	8.7	8.6	8.2	7.4	7.2	-1.2	10.4	11.9
1996	8.4	8.1	7.5	7.0	7.2	-1.1	10.1	11.9
1997	7.6	8.3	8.0	7.2	7.0	-1.1	9.9	11.4
1998	3.5	4.4	4.8	5.3	5.4	0.9	6.5	8.6
1997								
Jan.	7.6	7.6	7.3	7.1	7.3	-0.5	9.9	11.6
Feb.	7.3	7.5	7.3	7.3	7.3	-0.1	9.9	11.5
Mar.	7.4	7.6	7.6	7.8	7.8	0.2	9.9	11.5
Apr.	7.2	7.5	7.7	8.1	8.1	0.6	9.5	11.5
May	6.6	7.0	7.1	7.5	7.6	0.5	9.4	11.1
Jun.	6.7	7.0	6.8	7.0	7.1	0.0	9.1	10.9
Jul.	7.8	7.8	7.1	6.8	6.8	-1.0	9.6	10.6
Aug.	8.1	8.3	7.6	7.2	7.1	-1.2	10.4	11.6
Sep.	7.9	8.1	7.5	6.9	6.9	-1.1	10.1	11.6
Oct.	7.3	7.8	7.4	6.7	6.6	-1.0	9.9	11.5
Nov.	7.1	7.6	7.4	6.8	6.7	-0.8	9.9	11.4
Dec.	7.6	8.3	8.0	7.2	7.0	-1.1	9.9	11.4
1998								
Jan.	8.7	8.9	8.5	7.1	6.7	-1.8	10.5	11.9
Feb.	8.8	8.9	8.6	7.2	6.8	-1.8	10.5	12.1
Mar.	8.6	9.0	8.7	7.3	6.9	-1.7	11.1	12.5
Apr.	9.2	9.3	9.0	7.1	6.8	-2.1	11.2	12.7
May	8.6	8.9	8.6	6.9	6.7	-2.0	11.2	12.7
Jun.	8.9	9.1	8.3	6.9	6.6	-2.2	11.3	12.6
Jul.	7.1	7.8	7.1	6.6	6.3	-1.2	10.1	11.8
Aug.	6.0	6.8	6.6	6.3	6.2	-0.4	9.1	11.1
Sep.	5.4	5.8	6.0	6.1	6.0	0.3	8.3	10.4
Oct.	4.1	4.8	5.3	5.4	5.5	0.6	6.9	9.5
Nov.	3.5	4.5	5.0	5.5	5.6	1.0	6.5	8.9
Dec.	3.5	4.4	4.8	5.3	5.4	0.9	6.5	8.6
1999								
Jan.	3.3	4.5	4.9	5.4	5.5	0.9	6.5	8.6
Feb.	3.3	4.3	4.7	5.4	5.6	1.1	6.5	8.6
Mar.	4.1	4.6	4.4	5.6	5.8	1.0	6.5	8.4
Apr.	4.5	4.6	4.1	5.4	5.7	0.7	6.5	8.4
May	4.5	4.7	4.1	5.7	6.1	1.1	6.5	8.4
June	4.5	4.7	4.4	6.2	6.5	1.4	6.5	8.4
July	4.5	4.7	4.5	6.1	6.5	1.4	6.5	8.4

Sources: Data provided by Statistics New Zealand; and Reserve Bank of New Zealand.

1/ Yield on 5-year government bonds less the 90-day bill rate.

2/ Weighted prime rates for new borrowers on adjustable rate mortgages.

Table 14. New Zealand: Money and Credit Aggregates, 1994–99 1/

	M1 2/		M2 3/		M3 4/		Private Sector Credit 5/		Domestic Credit 6/	
	($NZ mn.)	Annual percent change	($NZ mn.)	Annual percent change	($NZ mn.)	Annual percent change	($NZ mn.)	Annual percent change	($NZ mn.)	Annual percent change
1994	10,948	4.4	27,840	11.4	67,948	7.3	73,226	13.6	82,180	11.4
1995	11,516	5.2	31,977	14.9	77,800	14.5	84,309	15.1	91,585	11.3
1996	11,003	-4.5	32,765	2.5	87,568	12.6	94,756	12.4	100,202	9.3
1997	11,718	6.5	33,162	1.2	91,023	3.9	104,196	10.0	110,156	9.8
1998	12,887	10.0	37,991	14.6	92,350	1.5	111,996	7.5	119,376	8.3
1997										
Jan.	10,986	0.4	33,405	2.3	85,838	11.9	95,974	13.9	101,324	12.4
Feb.	10,955	2.0	33,199	3.3	85,675	11.3	96,157	13.0	100,758	11.2
Mar.	11,523	3.6	36,029	8.6	85,316	8.9	96,879	11.8	101,951	11.0
Apr.	11,307	2.2	35,007	5.6	86,741	8.5	97,096	10.8	102,670	9.5
May	11,611	4.2	34,765	6.2	86,192	3.6	97,617	10.1	103,986	9.8
Jun.	11,432	4.4	35,920	6.3	87,740	3.6	99,472	9.8	105,291	10.1
Jul.	11,339	6.9	34,965	9.6	88,342	5.8	99,515	9.9	105,454	9.6
Aug.	11,288	7.1	35,015	15.7	89,472	6.6	100,551	9.9	107,303	9.4
Sep.	11,467	7.3	34,729	8.6	90,140	6.8	102,073	10.8	108,480	10.0
Oct.	11,557	5.8	34,021	-0.5	90,026	3.9	102,394	10.3	108,875	9.8
Nov.	11,512	7.7	34,160	4.4	90,574	6.6	103,555	11.5	109,715	10.1
Dec.	11,718	6.5	33,162	1.2	91,023	3.9	104,196	10.0	110,156	9.9
1998										
Jan.	11,558	5.2	33,615	0.6	91,197	6.2	105,577	10.0	111,523	10.1
Feb.	11,553	5.5	33,288	0.3	91,443	6.7	104,846	9.0	111,177	10.3
Mar.	11,620	0.8	34,037	-5.5	91,684	7.5	105,450	8.8	112,042	9.9
Apr.	11,671	3.2	34,806	-0.6	92,361	6.5	105,635	8.8	112,123	9.2
May	11,798	1.6	34,455	-0.9	93,878	8.9	107,244	9.9	114,329	9.9
Jun.	11,632	1.7	34,054	-5.2	94,613	7.8	108,022	8.6	115,535	9.7
Jul.	11,150	-1.7	33,575	-4.0	93,505	5.8	109,007	9.5	116,205	10.2
Aug.	11,351	0.6	35,161	0.4	94,140	5.2	110,233	9.6	119,345	11.2
Sep.	11,769	2.6	36,590	5.4	91,370	1.4	108,920	6.7	117,552	8.4
Oct.	12,059	4.3	37,512	10.3	92,962	3.3	109,925	7.4	117,626	8.0
Nov.	12,369	7.4	38,726	13.4	93,060	2.7	112,056	8.2	119,540	9.0
Dec.	12,887	10.0	37,991	14.6	92,350	1.5	111,996	7.5	119,376	8.4
1999										
Jan.	12,656	9.5	37,915	12.8	93,869	2.9	113,645	7.6	119,815	7.4
Feb.	12,936	12.0	38,885	16.8	95,010	3.9	114,227	8.9	121,256	9.1
Mar.	13,638	17.4	40,954	20.3	93,259	1.7	113,764	7.9	122,222	9.1
Apr.	13,024	11.6	39,335	13.0	93,588	1.3	115,170	9.0	122,932	9.6

Source: Data provided by Statistics New Zealand.

1/ Institutions covered are the Reserve Bank of New Zealand, registered banks, and other M3 institutions. Data are end of period.

2/ M1 equals notes and coins held by the public plus transaction accounts.

3/ M2 equals M1 plus any other call funding and term funding without break penalties.

4/ M3 equals M2 plus all other funding.

5/ Private sector credit equals the claims of M3 institutions on the private sector.

6/ Domestic credit equals private sector credit plus the claims of M3 institutions on the government.

Table 15. New Zealand: Financial Survey, 1994–99 1/

	1994	1995	1996	1997	1998	1997				1998				1999	
						Mar.	Jun.	Sep.	Dec.	Mar.	Jun.	Sep.	Dec.	Mar.	Jun.
	(In millions of New Zealand dollars; end of period)														
Net foreign assets and other items, net	-14,232	-13,786	-12,634	-19,133	-27,026	-16,635	-17,550	-18,339	-19,133	-20,357	-20,922	-26,181	-27,026	-28,963	-28,720
Domestic credit	82,180	91,585	100,202	110,156	119,376	101,951	105,291	108,480	110,156	112,042	115,535	117,552	119,376	122,222	123,761
Private sector credit	73,226	84,309	94,756	104,196	111,996	96,879	99,472	102,073	104,196	105,450	108,022	108,920	111,996	113,764	118,249
Claims on government 2/	8,954	7,277	5,447	5,960	7,380	5,072	5,819	6,407	5,960	6,592	7,513	8,632	7,380	8,459	5,513
Broad money	67,948	77,800	87,568	91,023	92,350	85,316	87,740	90,140	91,023	91,684	94,613	91,370	92,350	93,259	95,042
Broad money growth (annual, in percent)	7.3	14.5	12.6	3.9	1.5	8.9	3.6	6.8	3.9	7.5	7.8	1.4	1.5	1.7	0.5
	(Contribution to the growth of broad money)														
Net foreign assets and other items, net	-6.0	0.7	1.5	-7.4	-8.7	-4.0	-7.7	-4.9	-7.4	-4.4	-3.8	-8.7	-8.7	-9.4	-8.2
Domestic credit	13.3	13.8	11.1	11.4	10.1	12.9	11.4	11.7	11.4	11.8	11.7	10.1	10.1	11.1	8.7
Private sector credit	11.9	13.5	11.4	9.4	7.1	11.1	9.3	10.1	9.4	8.4	8.1	6.3	7.1	7.4	8.9
Claims on government 2/	1.4	0.4	-0.3	1.9	3.0	1.8	2.1	1.6	1.9	3.4	3.6	3.8	3.0	3.7	-0.2
Memorandum items:															
Nominal GDP growth (annual percent change)	7.8	7.1	6.9	7.1	6.2	2.4	3.5	3.5	2.9	3.3	-0.7	-0.1	1.0	2.0	...
CPI (annual percent change)	1.8	3.8	2.3	1.2	1.3	1.8	1.1	1.0	0.8	1.3	1.7	1.7	0.4	-0.1	-0.4
Velocity of circulation of broad money 3/	1.31	1.25	1.14	1.11	1.06	0.28	0.28	0.26	0.29	0.27	0.26	0.25	0.28	0.26	...

Source: Reserve Bank of New Zealand, Bulletin.

1/ Reserve Bank, registered banks, and other institutions whose liabilities are included in broad money.
2/ Including claims on marketing and stabilization accounts.
3/ Ratio of nominal GDP to average monthly data for broad money.

Table 16. New Zealand: Domestic Credit by Sector, 1995–99 1/

	1995	1996	1997	1998				1999		
				Mar.	Jun.	Sep.	Dec.	Mar.	May	June
	(In millions of New Zealand dollars; end of period)									
Total	97,546	110,975	119,799	121,215	117,585	119,639	123,531	122,194	125,874	127,992
Agriculture, hunting, forestry, and fishing	9,701	12,147	13,124	13,026	11,489	12,134	12,197	12,196	12,487	12,440
Mining and quarrying	158	272	219	210	120	119	193	218	246	240
Manufacturing	5,134	6,059	6,491	6,234	5,514	5,745	5,699	5,287	5,434	5,507
Electricity, gas, and water	1,240	1,191	1,725	1,602	1,596	1,628	2,247	2,852	2,700	2,488
Building and construction	1,057	1,039	1,273	1,294	1,172	1,086	1,041	1,082	1,085	1,082
Wholesale and retail trade, restaurants, and hotels	5,573	6,196	6,526	6,994	5,379	5,204	5,029	4,890	5,418	5,332
Transportation, storage, and communications	1,690	1,845	2,235	2,291	1,949	2,183	1,959	2,162	2,108	2,157
Financing, insurance, real estate, and business	21,995	25,050	28,114	27,206	26,477	27,690	30,405	26,600	29,328	29,289
Government, social, and personal services	2,773	3,260	2,981	3,182	3,106	3,034	3,216	3,333	3,389	3,409
Households	44,618	49,103	54,397	55,057	54,264	55,096	56,332	57,936	59,067	59,477
Housing	37,614	44,000	49,563	50,238	49,585	50,454	51,527	53,062	54,073	54,486
Other	7,004	5,103	4,834	4,819	4,679	4,642	4,805	4,874	4,994	4,991
Nonresidents	2,237	3,983	2,307	3,641	5,311	4,576	4,359	4,780	3,754	5,688
Unallocated	1,372	831	407	479	1,209	1,145	855	859	858	885
	(Percentage change from previous year)									
Total	12.2	13.8	8.0	8.4	2.3	2.5	3.1	0.8	0.8	8.9
Agriculture, hunting, forestry, and fishing	13.2	25.2	8.1	5.2	-10.0	-6.2	-7.1	-6.4	-5.1	8.3
Mining and quarrying	-30.8	71.7	-19.3	-6.0	-14.9	-1.7	-12.2	3.9	41.3	99.6
Manufacturing	5.3	18.0	7.1	3.4	-13.3	-13.5	-12.2	-15.2	-13.0	-0.1
Electricity, gas, and water	34.5	-3.9	44.8	6.3	7.2	6.5	30.3	78.0	64.9	55.9
Building and construction	33.6	-1.7	22.5	20.7	6.8	-9.4	-18.2	-16.3	-20.1	-7.7
Wholesale and retail trade, restaurants, and hotels	19.5	11.2	5.3	14.3	-15.8	-20.5	-22.9	-30.1	-23.1	-0.9
Transportation, storage, and communications	5.0	9.2	21.1	18.1	5.8	5.3	-12.4	-5.6	-7.9	10.7
Financing, insurance, real estate, and business	6.9	13.9	12.2	7.3	1.3	7.0	8.1	-2.2	-0.1	10.6
Government, social, and personal services	8.0	17.6	-8.5	4.8	-2.3	4.6	7.9	4.8	10.2	9.7
Households	13.1	10.1	10.8	9.0	5.2	4.3	3.6	5.2	6.7	9.6
Housing	12.9	17.0	12.6	10.4	6.0	4.8	4.0	5.6	7.0	9.9
Other	14.1	-27.1	-5.3	-3.3	-2.2	-0.7	-0.6	1.1	3.0	6.7
Nonresidents	18.4	78.1	-42.1	31.2	62.4	26.3	89.0	31.3	-10.0	7.1
Unallocated	78.3	-39.4	-51.0	-44.1	79.1	126.9	110.0	79.2	-13.8	-26.8

Source: Reserve Bank of New Zealand.

1/ Based on survey of registered banks and other M3 financial institutions; data includes mortgages and issuing of bills or notes.

Table 17. New Zealand: Balance of Payments, 1994–99

	1994	1995	1996	1997	1998	Year to March Quarter 1999
	(In billions of New Zealand dollars)					
Current Account	-1.9	-2.8	-3.9	-6.9	-6.0	-0.9
(in percent of GDP)	-(2.2)	-(3.1)	-(4.1)	-(7.1)	-(6.1)	-(3.6)
Balance on goods and services	1.8	1.1	0.3	0.1	0.0	0.4
Goods: Exports, fob	20.2	20.5	20.6	21.2	22.6	5.4
Goods: Imports, fob	17.9	19.2	19.9	20.0	21.0	5.6
Services: Credit	6.2	6.8	6.9	6.5	7.0	2.5
Services: Debit	6.7	7.1	7.4	7.6	8.6	2.0
Balance on income and transfers	-3.7	-3.9	-4.2	-6.9	-6.0	-1.7
Income: Credit	0.6	1.4	0.5	0.3	0.0	0.0
Income: Debit	6.1	7.5	7.4	8.0	6.7	1.8
Current Transfers: Credit	3.0	3.4	4.0	2.2	2.2	0.5
Current Transfers: Debit	1.1	1.2	1.3	1.4	1.5	0.4
	(In billions of U.S. dollars)					
Capital Account	0.6	1.2	1.3	0.2	0.1	...
Credit	1.0	1.7	1.8	0.8	0.5	...
Debit	-0.4	-0.4	-0.5	-0.5	-0.4	...
Financial Account	2.2	4.7	3.6	3.3	0.7 1/	...
Direct investment abroad	-1.7	0.3	1.5	0.1	-0.1 1/	...
Direct investment in New Zealand	2.5	3.7	2.2	2.7	0.5 1/	...
Portfolio investment assets	-0.1	-0.3	-0.4	-1.6	-0.4 1/	...
Equity securities	-0.2	-0.2	-0.3	-1.0	-0.3 1/	...
Debt securities	0.1	-0.1	-0.1	-0.6	-0.2 1/	...
Portfolio investment liabilities	0.6	0.1	-0.1	-0.6	-0.2 1/	...
Equity securities	0.0	-0.1	0.2	0.1	0.0 1/	...
Debt securities	0.6	0.2	-0.3	-0.7	-0.2 1/	...
Other investment assets	-0.1	-0.4	-0.9	1.2	0.4 1/	...
Other investment liabilities	0.9	1.3	1.3	1.7	0.4 1/	...
Net errors and omissions	0.3	-2.4	0.9	-0.3	-0.6 1/	...
Overall balance	0.7	0.4	1.8	-1.4	-0.5	...

Sources: Statistics New Zealand; and IMF, International Financial Statistics.

1/ First quarter of 1998.

Table 18. New Zealand: Foreign Trade Value, Volume, and Unit Values, 1994–99

	Value 1/		Exports 2/		Imports 2/		Terms of Trade
	Exports	Imports	Volume	Unit Value	Volume	Unit Value	
	(In millions of $NZ)		(Percentage change from the previous year)				
1994	20,519	18,491	10.1	-4.0	16.3	-3.6	-0.5
1995	20,787	19,715	2.9	-1.7	6.5	-0.1	-1.6
1996	20,876	19,847	4.8	-3.5	3.4	-2.6	-1.0
1997	21,448	20,440	5.6	-2.7	3.6	-1.1	-1.5
1998	22,493	21,682	-1.0	4.8	2.4	3.8	0.9
1994 Mar.	4,981	3,853	11.6	-6.5	14.3	-6.0	-0.6
Jun.	5,608	4,237	10.6	-6.5	14.5	-4.4	-2.3
Sep.	4,822	4,917	11.0	-4.7	10.6	-3.4	-1.4
Dec.	5,107	5,483	7.2	2.0	25.4	-0.4	2.4
1995 Mar.	5,386	4,498	6.0	1.2	14.7	1.1	0.1
Jun.	5,476	4,846	1.4	-3.2	14.5	-1.0	-2.3
Sep.	4,852	5,182	2.9	-2.0	4.8	0.2	-2.2
Dec.	5,074	5,188	1.7	-2.7	-3.9	-0.7	-2.0
1996 Mar.	4,994	4,635	-2.8	-3.5	4.2	-1.3	-2.2
Jun.	5,626	4,793	4.6	-0.7	0.0	-0.8	0.1
Sep.	5,029	5,388	7.5	-2.7	8.5	-4.3	1.7
Dec.	5,226	5,032	10.2	-7.1	1.0	-4.0	-3.2
1997 Mar.	4,896	4,489	5.2	-6.3	1.5	-4.6	-1.7
Jun.	5,881	4,876	7.6	-4.2	5.1	-3.3	-0.9
Sep.	5,205	5,650	6.3	-2.8	3.1	1.1	-3.8
Dec.	5,465	5,425	3.1	2.9	4.7	2.5	0.4
1998 Mar.	5,469	4,901	5.8	4.8	6.0	2.9	1.8
Jun.	5,851	5,034	-5.0	5.6	-2.1	5.6	0.0
Sep.	5,467	5,548	-3.2	6.2	-4.4	3.8	2.3
Dec.	5,707	6,199	-0.7	2.5	10.6	2.9	-0.5
1999 Mar.	5,555	5,283	1.0	-1.5	4.5	2.9	-4.2

Source: Statistics New Zealand.

1/ Based on external trade statistics; exports valued f.o.b. and imports v.f.d.

2/ Percentage changes in value terms may not be consistent with volume and unit value changes, as the latter two estimates are obtained from trade statistics expressed in value for duty terms.

Table 19. New Zealand: Changes in Volumes and Unit Values of Exports, 1994–99

(Percentage change from previous year)

	1994	1995	1996	1997	1998	1998				1999
						Mar.	Jun.	Sep.	Dec.	Mar.
Total exports										
Volume	10.1	2.9	4.8	5.6	-1.0	5.8	-5.0	-3.2	-0.7	1.0
Unit Value	-4.0	-1.7	-3.5	-2.7	4.8	4.8	5.6	6.2	2.5	-1.5
Meat										
Volume	3.6	7.9	-0.4	2.7	-2.5	15.2	-7.3	-14.8	-6.0	-13.4
Unit Value	-10.0	-10.9	1.1	1.0	6.8	0.5	4.4	13.9	8.4	7.4
Dairy products										
Volume	15.1	-7.8	23.2	15.5	-3.8	0.7	-13.0	-5.3	1.8	7.0
Unit Value	-13.6	5.3	0.7	-7.5	13.4	12.4	14.2	17.9	9.2	-0.6
Wool										
Volume	15.0	-10.6	-6.3	-1.8	-2.0	5.4	-10.1	4.0	-5.7	-22.1
Unit Value	11.5	12.0	-7.9	-7.7	-4.8	-0.2	-1.4	-4.2	-13.0	-6.7
All pastoral products										
Volume	8.7	2.1	6.1	4.6	-2.3	9.9	-7.7	-7.7	-3.1	-4.7
Unit Value	-5.7	-3.8	-0.3	-2.9	7.2	4.9	6.7	11.2	5.9	1.5
Fish and fish products										
Volume	-0.7	9.2	-0.5	-2.0	0.0	2.6	-6.0	3.4	0.3	2.7
Unit Value	-2.3	-2.7	-5.1	-3.0	7.8	1.8	4.9	11.8	12.6	15.5
Forestry products										
Volume	7.5	0.2	4.6	3.4	-3.5	0.4	-17.3	-8.8	14.3	9.8
Unit Value	-4.7	3.0	-10.8	-7.6	1.5	6.4	5.8	0.7	-6.2	-4.8
Manufactured goods other than food										
Volume	13.0	3.6	4.3	9.2	1.1	3.1	-0.7	2.7	-0.5	8.3
Unit Value	1.4	2.1	-7.1	-2.5	3.5	6.6	6.0	1.2	0.2	-6.8

Source: Statistics New Zealand.

Table 20. New Zealand: Composition of Exports FOB, 1994–99

	1994	1995	1996	1997	1998	March Quarter 1999
	(In millions of New Zealand dollars)					
Total merchandise exports	20,519	20,787	20,876	21,448	22,493	5,555
Live animals, meat, and meat offal	2,972	2,794	2,808	2,920	3,049	903
Fish crustacean, dairy products, and other animal products	4,147	4,146	4,739	4,927	5,356	1,383
Vegetables, fruit and prepared foodstuffs, beverages, and tobacco	2,063	2,176	2,234	2,183	2,425	607
Minerals, chemicals, plastic materials and their products	2,247	2,170	2,247	2,433	2,520	542
Manufactures and goods classifies by material (excluding metals)	5,293	5,437	5,071	4,812	4,576	1,014
Metals and articles of metal	1,354	1,547	1,381	1,547	1,684	367
Other	1,743	1,787	1,832	2,083	2,177	566
Reexports	699	730	564	543	707	174
	(In percent of total exports)					
Live animals, meat, and meat offal	14.5	13.4	13.5	13.6	13.6	16.3
Fish crustacean, dairy products, and other animal products	20.2	19.9	22.7	23.0	23.8	24.9
Vegetables, fruit and prepared foodstuffs, beverages, and tobacco	10.1	10.5	10.7	10.2	10.8	10.9
Minerals, chemicals, plastic materials and their products	11.0	10.4	10.8	11.3	11.2	9.8
Manufactures and goods classifies by material (excluding metals)	25.8	26.2	24.3	22.4	20.3	18.3
Metals and articles of metal	6.6	7.4	6.6	7.2	7.5	6.6
Other	8.5	8.6	8.8	9.7	9.7	10.2
Reexports	3.4	3.5	2.7	2.5	3.1	3.1

Source: Data provided by Statistics New Zealand.

Table 21. New Zealand: Value of Exports by Major Country of Destination, 1994–99 1/

	1994	1995	1996	1997	1998	March Quarter 1999
	(In millions of New Zealand dollars)					
Total	20,519	20,787	20,876	21,448	22,493	5,555
Australia	4,389	4,269	4,262	4,370	4,712	1,121
Japan	3,145	3,396	3,217	3,094	2,958	684
United States of America	2,260	2,061	1,913	2,217	2,910	784
China 2/	1,671	1,768	1,767	1,748	1,780	386
United Kingdom	1,237	1,233	1,341	1,314	1,329	393
Republic of Korea	986	1,080	985	974	724	249
Germany	529	501	505	541	625	162
Malaysia	396	436	476	512	393	105
Italy	288	295	343	321	433	82
	(In percent of total exports)					
Australia	21.4	20.5	20.4	20.4	20.9	20.2
Japan	15.3	16.3	15.4	14.4	13.2	12.3
United States of America	11.0	9.9	9.2	10.3	12.9	14.1
China 2/	8.1	8.5	8.5	8.1	7.9	6.9
United Kingdom	6.0	5.9	6.4	6.1	5.9	7.1
Republic of Korea	4.8	5.2	4.7	4.5	3.2	4.5
Germany	2.6	2.4	2.4	2.5	2.8	2.9
Malaysia	1.9	2.1	2.3	2.4	1.7	1.9
Italy	1.4	1.4	1.6	1.5	1.9	1.5

Source: Statistics New Zealand.

1/ Includes reexports.
2/ Includes Hong Kong SAR and Taiwan Province of China.

Table 22. New Zealand: Changes in Volumes and Unit Values of Imports, 1994–99

(Percentage change from previous year)

	1994	1995	1996	1997	1998	1997				1998				1999
						Mar.	Jun.	Sep.	Dec.	Mar.	Jun.	Sep.	Dec.	Mar.
Total imports														
Volume	16.3	6.5	3.4	3.6	2.4	1.5	5.1	3.1	4.7	6.0	-2.1	-4.4	10.6	4.5
Unit Value	-3.6	-0.1	-2.6	-1.1	3.8	-4.6	-3.3	1.1	2.5	2.9	5.6	3.8	2.9	2.9
Foods and beverages														
Volume	11.7	6.9	1.1	5.0	5.2	-1.7	15.9	-4.5	11.9	9.1	1.2	6.5	4.4	2.1
Unit Value	-2.4	-2.8	2.4	0.3	9.1	-1.8	-1.9	1.9	3.1	10.1	9.2	10.4	6.7	2.6
Petroleum and petroleum products														
Volume	16.2	1.6	11.8	0.7	13.0	-9.1	16.5	0.6	-5.7	16.4	1.2	10.4	29.2	3.9
Unit Value	-15.6	0.7	6.5	6.2	-14.7	12.4	6.2	2.0	4.1	-19.8	-14.3	-6.9	-17.0	-15.1
Nonfuel crude materials														
Volume	1.4	1.1	1.3	-4.5	5.0	-12.5	7.2	-7.1	-3.7	14.9	4.0	-3.3	5.3	-0.4
Unit Value	-0.8	1.8	-1.5	-1.4	8.6	-6.6	-4.6	1.5	4.5	9.0	11.1	12.1	2.4	-1.8
Nonfood manufactured goods														
Volume	17.4	7.1	3.4	4.3	1.1	3.5	3.5	4.7	5.2	4.4	-3.2	-6.3	9.9	4.9
Unit Value	-2.8	-0.1	-3.7	-2.1	5.0	-6.2	-4.5	0.6	2.1	4.5	7.4	3.8	4.5	4.6
Iron and steel														
Volume	13.9	-1.3	4.1	-4.7	-15.0	3.4	-3.4	-9.8	-7.4	-7.3	-16.7	-12.1	-23.1	5.6
Unit Value	-4.7	4.8	-1.6	-4.3	8.3	-10.9	-6.8	-2.0	2.9	12.7	11.4	7.6	1.8	-4.7
Nonelectrical machinery														
Volume	19.0	8.3	6.5	-0.1	-1.2	-2.7	-8.4	-3.4	14.8	20.9	1.5	-5.0	-17.4	-17.0
Unit Value	-2.9	-0.5	-4.7	-3.7	5.5	-5.6	-7.0	-1.5	-0.4	-1.3	7.5	3.6	12.3	16.7
Electrical machinery														
Volume	20.9	23.0	-1.5	7.6	-0.1	8.1	11.3	6.4	5.2	6.2	-5.0	-11.1	10.3	8.6
Unit Value	-4.8	-6.1	-0.8	-4.9	4.6	-8.6	-8.9	-0.8	-1.0	4.4	6.8	4.2	3.0	4.4
Transportation equipment														
Volume	31.6	3.6	1.5	1.4	6.7	-1.9	-2.3	10.6	-2.7	-13.8	-9.3	-17.4	73.8	45.3
Unit Value	1.5	-0.6	-2.3	1.8	-2.0	-3.2	-0.7	5.6	5.5	6.8	0.1	-9.4	-4.9	-5.8
Plastics and articles of plastic														
Volume	14.9	-5.7	10.3	3.7	0.5	4.3	9.2	0.4	1.7	2.8	-3.0	1.9	0.2	12.3
Unit Value	-5.1	11.4	-13.7	-1.6	5.7	-6.5	-3.8	-1.1	5.3	9.4	8.1	4.6	1.1	-8.8
Textile yarns and fabrics														
Volume	7.7	-5.9	-1.4	-1.6	-5.3	-7.0	-2.8	0.3	3.0	1.2	-8.3	-9.1	-4.2	-2.4
Unit Value	-3.0	-0.6	-4.2	0.8	11.5	-3.7	0.1	1.6	5.4	13.7	11.7	13.3	7.4	-1.7

Source: Statistics New Zealand.

Table 23. New Zealand: Composition of Imports, 1994–99

	1994	1995	1996	1997	1998	March Quarter 1999
	(In millions of New Zealand dollars)					
Total merchandise imports, CIF	19,981	21,251	21,399	21,964	23,348	5,673
Total merchandise imports, VFD	18,491	19,715	19,847	20,440	21,682	5,156
Live animals, foods fats, beverages, and tobacco	1,397	1,484	1,527	1,612	1,834	431
Minerals, chemicals, plastic materials and their products	4,252	4,470	4,649	4,777	5,064	1,251
Manufactures and goods (excluding textiles and metals)	1,476	1,627	1,577	1,691	1,846	452
Textiles and textile articles	1,139	1,107	1,108	1,194	1,292	333
Metals and articles of metal	1,168	1,306	1,270	1,229	1,263	308
Machinery and mechanical appliances	4,891	5,418	5,424	5,360	5,578	1,377
Vehicles and aircrafts	3,090	3,156	3,097	3,273	3,385	703
Other	1,077	1,148	1,196	1,304	1,419	301
	(In percent of total imports, VFD)					
Live animals, foods fats, beverages, and tobacco	7.6	7.5	7.7	7.9	8.5	8.4
Minerals, chemicals, plastic materials and their products	23.0	22.7	23.4	23.4	23.4	24.3
Manufactures and goods (excluding textiles and metals)	8.0	8.3	7.9	8.3	8.5	8.8
Textiles and textile articles	6.2	5.6	5.6	5.8	6.0	6.5
Metals and articles of metal	6.3	6.6	6.4	6.0	5.8	6.0
Machinery and mechanical appliances	26.5	27.5	27.3	26.2	25.7	26.7
Vehicles and aircrafts	16.7	16.0	15.6	16.0	15.6	13.6
Other	5.8	5.8	6.0	6.4	6.5	5.8

Source: Statistics New Zealand.

Table 24. New Zealand: Value of Imports by Major Country of Origin, 1994–99

	1994	1995	1996	1997	1998	March Quarter 1999
	(In millions of New Zealand dollars)					
Total	18,491	19,715	19,847	20,440	21,682	5,283
Australia	3,995	4,290	4,864	5,219	4,832	1,171
United States of America	3,557	3,669	3,283	3,634	4,230	803
Japan	2,815	2,698	2,783	2,347	2,422	708
China 1/	1,310	1,433	1,409	1,620	1,770	440
United Kingdom	1,159	1,163	1,046	1,046	1,111	237
Germany	852	953	940	853	1,024	226
Italy	400	481	482	439	473	103
Republic of Korea	296	337	364	391	411	114
Malaysia	224	350	389	384	464	100
	(In percent of total imports)					
Australia	21.6	21.8	24.5	25.5	22.3	22.2
United States of America	19.2	18.6	16.5	17.8	19.5	15.2
Japan	15.2	13.7	14.0	11.5	11.2	13.4
China 1/	7.1	7.3	7.1	7.9	8.2	8.3
United Kingdom	6.3	5.9	5.3	5.1	5.1	4.5
Germany	4.6	4.8	4.7	4.2	4.7	4.3
Italy	2.2	2.4	2.4	2.1	2.2	2.0
Republic of Korea	1.6	1.7	1.8	1.9	1.9	2.2
Malaysia	1.2	1.8	2.0	1.9	2.1	1.9

Source: Statistics New Zealand.

1/ Includes Hong Kong SAR and Taiwan Province of China.

Table 25. New Zealand: Services, Income, and Transfers, 1994–99

(In millions of New Zealand dollars)

	1994	1995	1996	1997	1998	First Quarter 1999
Net services, income, and transfers	-4,210	-4,172	-4,608	-8,015	-7,529	-1,111
Transportation	-113	-538	-690	-823	-974	-105
Travel	885	1,580	1,391	870	586	904
Other miscellaneous services 1/	-1,312	-1,330	-1,148	-1,148	-1,155	-220
Government current transactions	-12	-20	-6	7	-1	-1
International investment income	-5,508	-6,033	-6,872	-7,758	-6,753	-1,768
Transfers	1,850	2,169	2,717	837	768	79
Receipts	9,771	11,631	11,425	9,041	9,259	3,035
Transportation	2,460	2,327	2,337	2,282	2,461	730
Travel	2,817	3,539	3,543	3,105	3,226	1,428
Other miscellaneous services 1/	811	848	885	1,005	1,219	339
Government current transactions	110	123	131	136	138	32
International investment income	597	1,423	543	280	-25	5
Income from direct investments	289	935	-79	-468	-849	-153
Official investment income	183	307	342	280	310	61
Other	125	181	280	468	514	97
Transfers	2,976	3,371	3,986	2,233	2,240	501
Payments	-13,981	-15,803	-16,033	-17,056	-16,788	-4,146
Transportation	-2,573	-2,865	-3,027	-3,105	-3,435	-835
Travel	-1,932	-1,959	-2,152	-2,235	-2,640	-524
Insurance	-338	-350	-258	-247	-252	-59
Other miscellaneous services	-1,785	-1,828	-1,775	-1,906	-2,122	-500
Government current transactions	-122	-143	-137	-129	-139	-33
International investment income	-6,105	-7,456	-7,415	-8,038	-6,728	-1,773
Income from direct investments	-3,513	-4,593	-4,743	-4,957	-3,570	-1,131
Official investment income	-1,826	-1,579	-1,617	-1,871	-1,717	-360
Other	-766	-1,284	-1,055	-1,210	-1,441	-282
Transfers	-1,126	-1,202	-1,269	-1,396	-1,472	-422

Source: Data provided by Statistics New Zealand.

1/ Other services also includes insurance services, as insurance services are confidential.

Table 26. New Zealand: External Debt, 1994–99 1/

	1994	1995	1996	1997	1998	1999
			(In millons of New Zealand dollars)			
Total external debt	72,545	69,975	75,425	79,593	99,554	101,940
Of which : Long term	36,108	34,771	35,744	39,200	55,719	53,255
Official government 2/	26,289	23,418	21,896	20,649	19,969	17,384
Other sectors 3/	46,256	46,557	53,529	58,945	79,585	84,556
			(In percent of GDP)			
Total external debt	89.8	80.8	82.5	83.7	101.4	103.2
Of which : Long term	44.7	40.2	39.1	41.2	56.7	53.9
Official government 2/	32.5	27.1	23.9	21.7	20.3	17.6
Other sectors 3/	57.2	53.8	58.5	62.0	81.0	85.6
			(In percent of total)			
Currency of denomination						
New Zealand dollar	35.2	44.2	52.8	55.0	54.0	47.4
U.S. dollar	38.9	33.1	26.0	26.2	27.4	32.4
Japanese yen	8.6	8.6	6.2	5.0	5.0	5.4
Australian dollar	4.8	4.9	4.9	3.9	3.7	4.3
Debt instruments						
Loans	32.2	31.6	33.2	35.3	44.2	44.1
Bills and bonds	28.4	24.7	21.4	16.7	20.9	19.7
Deposits	22.1	23.6	21.9	22.2	15.2	18.5
Domestically issued securities	13.3	15.3	18.2	21.3	15.2	12.3

Source: Data provided by Statistics New Zealand.

1/ As of end-March each year.
2/ Includes the Reserve Bank, the Treasury, and all other government departments.
3/ Includes private and other government sectors.

Table 27. New Zealand: Exchange Rates, 1994–99 1/

	US$/$NZ		$A/$NZ		Reserve Bank Trade-Weighted Index		Nominal Effective Rate		Real Effective Rate	
	Level	Percent change 2/	Level	Percent change 2/	Level (June 1979=100)	Percent change 2/	Level (1990=100)	Percent change 2/	Level (1990=100)	Percent change 2/
1994	0.59	9.8	0.81	2.0	57.25	4.2	100.16	6.9	94.39	5.9
1995	0.66	10.6	0.89	9.2	61.12	6.8	105.19	5.0	99.93	5.9
1996	0.69	4.8	0.88	-0.8	65.61	7.3	112.97	7.4	107.37	7.4
1997	0.66	-3.6	0.89	1.4	66.24	1.0	116.63	3.2	110.22	2.7
1998	0.54	-19.0	0.85	-4.3	58.19	-12.1	99.97	-14.3	94.34	-14.4
1996 Mar.	0.67	4.9	0.89	3.9	64.27	7.4	110.06	5.7	104.43	5.5
Jun.	0.68	1.9	0.86	-6.3	64.90	6.6	112.10	6.8	106.50	6.5
Sep.	0.69	4.4	0.88	-2.0	66.03	7.4	113.38	6.9	107.87	7.2
Dec.	0.71	7.9	0.89	1.5	67.23	8.0	116.32	10.1	110.67	10.5
1997 Mar.	0.70	3.7	0.90	0.8	68.40	6.4	119.91	8.9	113.70	8.9
Jun.	0.69	1.3	0.90	4.3	67.93	4.7	120.11	7.1	113.47	6.5
Sep.	0.65	-6.4	0.88	0.2	64.77	-1.9	115.02	1.4	108.50	0.6
Dec.	0.62	-12.5	0.89	0.5	63.86	-5.0	111.47	-4.2	105.20	-4.9
1998 Mar.	0.58	-17.1	0.87	-3.1	61.18	-10.6	107.86	-10.0	101.96	-10.3
Jun.	0.53	-22.7	0.85	-5.5	58.50	-13.9	100.56	-16.3	95.10	-16.2
Sep.	0.51	-21.4	0.85	-3.5	57.09	-11.9	96.55	-16.1	91.40	-15.8
Dec.	0.53	-14.7	0.84	-5.2	56.00	-12.3	94.93	-14.8	88.92	-15.5
1999 Mar.	0.54	-6.9	0.85	-2.2	57.51	-6.0	97.98	-9.2	91.64	-10.1
Jun.	0.54	1.6	0.83	-2.1	59.09	1.0	101.57	1.0	94.42	-0.7

Sources: Data provided by Statistics New Zealand; and IMF, Information Notice System and Treasurer's database.

1/ Period averages.
2/ Percentage change from the previous year.

Table 28. New Zealand: Gross Official International Reserves, 1994–99

(In millions of U.S. dollars; end of period)

	Gold	SDRs	Reserve Position in the Fund	Foreign Exchange			Gross Official Reserves	Months of Imports (c.i.f) Equivalent
				Total	Reserve Bank Overseas	Treasury Overseas		
1994	0.0	0.3	146	3,561	2,351	1,210	3,709	3.5
1995	0.0	0.8	163	4,187	2,514	1,673	4,353	3.9
1996	0.0	0.4	182	5,770	2,714	3,057	5,953	5.0
1997	0.0	0.3	181	4,273	2,750	1,522	4,451	4.0
1998	0.0	1.7	352	3,846	2,461	1,385	4,201	4.1
1994 Mar.	0.0	0.1	148	3,741	2,447	1,294	3,887	4.3
Jun.	0.0	0.1	151	3,856	2,469	1,387	4,008	4.4
Sep.	0.0	0.2	146	3,356	2,427	929	3,503	3.2
Dec.	0.0	0.3	146	3,561	2,351	1,210	3,709	3.5
1995 Mar.	0.0	0.3	157	3,802	2,523	1,280	3,958	3.3
Jun.	0.0	0.1	165	3,615	2,631	983	3,780	3.5
Sep.	0.0	0.9	157	3,886	2,555	1,332	4,044	3.4
Dec.	0.0	0.8	163	4,187	2,514	1,673	4,353	3.9
1996 Mar.	0.0	0.9	176	4,402	2,543	1,859	4,578	4.0
Jun.	0.0	0.3	176	5,295	2,717	2,578	5,473	4.9
Sep.	0.0	0.7	182	6,285	2,728	3,557	6,469	5.1
Dec.	0.0	0.4	182	5,770	2,714	3,057	5,953	5.0
1997 Mar.	0.0	0.5	168	4,349	2,628	1,722	4,516	3.7
Jun.	0.0	0.1	169	4,057	2,633	1,424	4,224	3.7
Sep.	0.0	0.2	162	4,277	2,747	1,531	4,441	3.5
Dec.	0.0	0.3	181	4,273	2,750	1,522	4,451	4.0
1998 Mar.	0.0	0.7	266	3,935	2,624	1,311	4,194	3.7
Jun.	0.0	1.1	277	3,830	2,577	1,252	4,103	4.4
Sep.	0.0	1.3	325	3,839	2,613	1,226	4,167	4.1
Dec.	0.0	1.7	352	3,846	2,461	1,385	4,201	4.1
1999 Mar.	0.0	2.3	438	3,418	2,383	1,035	3,857	3.5
Jun.	0.0	...	...	3,288	2,351	937	3,720	3.4

Source: Reserve Bank of New Zealand.