# REVIEW OF ECONOMIC AND MONETARY CONDITIONS

*In this article David Carey and Robin Clements review monetary conditions over April-August in the light of economic developments since mid-1987.*

Crucial to any assessment of monetary conditions is the state of the real economy. The more buoyant is the economy, the greater is the pressure that must be exerted on liquidity conditions to achieve a given pace of disinflation. This pressure will be likely to show up in higher interest rates, a more inverted interest rate yield curve and a stronger exchange rate than would occur in a more depressed economy.

For the first three years after the adoption in 1984 of a disinflationary monetary policy, the real economy remained consistently more buoyant than had been anticipated. The strength of economic activity, amongst other things, reflected the wide range of new opportunities that had become available following de-regulation of financial and other markets as well as a high level of optimism about the economy's medium term prospects. This optimism fueled a stockmarket boom that was the largest recorded in any OECD country over 1984-87 and, in turn, underpinned high levels of aggregate demand in spite of high real interest rates.

Following the stockmarket crash, economic activity has been much less buoyant and substantial progress in the battle against inflation has been made. The developments which have occurred in the real economy since late 1987 are reviewed in the next section of this article. In the following section, some of the main conclusions about conditions in the real economy are used to assist in the interpretation of monetary indicators over the period April-August 1988.

## Real Economy Developments

The stockmarket crash in October last year set the scene for reduced levels of consumption expenditure. The stockmarket wealth effects that had formerly supported high levels of consumption expenditure in relation to income were reversed. Moreover, the property market boom of recent years also came to an abrupt end, further depressing consumption expenditure.

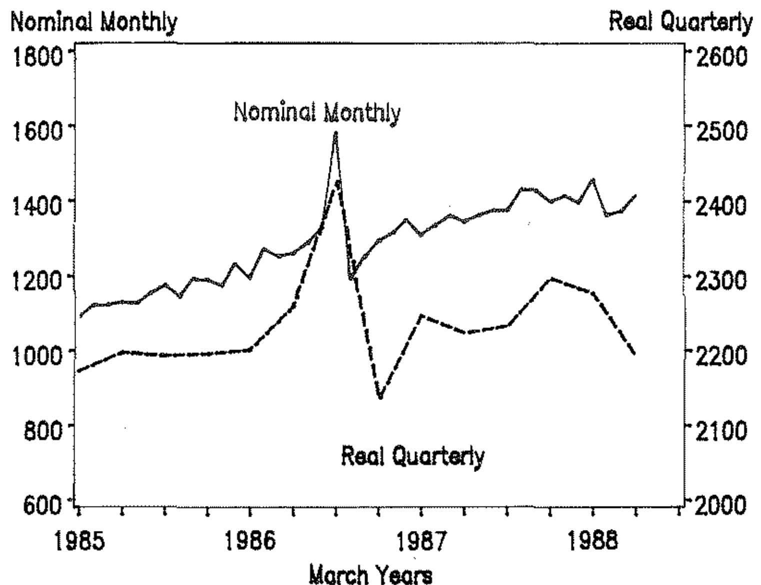
At the same time that wealth effects were having an adverse influence on levels of consumption expenditure, the pace of structural reform in the economy was also accelerating, especially in the government sector. In the drive to achieve a more efficient economy, large numbers of employees were being made redundant. The rate at which workers were being laid off was particularly high in State Owned Enterprises (SOEs), where there had typically been excessive staffing levels prior to corporatisation. The historically high and rapidly increasing levels of unemployment that have resulted from this re-structuring have severely dented consumer confidence. As might be expected, sales of consumer durables have been especially depressed in this environment.

Another factor weakening consumption expenditure since October 1987 is likely to have been the rise in real after-tax interest rates. The October 1988 tax cuts, which reduce the personal income tax rates applicable for 1988/89 and then further reduce them for 1989/90, have increased the after-tax return on savings. Similarly, a decline in inflation expectations in excess of the fall in nominal interest rates since late 1987 has also increased the net of tax real return on savings. The resulting rise in real after-tax interest rates is likely to have encouraged people to save more and consume less since late 1987.

In response to all of these factors, a marked contraction in consumption expenditure occurred in the June quarter 1988. Much of this decline actually appears to have been concentrated in April, when retail sales fell by 6.5 per cent (see figure 1). Since that time nominal retail sales levels have expanded by 0.8 per cent in May and 2.9 per cent in June, indicating that retail sales, and therefore consumption, have recovered somewhat from their low points in April.

The decline in investment expenditure, admittedly off a high base, began earlier than that in consumption. The major element of investment expenditure accounting for the decline in total investment was commercial property invest-

Figure 1
Retail Trade – Seasonally Adjusted ($m)
Excluding Automotive Sector



ment. Such investment had been occurring at very high levels over recent years, with the result that actual and planned office accommodation in Auckland and Wellington was growing rapidly in relation to prospective levels of demand. As an impending imbalance between office demand and supply became more apparent, the rate at which new projects were commenced fell off sharply. Given that developers were committed to completing projects already well underway, the major effects on commercial property investment have only become apparent as projects have been completed.

An important factor ameliorating the decline in investment expenditure over the last half of 1987/88 was a high rate of growth in the plant and machinery category of private investment. After remaining relatively depressed over the previous few years, high growth in this category occurred in the six months to March 1988, partly as a correction to the previous low levels of investment but also in response to the large numbers of commercial building completions, which boosted demand for telecommunications equipment. Demand for transport equipment was also high at this time.

The combined influence of these developments in consumption and investment expenditures has been a decline in final domestic demand in each quarter since the September quarter 1987, with the decline being particularly sharp in the June quarter 1988. In addition, total domestic expenditure has also been depressed by a large amount of commercial destocking since late 1987, especially in the March quarter. Reserve Bank discussions with manufacturers and retailers suggest that this destocking has not been largely cyclical but rather has been undertaken to reduce stock financing costs and thereby improve efficiency.

Real Gross Domestic Product (GDP)[1] has also been declining since the September quarter of 1987, but at a more rapid rate than has been the case for demand. The greater decline in activity reflects the fact that an increased proportion of final demand was for imports over the six months to March 1988 and especially in the December quarter 1987. This rise in the relative importance of import demand is related to the high level of plant and machinery investment that occurred at this time and to the rising level of import penetration in consumption expenditure.

The most recent economic indicators suggest that activity on average throughout the June quarter declined over the previous quarter but also point to the possibility that the economy may be close to bottoming out. As previously noted, a large decline in retail sales occurred in April but figures for the subsequent two months suggest that consumption expenditure has recovered somewhat since then. In addition, the other main indicator of consumption trends, car registration numbers, appears in the last few months to have recouped some of the fall recorded earlier in the year, even allowing for the effects of the 1 June tariff cuts. After peaking in September last year, total car registrations (seasonally adjusted) fell by over 14 per cent in the three months to April compared with registrations in the previous three months but have since increased by a little more than 3 per cent in the three months to July (although the month of July itself fell in seasonally adjusted terms).

With respect to investment, recent indicators are rather more pessimistic and favour the view that real expenditures on all types of capital formation declined in the June quarter. Permits issued for new dwellings declined on average over both the March and June quarters, although the volatility of this series makes it difficult to interpret monthly movements with much confidence. Commercial building activity is continuing to ease from a mid-1987 peak but projects underway in the June 1988 quarter mean that this type of investment is still relatively high. The only sign of expansion in investment levels is the 8.2 per cent annual growth in surveyed import orders for machinery and electrical equipment in the three months to June.

While the above range of indicators highlights the weakening of domestic demand over the June quarter as a whole, the soaring rate of registered unemployment over the quarter has been the most public manifestation of the downturn. However, as an indicator of the state of economic activity, registered unemployment is particularly misleading because it represents the total effect of two quite different influences. While there is no doubt that the economic downturn has contributed to the increase in unemployment, the more significant factor is layoffs related to both public and private sector restructuring. The drive for greater efficiency in both sectors was the inevitable result of the reforms which have taken place since 1984 to create a more competitive economy. This shakeout of employment would have occurred whether or not the economy had entered a downturn and will probably continue to be a significant factor in increasing unemployment over the next year even if the widely anticipated upturn eventuates (see Economic Forecasts later in this Bulletin).

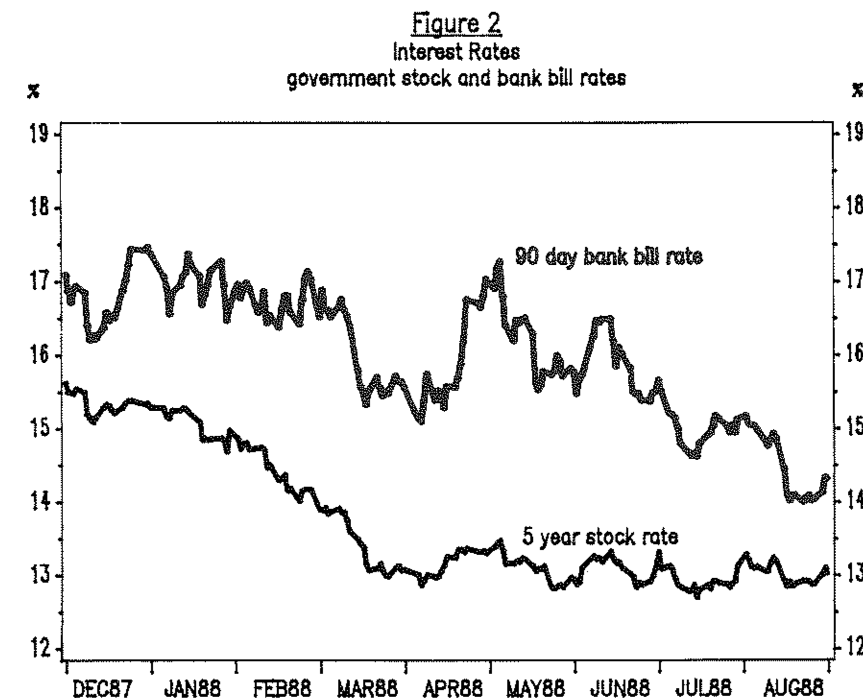
Overall, indicators for the last six months suggest that real expenditures have fallen back from peaks reached in mid-1987. The lagged effects of a non-accommodating monetary policy along with the significant dampening effect of the stockmarket crash on confidence have resulted in a continuation of the downturn which began in the September quarter of 1987. However, there are signs of some improvement in indicators for consumption which, in association with the cessation of the negative influence of destocking, should more than out-

[1] Expenditure measure

weigh a further fall-off in investment and produce at least a stable level of economic activity in the second half of 1988/89.

## Developments in Monetary Indicators

Short-term interest rates (90-day bank bills) fluctuated widely over the period April to August (see figure 2). At first, short-term rates rose rapidly, from 14.8 per cent at the beginning of April to a peak of 17.3 per cent in early May. This interest rate rise was caused by uncertainty over the introduction of the float tender, cash distribution problems, an uneven primary liquidity maturity structure and the imminent settlement of a number of large financial market transactions. Since that time, rates have generally trended downwards, although occasional upward fluctuations have occurred. The most significant of these fluctuations occurred in early June, when a financial institution endeavoured to monopolise settlement cash, reducing the effective liquidity of the financial system. Following the Governor's statement on 12 August that the Bank considered a further interest rate decline to be warranted, 90-day rates dropped from 14.6 per cent to 14 per cent but bounced back to 14.3 per cent at the end of August.




Long-term bond (five year government stock) rates over the review period fluctuated in a range of 70 basis points (i.e. 0.7 percentage points) with only a slight downward trend in rates evident (see figure 2); the five year bond rate averaged 13.2 per cent in April and 13 per cent in August. The fluctuations in rates that occurred seemed to be largely in sympathy with movements in short-term funding costs. However, when the Prime Minister announced on 29 June 1988 that the Government was having difficulty containing expenditure, a significant but temporary upward movement in rates was initiated. Over the subsequent period leading up to the Budget, the market tended to discount the Prime Minister's statement and rates fell to levels that were even lower than those at the end of June.

Although many of the major features of the Budget had been announced before its delivery on 28 July, financial markets were nevertheless disappointed with the Budget. As expected, the forecast budget deficit (Government Finance Statistics Financial Balance basis) was $1,380 million, or 2.2 per cent of GDP (compared with a 1987/88 out-turn of 1.9 per cent of GDP) and the intention to sell $2 billion worth of state assets this year was announced. However, the budget deficit was only contained to the projected level through the one-off advancement of $550 million in provisional tax payments. More importantly, large increases in expenditure as a percentage of GDP were budgeted for in virtually every category of expenditure; Interest on Public Debt and the General Public Services categories of expenditure were the only exceptions. In the case of the three biggest expenditure categories – Social Security and Welfare; Health; Education – the increases were 14.9 per cent, 6.4 per cent and 12.4 per cent respectively. The Government also announced in the Budget the rejection of the Brash Committee Report on the taxation of superannuation and instead confirmed that superannuation contributions and accumulation would be taxed. The Government's failure to contain social expenditure and reduce the fiscal deficit, together with concerns that the superannuation tax changes could reduce the demand for long-term bonds, helped to push up long rates following the Budget. In addition,the large issues of five year New Zealand dollar bonds being planned by SOEs at this time also helped to increase long rates. This upward trend in long rates was broken on 12 August, when the Governor made his statement about interest rate reductions being warranted. At the end of August, however, uncertainty about the future course of the exchange rate and political developments pushed five year government bond rates back up 19 basis points to 13.1 per cent.

Developments in short- and long-term interest rates over the review period meant that the interest rate yield gap (see figure 3) rose during April to reach 3.8 percentage points by early May and has since fluctuated around a downward trend. By late August the yield curve gap had declined to around 1.2 percentage points.

The exchange rate strengthened markedly from April to June, rising from a Reserve Bank Trade Weighted Index (TWI) value of 64.0 in early April to a peak of 70.2 on 20 June (see figure 4). A major factor underpinning this rise was the increase in short-term rates which occurred during April. Although this increase was partly reversed over the subsequent six weeks, short-term rates still remained significantly higher in mid June than they had been at the beginning of the review period. Other factors that may have been supporting the New Zealand dollar at this time included an improving outlook for New Zealand's exports, declining current account deficit statistics and the strengthening of the Australian dollar; many overseas investors perceive that the New Zealand and Australian currencies are closely related and consequently, fluctuations in the Australian dollar can sometimes be transmitted to the New Zealand dollar.

From its peak in late June, the exchange rate index has fallen markedly, reaching 60.3 by late August. The decline occurred in two major phases: from 20 June to 15 July, when it fell from 70.2 to 65; and 12 August to 30 August (the cut-off date for this article), when it dropped from 67.4 to 60.3. Both phases were largely attributable to declines in the margin between New Zealand and foreign short-term interest rates. As can be seen in figure 2, large reductions in short-term interest rates were occurring over most of these two periods. At the same time, foreign short-term interest rates were rising; for example, the three month U.S. euro dollar in-

Figure 3
Yield gap between 90 day bank bills and 5 year government stock rates

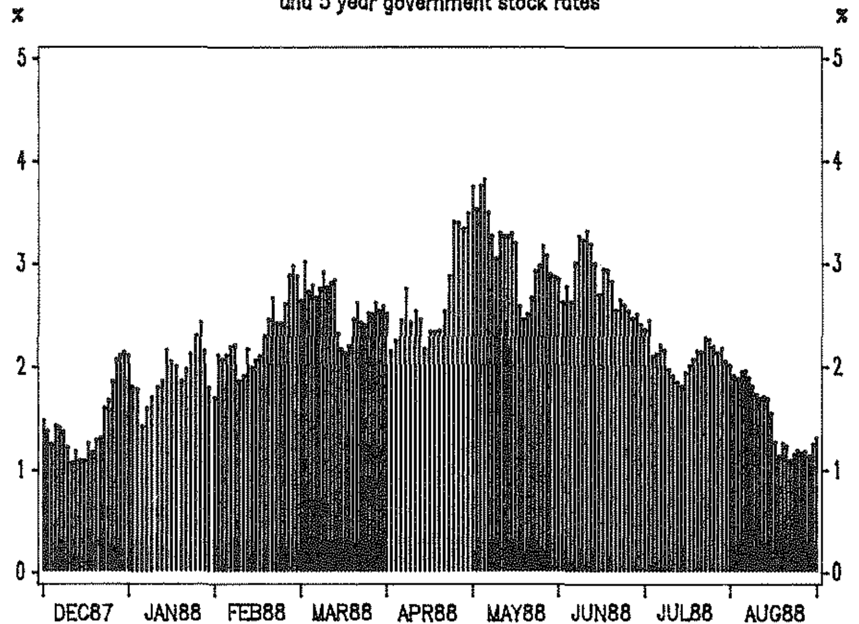
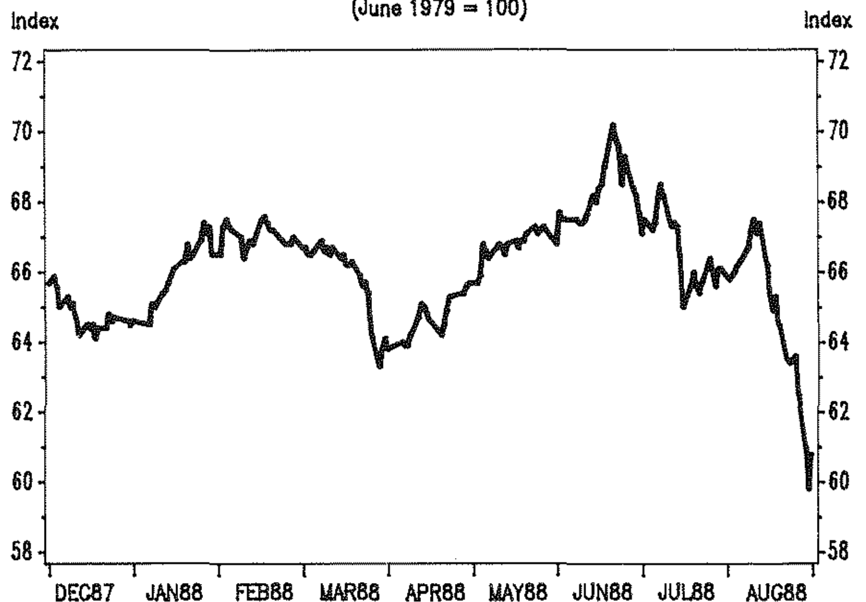


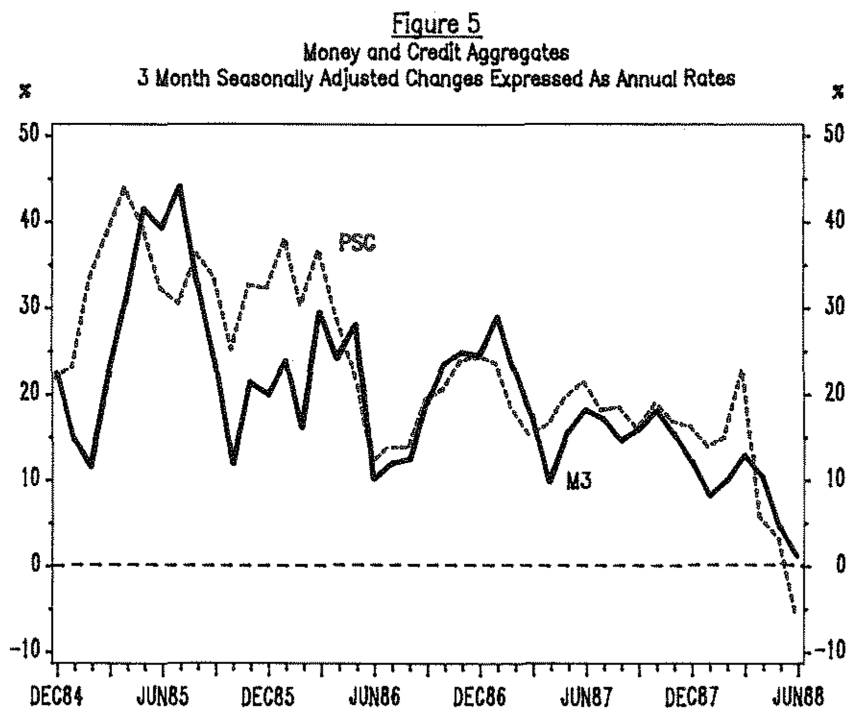

Figure 4
Nominal Exchange Rate
(daily foreign exchange trade weighted index)
(June 1979 = 100)



terest rate rose from 7.63 per cent on 17 June to 8.75 per cent on 30 August. The combination of higher foreign short-term interest rates (caused by high growth in nominal demand and tightening monetary policies) and lower New Zealand short-term rates made New Zealand dollar assets less attractive to hold than they had been formerly. In addition, the effect on the exchange rate of the decline in short-term interest rates from 12 August was magnified by a perception that the Reserve Bank was not going to underwrite high short-term interest rates and, therefore, a high dollar to the same extent as in the recent past. Political uncertainty, especially in late August when the Labour Party Conference and a Cabinet reshuffle were known to be imminent, also served to weaken the currency.

Growth in money and credit aggregates was extremely slow over the review period (see figure 5). The three month seasonally adjusted rate of growth in Private Sector Credit (PSC), expressed as an annual rate, declined from a peak of 23 per cent in March to -5 per cent in June. Although less dramatic, the comparable rate of M3 growth also declined markedly, from 13 per cent in March to 1 per cent in June. These declines are likely to have reflected the reduction in final demand which occurred during the June quarter. More generally, the tendency for businesses and firms to reduce their gearing following the sharemarket crash must have contributed to a decline in the rate of growth of financial intermediaries' balance sheets.

A longer-term perspective on monetary aggregate trends is evident in figure 6, which shows the annual percentage changes in PSC and M3. It can be seen that monetary growth has been trending down for some time. To put the most recent figures into perspective, it might be noted that the annual percentage change in M3 in June is the lowest since June 1983 and that the June year growth rate for PSC is the lowest since October 1983.

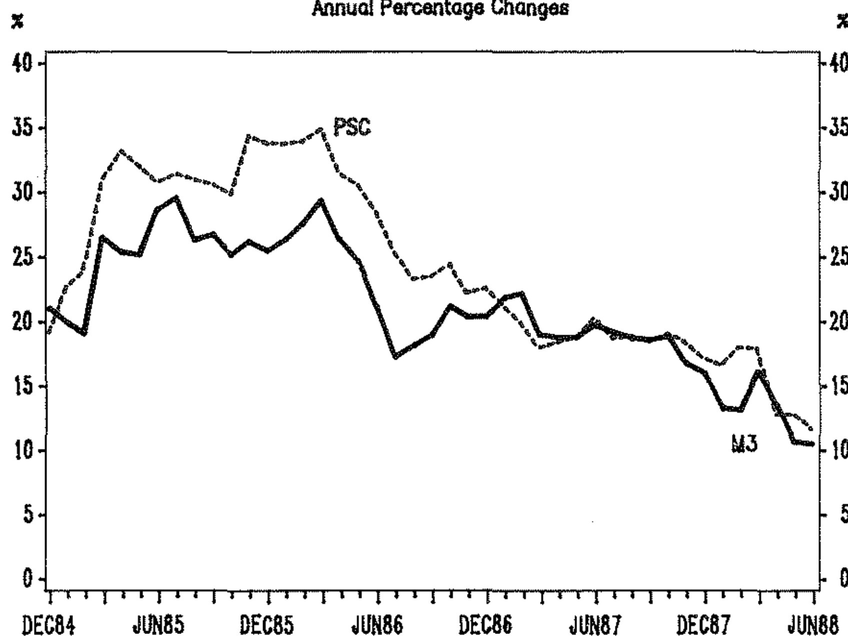



## Assessment

Abstracting from real economy and other relevant developments, the interest rate and exchange rate indicators suggest that monetary conditions were firmer during the June quarter than they were in the March quarter. The yield curve gap was on average 57 basis points higher than it was in the March quarter and the exchange rate (TWI) recovered by the beginning of May to the 65.0-65.5 levels common during the March quarter and then continued to firm markedly until 20 June. Although difficult to interpret over a short period, the declining rates of growth in the monetary aggregates during the June quarter also support the view that monetary conditions were tight over the June quarter; it must be acknowledged, however, that monetary growth during the June quarter would have been significantly influenced by liquidity conditions in the March quarter.

When allowance is made for the state of the real economy, the tightness of June quarter monetary conditions is underlined. As discussed in the Real Economy Developments section of this article, domestic demand has declined in each quarter since the September quarter 1987. In addition, a very sharp reduction in commercial stocks occurred over the six months to March 1988, with an especially large decline being recorded in the March quarter. These factors would have tended to have progressively reduced demand for liquidity since the middle of last year and to have resulted in a significant decline in demand for liquidity in the June quarter. Moreover, in a recession, credit demand, and hence interest rate pressure, is weaker than it is anticipated to be in the future. Hence, the yield curve would have tended to have been flatter or more upward sloping than otherwise.

Although the Bank recognised the considerable extent of the tightening in monetary conditions which occurred over the June quarter, it was decided not to take any action to ease conditions on the grounds that the main causes of the tightening were temporary. As expected, a more appropriate maturity structure for primary liquidity developed, the extent of interbank market frictions declined and conditions began to ease in late June.




This easing in monetary conditions only continued for a short time, however. The interest rate yield gap dipped to around 200 basis points towards the middle of July and the exchange rate also reached a local minimum (of 65.0 on the TWI) in mid-July. Subsequently, the yield gap widened and the exchange rate began to appreciate again.

The Bank viewed with some concern this tightening in monetary conditions. It was the Bank's view that monetary conditions did not need to be as tight as they were for the attainment of price stability (0-2 per cent increases in the Consumers' Price Index) by the early 1990s. Moreover, with restructuring already creating high levels of unemployment, the Bank had no wish to impede the rate at which displaced workers could be reabsorbed in new industries by maintaining unnecessarily tight monetary conditions.

Furthermore, it had become clear that over the review period nominal interest rate reductions were not keeping pace with the decline in surveyed inflation expectations. By early August, real 90-day bill rates were approximately 10.4 per cent and real five year bond rates were around 7.9 per cent, compared with real rates in February of 9.2 per cent and 7.2 per cent respectively.[2]

Even though there were non-monetary policy factors affecting real interest rates since the March quarter – especially uncertainty about the future direction of government policy – the Bank was also concerned to ensure that an apparent misunderstanding by financial market participants about the manner in which monetary policy was conducted did not underpin unnecessarily tight monetary conditions. Specifically, feedback from financial markets suggested that many market participants believed that the Bank was maintaining a specific floor under short-term rates. To correct this misunderstanding, the Governor stated on 12 August that further falls in interest rates were warranted given the reductions in actual and forecast inflation rates which had occurred.

Monetary conditions eased significantly over the remainder of August. By 30 August the yield gap had declined by 50 basis points to 1.2 percentage points and the TWI had fallen by 10.5 per cent to 60.3.

The decline in the exchange rate was particularly marked during the final days of August; the TWI dropped from 63.6 on 25 August to 60.3 on 30 August. The realisation that the Reserve Bank was not targeting particular interest rate and exchange rate levels may have prompted foreign investors to reduce their holdings of New Zealand dollar assets. Political uncertainty, however, was also likely to have been an important factor in this decline. In addition, market participants also attributed the rapid decline in the exchange rate over 25-30 August to the maturity of a large value Yankee Kiwi bond on 30 August. Settlement of this bond maturity had apparently not been covered in the forward exchange market. Consequently, market participants were concerned about the associated selling pressure on the New Zealand dollar that could be expected in late August.

## Conclusion

The economy is presently in a recession which appears to have started in the September quarter 1987. Both activity and demand have been declining since then although, at least until mid-1988, the reduction in GDP seems to have been larger than the reduction in demand. In this environment, any particular configuration of monetary indicators is likely to be suggestive of firmer monetary conditions and a more rapid pace of disinflation than would have been the case in a more buoyant economy.

Even without making allowance for the state of the economy, the

[2] The inflation expectations data used in these real interest rate calculations were obtained from the Reserve Bank Survey of Expectations. March quarter survey data, which were collected in February 1988 were used for the February calculations and September quarter survey data, which were collected in August 1988, were used for the August calculations. The five year inflation expectation is proxied by the inflation expectation for two years ahead, which is the longest period over which respondents are asked to forecast inflation. This inflation expectation is likely to be a reasonably good proxy of a five year inflation expectation because inflation expectations change little over the one to two year horizon.

monetary indicators suggested that monetary conditions firmed during the June quarter. When real economy considerations are taken into account, the extent of the tightening is more pronounced. Monetary conditions began to ease from late June, but this trend was broken from mid July to early August.

So as to ensure that an apparent misunderstanding about the manner in which monetary policy was being conducted did not impede an adjustment to more appropriate monetary conditions, the Governor stated on 12 August that further interest rate reductions were warranted given the declines which had occurred in actual and forecast inflation. The subsequent declines in interest rates and the exchange rate, together with the cessation of destocking and some recovery in consumption levels, increase the likelihood that the economy will not keep contracting over the remainder 1988/89 and indeed that a recovery may begin in 1989/90. While interest rates should continue to decline with inflation, the maintenance of a firm policy stance will nevertheless be required in order to contain the direct price effects of the lower exchange rate and hence to cement in the improvement in export competitiveness.

## OPEN MARKET OPERATIONS
**Period: 18 May 1988–1 July 1988**

| Date 1988 | Transaction | Maturity | Volume Offered $m | Volume Bid $m | Total Amount Sold $m | Total Amount Purchased or Advanced $m | Range of Bids Received % | Range of Successful Bids % | Average of Successful Bids % |
|---|---|---|---|---|---|---|---|---|---|
| 18 May | Treasury Bills | 10/11/88 | 50 | 138 | 50 | | 15.34-15.85 | 15.34-15.51 | 15.44 |
| 19 May | Treasury Bills | 05/08/88 | 10 | 45 | 5 | | 14.65-15.50 | 14.65 | 14.65 |
| | | 09/11/88 | 45 | 176 | 40 | | 15.24-15.80 | 15.24-15.53 | 15.48 |
| 20 May | Treasury Bills | 04/08/88 | 15 | 35 | 10 | | 14.69-15.37 | 14.69-14.74 | 14.72 |
| | | 09/11/88 | 30 | 65 | 30 | | 15.56-15.79 | 15.56-15.68 | 15.62 |
| | | 10/11/88 | 25 | 83 | 25 | | 15.61-15.90 | 15.61-15.68 | 15.64 |
| 23 May | Treasury Bills | 04/08/88 | 30 | 40 | 15 | | 14.99-15.88 | 14.99 | 14.99 |
| | | 23/09/88 | 40 | 67 | 30 | | 15.18-15.84 | 15.18-15.33 | 15.27 |
| | | 10/11/88 | 7 | 35 | 7 | | 15.62-15.87 | 15.62-15.67 | 15.66 |
| | | 11/11/88 | 15 | 64 | 15 | | 15.59-15.77 | 15.59-15.67 | 15.63 |
| 24 May | Sellback | 01/06/88 | – | 227 | | 19 | 15.32-16.32 | 16.26-16.32 | 16.29 |
| | Treasury Bills | 13-20 July | – | 46 | | 21 | 14.25-14.75 | 14.70-14.75 | 14.73 |
| 25 May | Sellback | 01/06/88 | 30 | 161 | | 20 | 16.50-17.04 | 17.03-17.04 | 17.04 |
| | | 15/06/88 | 50 | 280 | | 40 | 15.75-16.81 | 16.76-16.81 | 16.77 |
| | Treasury Bills | 13-20 July | – | 37 | | 21 | 14.65-14.81 | 14.76-14.81 | 14.77 |
| 26 May | Sellback | 15/06/88 | 45 | 129 | | 32 | 15.27-16.36 | 16.22-16.36 | 16.25 |
| | Treasury Bills | 13-20 July | – | 25 | | 13 | 14.70-14.93 | 14.91-14.93 | 14.92 |
| 27 May | Treasury Bills | 08/06/88 | 10 | 25 | 10 | | 14.07-15.23 | 14.07-14.12 | 14.10 |
| | | 23/09/88 | 20 | 56 | 20 | | 15.39-15.76 | 15.39-15.57 | 15.48 |
| 30 May | Treasury Bills | 10/06/88 | 15 | 30 | 10 | | 14.49-14.95 | 14.49-14.69 | 14.59 |
| | | 04/08/88 | 25 | 35 | 6 | | 14.80-16.36 | 14.80-15.49 | 15.38 |
| | | 05/08/88 | 5 | 11 | 5 | | 14.80-16.07 | 14.80-15.49 | 15.35 |
| | | 22/09/88 | 10 | 42 | 10 | | 15.49-15.97 | 15.49-15.60 | 15.55 |
| 31 May | Treasury Bills | 09/06/88 | 25 | 30 | 25 | | 14.71-15.50 | 14.71-15.50 | 15.18 |
| | | 23/06/88 | 70 | 205 | 55 | | 14.60-16.20 | 14.60-15.49 | 15.28 |
| | | 04/08/88 | 19 | 49 | 10 | | 15.50-16.28 | 15.50-15.77 | 15.64 |
| | | 18/08/88 | 20 | 59 | 20 | | 15.19-16.20 | 15.19-15.57 | 15.45 |
| | | 19/08/88 | 15 | 60 | 15 | | 15.29-16.20 | 15.29-15.49 | 15.41 |
| | | 23/08/88 | 15 | 44 | 15 | | 15.19-16.03 | 15.19-15.49 | 15.39 |
| | | 02/09/88 | 40 | 111 | 37 | | 15.59-16.20 | 15.59-15.78 | 15.70 |
| | | 05/09/88 | 41 | 132 | 38 | | 15.59-16.20 | 15.59-15.77 | 15.63 |
| 1 June | Treasury Bills | 09/11/88 | 75 | 200 | 75 | | 15.50-15.95 | 15.50-15.69 | 15.62 |
| 2 June | Sellback | 15/06/88 | 20 | 115 | | 19 | 15.06-15.86 | 15.84-15.86 | 15.85 |
| | Treasury Bills | 13-20 July | – | 38 | | 16 | 14.19-14.75 | 14.65-14.75 | 14.69 |
| 3 June | Treasury Bills | 10/11/88 | 10 | 51 | 10 | | 15.64-15.78 | 15.64-15.67 | 15.65 |
| 8 June | Treasury Bills | 23/06/88 | 10 | 40 | 10 | | 16.12-16.77 | 16.12-16.30 | 16.21 |
| | | 11/11/88 | 20 | 42 | 10 | | 16.27-16.83 | 16.27-16.33 | 16.30 |
| | | 08/02/89 | 30 | 100 | 16 | | 16.23-16.59 | 16.23-16.33 | 16.28 |
| | | 22/02/89 | 25 | 56 | 19 | | 16.23-16.53 | 16.23-16.30 | 16.27 |
| 9 June | Treasury Bills | 10/06/88 | 5 | 15 | 5 | | 17.90-18.50 | 17.90 | 17.90 |
| | | 08/02/89 | 30 | 119 | 30 | | 16.18-16.61 | 16.18-16.25 | 16.22 |
| 10 June | Sellback | 15/06/88 | 15 | 71 | | 15 | 18.55-19.92 | 19.56-19.92 | 19.63 |
| 14 June | Sellback | 15/06/88 | 50 | 175 | | 50 | 17.50-18.78 | 18.26-18.78 | 18.68 |
| 15 June | Treasury Bills | 21/12/88 | 30 | 57 | 10 | | 15.65-16.08 | 15.65-15.69 | 15.67 |
| | | 08/02/89 | – | 129 | 45 | | 15.69-16.16 | 15.69-15.90 | 15.83 |
| | | 09/02/89 | 70 | 140 | 59 | | 15.81-16.16 | 15.81-15.90 | 15.86 |
| | | 23/02/89 | 45 | 72 | 41 | | 15.78-16.03 | 15.78-15.90 | 15.85 |
| 17 June | Sellback | 20/06/88 | 55 | 347 | | 55 | 15.65-19.57 | 19.33-19.57 | 19.47 |
| 20 June | Treasury Bills | 22/06/88 | 15 | 25 | 15 | | 17.20-17.42 | 17.20-17.30 | 17.27 |
| | | 23/06/88 | 25 | 55 | 25 | | 17.06-17.28 | 17.06-17.20 | 17.17 |
| | | 01/07/88 | 20 | 50 | 20 | | 16.73-17.02 | 16.73-16.83 | 16.76 |
| | | 23/12/88 | 50 | 231 | 50 | | 15.37-15.90 | 15.37-15.44 | 15.43 |
| | | 09/02/89 | 61 | 314 | 10 | | 15.44-15.85 | 15.44-15.44 | 15.44 |
| 21 June | Treasury Bills | 24/06/88 | 20 | 110 | 20 | | 14.90-16.99 | 14.90 | 14.90 |
| | | 22/12/88 | 30 | 120 | 22 | | 15.20-15.50 | 15.20-15.35 | 15.30 |
| | | 10/02/89 | 85 | 182 | 73 | | 15.30-15.60 | 15.30-15.45 | 15.39 |
| 22 June | Sellback | 29/06/88 | 20 | 80 | | 20 | 14.01-15.18 | 15.18 | 15.18 |
| 23 June | Sellback | 28/06/88 | 60 | 125 | | 45 | 13.75-15.06 | 14.83-15.06 | 14.96 |
| | | 15/07/88 | 110 | 396 | | 90 | 14.75-15.80 | 15.50-15.80 | 15.59 |
| 24 June | Sellback | 27/06/88 | 30 | 80 | | 30 | 12.43-13.01 | 12.85-13.01 | 12.96 |
| | | 15/07/88 | 50 | 214 | | 40 | 14.60-15.37 | 15.26-15.37 | 15.32 |
| 28 June | Treasury Bills | 08/02/89 | 34 | 74 | 24 | | 15.27-15.38 | 15.27-15.32 | 15.28 |
| | | 22/02/89 | 6 | 22 | 6 | | 15.29-15.36 | 15.29-15.30 | 15.30 |
| | | 23/02/89 | 4 | 13 | 4 | | 15.30-15.35 | 15.30 | 15.30 |
| 29 June | Treasury Bills | 22/12/88 | 8 | 50 | 8 | | 15.29-15.43 | 15.29 | 15.29 |
| | | 09/02/88 | 40 | 121 | 32 | | 15.29-15.48 | 15.29-15.33 | 15.31 |
| 30 June | Sellback | 05/07/88 | 25 | 201 | | 25 | 14.50-15.80 | 15.57-15.80 | 15.75 |
| 1 July | Sellback | 06/07/88 | 30 | 150 | | 25 | 14.53-14.98 | 14.90-14.98 | 14.95 |
| | Govt. Stock | 15/09/88 | – | 42 | | 5 | 15.00-15.25 | 15.25 | 15.25 |

## OPEN MARKET OPERATIONS
Period: 4 July 1988 – 24 August 1988

| Date 1988 | Transaction | Maturity | Volume Offered $m | Volume Bid $m | Total Amount Sold $m | Total Amount Purchased or Advanced $m | Range of Bids Received % | Range of Successful Bids % | Average of Successful Bids % |
|---|---|---|---|---|---|---|---|---|---|
| 4 July | Sellback | 13/07/88 | 10 | 41 | | 10 | 14.00-14.80 | 14.80 | 14.80 |
| 5 July | Sellback | 15/07/88 | 45 | 145 | | 45 | 14.20-14.85 | 14.71-14.85 | 14.81 |
| 6 July | Treasury Bills | 08/02/89 | 10 | 59 | 10 | | 15.09-15.22 | 15.09 | 15.09 |
| | | 10/02/89 | 12 | 77 | 12 | | 15.09-15.21 | 15.09-15.11 | 15.11 |
| 7 July | Sellback | 12/07/88 | 40 | 188 | | 40 | 14.35-15.35 | 15.24-15.35 | 15.30 |
| 8 July | Sellback | 18/07/88 | – | 168 | | 45 | 13.74-14.26 | 14.02-14.26 | 14.14 |
| | Govt. Stock | 15/09/88 | – | 66 | | 40 | 14.65-14.87 | 14.80-14.87 | 14.82 |
| 11 July | Treasury Bills | 02/09/88 | 3 | 15 | 3 | | 14.58-14.99 | 14.58 | 14.58 |
| | | 05/09/88 | 3 | 21 | 3 | | 14.38-15.01 | 14.38 | 14.38 |
| | | 10/11/88 | 10 | 55 | 10 | | 14.73-14.77 | 14.73 | 14.73 |
| | | 09/02/89 | 19 | 46 | 19 | | 14.65-14.85 | 14.65-14.68 | 14.66 |
| 12 July | Sellback | 18/07/88 | 80 | 334 | | 80 | 13.04-14.26 | 14.03-14.26 | 14.07 |
| 13 July | Treasury Bills | 08/02/89 | 20 | 59 | 20 | | 14.63-14.72 | 14.63-14.66 | 14.65 |
| 14 July | Sellback | 18/07/88 | 30 | 159 | | 20 | 14.02-14.60 | 14.40-14.60 | 14.53 |
| | Govt. Stock | 15/09/88 | – | 30 | | 10 | 14.45-14.55 | 14.55 | 14.55 |
| 15 July | Treasury Bills | 09/02/89 | 45 | 111 | 45 | | 14.68-14.83 | 14.68-14.77 | 14.74 |
| 18 July | Treasury Bills | 28/07/88 | 20 | 100 | 20 | | 14.36-15.50 | 14.36-14.69 | 14.61 |
| | | 10/02/88 | 80 | 177 | 80 | | 14.79-15.35 | 14.79-14.88 | 14.85 |
| 19 July | Treasury Bills | 25/07/88 | 23 | 38 | 20 | | 14.80-15.55 | 14.80-15.00 | 14.90 |
| | | 09/02/88 | 45 | 141 | 45 | | 14.78-14.93 | 14.78-14.83 | 14.82 |
| 20 July | Treasury Bills | 15/08/88 | 40 | 120 | 40 | | 14.34-15.40 | 14.34-14.59 | 14.45 |
| | | 15/09/88 | 50 | 70 | 25 | | 14.70-15.40 | 14.70-14.78 | 14.75 |
| | | 15/02/89 | 50 | 131 | 45 | | 14.89-15.29 | 14.89-14.97 | 14.92 |
| 21 July | Sellback | 01/08/88 | 20 | 170 | | 20 | 15.06-16.20 | 16.20 | 16.20 |
| 22 July | Sellback | 01/08/88 | 75 | 140 | | 75 | 16.35-18.63 | 17.40-18.63 | 17.77 |
| 25 July | Sellback | 01/08/88 | 60 | 204 | | 60 | 14.72-16.01 | 15.50-16.01 | 15.82 |
| | | 15/08/88 | 90 | 155 | | 80 | 14.62-15.10 | 15.06-15.10 | 15.08 |
| | | 17/08/88 | 80 | 105 | | 25 | 14.52-15.05 | 15.04-15.05 | 15.05 |
| 26 July | Treasury Bills | 08/09/88 | 20 | 35 | 5 | | 14.59-15.25 | 14.59 | 14.59 |
| | | 09/02/89 | 15 | 30 | 15 | | 14.89-14.95 | 14.89-14.91 | 14.90 |
| | | 10/02/89 | 40 | 85 | 40 | | 14.85-15.00 | 14.85-14.94 | 14.90 |
| 27 July | Treasury Bills | 08/02/89 | 20 | 35 | 20 | | 14.98-15.15 | 14.98-15.04 | 15.00 |
| | | 08/03/89 | 50 | 54 | 29 | | 14.93-15.20 | 14.93-15.00 | 14.97 |
| 28 July | Treasury Bills | 09/02/89 | 40 | 139 | 40 | | 14.94-15.20 | 14.94-15.02 | 14.99 |
| | | 09/03/89 | 40 | 87 | 30 | | 14.89-15.15 | 14.89-14.98 | 14.97 |
| 29 July | Treasury Bills | 01/08/88 | 4 | 12 | 4 | | 16.42-17.10 | 16.42 | 16.42 |
| | | 02/08/88 | 5 | 15 | 5 | | 16.28-17.45 | 16.28 | 16.28 |
| | | 09/02/89 | 10 | 30 | 10 | | 15.05-15.20 | 15.05 | 15.05 |
| 1 August | Treasury Bills | 10/02/89 | 20 | 30 | 20 | | 15.20-15.30 | 15.20 | 15.20 |
| | | 09/03/89 | 30 | 35 | 30 | | 15.12-15.30 | 15.12-15.15 | 15.14 |
| 3 August | Treasury Bills | 25/01/89 | 45 | 61 | 25 | | 15.07-15.28 | 15.07-15.15 | 15.12 |
| | | 08/03/89 | 45 | 77 | 40 | | 15.03-15.22 | 15.03-15.10 | 15.09 |
| 4 August | Sellback | 10/08/88 | 45 | 245 | | 45 | 14.08-15.39 | 14.80-15.39 | 15.03 |
| | | 17/08/88 | 60 | 294 | | 50 | 14.30-15.17 | 15.10-15.17 | 15.08 |
| 5 August | Sellback | 18/08/88 | 20 | 120 | | 20 | 14.61-15.08 | 15.02-15.08 | 15.05 |
| 8 August | Treasury Bills | 10/02/89 | 30 | 57 | 5 | | 14.94-15.05 | 14.94 | 14.94 |
| | | 10/03/89 | 30 | 95 | 25 | | 14.90-15.10 | 14.90-14.94 | 14.93 |
| 9 August | Treasury Bills | 10/02/89 | | | | | | | |
| 10 August | Sellback | 11/08/88 | 20 | 85 | | 15 | 13.50-14.76 | 14.76 | 14.76 |
| | | 18/08/88 | 20 | 135 | | 20 | 14.78-15.02 | 15.02 | 15.02 |
| 11 August | Treasury Bills | 26/01/89 | 35 | 45 | 10 | | 14.98-15.15 | 14.98 | 14.98 |
| | | 10/02/89 | 35 | 95 | 30 | | 14.96-15.08 | 14.96-14.99 | 14.98 |
| | | 09/03/89 | 35 | 81 | 35 | | 14.95-15.13 | 14.95-14.98 | 14.97 |
| 12 August | Treasury Bills | 27/01/89 | 15 | 60 | 15 | | 14.96-15.05 | 14.96-14.97 | 14.97 |
| | | 09/03/89 | 26 | 62 | 20 | | 14.96-15.10 | 14.96-14.99 | 14.98 |
| 15 August | Sellback | 19/08/88 | 10 | 70 | | 10 | 13.65-14.28 | 14.28 | 14.28 |
| 16 August | Treasury Bills | 26/01/89 | 10 | 62 | 10 | | 14.08-14.20 | 14.08-14.14 | 14.11 |
| 17 August | Treasury Bills | 26/01/89 | 25 | 77 | 25 | | 13.99-14.15 | 13.99-14.02 | 14.00 |
| | | 09/02/89 | 25 | 77 | 10 | | 14.00-14.15 | 14.00-14.01 | 14.01 |
| 18 August | Sellback | 19/08/88 | 35 | 120 | | 35 | 11.75-13.12 | 13.12 | 13.12 |
| | | 22/08/88 | 35 | 178 | | 35 | 12.85-13.65 | 13.32-13.65 | 13.45 |
| | | 23/08/88 | 35 | 221 | | 5 | 12.75-13.32 | 13.60 | 13.60 |
| 19 August | Treasury Bills | 09/02/89 | 10 | 44 | 10 | | 14.07-14.14 | 14.07 | 14.07 |
| 23 August | Sellback | 29/08/88 | 30 | 295 | | 30 | 13.56-14.48 | 14.48 | 14.48 |
| 24 August | Sellback | 29/08/88 | – | 440 | | 75 | 13.81-14.76 | 14.52-14.76 | 14.69 |
| | | 30/08/88 | 50 | 190 | | 23 | 13.82-14.64 | 14.50-14.64 | 14.59 |
| | | 15/09/88 | – | 285 | | 50 | 13.52-14.22 | 14.10-14.22 | 14.14 |
| | Govt. Stock | 15/09/88 | – | 37 | | 12 | 13.52-13.85 | 13.85 | 13.85 |

## OPEN MARKET OPERATIONS
**Period: 25 August 1988 – 31 August 1988**

| Date 1988 | Transaction | Maturity | Volume Offered $m | Volume Bid $m | Total Amount Sold $m | Total Amount Purchased or Advanced $m | Range of Bids Received % | Range of Successful Bids % | Average of Successful Bids % |
|---|---|---|---|---|---|---|---|---|---|
| 25 August | Sellback | 29/08/88 | – | 315 | | 71 | 13.08-14.54 | 14.29-14.54 | 14.35 |
| | | 30/08/88 | 40 | 115 | | 20 | 13.97-14.35 | 14.31-14.35 | 14.32 |
| | Govt. Stock | 15/09/88 | – | 31 | | 4 | 13.52-13.85 | 13.85 | 13.85 |
| 26 August | Sellback | 29/08/88 | – | 165 | | 20 | 14.02-14.83 | 14.81-14.83 | 14.81 |
| | Govt. Stock | 15/09/88 | – | 25 | | 5 | 13.52-13.85 | 13.85 | 13.85 |
| 29 August | Treasury Bills | 26/01/89 | 25 | 45 | 45 | | 14.12-14.21 | 14.12-14.15 | 14.13 |
| 30 August | Treasury Bills | 26/01/89 | 40 | 62 | 35 | | 14.22-14.39 | 14.22-14.31 | 14.26 |
| | | 10/03/89 | 40 | 57 | 25 | | 14.29-14.39 | 14.29-14.32 | 14.31 |
| 31 August | Treasury Bills | 26/01/89 | 5 | 25 | 5 | | 14.26-14.34 | 14.26 | 14.26 |
| | | 10/02/89 | 35 | 80 | 35 | | 14.24-14.40 | 14.24-14.29 | 14.28 |
| | | 10/03/89 | 45 | 69 | 5 | | 14.28-14.40 | 14.28 | 14.28 |