A BRIEFING ON

THE NEW ZEALAND

MACROECONOMY,

1960 - 1990

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INTRODUCTION

In the opening lecture to the Stage One Economics class at Lincoln University, we tell our students that the first step in macroeconomics is to define and describe the key variables which are the object of our study. Only when we understand what is meant by real growth, unemployment, inflation, the Balance of Payments, the terms of trade, the exchange rate and so on, and only when we know how they have behaved over time, is it sensible to begin putting together macroeconomic models which seek to explain their behaviour, and then to use those models to provide policy advice.

Despite this, there is no single reference available which provides an up-to-date description of New Zealand macroeconomic time series data. This is not because such data are not collated. To the contrary, the Department of Statistics and the Reserve Bank publish a great deal of information about the New Zealand economy. As well, a number of studies have been recently published on the New Zealand economy, as listed in the final section of this booklet. Thus the difficulty for the serious student of New Zealand macroeconomics is not that there is no information available, but rather that she or he must consult a wide range of sources to find it.

It was this gap which led us to prepare this booklet. It was first produced for our Stage One classes at Lincoln University, but we also kept in mind the needs of senior students in Secondary Schools. The revised University Bursaries Prescriptions for Economics require students to be able to interpret and present economic data; so the data in this booklet should help preparation for Section C (Aggregate Economic Activity and Policy) of their course.

We also hope that the booklet will be of interest to a wider audience. Even a cursory examination of television, radio and newspaper reports reveals that New Zealanders are passionately concerned about the economic management of our country. It is usually the major issue of any election campaign, and opinions on the state of the economy are constantly sought from politicians, business leaders, trade unionists, civil servants, sector group spokespersons and community workers. Their views are a frequent source of argument in seminars, tearooms, bars, community meetings and letters to the Editor all around the country. Under such an intense spotlight, the danger is that the long-run perspective might be lost. Yet it is important that policy-makers keep in mind the lessons we have learned from our history, reflected in the 30-year graphs contained in these pages.

Our title has been deliberately chosen to echo that of a booklet produced by Government economists at the time of the Economic Summit Conference in 1984. That booklet, *A Briefing on the New Zealand Economy*, was the first publication to present New Zealand's major data series

over a significant time period and to provide an elementary interpretation of them in an economic commentary. This present booklet owes much to the work of those economists in its format and approach. However we have expanded the number of data series presented, and have brought them up to date. The result is over 40 time series of important New Zealand macroeconomic data covering the three decades from 1960 to 1990.

We would like to record here our gratitude to all those who have helped us produce this booklet, especially our colleagues Peter Grundy, Rod St Hill, Robert Ivory and June Laird who provided us with some data sources, and Brenda Lord and John Gibson who helped us with the graphics software. We are also grateful to Ray Brookes (Reserve Bank), Betty Huggins (Department of Statistics) and Denis Walker (Barclays Bank) who gave us access to statistical data not easily available from published sources.

But to all our colleagues in the Economics and Marketing Department at Lincoln University we acknowledge our greatest debt. While not all might agree with everything we have written in our economic commentary, it is the Department's emphasis on understanding the New Zealand economy through solid empirical work informed by up-to-date theory which is the real inspiration behind this project. This approach was a feature of the work of Professor Tony Rayner (1938-1990) at Lincoln, and this booklet is respectfully dedicated to his memory.

- Paul Dalziel
- Ralph Lattimore

A WORD ABOUT GRAPHS

The next forty pages contain 20 graphs of important macroeconomic time series data for New Zealand from 1960 to 1990. Before proceeding, it is worth revising some features of different graph types.

The Horizontal Axis

The horizontal axis of every graph which follows measures the years, from 1960 to 1990. Unless otherwise noted, the data all refer to the "financial year"; that is, the twelve months from the 1st of April the previous year to March 31st of the current year. Thus the first oil shock (for example), which occurred in August 1973, is recorded in the graphs during the 1974 March year. This distinction between the calendar year and the financial year must be maintained when interpreting the graphs.

Another useful distinction is between quantities which are "flows" and those which are "stocks". Flows are economic activities which take place over time (for example, real growth and the budget deficit), and are always measured over a period of time, in this case a financial year. Stocks are items whose values are determined at some moment in time (for example, the rate of unemployment or the level of overseas debt). These are recorded either as an average for the year (unemployment) or as a value at the year's end (overseas debt).

As well as quantities, the graphs also depict different price series (for example, inflation, the terms of trade and the interest rate) and these too are recorded either as an average for the year or as a value at the year's end. In every case, the label on the horizontal axis states whether the graph is showing values for the "year ending March", or the "average for March year" or the value "at March 31st" each year.

The Vertical Axis

The vertical axis explains what type of graph is being portrayed. There are three types.

The first type is for a series showing *levels;* for example the "Components of Real GDP" graph. If the graph slopes upwards at some point, this means the statistic is growing; if it slopes downwards, the statistic is shrinking. A special case is the graphs showing index levels; for example, the "Terms of Trade" and "Exchange Rate" graphs.

The second type measures the *percentage change* of a statistic; for example the "Real Growth" and "Inflation" graphs. If the level of the statistic is growing in these graphs, the graph will be positive; if negative, the statistic is shrinking.

The third type measures the *percentage share* of a statistic; for example, the "Shares of GDP" and the "Unemployment" graphs. If such a graph slopes upwards, it means that the share of the statistic is increasing; that is, it is growing faster (or shrinking less slowly!) than the other components of the item being partitioned.

REAL GROWTH

Description

The principal indicator of real growth in the New Zealand economy is found from the Gross Domestic Product statistic (GDP). GDP estimates the value of all final goods and services produced in New Zealand within a year; that is, the quantity sold times the market price, added up for every type of good and service produced in the economy.

There are some major shortcomings of the statistic. In particular, transactions which don't occur in the marketplace tend to be omitted. Thus, despite its name, all unpaid production in domestic households is not recorded. Nor are all the negative impacts of economic growth recorded, for example increased pollution and resource depletion.

Another difficulty is that inflation (a general rise in prices) will cause GDP to rise even if there is no real growth. This problem is solved by dividing GDP by the general price level (see page 6) to produce "Real GDP". The percentage change in real GDP gives the economy's real growth for any particular year.

In the late 1970s the Department of Statistics undertook a major revision of the National Accounts, taking into account new standards set by the United Nations. Consequently there are two series, the old series (OS) finishing in 1977/78 and the new series (NS) beginning the same year. The graph also contains a bar chart of average real growth for the small OECD countries (Australia, Austria, Belgium, Denmark, Finland, Greece, Iceland, Ireland, Luxembourg, Netherlands, New Zealand, Norway, Portugal, Spain, Sweden, Switzerland and Turkey).

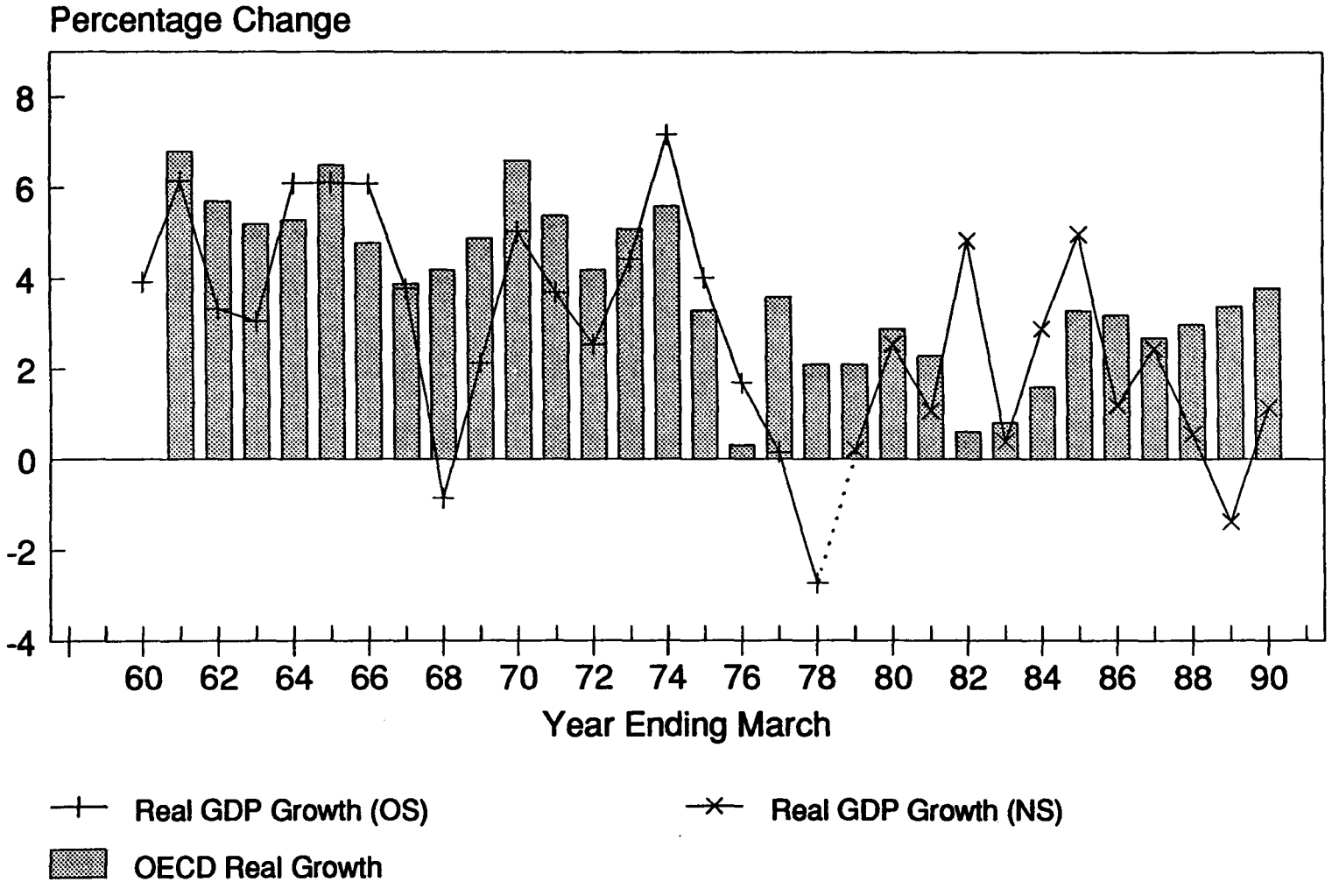
Features

New Zealand experienced sustained growth of between 3% and 6% in the first half of the 1960s, before the recession of 1968 and 1969 saw the economy shrink and then slowly recover. The world-wide commodity price boom in the early 1970s was good for New Zealand and output grew from 1970 to 1973. Despite the first oil shock, growth was maintained from 1974 to 1976, aided by government policy; but it could not be sustained. There was no real growth in 1977 or 1979, and output shrank sharply in 1978. Throughout the 1980s, growth was low and variable, with 1984 and 1985 being the only two years in succession where growth was sustained at over 2%. In 1989 GDP growth was negative for the third time in the three decades, before recovering to just under 2% in the year ending March 1990.

Sources

Annual real GDP comes from pages 679-80 of the *New Zealand Official 1990 Yearbook* (Wellington: Government Printer, 1990) for 1959 to 1978, and from the Department of Statistics Series SNBA.SZ999 for 1978 to 1990. The OECD figures come from the historical tables in the appendix to its six-monthly publication *Economic Outlook*, and are for the previous calendar year.

REAL GROWTH


Percentage Change
8
6
4
2
0
-2
-4
60
62
64
66
68
70
72
74
76
78
80
82
84
86
88
90
Year Ending March
Real GDP Growth (OS)
Real GDP Growth (NS)
OECD Real Growth

INFLATION

Description

Inflation is a phenomenon which refers to any general rise in prices. To measure inflation, the Department of Statistics prepares a suitable price index by undertaking a survey of prices, and collating those prices into an average figure using an appropriate statistical procedure. The Department then records changes in the surveyed prices and recalculates the index. The rate of inflation is the percentage change in the price index.

The most well-known price index is the Consumer Price Index (see page 20), which measures the average prices faced by New Zealand consumers. However, the best measure of New Zealand inflation from a macroeconomic viewpoint is the percentage change in the "Gross Domestic Product Deflator". This is because the GDP Deflator measures the average price level of all goods and services *produced in New Zealand*, and so measures the inflation generated within our economy.

Again the change in the system of National Accounts means that there is an old series (OS) and a new series (NS) before and after 1977/78. The bar chart refers to the average inflation rate of OECD small countries.

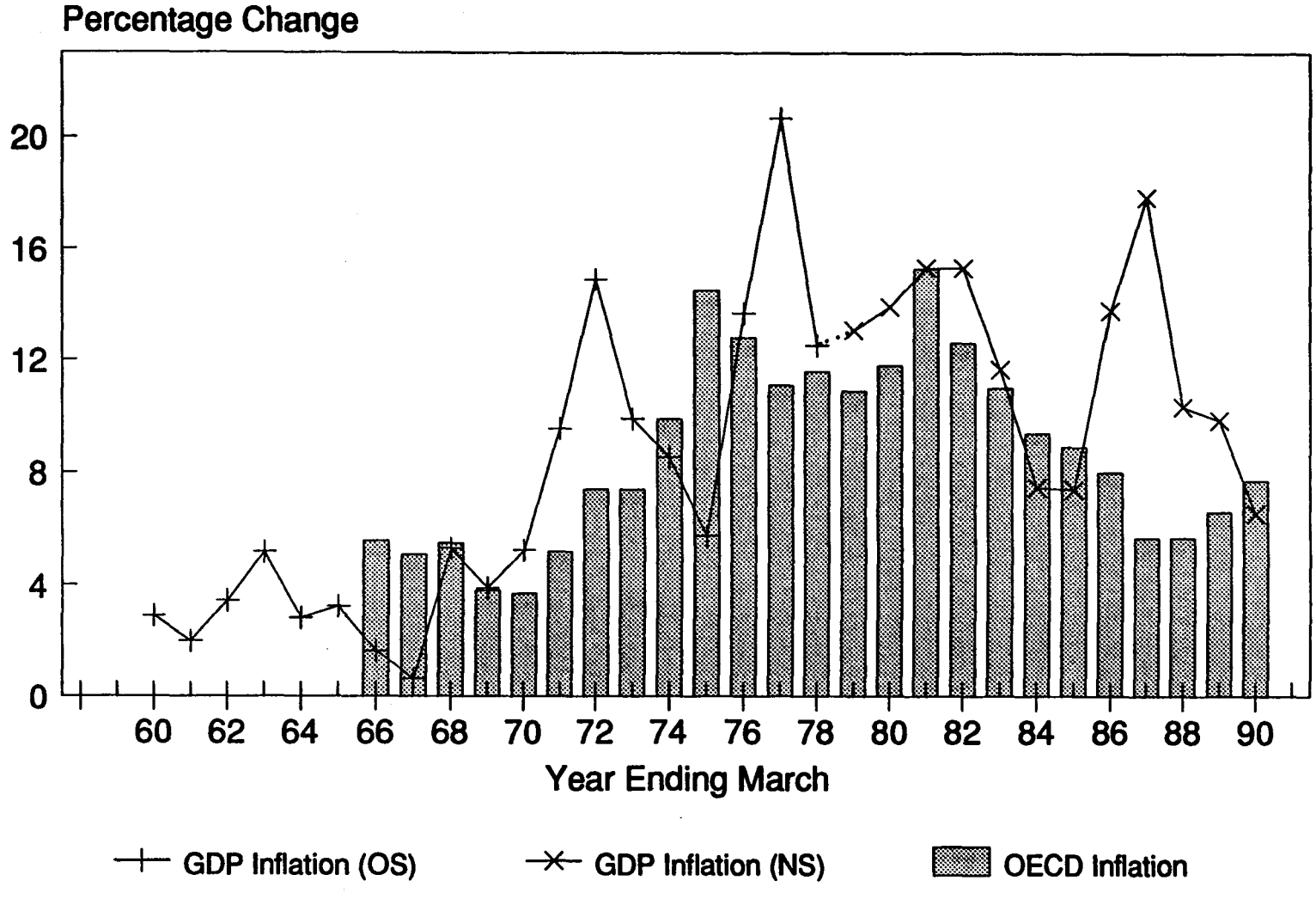
Features

Until 1970, inflation was below 6% but was never that low again in the next two decades. It rose sharply in two stages during the 1970s. From 1971 to 1973 prices rose as part of the general prosperity enjoyed by New Zealand during the world-wide commodity boom of those years. Then came the oil shock in August 1973. Despite this shock, the GDP Deflator inflation rate continued to fall in the 1974 and 1975 March years. This was because oil and its related products were not major outputs of the New Zealand economy, while the world recession reduced the price of our exports. By 1976, however, the oil shock had fed through the economy, and annual inflation rose to a peak of 21% in 1977 before settling at around 14% for the next five years. In June 1982, the government introduced a comprehensive prices and incomes freeze which saw inflation fall to single figures again. When those controls were lifted in 1984, GDP Deflator inflation remained steady initially, but rebounded in 1986 and then again in 1987 after the introduction of the Goods and Services Tax (1st of October 1986). Inflation was slowly squeezed out by tight monetary policy during the rest of the decade.

Sources

The OECD data (previous calendar year) and the real GDP data come from the sources cited on page 4. Nominal GDP comes from the same source for the old series (1959-78) and from the Department of Statistics series SNBA.SB9 for 1978 to 1990. The GDP Deflator is found by dividing nominal GDP by real GDP.

INFLATION


Percentage Change
20
16
12
8
4
0
60
62
64
66
68
70
72
74
76
78
80
82
84
86
88
90
Year Ending March
GDP Inflation (OS)
GDP Inflation (NS)
OECD Inflation

UNEMPLOYMENT

Description

The standard definition (International Labour Organisation) of an unemployed worker is a person not in employment who is both available for work and actively searching for a job. The labour force is all such workers plus those in employment, and the unemployment rate is the number of unemployed workers divided by the labour force, expressed as a percentage.

In December 1985, the Department of Statistics introduced a quarterly Household Labour Force Survey which provides estimates of the number of people satisfying all the requirements above, and of the size of the labour force, allowing an internationally comparable "Official Unemployment Rate" to be calculated for the first time in New Zealand. Prior to 1985, economists rely on the Department of Labour's "Registered Unemployed" series and on Census Night estimates of the labour force (adjusted for population growth between censuses). This statistic suffers two major weaknesses: many unemployed (especially those who were married to a person in employment) do not register since they are not entitled to an unemployment benefit, and many people not actively seeking work remain on the register. The net effect is to overstate the official unemployment rate, although the trends appear to be similar.

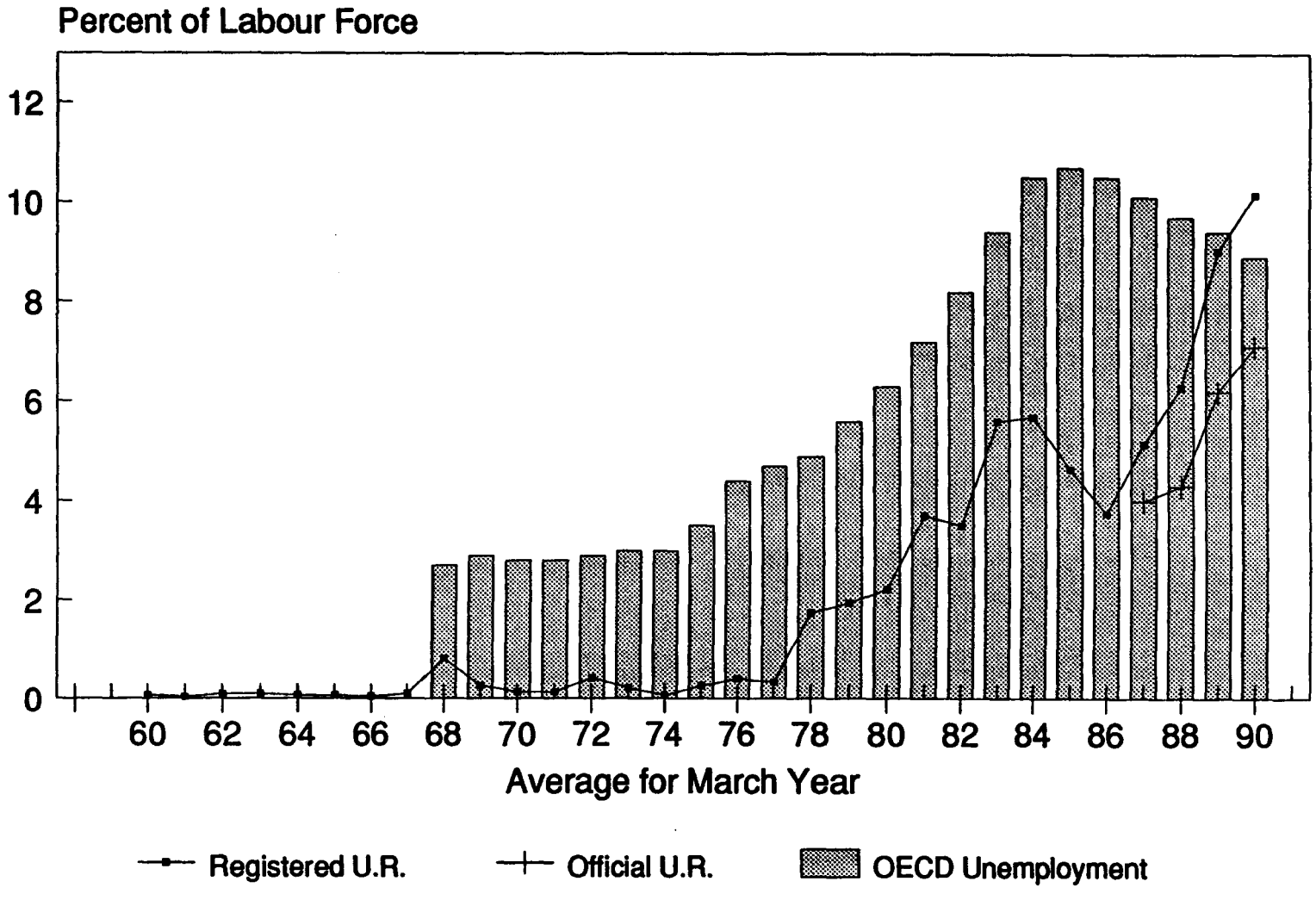
Features

Throughout the 1960s and first half of the 1970s, unemployment in New Zealand was negligible, approaching one percent only in the 1967/68 recession. This was well below the OECD small country average (shown as a bar chart in the graph). The unemployment rate rose sharply in the second half of 1977, leading the government to introduce a special mini-budget to try and stimulate extra expenditure in the economy. These measures did not succeed in reducing unemployment, which continued to rise throughout the seventies and eighties, peaking at just under 6% prior to the 1984 General Election. Unemployment fell in the 1985 and 1986 March years, but then resumed its upward trend as the government's monetary disinflation strategy began to bite. By 1990, the registered unemployment rate had risen to 10% and the official rate to 7%.

Sources

The registered unemployment rate comes from the Department of Statistics' "Estimated Distribution of the Total Labour Force" (*Monthly Abstract of Statistics*, Table 13 or 5.02, for 1960-1984, and from Table J4 of the *Reserve Bank Bulletin*, 1985-1990. The data are for April (1960-79), for February (1980-84), and for the year ending February (1985-90). The Department of Statistics "Official Unemployment Rate" is given in their series HLFQ.SF3CZ, and in the graph is the average of the four quarters ending March each year. The OECD data (previous calendar year) come from the sources cited on page 4.

UNEMPLOYMENT



INCOME DISTRIBUTION

Description

High economic growth, low inflation and low unemployment are standard objectives given in any macroeconomic textbook. More controversial is an objective of an equitable income distribution. Some argue that income distribution is central to economic affairs. Some argue that it should be a matter of social rather than economic policy. Others point out that there is no agreement on what a desirable distribution of income would be (from an economic standpoint). For example, while greater equality can improve social cohesion enhancing economic growth, it can also diminish incentives for effort, reducing economic growth. Whatever view is taken, it remains true that macroeconomic policy can have profound impacts on income distribution.

Comparatively little work has been done to produce statistics measuring changes in income distribution in New Zealand. The only ongoing series is the Department of Statistics' "Full-time Wage and Salary Earners Real Disposable Income Indices", drawn from its Household Expenditure and Income Survey. These indices divide the surveyed sample into five groups (called quintiles), with the lowest income earners in the first quintile, the next lowest income earners in the second quintile, and so on up to the highest income earners in the fifth quintile. The Department works out changes over time to each group's real disposable income; that is, to their income after the effects of taxation and inflation have been removed. These series began in 1980, and the bottom, middle and top quintiles are shown in the graph.

Features

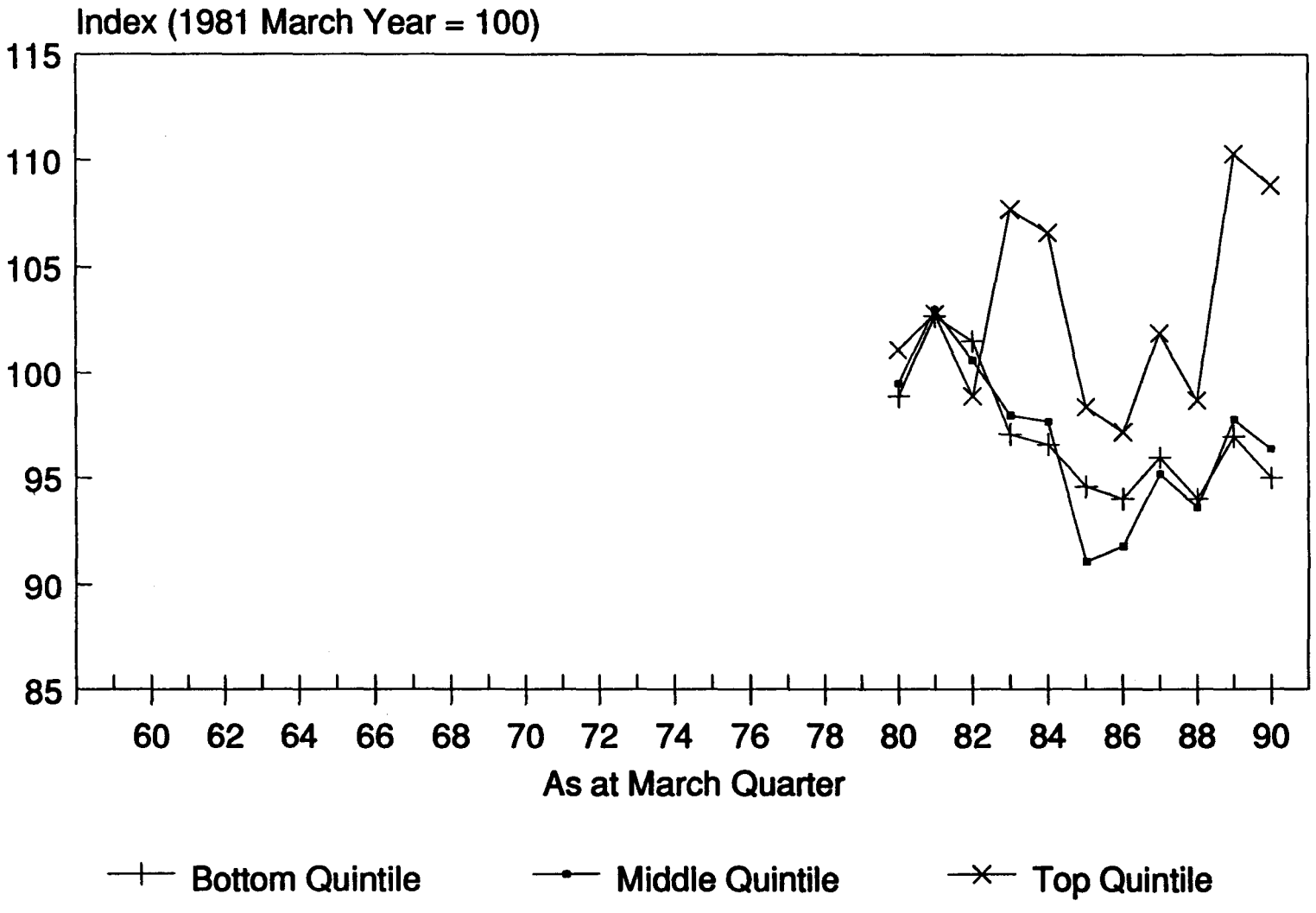
The way the indices work is that each quintile's index is standardised to equal 100 for the year ending March 1981. This is why the three graphs converge for the March 1981 quarter, and does not mean that the income distribution was equal at that point. Rather it means that we can compare the income distribution with what it was at that date, by looking at how the graphs behave over time.

The answer is that over the decade the income distribution became unambiguously more unequal; according to this measure the rich became richer and the poor became poorer. Three major macroeconomic policy changes can be identified as contributing to this by giving significant increases in the top quintile's real disposable income relative to poorer income earners. These were the income tax rate reductions introduced as part of the policy package supporting the government's price and incomes freeze of 1982-1984; the Goods and Services Tax in October 1986, and the further income tax rate reductions in October 1988.

Sources

Department of Statistics series RDIQ.SC2, RDIQ.SC4 and RDIQ.SC6.

INCOME DISTRIBUTION



BALANCE OF PAYMENTS

Description

New Zealand is a small trading nation. We depend on imported goods for many of our inputs into agriculture and industry and also for consumption. We export significant shares of our output. New Zealanders enjoy travelling overseas, and tourists are welcome in New Zealand. Investment flowing in and out of the country results in ongoing transfers of profits and interest payments between ourselves and overseas residents. These various transactions are recorded in New Zealand's "Balance of Payment's Current Account". If the Balance of Payments is in deficit, it means that New Zealand is making more payments to the rest of the world that it is earning in receipts from the rest of the world. A surplus means that receipts are greater than payments.

The true significance of a Balance of Payments Current Account Deficit is that it implies that the country must be borrowing from overseas in one form or another. In this sense the country is no different from any household. If we spend more than we earn in our transactions with the rest of the world, we must borrow externally (or sell domestic assets) to make up the difference. If that borrowing is undertaken to improve economic growth, then there is little concern, since we can repay the debt from our greater future output. But if the borrowing is invested unwisely, or is used to postpone a need for economic adjustment, then the country is at risk of finding itself severely constrained by its external debt in the future.

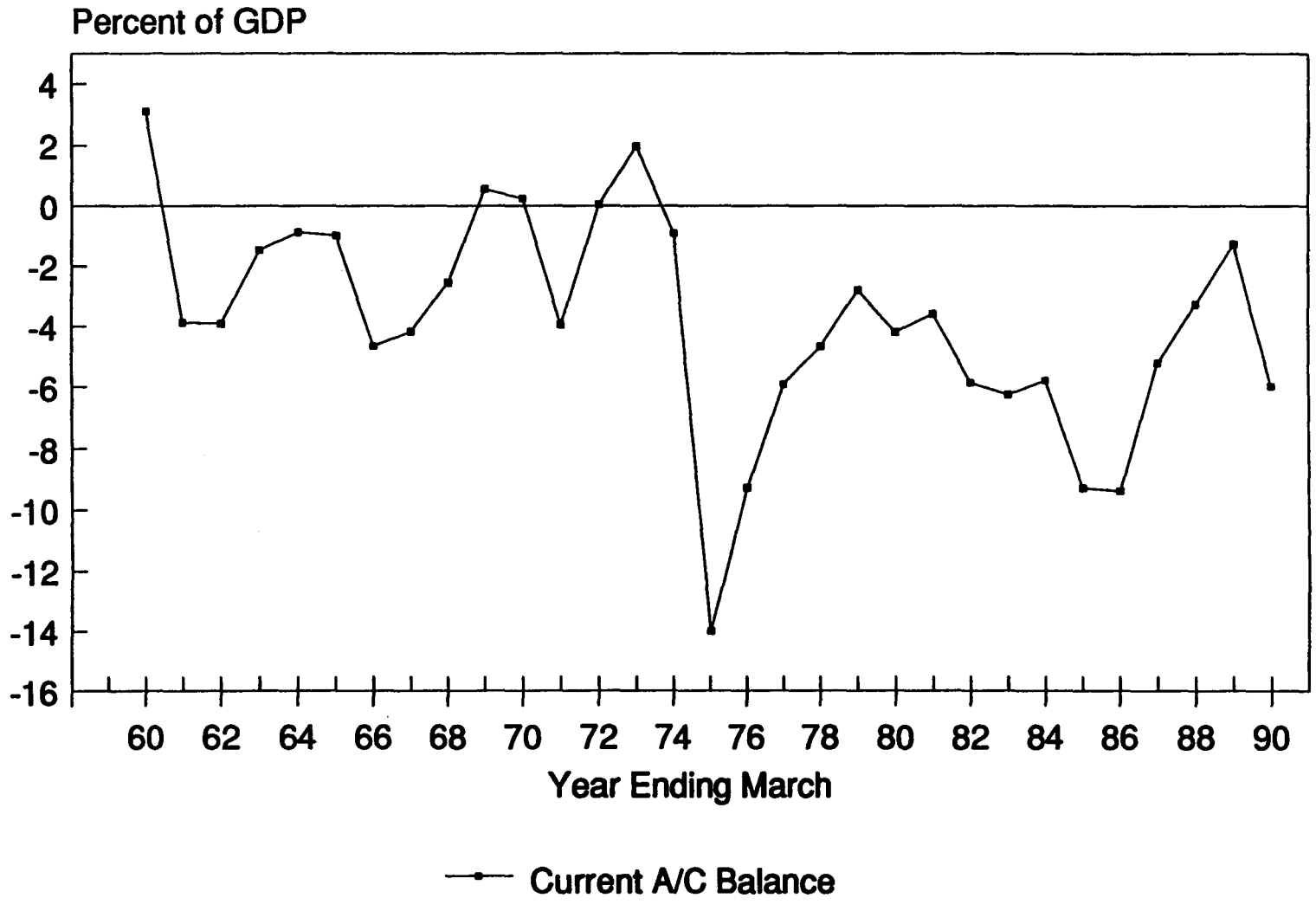
Features

The graph shows New Zealand's Balance of Payments Current Account as a percent of Gross Domestic Product. In the 1960s it was unexceptional, fluctuating between small surpluses and deficits. However, in the 1975 March year, the Balance of Payments fell to a staggering record deficit of 14% of GDP, remaining at 9% in 1976. This was a result of the government's efforts to protect the domestic economy from the impact of the first oil shock, borrowing heavily from overseas to do so. That episode has affected economic policy ever since. It led the government to shelve its efforts to maintain full employment so that the Balance of Payments could recover after 1976; the Thing Big energy projects were an attempt to relax the implied Balance of Payments constraint on growth; and it was a major reason for the government's efforts to make the economy more responsive to international prices after 1984. Despite these efforts, the deficit was again severe in the two years of high growth in 1984 and 1985, and had rebounded again in 1990 after shrinking in the recession after 1986.

Sources

Department of Statistics Series BOPA.STOT168 and BOPQ.STOT168.

BALANCE OF PAYMENTS



BUDGET DEFICIT

Description

A very important actor in the macro-economy is the government, especially through its expenditure and taxation decisions. These decisions make up its "fiscal policy", and the government's fiscal stance is traditionally measured by the "Table 2 Budget Surplus" (or Deficit, if negative). Table 2 of the government's budget each year records its revenue and expenditure on a cash flow basis. The amount of revenue in excess of expenditure is the Budget Surplus, shown in the graph as a percent of GDP.

The Table 2 Surplus is an accountant's measure of government transactions. In particular, it includes cash received from the sale of shares in State-Owned Assets such as Air New Zealand, the Bank of New Zealand, Telecom and so on. From an economist's point of view, these are capital transactions which should be excluded from a measure of fiscal balance. The data series which does this is the "GFS Financial Surplus" based on a system of "Government Financial Statistics" (GFS) developed by the International Monetary Fund and available for New Zealand from 1972.

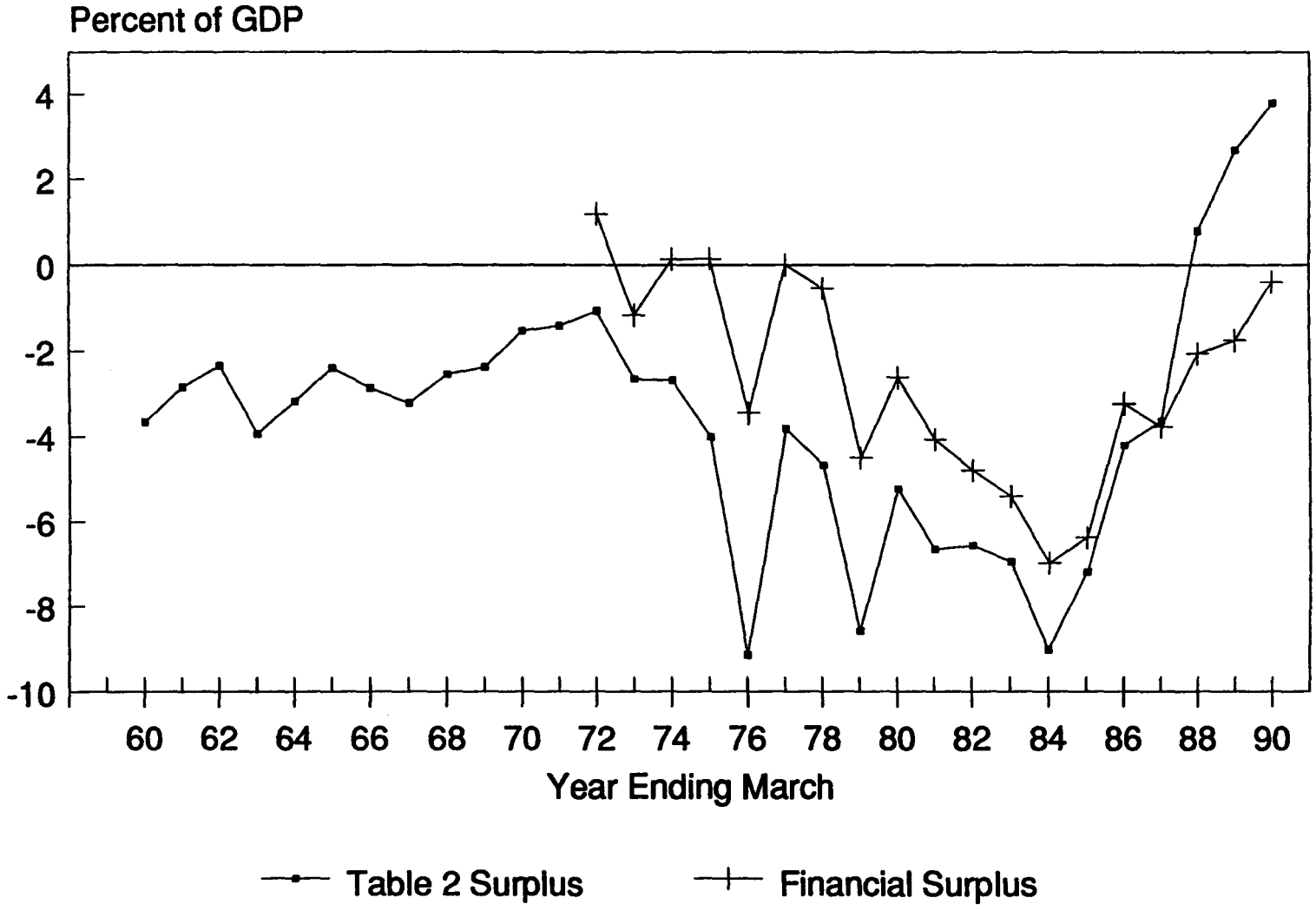
Features

The graph shows that the government's budget has generally been in deficit. The Table 2 Budget Deficit remained stable and less than 4% of GDP throughout the 1960s and early 1970s. The year 1976 saw a marked change. The deficit increased to over 9% of GDP as the government tried to maintain domestic economic activity after the first oil shock. The next year, it was reduced again to 4% as the government sought to retrench to protect the Balance of Payments. This set the pattern of high and variable deficits for the next decade. After the 1984 General Election, the government began a programme of reductions in the deficit. On the Table 2 definition this produced in 1988 a budget surplus "for the first time in 35 years". The surplus was achieved by including the revenue from the sale of State-Owned Assets; however the GFS Financial Surplus measure also shows the steady progress towards a balanced budget, notwithstanding pressure on government finances brought about by increased social welfare expenditure and reduced tax income as a result of the ongoing recession.

Sources

The Table 2 Budget Deficit comes from the Government's Budget (*Appendix to the Journals of the House of Representatives* Document B6), adjusted for certain definitional changes. The GFS Deficit series comes from Table 9 of David Webber's *Tracking Down the Deficit* (Wellington: New Zealand Planning Council, 1987) for 1972-86, and from the Budget for 1987-90. Note that the government changed to a June financial year in 1990.

BUDGET DEFICIT



COMPONENTS OF GDP

Description

Gross Domestic Product provides an estimate of the value of all goods and services produced within New Zealand in a year. Denote this value as Y. If we add imported goods and services (denoted M), this gives the total value of production available in the economy. This output is used in four different ways. The largest component is consumed by private sector firms and households. This is termed private consumption (denoted C). Another significant component is used by the public sector (denoted G for government consumption). A third component is used for investment (I), replacing worn out capital (i.e., depreciation) and adding to the capital stock (for example, new factories, machines, office buildings, inventory levels and so on). The remainder is exported overseas (denoted X). Using these symbols the so-called "National Income Accounting Identity" can be written as

$$Y + M = C + G + I + X$$

The convention is to rewrite this with imports moved to the right-hand-side.

$$Y = C + G + I + (X - M)$$

The graph shows these four components of GDP (the fourth one, exports less imports, is called net exports) all deflated by the GDP deflator to exclude the impact of inflation on values.

Features

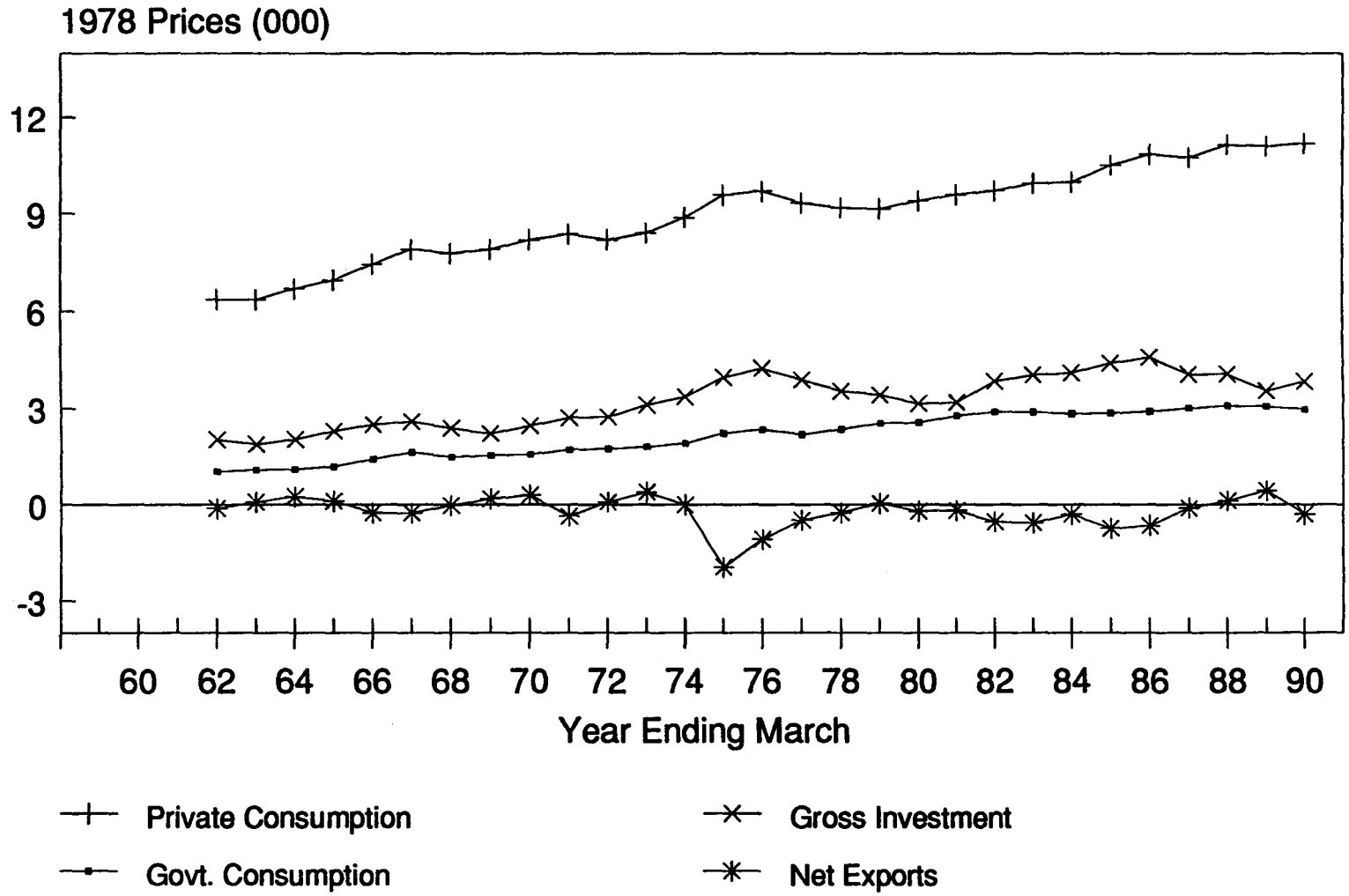
Overseas textbooks often emphasise the relative variability of investment compared to consumption as a cause of economic fluctuations. The graph shows that the same can be said for New Zealand with clear cycles discernible in the gross investment series. However, the major source of instability is in the net export series, which reveals a number of short sharp fluctuations during the thirty year period. This emphasises New Zealand's dependence on world trade, and our vulnerability to changes on the international scene. It is also partly why macroeconomic policymaking is so difficult in this country.

Another feature worth highlighting is the humps in the private consumption and the investment series in 1976 and 1977. This reflects the efforts of the government in those years to offset the sharp deterioration in New Zealand's net exports after the first oil shock. Thus the recessionary impact was successfully postponed for two years, but at the expense of ongoing structural problems that were not finally addressed until after 1984.

Sources

D. Grindell (Ed) Consolidated National Accounts for New Zealand on an SNA Basis (Wellington: Reserve Bank of New Zealand Discussion Paper No. 32, 1981) gives the data for the years 1962 to 1977. For 1977 to 1990, the data are contained in the Department of Statistics series SNBA.SBG, SNBA.SBF, SNBA.SBI, SNBA.SBL and SNBA.SBM.

COMPONENTS OF GDP



WAGES PROFITS AND TAXES

Description

The amount of output produced within a country, GDP, must by definition equal the value of income generated in the country. That income is distributed in three major categories: after-tax wages, after-tax profits and total taxation (made up of direct taxes on income and indirect taxes on production).

The Department of Statistics directly estimates the division of GDP into gross wages (that is, before income tax is paid), gross profits (ditto), and net indirect taxes. The government also publishes data on its direct taxation collected each year, but unfortunately does not distinguish the tax collected from wages and the tax collected from profits. However the Department of Inland Revenue publishes statistics on "Income Tax at Source". This is tax collected under the "Pay as You Earn" system, and can be used as a proxy for tax on wages. Subtracting it from total direct tax gives the estimated tax on profits. The resulting three series are shown in the graph as percentages of GDP.

Features

Each series has its own interesting story to tell. After-tax wages was a relatively stable 40% of GDP in the 1960s. The first oil shock saw workers increase their share of GDP, contrary to what economic theory would suggest was required to maintain full employment. An adjustment to lower levels occurred in the late 1970s and early 1980s, but the price and incomes freeze of 1982-84 resulted in a significant fall in the income share of wages after 1983, a reduction that has been maintained.

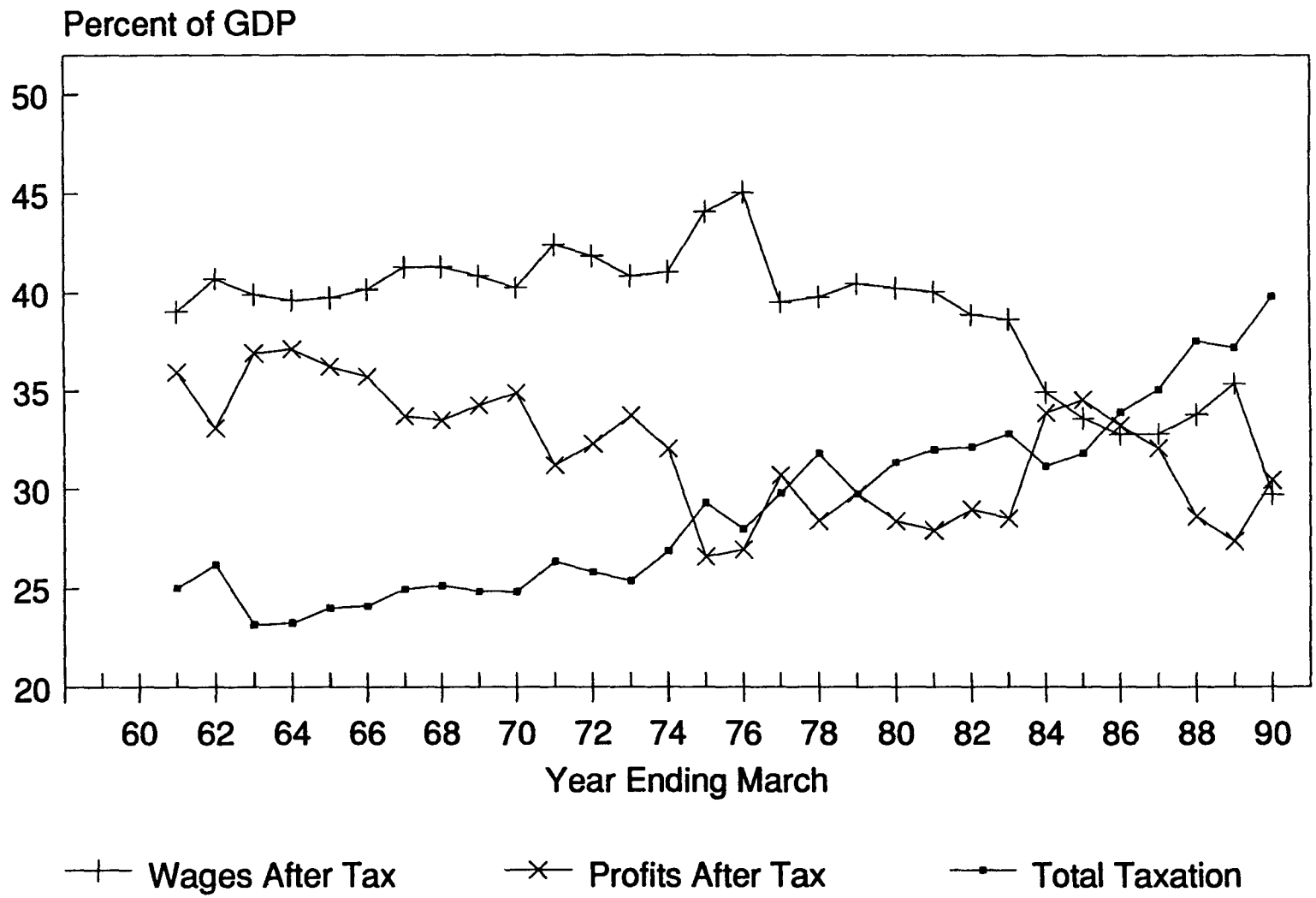
After-tax profits is a very variable series. The overall trend was for an erosion in profits throughout the sixties and seventies, until the price and incomes freeze produced a strong recovery in 1984 and 1985 (which were also the only two years of sustained growth in New Zealand since 1975; see page 4 above). However, in the decade's second half, profits returned to their pre-freeze level before rising sharply in 1990.

Tax collected by the government rose from 25% of GDP in 1960 to 30% in 1984 and then to 40% by 1990. Thus New Zealand moved into the 1990s with both wages and profits shares significantly reduced, while the higher tax revenue collected by the government was still insufficient to cover its expenditure, not auguring well for the future.

Sources

The data for gross wages, gross profits, and net indirect taxation are contained in Grindell (cited page 16) for 1962-77, and for 1977-90 in the Department of Statistics series SNBA.SBA, SNBA.SBB plus SNBA.SBC, and SNBA.SBD less SNBA.SBE. Total direct tax is given in the Budget, Table 3. Direct tax on wages is proxied by the series SNB.S1AD, "Income Tax at Source".

WAGES PROFITS AND TAXES



CONSUMER PRICES AND WAGES

Description

The Consumer Price Index (CPI) has been calculated by the Department of Statistics since 1891 to record changes in the average price of goods purchased by households. It is a measure of the "cost of living" of the average New Zealand household. The percentage change in the value of CPI is the consumer price inflation rate, and is one of the series shown in the graph.

The other series in the graph is the wage inflation rate; that is, the percentage change in the Department's Prevailing Wage Index (PWI). This index is calculated from a postal survey of employees to determine changes in the actual wages rates being received by full-time adult workers (before 1978 only male workers were surveyed).

The two inflation rates are depicted together to show how workers' wages have changed relative to their cost of living. If the CPI inflation rate is higher than the PWI inflation rate, for example, it means that workers' wages have failed to keep up with their cost of living, and vice versa.

Features

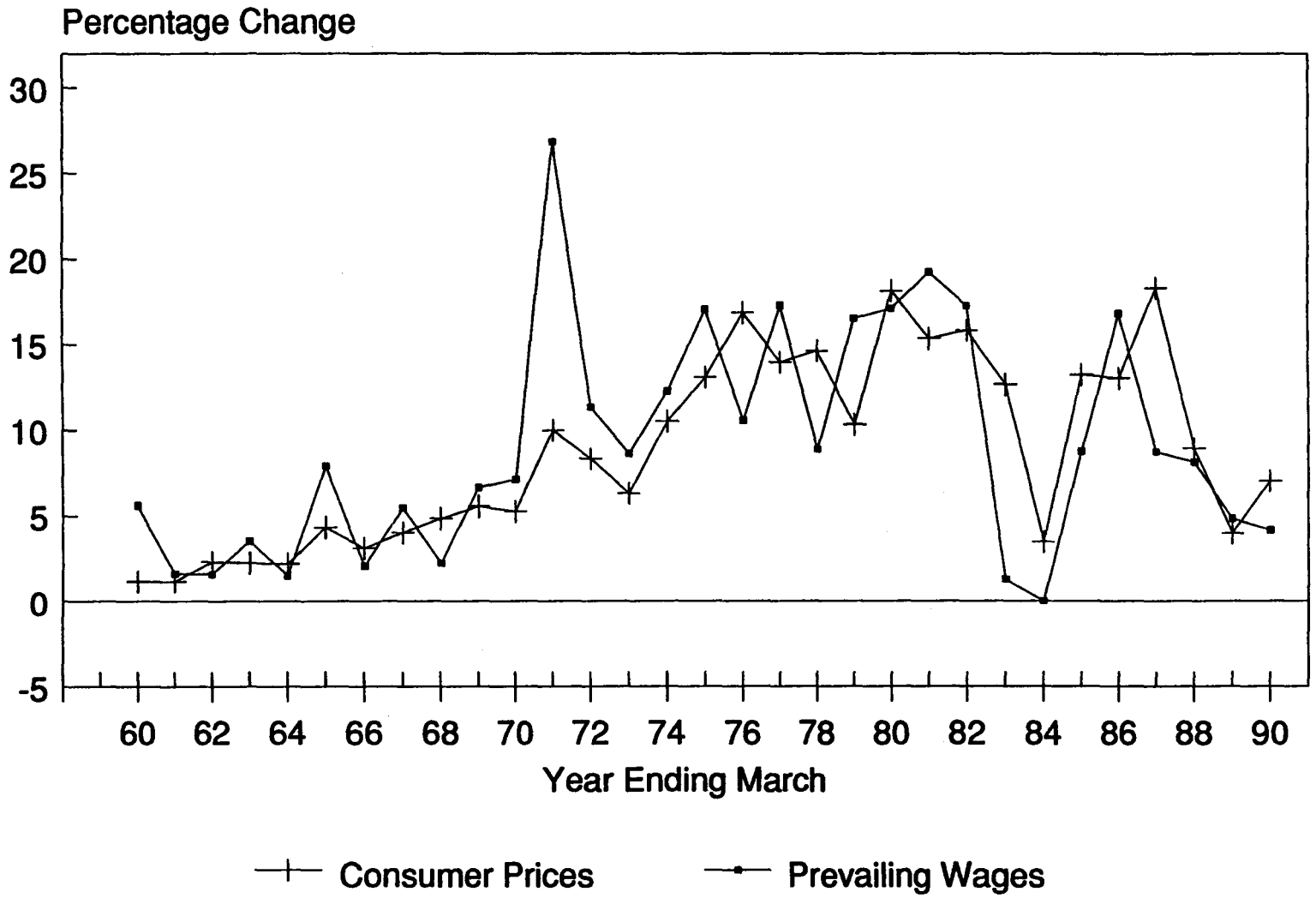
Throughout the 1960s, the CPI and PWI inflation rates moved approximately together, after an initial boost to wages above prices in 1960. In the 1971 March year, however, there was an extraordinary leap in wages compared to consumer prices; wages rose by over 25% at a time when consumer price inflation was approximately 10%. There were a number of institutional factors behind this event, including efforts to raise Award wage rates up to the actual rates being paid which led to even higher actual wage rates being expected, and attempts by different trade unions to restore traditional relativities which saw occupational pay rates leapfrogging over each other. For the rest of the decade, wages continued to grow faster than consumer prices, apart from two years, 1976 and 1978.

On June 22nd, 1982, the government announced a comprehensive prices and incomes freeze, initially for one year, but later extended until February 1984 for prices and to August 1984 for wages. Prevailing wages consequently grew more slowly than consumer prices in 1983, 1984 and 1985. Another divergence occurred in 1987 when the Goods and Services Tax raised consumer prices (partially compensated for by income tax cuts at the same time).

Sources

The Consumer Price Index is contained in the Department of Statistics series CPIQ.SE9A. The Prevailing Wage Index is contained in PWIQ.S1329 for 1978-90. For the period 1959-78, the Department of Statistics "Nominal Weekly Wage Rates Index - Adult Employees [Male], All Groups Combined" series was used.

CONSUMER PRICES AND WAGES



PRODUCER PRICES AND WAGES

Description

The previous graph compared workers' wages and their cost of living. This graph looks at the situation of firms, comparing changes in the wage rates they must pay with changes in the prices they receive for their output. The former series has been described on page 20. The Producers Price Index (PPI) is calculated by the Department of Statistics to estimate changes in the prices received by firms at the factory door or farm gate. The producers price inflation is given by the percentage change in the value of the PPI.

There are two main reasons why firms and consumers might experience different inflation rates in their respective price indices. First the CPI is influenced by movements in the price of imported consumption goods. If overseas prices rise faster than domestic prices, then the CPI will increase more quickly than the PPI. Secondly, indirect taxes such as the Goods and Services Tax must be paid by consumers but are not retained by firms. Hence a rise in an indirect tax will increase the CPI, but not the PPI.

If wages rise faster than producer prices, economists would expect greater unemployment. There is one exception to this: if labour productivity increases (see page 24) this allows higher wages to be paid without reducing profitability.

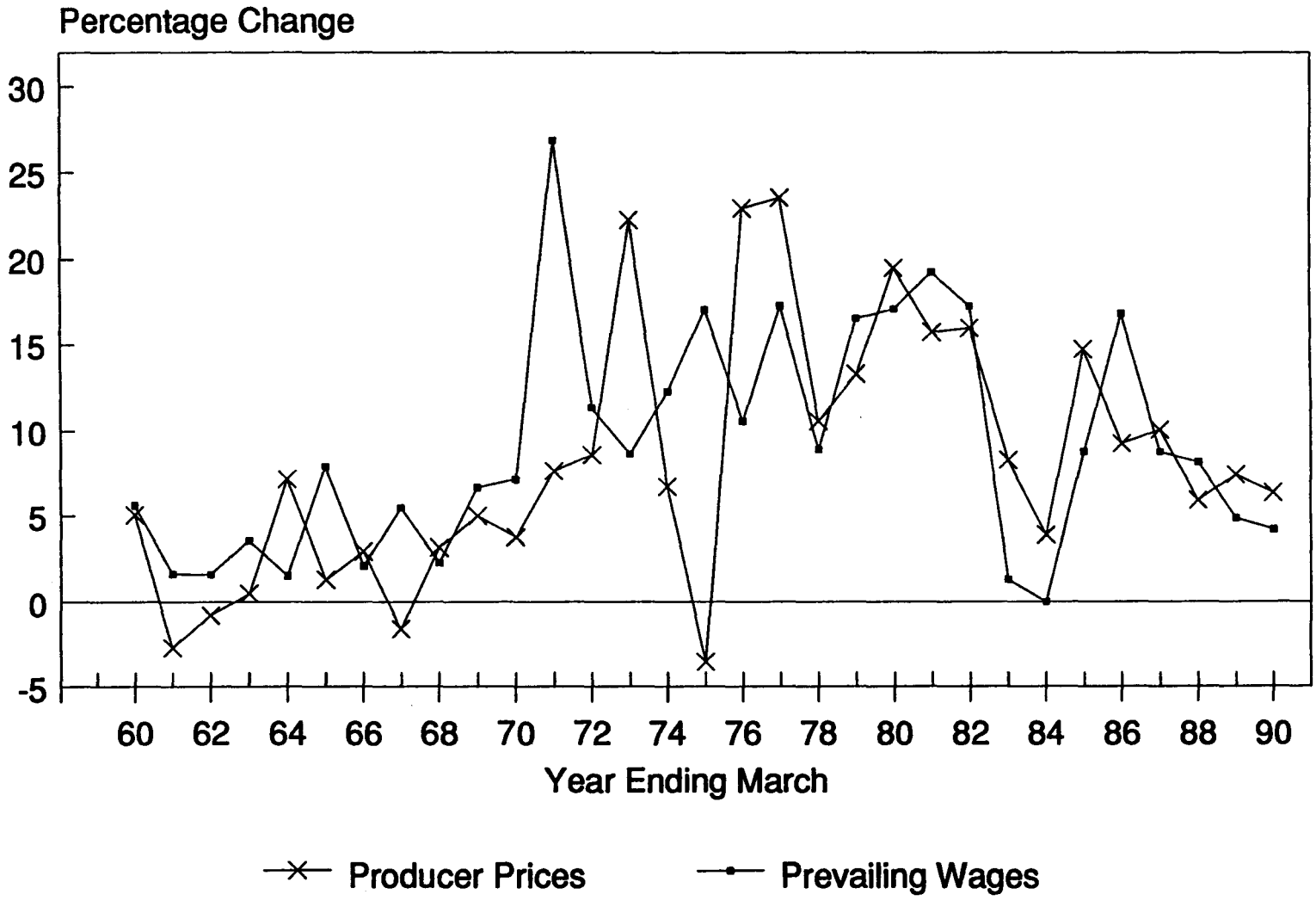
Features

Throughout the 1960s, wage inflation was consistently greater than producer price inflation, justified by positive productivity growth (see page 25). However, the huge wage push of 1970/71 (see page 20) went well beyond any increase that could be sustained. Employment was maintained by the world commodity boom of the early 1970s, which saw New Zealand producer prices rise sharply, especially in 1973. But this respite was short-lived, due to the world recession accompanying the first oil shock. In 1975, producer prices fell by 4% at a time when wage rates increased by over 15%. There was some readjustment in 1976 and 1977, and the two series then moved reasonably closely together until the prices and incomes freeze of 1982-84 saw producers prices grow more quickly than wages in 1983, 1984 and 1985, with a wage rebound occurring in 1986 as the first wage round after the freeze sought to catch up. Notice than unlike the graph on page 21, the two series do not diverge with the introduction of GST in October 1986. In 1988 and 1989, producers' prices were again growing faster than their wage rates.

Sources

The Producer Price Index used is the Department of Statistics PPI Output Series, PPIQ.SO2, for 1978-90. For 1959-78, the Department's series "Prices Received for Commodities Produced in New Zealand - Output of All Domestic Industries" was used. The Prevailing Wage Index has been described on page 20.

PRODUCER PRICES AND WAGES



PRODUCTIVITY AND EMPLOYMENT GROWTH

Description

Labour productivity measures the average amount of output produced by each worker employed. Formally, it is the value of real gross domestic product divided by the number of (full-time equivalent) workers employed.

Higher labour productivity means that output (and therefore income) per worker rises, increasing living standards in New Zealand. Also, because more output is being produced per worker, the unit cost of production is lower making New Zealand goods more competitive on world markets and encouraging export-led growth. For these reasons, the New Zealand Planning Council emphasises productivity growth as the best means of achieving full employment and high real incomes.

Measuring productivity growth is not easy. The best historical annual series for employment is the Department of Labour's Quarterly Employment Survey. The survey excludes agriculture, so that the output from this sector must also be excluded from GDP for consistency. In any case, this is useful for establishing trends since agricultural production is extremely variable, subject to changing weather conditions and so on.

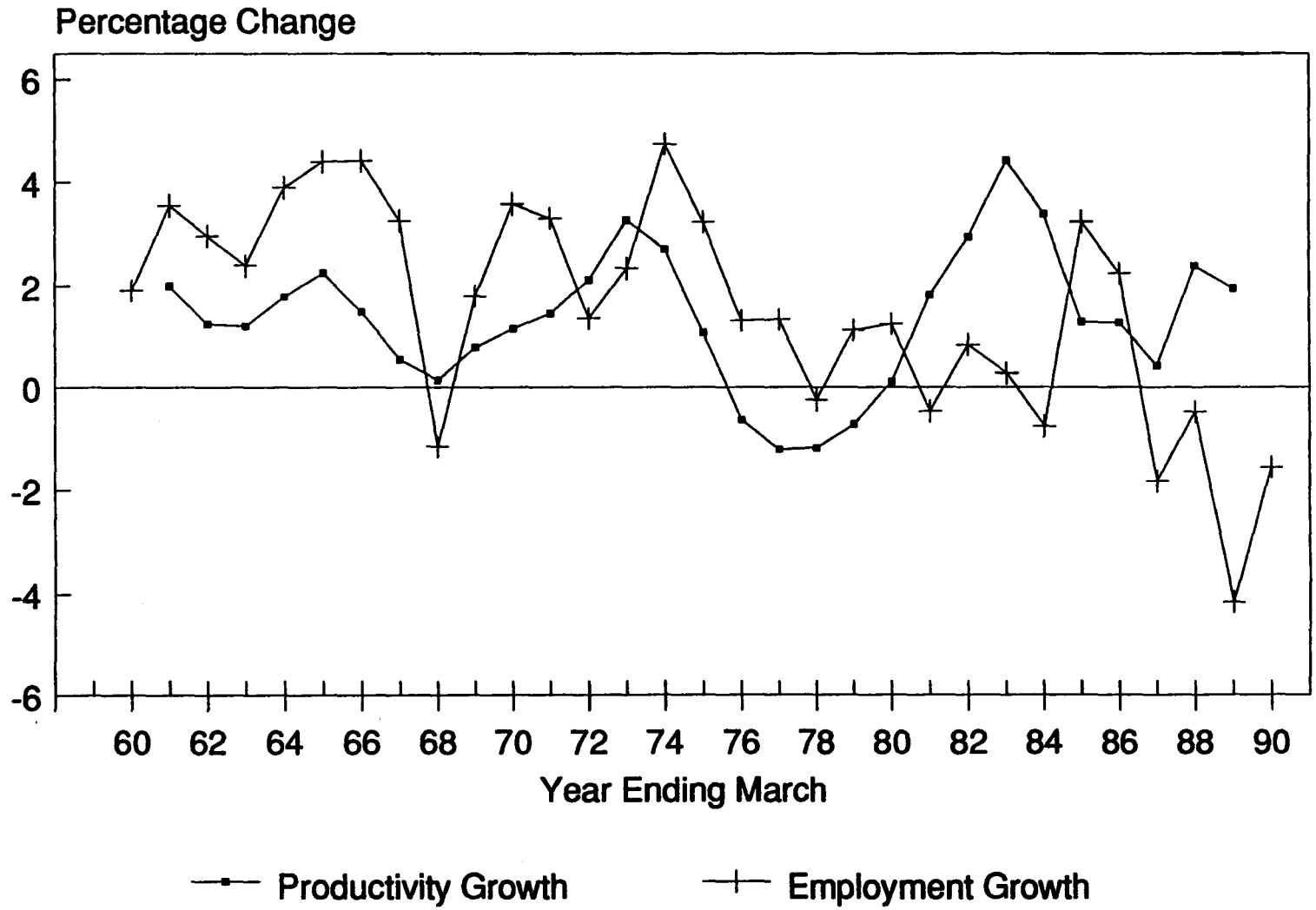
Features

Productivity and employment tended to move together between 1960 and 1980, with distinctive cycles in productivity growth being mirrored by employment growth. After the first oil shock, New Zealand shared in the world-wide trend of falling productivity, with its growth being negative from 1976 to 1979. Employment growth also slowed in those years. There was strong employment growth during 1985 and 1986, but employment then fell for four consecutive years from 1987 to 1990, emphasising the extent of the recession. In contrast to the earlier experience, productivity growth was inversely related to employment growth in the 1980s (that is, high productivity growth tended to be associated with low employment growth, and vice versa). This emphasises the relative importance of labour reductions in obtaining productivity improvements in this latter period.

Sources

Employment data come from the Department of Labour's Quarterly Employment Survey (six-monthly prior to 1981) for 1959-1988. Averages of the survey data were used, with part-time workers given a weighting of one-half. This series ended in 1988, and was replaced by the Department of Statistics Household Labour Force Survey series. Real GDP data come from the sources cited on page 4. The subtracted series for agriculture output comes from SNBA.SF9AA for 1978-89, and from its volume index, published in the *New Zealand Year Book*, for 1959-78. The productivity series shown in the graph has been "smoothed" to show the average of the three years before, during and after the current year.

PRODUCTIVITY AND EMPLOYMENT GROWTH



EXTERNAL ACCOUNTS

Description

The graph on page 13 shows the Current Account Surplus of New Zealand's Balance of Payments. This graph shows the two major components of the Current Account, the Balance of Trade and the Balance on Invisibles.

The Balance of Trade is the difference between the value of merchandise goods exported and the value of merchandise goods imported (notice that this is different from the concept of net exports on page 16, which includes services as well as merchandise goods in its definition). The graph shows exported and imported goods as well as the Balance of Trade, all as percentages of GDP.

The second component is the Balance on Invisibles. This includes receipts and payments between New Zealand and the rest of the world for "services" such as transportation, travel and insurance, as well as the transfers of dividends, profits and interest payments either to New Zealanders holding investments in other countries or to overseas investors in this country.

Features

Typically, New Zealand's Balance of Trade is in surplus; that is, we export more merchandise than we import. The outstanding exceptions to this rule occurred in 1975 and 1976. Looking at exports and imports in those years, this can be explained as follows. After the oil shock in the August 1973, the world economy moved into a sharp recession, reducing demand for New Zealand exports. At the same time, the New Zealand government succeeded in maintaining domestic activity and achieving reasonable real growth in the two years. Because a significant proportion of inputs into New Zealand industry are imported, this increased our demand for imports. Thus the consequence of low international activity and high domestic activity was the huge Balance of Trade and Balance of Payment's Current Account deficits in 1975 and 1976.

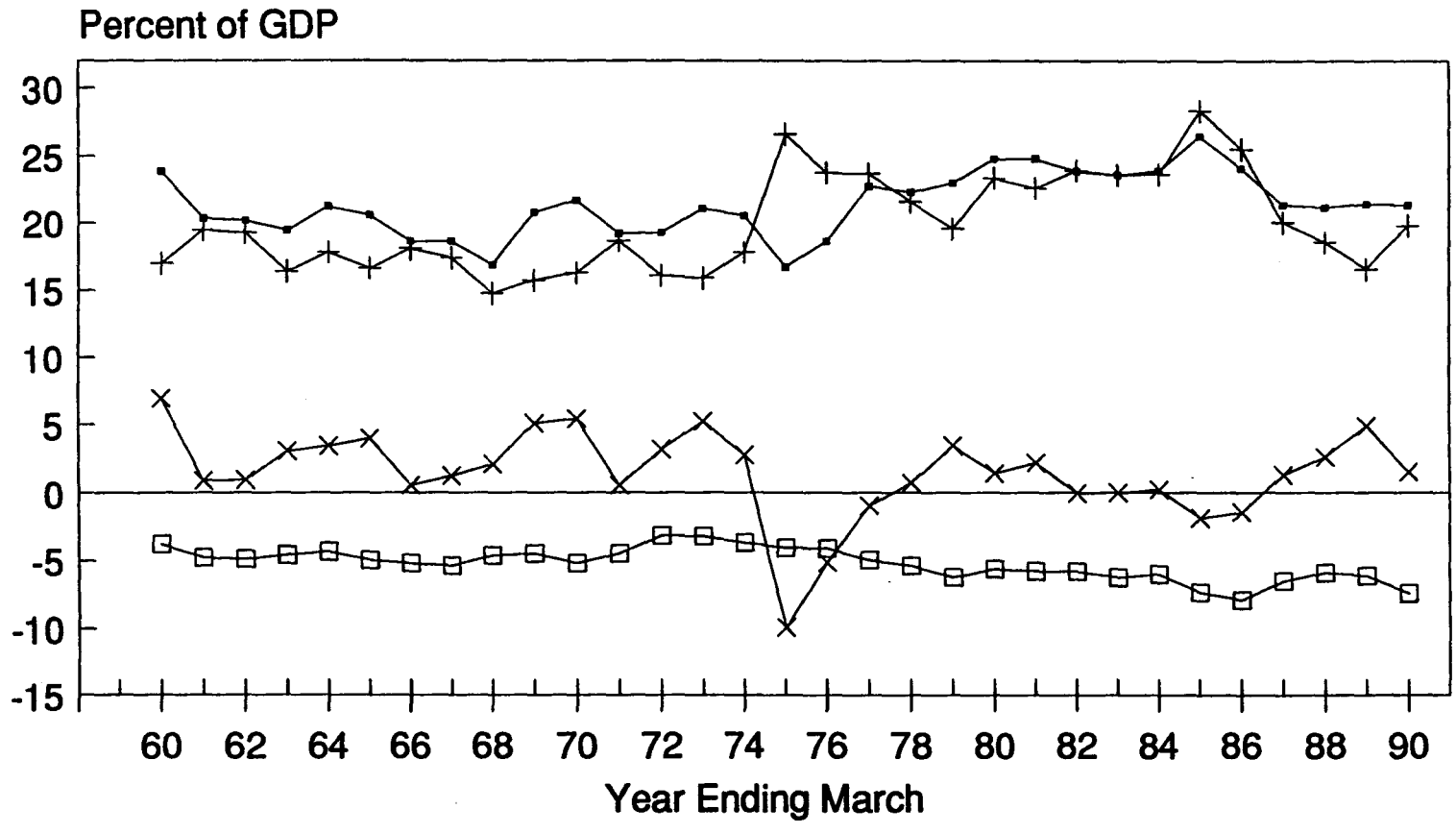
In the 1980s, the Balance of Trade has been largely driven by changes in imports associated with changes in output growth. Thus in the high growth years of 1985 and 1986, imports rose faster than exports and the Balance of Trade moved into deficit. In the four years of recession at the end of the period, imports were low by historical standards and the Balance of Trade was in surplus.

The Balance on Invisibles has been in deficit throughout the thirty years, generally wiping out any advantage from a Balance of Trade surplus. The deficit has steadily grown, especially since 1972, reflecting in part the increase in New Zealand's interest payments on our growing overseas debt.

Sources

Department of Statistics series BOPA.ST010, BOPA.ST011, and BOPA.ST159.

EXTERNAL ACCOUNTS



GOVERNMENT ACCOUNTS

Description

The graph on page 15 shows the trends in the government's budget surplus. Of course, the budget surplus is simply the difference between government revenue and government expenditure, and this graph shows these two series. For the years 1960-1972, the Table 2 definitions of revenue and expenditure are used, since the IMF's Government Finance Statistics (which are better from an economist's point of view) are available for New Zealand only from 1972. All data are for March years, except for 1990 when the government moved to a June financial year.

Features

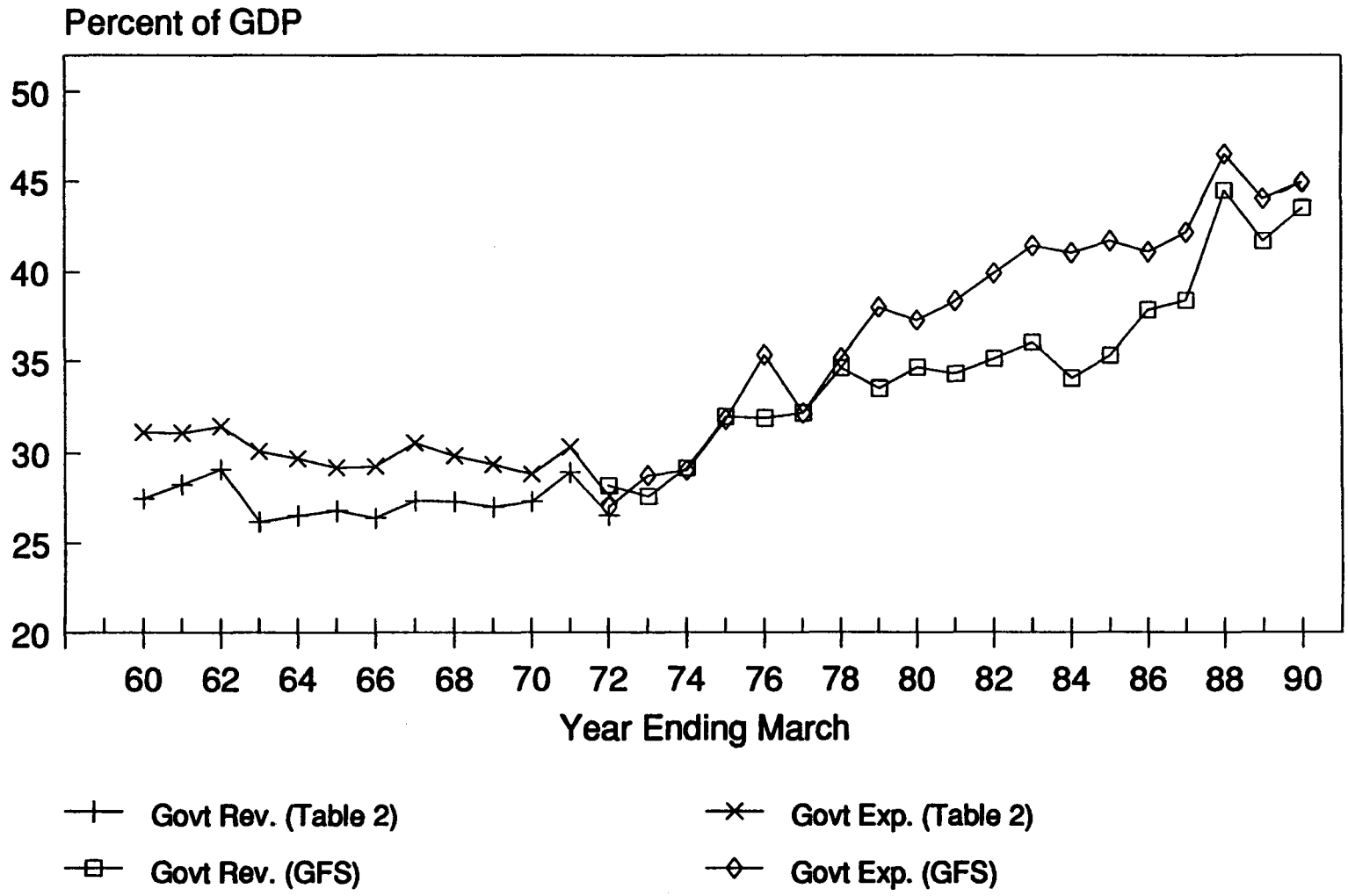
The Table 2 data to 1972 reveal that both government revenue and expenditure were relatively stable during the 1960s at about 28% and 30% of Gross Domestic Product respectively, with approximate fiscal balance achieved by the 1972 financial year. Switching to the GFS Series, fiscal policies remained balanced in 1973 and 1974. But in 1975, both revenue and expenditure rose sharply, and the latter was boosted again in 1976 as the government tried to cope with the impact of the oil shock in the middle of the 1974 financial year. In 1977, a new government reduced expenditure back in line with revenue again, but this proved to be only temporary.

Government expenditure grew steadily throughout the rest of the 1970s and in the first half of the 1980s. Revenue growth failed to keep up, and indeed the tax cuts introduced as part of the 1982-84 prices and incomes freeze saw revenue fall to 34% of GDP in 1984 compared to expenditure of 41%. After 1984 the government introduced a programme of sustained reductions in the budget deficit. The graph shows that this was achieved almost entirely on the revenue side of the government's accounts. Expenditure continued to rise (mainly due to changes in accounting conventions rather than increases in real spending), reaching a peak of 47% in 1988, with the revenue equalling 45% of GDP that financial year. Both revenue and expenditure fell the following two years, as the size of the public sector was reduced after the sale of some major State Owned Enterprises to the private sector. Nevertheless, the government was still a significantly bigger part of the New Zealand economy at the end of the 1980s than it had been in the 1960s or 1970s.

Sources

The Table 2 data for 1960-1972 come from the Government's Budget (*Appendix to the Journals of the House of Representatives* Document B6), adjusted for certain definitional changes. The GFS data come from Table 9 of David Webber's *Tracking Down the Deficit* (Wellington: New Zealand Planning Council, 1987) for 1972-86, and from the Budget for 1987-90.

GOVERNMENT ACCOUNTS



PUBLIC AND OVERSEAS DEBT

Description

Whenever there is a government budget deficit, it must be financed one way or another. The government may choose to print more money or to sell State Owned Assets; however, the orthodox method is to borrow, thus increasing "public debt". Of course, this process cannot be carried on without limit; hence the ratio of public debt to GDP is watched closely by economists, and is shown in the graph along with its division between domestic and overseas borrowing.

The government is not the only agent borrowing overseas. Total long term overseas debt includes other official and private sector borrowing. This series is important, since a high or growing level of overseas debt would undermine New Zealand credit-worthiness in world financial markets and so raise the rate of interest we would have to pay to borrow overseas.

Features

Throughout the 1960s, public debt was approximately 60% of GDP, with most of it borrowed domestically. By 1974 it had been reduced to just over 40%, with the domestic component that year about 35% of GDP, where it more or less remained for the rest of the period apart from a temporary rise to 40% in 1984, gradually eliminated over the next seven years.

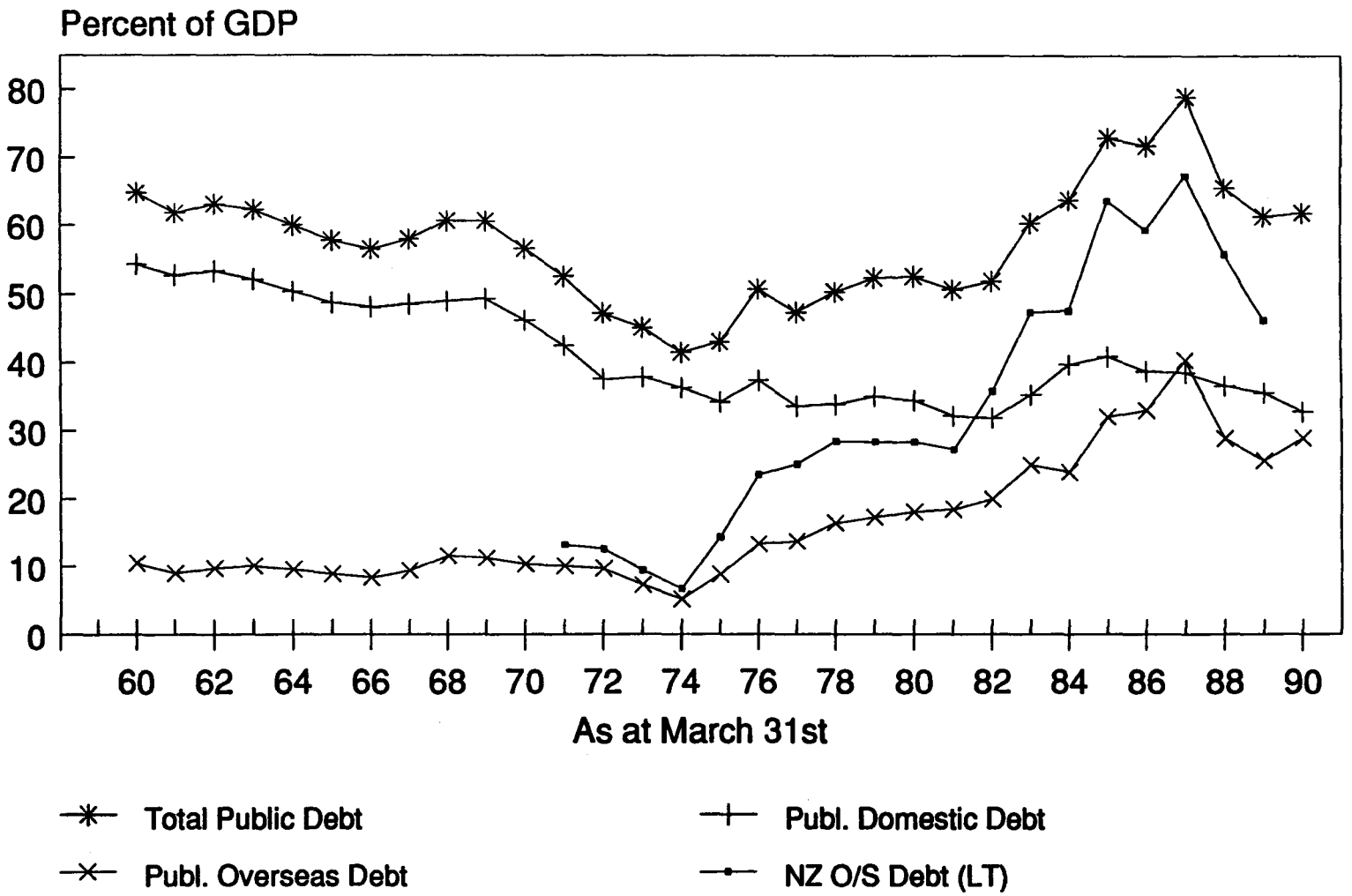
Movements in overseas public debt since 1974 have been more dramatic. By 1976 it was higher than it had been at any stage in the 1960s, and continued to rise until it peaked at 42% of GDP in 1987. Amidst widespread concern about whether New Zealand could sustain such a high level of overseas debt, the proceeds of the government's State Owned Assets sales were directed towards its reduction in 1988 and 1989; by 1990 overseas public debt had stabilised at 30% of GDP.

The graph of long-term overseas debt shows its steady rise from under 10% in 1974 to over 60% of GDP in 1987, before falling again to 40% in 1989. Most of the sharp rises were due to devaluations of the New Zealand dollar (see page 34), especially in 1975, 1982-83 and 1985. Because the overseas debt is fixed in foreign currencies a devaluation increases its New Zealand value. In late 1984, legal restrictions on New Zealand companies' ability to borrow overseas were relaxed, adding to the increase in debt that year.

Sources

Domestic and Overseas Public Debt are published in the tables of the Government's Budget (*AJHR*, B6). The data are for March 31st to 1989 and for June 30th for 1990. Total New Zealand Long Term Overseas Debt after 1983 comes from the Department of Statistics' series OSDQ.S9 (replaced in 1990 by a new series, OTDQ.SAC9, not shown), and for 1971-82 from Table 1A of David Webber's *Overseas Debt: An Assessment* (Wellington: New Zealand Planning Council, 1988).

PUBLIC AND OVERSEAS DEBT



TERMS OF TRADE

Description

The value of New Zealand's "terms of trade" is very important for our economy. Formally, the terms of trade is the average price of New Zealand exports, divided by the average price of New Zealand imports. Therefore, if New Zealand's terms of trade rises, it means that the prices of our exported goods have gone up faster than the price of our imported goods, increasing New Zealand prosperity. If the terms of trade falls, we have to export a greater quantity of exports to pay for the same quantity of imports and domestic prosperity falls.

The graph also shows two international price series, the real price of wool and the real price of crude oil. The former is an important part of New Zealand's export price index, and the latter an important part of our import price index.

Features

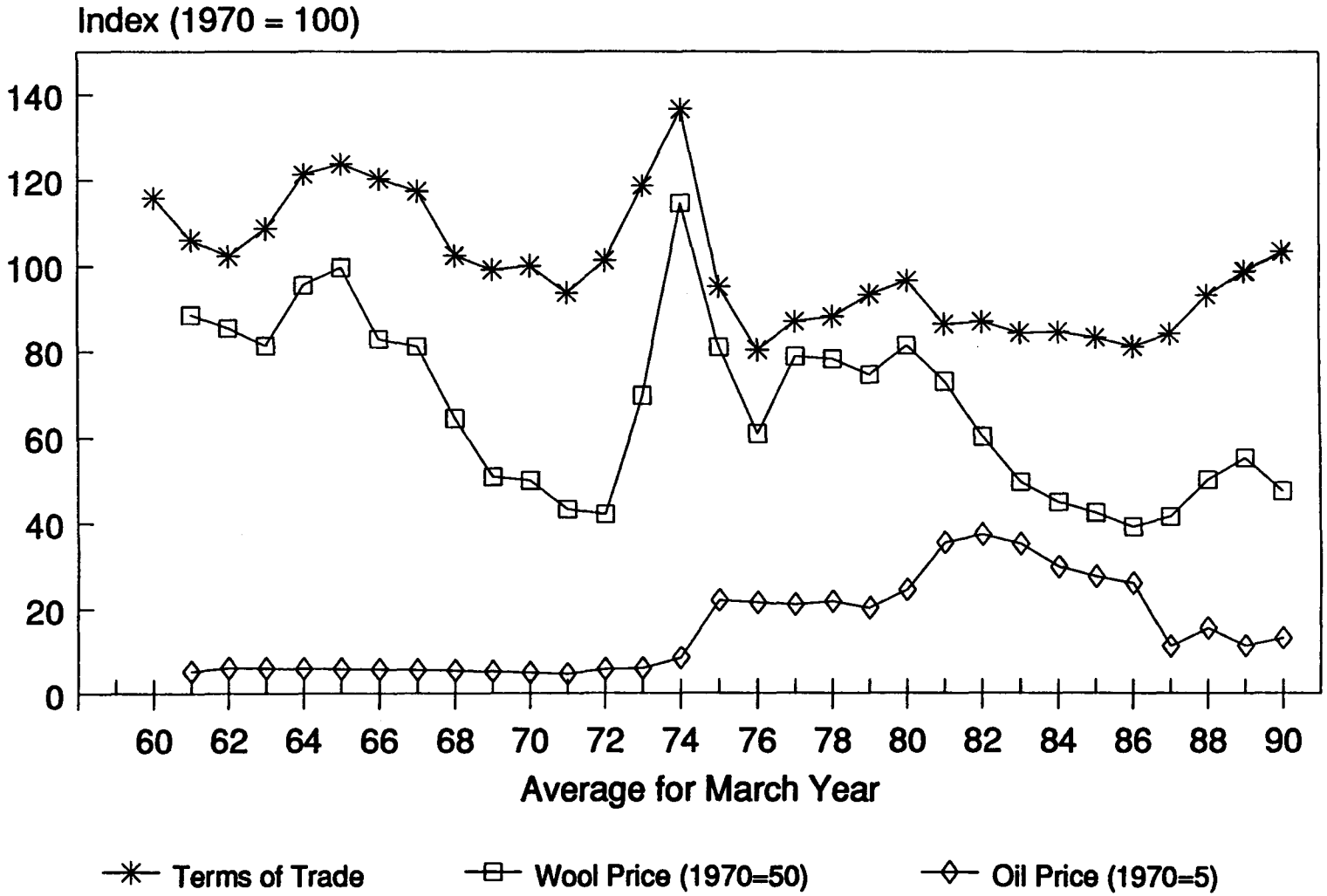
The outstanding feature of New Zealand's terms of trade is their extreme variability. For example, between 1971 and 1974, the terms of trade rose nearly 50% in just three years, but one year later had fallen back to its 1971 value and fell a further 15% in 1976. Less severe, but just as sudden, swings are apparent in the mid-1960s and at the beginning and end of the 1980s. It is very difficult to suggest policies to stabilise the New Zealand economy which could cope with such large and sudden fluctuations in the price of our exports relative to our imports.

The causes of the major movements in the 1960s and 1970s were New Zealand's export concentration in a relatively small range of agricultural products and markets, and a strong dependence on imported fuels. Thus when the world price of primary commodities (wool, for example) rose or fell, our terms of trade rose or fell with them. New Zealand was also vulnerable to the large percentage increases in the price of oil in the 1974 and 1980 calendar years, although not to the same extent. To reduce this vulnerability the government introduced the "Think Big" energy projects in the late 1970s (to reduce the dependence on imported fuels) and undertook a wide-ranging restructuring programme in the late 1980s (to reduce the concentration on primary exports).

Source

The terms of trade index comes from the Department of Statistics Series OTIQ.STTZZ5. The world prices of wool (Australia and New Zealand produced wool in the U.K. market) and oil (petroleum extracted in Venezuela), and the U.S.A. consumer price index used to convert these into real prices, come from the IMF's *International Finance Statistics Yearbook* (Washington: International Monetary Fund, 1989 and 1990). The world prices refer to the previous calendar year. Note the changes of scale in the graph.

TERMS OF TRADE



EXCHANGE RATE

Description

The nominal exchange rate shown in the graph depicts in an index form the value of foreign currencies which can be obtained by exchanging one New Zealand dollar; that is, the world price of a New Zealand dollar, measured in foreign currency units. Before 1973, the New Zealand exchange rate was set in relation to the British pound. That changed with the collapse of the international gold standard system of exchange rates after 1971, and since July 1973 the Reserve Bank has measured the exchange rate against a "trade-weighted basket of foreign currencies".

The real exchange rate is defined to be the nominal exchange rate multiplied by the ratio of the price level of domestically-produced goods to that of overseas-produced goods. If the real exchange rate rises (appreciates or revalues), New Zealand producers lose international competitiveness; if it falls (depreciates, devalues), competitiveness is enhanced.

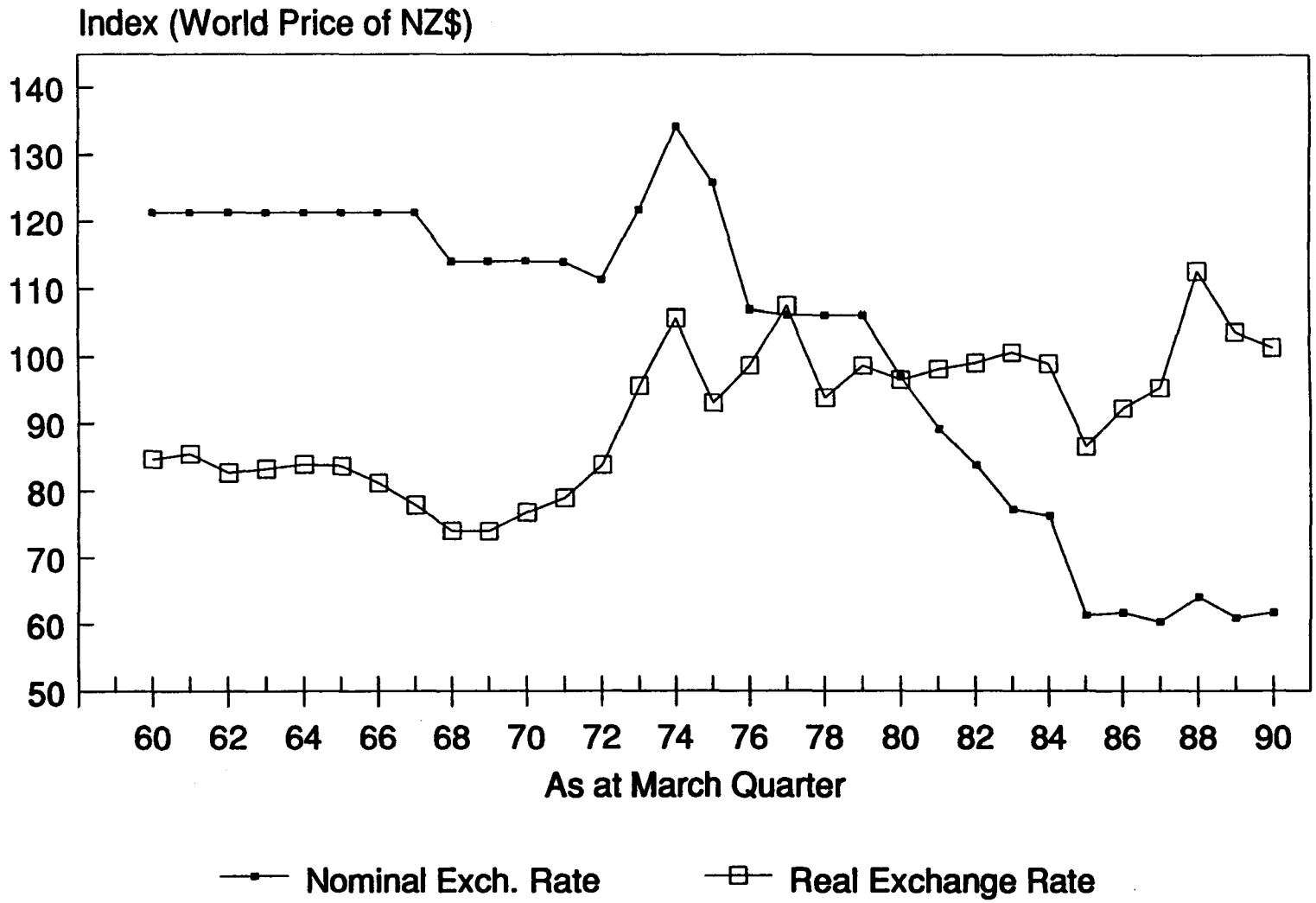
Features

The nominal exchange rate against the British pound was adjusted only once during the 1960s, when the government devalued the New Zealand dollar by 19.45% in November 1967. This also reduced the real exchange rate, but only temporarily as domestic inflation greater than world inflation soon restored its previous value. A 10% devaluation of the US dollar meant that the NZ dollar rose in early 1973, and it was further revalued by the New Zealand government in July and again in September that year. The real exchange rate rose sharply, and then stabilised at the higher level despite two significant devaluations in September 1974 and August 1975 and the shift to a crawling peg system which allowed the dollar to devalue continuously by about half a percent per month between June 1979 and June 1982. The 20% devaluation of July 1984 reduced both the nominal and real exchange rates substantially, but only the first effect has been maintained. After floating the New Zealand dollar in March 1985, the nominal exchange rate was kept stable by firm monetary policy while high domestic inflation meant that the real exchange rate rose sharply and then returned to close to its level before the 1984 devaluation.

Sources

The nominal exchange rate index is based on the UK£/NZ$ exchange rate for 1960 to 1970; after 1970 it is the Reserve Bank's trade-weighted index published in its quarterly *Bulletin*. The real exchange rate uses the GDP Deflator indices given in the IMF's *IFS Supplement on Price Statistics* (Washington: IMF, 1986), pp.36-37, to 1979, and then uses the Reserve Bank's official real exchange rate series, again published in its *Bulletin*.

EXCHANGE RATE



INTEREST RATE

Description

The nominal interest rate is the annual charge for providing a monetary loan, expressed as a percentage of the loan's dollar value. There are many different interest rates, depending on how long and for what purpose is the loan. However, interest rates in an efficient financial system are related to each other, with margins determined by differences in risk associated with each type of loan. Hence it is possible to single out a particular interest rate to examine trends. In the graph, the nominal interest rate chosen is the average rate charged for new first mortgages, primarily because it is the most (but not perfectly) consistent series published for the 30 year period.

Part of the nominal interest rate must compensate the lender for the impact of inflation on the purchasing power of the value of the loan. To account for this, the (ex post) real rate of interest is defined as the nominal rate less the rate of inflation. It is this real rate which equals the true return on a loan. The United Kingdom real interest rate is also shown as a bar chart, as a proxy for world real interest rates during the period.

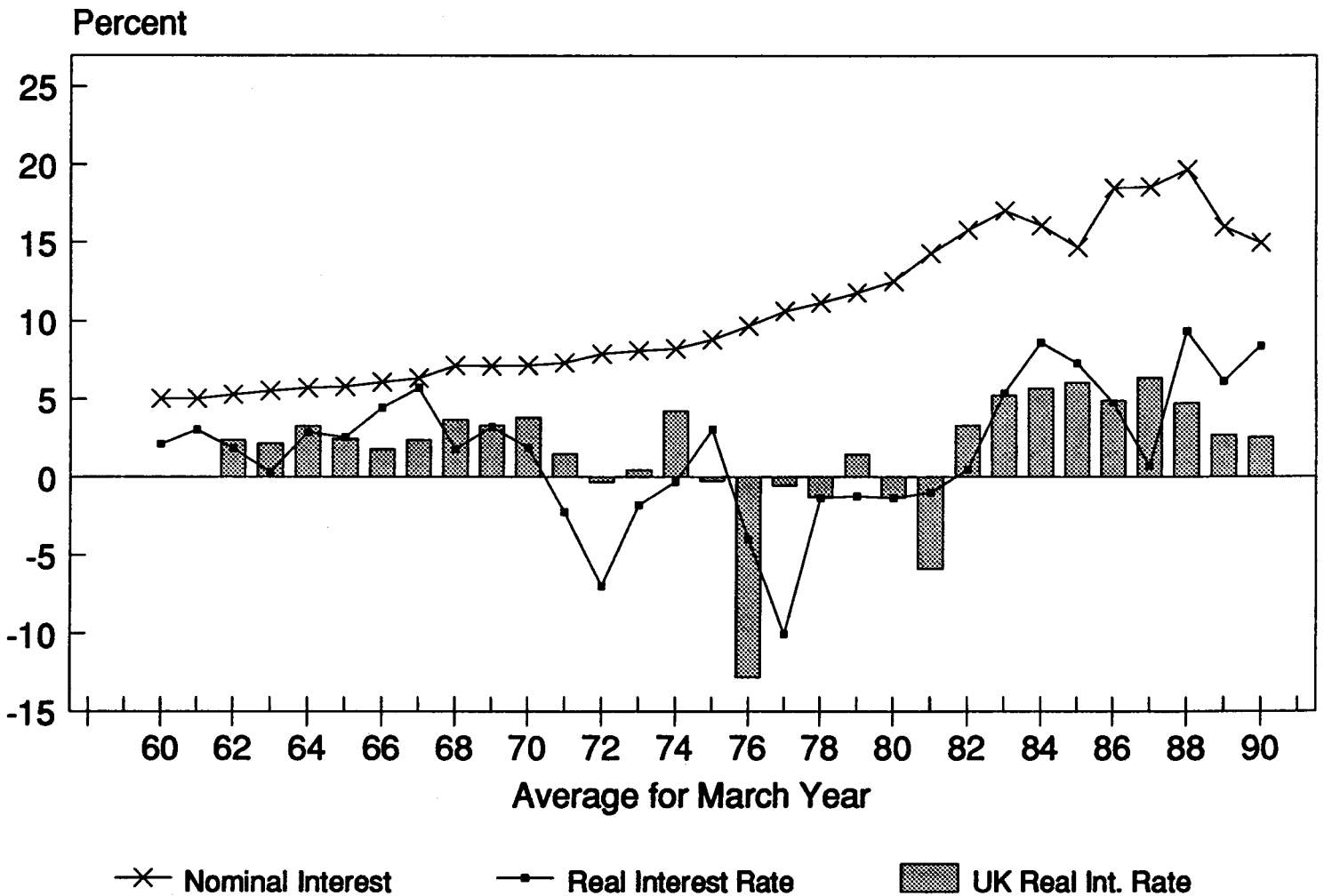
Features

In the 1960s the real rate of interest fluctuated within a relatively narrow band of 0 to 5 percent. The nominal interest rate rose steadily throughout so that it was movements in inflation which produced the fluctuations. Throughout the 1970s world interest rates were low and often negative. This pattern was repeated in New Zealand, reinforced by the introduction of nominal interest rate controls in 1972. Thus lenders were not compensated for inflation throughout the decade. This changed first with the price and incomes freeze of 1982-84, and then with the removal of interest rate controls in August 1984. From then onwards, the real interest rate was considerably higher than in the 1960s or the 1970s, usually being above 5% (although with dips in the March years GST was introduced and increased). New Zealand's real interest rate was also significantly above the world real rate after 1988.

Sources

To 1987, the nominal interest rate is the "Average Rate of New Mortgage Registrations", published in the *Reserve Bank Bulletin*. From 1988, the rate is the "First Mortgage Housing Rate for Nine Major Providers of Housing Finance" published in Table I8 of the *Reserve Bank Bulletin*, each quarter. The real rate of rate is calculated here using the GDP Deflator inflation rate (see page 6). The U.K. interest rate is the yield on Treasury Bills, less U.K. inflation, given in the IMF's *International Finance Statistics Yearbook* (Washington: International Monetary Fund, 1989 and 1990), and refers to the previous calendar year.

INTEREST RATE



MONEY SUPPLY GROWTH

Description

Money is any generally accepted medium of exchange. In modern economies, it is defined to include the public's holdings of banknotes and coins (issued by the government), plus the balances of their cheque, savings and EFT-POS accounts (a far greater proportion of the money supply, mostly created through loans by banks and other financial institutions). The Reserve Bank has several definitions of the nominal money supply; the graph shows the percentage growth of the Bank's most inclusive definition, M3.

The graph also shows the percentage growth of the real money supply, where the real money supply is the nominal supply divided by the GDP Deflator. This series is important for monetary theories of inflation. Since real money supply equals real money demand in equilibrium, any growth in nominal money supply beyond growth in real money demand will produce inflation. The difference between the nominal and real growth series is a measure of this required inflation rate.

Features

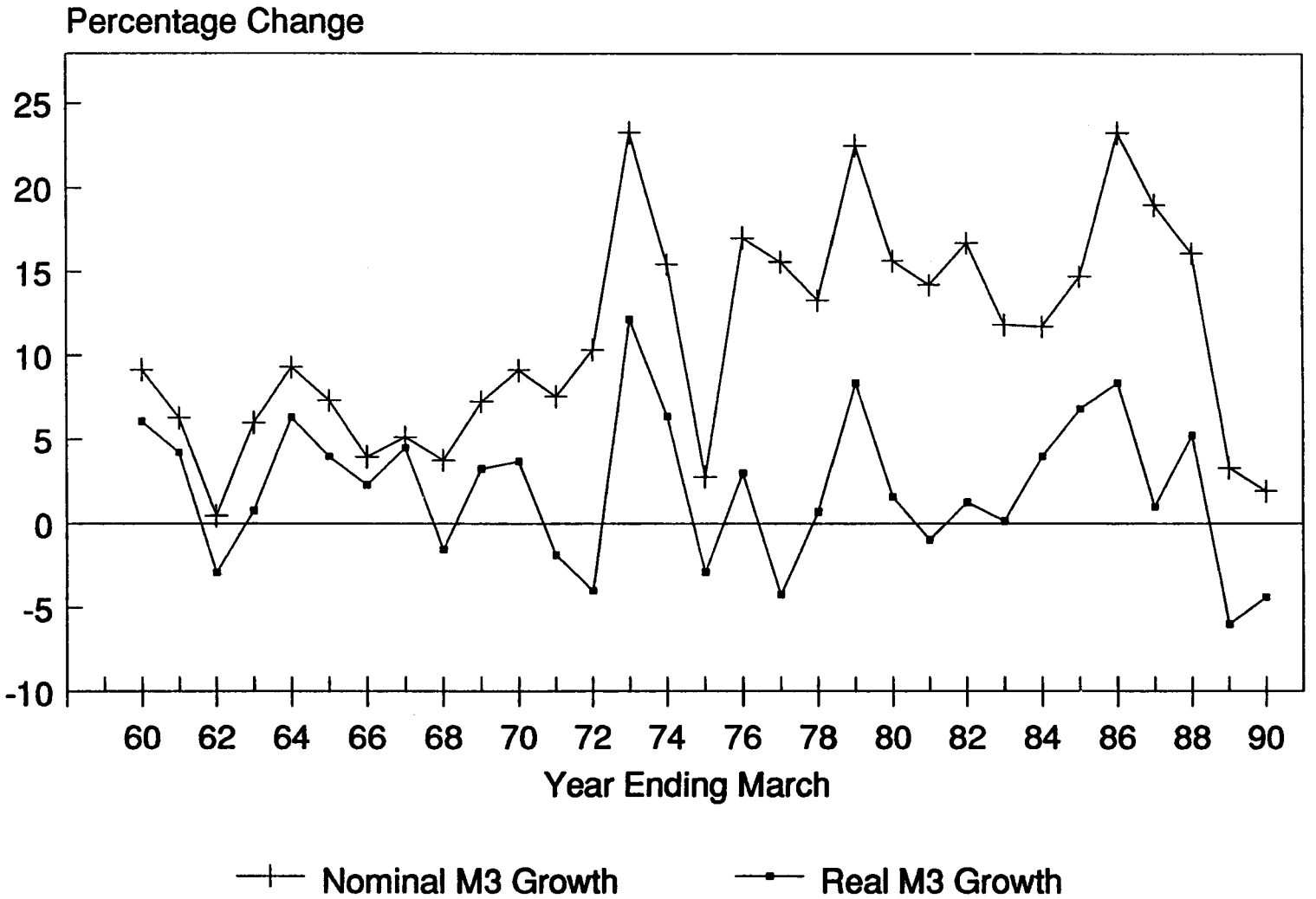
Nominal money supply growth fluctuated in the 1960s, but never rose above ten percent in any financial year. This changed in 1972, and between then and 1988, nominal money supply growth was less than ten percent only once (in 1975, when the huge Balance of Payments deficit under a fixed exchange rate regime drained money out of the domestic economy), and was greater than twenty percent on three occasions (1973, 1979 and 1986). A political cycle is evident in the graph with peaks in the election years of 1964, 1967, 1970, 1973, 1976, 1979, and 1982. Deregulation of the financial sector allowed continued money supply growth in 1986-88, with the government's policy of monetary restraint having effect only after 1989.

Throughout the 1960s, the gap between nominal and real money supply growth was never large, reflecting the relatively low inflation of that period, but also the relatively low nominal money supply growth. Although real money supply leapt spectacularly in 1973, there is no evidence that this was the beginning of higher real money demand growth, so that the high nominal money supply growth of the 1970s and 1980s was reflected mainly in inflation. With very low nominal growth in 1989 and 1990, the real money supply was reduced by about 5% in both years. This explains much of the recessionary pressure felt by the economy at the end of the 1980s.

Sources

The nominal money supply (definition M3) series is provided in the *Reserve Bank Bulletin*. The growth series in the graph has been spliced to account for definition changes in 1974 and in 1986. Real M3 growth is calculated using the GDP Deflator defined on page 4.

MONEY SUPPLY GROWTH



INCOME VELOCITY OF MONEY

Description

The basis of monetary policy is the need of the economy for a certain stock of money to finance transactions. If the authorities and financial sector supply more money than is needed this will produce inflationary pressures; if they supply too little, the economy may move into recession.

One measure of how much money is required is known as the income velocity of circulation of money (or velocity of money for short). An interesting property of money is that it is able to finance a smaller or greater value of transactions than its own face value, depending on how quickly it circulates through the economy. The income velocity of money is defined to be value of nominal GDP divided by the average value of the nominal money supply, and so measures the average value of market transactions financed by each dollar of the money stock. Because the velocity of money can change due to a variety of economic factors (as the graph illustrates), this makes it very difficult to achieve just the right balance for monetary policy.

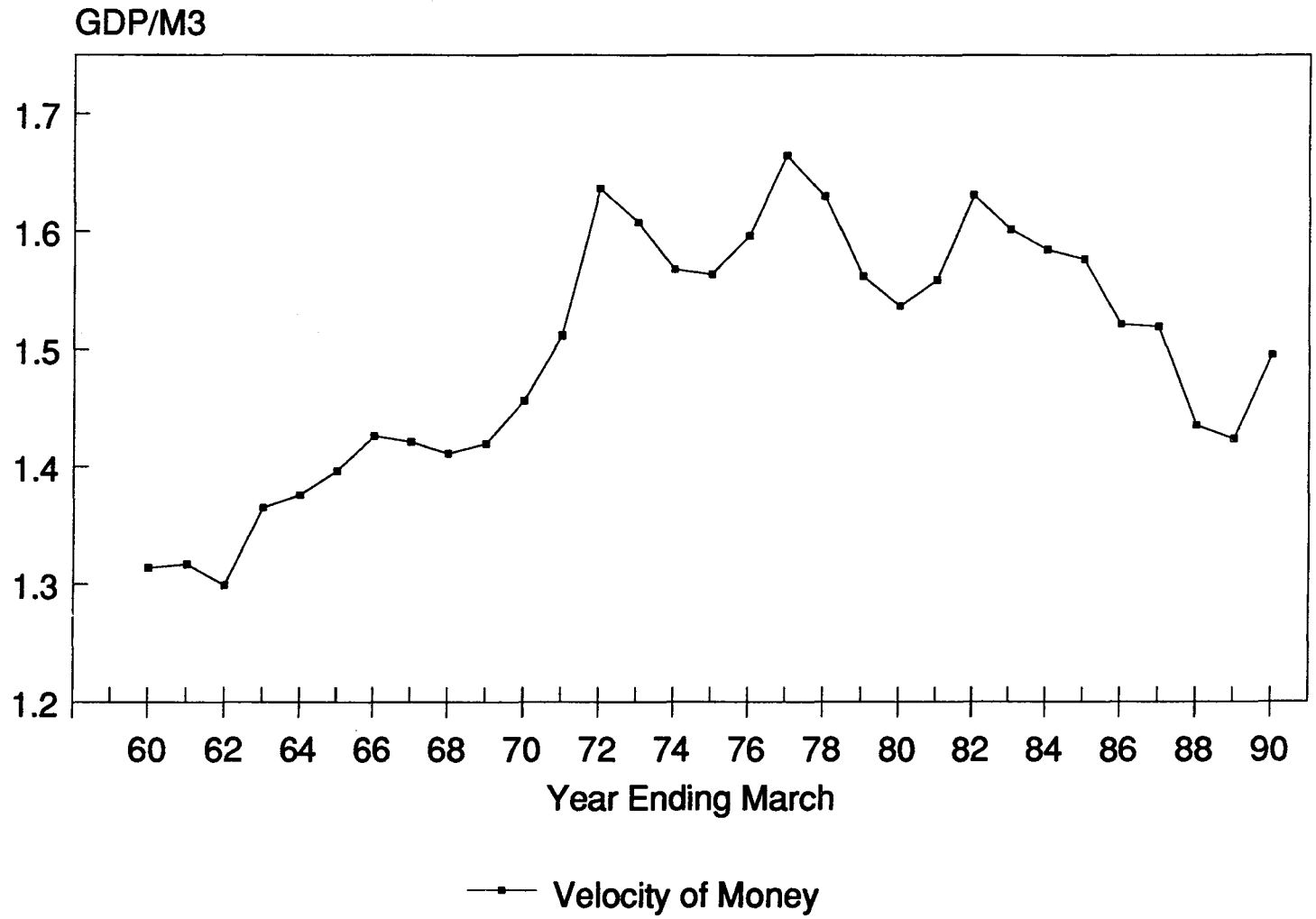
Features

There are three clear stages in the graph. Throughout the 1960s, the velocity of money was low at about 1.3 from 1960-62 and about 1.4 from 1963-69. In the 1970s it rose appreciably. The rise is easily explained, recalling that real interest rates throughout the period were negative. This made the holding of money very undesirable, so that households and firms found ways to economise on their use of money. This increased the velocity of circulation, although it is interesting to note the pattern of falling then rising velocity between 1972 and 1977, and again between 1977 and 1982. The third stage after 1982 saw the income velocity of circulation fall steadily until 1990. Two factors contributed to this trend. The first was the restoration of positive real interest rates after the introduction of the price freeze in June 1982. The second was financial sector deregulation, which saw high nominal money supply despite the Reserve Bank's policies of monetary restraint. It remains to be seen whether this growth was sustainable, or whether the increase in the velocity in 1990 marks a return to its previous higher levels.

Sources

The nominal GDP series comes from D. Grindell (Ed) Consolidated National Accounts for New Zealand on an SNA Basis (Wellington: Reserve Bank of New Zealand Discussion Paper No. 32, 1981) for 1960 to 1977, and from the Department of Statistics series SNBA.SB9 for 1978 to 1990. The M3 definition of the money supply was used (see page 38), with the average taken of its beginning-year and end-year values.

INCOME VELOCITY OF MONEY



REAL WEALTH INDICATORS

Description

An important determinant of an economy's well-being is the real wealth of its people. As wealth increases, households are willing to spend more on consumption goods, and the economy is better placed to cope with the effects of a lengthy recession. Indeed, New Zealand's increased real wealth is one reason why very high unemployment in the late 1980s did not result in the same social disruption as it did in the 1930s.

Wealth is very hard to measure, but two indicators are the values of residential property and of the sharemarket. The Department of Statistics publishes data on the residential property prices for 17 urban areas every six months. Changes in the value of the sharemarket can be assessed using the Barclays Share Index, which provides an index of share prices, weighted by the number of each share on issue. To obtain real values, the data are divided by the GDP deflator.

Features

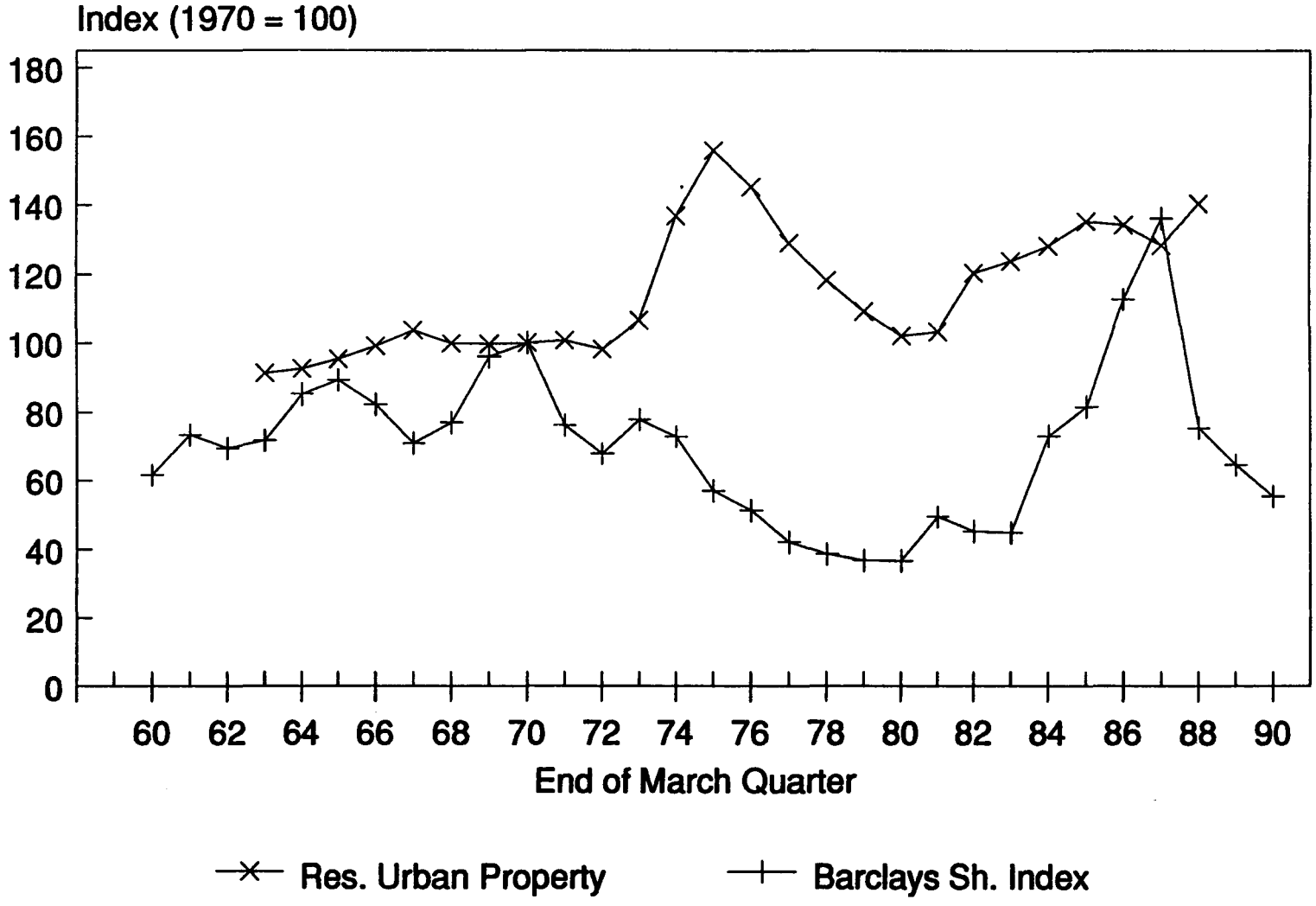
The residential property index was started in June 1962, and so the graph begins in March 1963. House prices rose slightly faster than general inflation for the next four years before stabilising at the inflation rate until 1972. There then followed a period of spectacular growth in house prices, with the real index rising by more than 50 percent at its peak in 1976. This speculative boom in property was fed by several factors; low interest rates, monetary expansion, price controls, government borrowing from overseas to maintain domestic activity, and so on. But it eventually came to an end, and real property prices fell steadily over the remainder of the decade, before recovering in the 1980s.

The sharemarket index also displays considerable variation. The long recession after the first oil shock is reflected in the falling real value of the Barclays Share Index to a low point in 1979 and 1980 and a small recovery by 1983. The surge in 1984 and 1985 can be understood, since company profits were relatively high in those years (see page 19). But the growth continued at an even faster rate in 1986 and 1987, fuelled by deregulation of the financial market after mid-1984. The inevitable collapse occurred in August 1987, when the index fell to below its 1984 level. Further smaller falls occurred in 1989 and 1990.

Sources

The Property Index comes from the Department of Statistics series for Residential Properties in 17 Urban Areas, UPIH.SR9. It is the average of the December previous year and June current year values for the Index. The Sharemarket Index is the Barclays Share Index, obtained from the Barclays Bank. Both series have been deflated into real values using the GDP Deflator explained on page 6.

REAL WEALTH INDICATORS



ECONOMIC COMMENTARY

Introduction

The purpose of this section is to provide a brief overview of New Zealand macroeconomic experience between 1960 and 1990. The treatment is necessarily simplified, but provides a framework for understanding the graphs presented in the preceding pages. For detailed analyses, readers are referred to the material listed in the final section of this booklet. Note that all years refer to "Years Ending March" unless otherwise stated.

The period opens in the first half of the 1960s with New Zealand in good macroeconomic shape. Real growth was steady at about 5%. Inflation was at a low and acceptable level. Unemployment was less than one percent of the labour force, and employment growth was strong. The Balance of Payments deficit and the government's budget deficit were both manageable, especially as the country's terms of trade rose appreciably after 1962 and remained high until 1967.

The Wool Price Collapse, 1967 - 1971

The first signs in New Zealand that this golden age would not continue occurred in the 1967 calendar year. World real prices for wool fell by over 20% that year, and by a further 20% the following year. By 1971, real wool prices were just over 50% of their 1966 values. As a result, New Zealand's terms of trade fell sharply in the 1968 March year, and continued to slip until 1972. In 1968, real GDP and employment shrank as the government sought to protect the Balance of Payments, while inflation and unemployment both rose alarmingly.

On the international scene, subtle changes were occurring which would also influence the New Zealand economy. The economic supremacy of the United States began to erode at the end of the 1960s, while the economies of Germany and Japan continued to grow rapidly. Coupled with increasing U.S.A. fiscal deficits (to finance the Vietnam War), this put severe strains on the world monetary system (the Bretton Woods fixed exchange rate agreement, set up in 1947 after the Second World War) and upward pressure on inflation rates worldwide.

Policymakers in New Zealand responded to the domestic crisis in several ways. The Wool Commission intervened in the market, buying wool at a price floor to stabilise farmers incomes (the stockpile was not disposed of until the end of 1972). In November 1967, the exchange rate was devalued by 19.45%, to improve the returns to farmers and other exporters. On June 18th, 1968, the Arbitration Court ruled that New Zealand could not afford any wage increase, and issued a nil General Wage Order (although this was changed to a 5% Order two months later with the support of employers as well as trade unions). The government convened the National Development Conference, bringing together representatives of the different sector groups in August 1968 and May 1969 to improve economic

planning on a national basis.

The indicators show that policymakers were generally successful in their efforts to stabilise the economy. Real growth recovered in 1969 and 1970, inflation remained steady at just under 6%, unemployment returned to its former levels, and the Balance of Payments moved into surplus. However this was not achieved without cost. In particular, the nil General Wage Order severely damaged confidence in the Arbitration Court, introducing a period of industrial instability when the economy recovered in the early 1970s.

The Commodity Price Boom, 1971 - 1974

The breakdown in the General Wage Order system saw the prevailing wage index rise by over 25% in 1971, in a year when the consumer and producer price indices both rose by approximately 10% only. Such an increase in real wages should have produced higher unemployment, especially since the share of profits in GDP was also adversely affected by increased taxation that year. In the event, relief was provided by large rises in world commodity prices in 1972 to 1974, brought about by a remarkable coincidence of demand-side and supply-side factors. In particular, a change in the U.S.S.R.'s livestock feed policy saw it become a much larger importer of grains at the same time that the El Nino weather effect temporarily removed the Peruvian anchovy crop (an important source of livestock feed), followed by other important crop failures in 1973 and 1974. Also, the Bretton Woods Agreement finally came to an end in 1971, when the United States stopped its policy of converting dollars into gold at US$35 per ounce. The major world currencies were then effectively free to find their own level in financial markets, releasing pent-up demand for Yen and Deuschmarks. World inflation rates continued to move upward.

As a result of all these factors, New Zealand's terms of trade increased by 46% between 1971 and 1974, stimulating exports but threatening higher inflation (15% in 1972). A rapid increase in the nominal money supply (23% in 1973, partly fuelled by the large Balance of Payments surplus that year) at a time when people were reducing their need for money (reflected in a leap in its velocity of circulation), plus a speculative boom in housing prices, added to the inflationary pressures.

The government took a number of steps to combat the threat of inflation. It froze government charges, introduced a series of wage and price controls, provided a "Farm Income Equalisation Scheme" to reduce farm disposable incomes (which were at very high levels during the commodity price boom), imposed ceilings on interest rates from April 1973, and increased its subsidies expenditure on woollen goods, sheep meat, sugar and milk. It revalued the New Zealand dollar in February, in July and again in September 1973, reducing inflationary pressure from import prices but also moving the Balance of Payments from a surplus to a small deficit. Inflation did fall in the 1973 and 1974 March years, but the strains on the

government's budget, on the Balance of Payments and on industrial relations meant that the economy was not well placed to cope with the oil shock just around the corner.

The First Oil Shock, 1975 - 1977

The outbreak of the Arab-Israeli war in October 1973 cemented an accord amongst OPEC oil producers for the first time, allowing the cartel to engineer a major rise in the price of oil through agreed cutbacks in its supply. The impact in New Zealand was muted at first, but in the June quarter of 1974 our Fuel Import Price Index doubled. At the same time, the world economy moved into a prolonged recession as a result of the oil shock. This reduced the demand for New Zealand exports, made worse by Britain's formal entry into the European Common Market (1st January, 1973) and by the rapid movement of developed countries towards greater agricultural protectionism, particularly in the form of 'voluntary' export restraints and non-tariff barriers. As a result, New Zealand's export price index fell every quarter in the 1975 financial year, and the overall impact was a massive fall of 30% in New Zealand's terms of trade in the twelve months to March 1975. The impact on the Balance of Payments was immediate and devastating, with the Current Account Balance deficit plummeting to 14% of New Zealand's GDP.

The government adopted the view that it needed to maintain aggregate demand to maintain full employment. However, it was reluctant to devalue the exchange rate (because of the impact on inflation through even higher import prices) which remained above its 1972 level until August 1975. Instead it sought to maintain domestic incomes, increasing agricultural subsidies and accepting wage growth equal to consumer price inflation despite the sharp fall in producer prices in 1975. It increased its own (Table 2) Budget deficit to 4% of GDP in 1975 and to 9% in 1976. After money supply growth had been constrained by the Balance of Payments deficit in 1975, it was expanded again by 17% in 1976. To support this domestic activity, and taking advantage of low (and often negative) world real interest rates, the government borrowed heavily offshore. Consequently, there was a marked increase in New Zealand's level of overseas debt during these years.

Aided by these policies, private consumption and investment increased to fill the gap left by the sharp fall in New Zealand's net exports, and real growth was achieved in 1975 and 1976 despite a clear fall in the income share of profits for those two years. However, the Budget and Balance of Payments deficits could not be sustained, and the government was forced to change its policies in the 1977 financial year. It cut back its own expenditure, lifted many interest rate controls, removed subsidies, slightly devalued the New Zealand dollar and announced a 40% increase in electricity prices from April 1st, 1977. The economy responded with zero real growth, and inflation which rose above 20% for the 1976/77 March year.

Rising Unemployment, 1978 - 1984

1977 was the last year that unemployment was below one percent of the labour force. In 1978 it had risen to over 2%, and there were further sharp rises in 1981 and 1983 to be just under 6% in 1984. This performance is also reflected in the economy's real growth, negative in 1978 and very low in 1979, 1981 and 1983. Inflation was high and rising throughout the period, until the price and incomes freeze had some impact in 1983 (12%) and 1984 (7.5%). Nor was there any sustained improvement in the Balance of Payments deficit which remained at about 6% of GDP in 1984, despite a steadily falling nominal exchange rate from 1980 to 1984.

Policymakers were not idle during this period. To the contrary, a feature of the budget deficit and nominal money supply growth data is their large variations, as the government tried to expand or contract the economy from year to year depending on whether it was more concerned about growth and unemployment, or about the Balance of Payments deficit and inflation. This is also reflected in the real growth figures, which reveal that New Zealand did not enjoy two consecutive years of growth above 2% at any time between 1975 and 1984. At the time of the 1984 General Election, Treasury economists argued that this policy-induced macroeconomic instability was doing considerable damage to the long-run growth prospects of the economy.

Given such variability, a striking example of stability was the economy's real exchange rate, which throughout remained approximately 25% above its value in the 1960s, despite ongoing nominal devaluations. This means that New Zealand made goods did not become any more internationally competitive during the period, as the benefits of each devaluation were quickly wiped out by high domestic inflation. This was an important reason why policymakers failed in their efforts to return the economy to its former prosperity.

Two major government initiatives in this period deserve a mention. The first was its "Think Big" energy projects, intended to achieve three objectives: to reduce New Zealand's dependency on fuel imports; to relax the Balance of Payments constraint on sustained economic growth; and to increase employment opportunities as growth was achieved. However the strategy proved to be unsuccessful, since the projects required the price of oil to rise a lot more than it did before they became economically viable. Thus the projects turned out to be large items of misdirected investment which therefore restricted New Zealand's potential growth well into the future.

The second initiative was the government's comprehensive price and incomes freeze, introduced in June 1982 and lasting until November 1984 (apart from a brief relaxation of price controls in early 1984 coupled with an $8 per week General Wage Adjustment). The freeze was effective in reducing inflation to single figures in the 1984 and 1985 financial years, and also produced a marked increase in the income share of profits in those two years as real wages fell. However, the nominal money supply

continued to grow throughout the freeze, and government expenditure did not fall in line with tax cuts made at its introduction, so that the budget deficit in 1984 was back to its 1972 level (9% of GDP). There was a major run on the New Zealand dollar leading up to the 1984 election, making a major devaluation of the currency necessary. Thus, because the freeze was not supported by appropriate monetary, fiscal and exchange rate policies, there were enormous pent-up inflationary pressures as the freeze came to an end towards the end of the 1984 calendar year.

Economic Restructuring and Monetary Disinflation, 1985 - 1990

After the General Election of July 1984, the government published Briefing Papers prepared by Treasury and convened a three-day Economic Summit Conference. A widespread consensus emerged from these that the New Zealand economy needed to be restructured to become more competitive internationally, and that macroeconomic policy needed to become more consistent and balanced. The former had already been helped by a substantial devaluation of the exchange rate (20%) immediately after the election. It was further assisted by a reduction in agricultural and industrial subsidies in the 1984 Budget, by major reform of State Owned Enterprises, by deregulation of certain key industries including the financial sector, and by lowering border protection for domestic manufacturing. These policies were designed to make export industries more responsive to international prices, and to make non-export industries more efficient.

There were three elements to the government's strategy of a more consistent and balanced macroeconomic policy: tight monetary policy aimed at reducing inflation, phased reductions in the budget deficit, and a more market-determined exchange rate. The strategy began in earnest with the government's decision to float the New Zealand dollar on March 4th 1985.

At first the increase in international competitiveness achieved by the devaluation, together with higher profits after the price and incomes freeze, allowed reasonable output and employment growth in 1985 and 1986, and a fall in unemployment, although at the expense of a blow-out in the Balance of Payments. But with domestic inflation remaining above world inflation, the real exchange rate reached a new peak in 1988. Also, tax increases (particularly the introduction of the Goods and Services indirect tax) reduced the income share of profits to its earlier levels. The economy moved into recession, and registered unemployment continued its upward climb towards 10% of the labour force, despite strong growth in New Zealand's terms of trade as the rest of the world enjoyed strong economic growth.

The combination of financial market deregulation and monetary disinflation in New Zealand followed a pattern that has been observed in other economies. Real interest rates rose, despite an increase in the money supply permitted by the deregulation. The extra money created by

the banking system allowed a sharemarket boom which saw the Barclays Share Index rise quickly, but fall just as sharply once it ran out of steam.

There were further worrying aspects to the government's strategy. The Table 2 Budget deficit had moved into surplus after 1988, but this had been achieved by the sale of shares in State Owned Enterprises. The financial deficit (which removes the impact of such sales, and so is a better guide to the economic impact of fiscal policy and its long term sustainability) had also moved closer towards balance, but this had been achieved by significant increases in tax revenue rather than by reductions in expenditure. With further expenditure commitments projected for the future (particularly for National Superannuation and interest payments on public debt), there was considerable doubt about whether the improvement in the deficit could be sustained.

There were also serious doubts about the electorate's willingness to tolerate the dramatic increase in unemployment after 1984 and its continuing growth in 1990. Without clear electoral support, the overall strategy of economic managers suffered from a "credibility" problem. The possibility of a policy U-turn (in response to electoral pressure) had to be kept in mind by economic agents, keeping inflationary expectations and interest rates high, thus postponing economic recovery. As the economy entered into the 1990s, commentators were predicting further recession and higher unemployment well into the future.

Conclusion

It is very obvious from the commentary that the New Zealand economy was in a very different state going into the 1990s than it had been going into the 1960s. As economists, our first reaction in trying to explain this is to look at what happened to relative prices. Immediately striking is New Zealand's real exchange rate, which compares the price of domestically-produced goods and services with the prices of goods and services produced overseas. Our real exchange rate rose by approximately 25% in the early 1970s on the back of the world-wide commodity boom, and was sustained at that higher level despite the major reversal in New Zealand's terms of trade after the first oil shock. If anything, the real exchange rate appreciated still further during the period of monetary disinflation policies (after 1985). For a small trading nation such as New Zealand, such a loss of international competitiveness must provide some explanation of our poor economic performance since 1975.

Secondly, it is clear that there have been major divergences between New Zealand's actual wage path and the wage path that could be sustained (without unemployment) given productivity growth and changes in our terms of trade. For example, in 1971, prevailing wages rose by 25% at a time when the Consumer Price Index and the Producer Price Index were rising by less than 10%. Also, four years later, New Zealand producers faced a sharp decline in the prices of their outputs (about 4%) at a time when wage inflation remained above 15% in line with

the consumer price index. These events raised the real wages faced by firms (at least until the price and incomes freeze of 1982-84), making higher unemployment inevitable.

Thirdly, a feature of the last three years of the period is the real interest rate, which was high both historically and by international standards - the legacy of the government's restrictions on money supply growth to squeeze out inflation, unsupported by appropriate fiscal and incomes policies. Higher interest rates discourage investment and contribute to the higher real exchange rate. Coupled with the impact of the sharemarket crash, these factors reduce aggregate demand in the economy, restricting sales and growth.

However, the increased involvement of the government in the economy during the 1970s and 1980s meant that there were no easy options remaining for policymakers in the 1990s. In particular, an over-valued real exchange rate requires a reduction in income of at least some sectors of society. But compared to the 1960s, the after-tax wage and profit shares of income were already lower, and the tax share was higher but still not high enough to cover additional government expenditure. Under these circumstances, the chosen path forward may depend as much on judgments about income equity as it does on economic efficiency.

Finally, all of these factors need to be addressed against the background of a global economic environment which continues to offer major challenges. The free trade agreement with Australia (ANZCERTA) provides both growth prospects and tensions as it develops. Other regional trading associations in Europe and North America, plus potential Pacific Rim liaisons, all have important economic and political ramifications for New Zealand. Multinational groups like GATT continue to work through important world market access issues for New Zealand in primary and manufactured products and services. Misalignments in fiscal and monetary policies in economic superpowers continue to challenge the ability of New Zealand economic managers to moderate exchange, interest and inflation rate rollercoaster rides at the global level. As a small nation we can seldom influence any of these events to any degree. We can only manage the risks associated with them, and be ready to take advantage of opportunities when they appear.

FURTHER READING

As explained in the Introduction, the format of this booklet was inspired by *A Briefing on the New Zealand Economy* (Wellington: Government Printer, 1984).

The best New Zealand economic history from pre-European times is Gary Hawke's *The Making of New Zealand* (Cambridge: Cambridge University Press, 1985). Treatments concentrating on the 1960s and 1970s are given in *Decade of Change* edited by Peter Lane and Paul Hamer (Wellington: Reed, 1973), in *Trade, Growth and Anxiety* by Harvey Franklin (Wellington: Methuen, 1978) and in *The Rake's Progress* by John Gould (Auckland: Hodder and Stoughton, 1982).

A number of books have been published in recent years, discussing one or more features of the New Zealand macroeconomy, for example:

- Jonathan Boston, *Incomes Policy in New Zealand*, (Wellington: Victoria University Press for IPS, 1984)
- John Gould, *The Muldoon Years*, (Auckland: Hodder and Stoughton, 1985)
- Brian Easton, *Wages and the Poor*, (Wellington: Allen & Unwin, 1986)
- Alan Bollard and Robert Buckle (Eds) *Economic Liberalisation in New Zealand* (Wellington: Allen and Unwin, 1987)
- Brian Easton (Ed), *The Making of Rogernomics*, (Auckland: Auckland University Press, 1989)
- Simon Walker (Ed) *Rogernomics: Reshaping New Zealand's Economy* (Auckland: NZCIS, 1989)
- Jonathan Boston and Martin Holland (Eds) *The Fourth Labour Government*, 2 Editions (Auckland: Oxford University Press, 1987, 1990)

Three good textbooks are Brian Easton and N.J. Thomson's *An Introduction to the New Zealand Economy* (St Lucia: University of Queensland Press, 1982), Robert Scollay, Susan St John and John Horsman's *Macroeconomics and the New Zealand Economy*, (Auckland: Longman Paul, 1987), and Paul Wooding's *Macroeconomics: A New Zealand Introduction*, (in preparation).

For up-to-date and regular accounts of the New Zealand macroeconomy, the *Reserve Bank Bulletin* (published quarterly) is an excellent source. The Bank also publishes an occasional series of Discussion Papers. Its book, *Financial Policy Reform* (Wellington, RBNZ, 1986), gives a summary of the events and theories which led to the major reforms of 1984/85.

The New Zealand Treasury publishes an economic commentary with the Budget in July each year. The Briefing Papers prepared by the New Zealand Treasury at the General Elections of 1984, 1987 and 1990, published as *Economic Management*, *Government Management* and *Briefing to the Incoming Government*, provide thorough

analysis of the issues as seen by the government's major economic adviser.

The New Zealand Institute of Economic Research publishes *Quarterly Predictions* every three months, as well as a series of research monographs, with recent titles including:

- Income Distribution in New Zealand (Brian Easton, 1983)
- Studies in the Labour Market (Brian Easton, Ed., 1984)
- The Financial Services Industry (David Harper, 1986)
- Financial Deregulation and Disinflation in a Small, Open Economy (Nicola Hunn, David Mayes and Neil Williams, 1989)
- Trade Liberalisation and the New Zealand Labour Market (Kevin Lang, 1989)
- Productivity Trends and Cycles in New Zealand (Adrian Orr, 1989)

The New Zealand Planning Council has published many interesting reports on the New Zealand economy. For example,

- The Stabilisation Role of Fiscal Policy (1980)
- Foreign Exchange Constraints, Export Growth and Overseas Debt (1983)
- Strategy for Growth (1984)
- The Foreign Exchange Market (1985)
- Employment and the Economy (1985)
- Labour Market Flexibility (1986)
- Tracking Down the Deficit (1987)
- For Richer or Poorer (1988)
- Overseas Debt: An Assessment (1988)
- The Economy in Transition (1989)
- Work Today (1989)
- The Fully Employed High Income Society (1990)
- Who Gets What? The Distribution of Income and Wealth in New Zealand (1990)

Every two years the Paris-based OECD publishes an *Economic Survey* of New Zealand.

For a wealth of information on New Zealand social and economic statistics, the New Zealand Official 1990 Yearbook (Wellington: Department of Statistics) should be consulted. The Department produces a large number of publications containing and explaining economic data. Its *Key Statistics* is available monthly, and it maintains an extensive databank called INFOS (also available as PC-INFOS for personal computers) which provided most of the series in this booklet.

Two academic journals that contain a number of relevant articles are *New Zealand Economic Papers* and *New Zealand Journal of Industrial Relations*.

APPENDIX

DATA TABLES

Notes: A horizontal line in a column indicates that two series have been linked at that point due to definitional changes.
The definitions and sources are given in the text, on the page recorded at the bottom of each column in the tables.

MARCH YEAR	REAL GDP (OS) ($m)	REAL GDP (NS) ($m)	N.Z. REAL GROWTH (%)	OECD REAL GROWTH (%)	NOMINAL GDP (OS) ($m)	NOMINAL GDP (NS) ($m)	GDP DEFLATOR INFLATION (%)	OECD INFLATION (%)
1960	8441		3.93		2482		2.90	
1961	8960		6.15	6.8	2687		1.99	
1962	9259		3.34	5.7	2872		3.43	
1963	9543		3.07	5.2	3114		5.20	
1964	10125		6.10	5.3	3397		2.82	
1965	10744		6.11	6.5	3721		3.23	
1966	11398		6.09	4.8	4012		1.63	5.6
1967	11830		3.79	3.9	4190		0.62	5.1
1968	11728		-0.86	4.2	4375		5.32	5.5
1969	11978		2.13	4.9	4642		3.89	3.8
1970	12583		5.05	6.6	5133		5.26	3.7
1971	13049		3.70	5.4	5832		9.56	5.2
1972	13381		2.54	4.2	6871		14.89	7.4
1973	13974		4.43	5.1	7887		9.92	7.4
1974	14977		7.18	5.6	9175		8.54	9.9
1975	15580		4.03	3.3	10095		5.77	14.5
1976	15843		1.69	0.3	11668		13.66	12.8
1977	15866		0.15	3.6	14101		20.68	11.1
1978	15432	28447	-2.74	2.1	15432	14879	12.52	11.6
1979		28506	0.21	2.1		16856	13.05	10.9
1980		29233	2.55	2.9		19688	13.90	11.8
1981		29547	1.07	2.3		22947	15.31	15.3
1982		30981	4.85	0.6		27746	15.32	12.6
1983		31097	0.37	0.8		31096	11.66	11.0
1984		31999	2.90	1.6		34383	7.45	9.4
1985		33595	4.99	3.3		38764	7.39	8.9
1986		33993	1.18	3.2		44619	13.76	8.0
1987		34829	2.46	2.7		53878	17.85	5.7
1988		35020	0.55	3.0		59778	10.35	5.7
1989		34535	-1.38	3.4		64759	9.85	6.6
1990		34928	1.14	3.8		69785	6.55	7.7
Page:	4	4	4	4	6	6	6	6

MARCH YEAR	ESTIMATED LABOUR FORCE (000)	REGIST'D UNEMP-LOYED (000)	REGIST'D UNEMPL. RATE (%)	OFFICIAL UNEMPL. RATE (%)	OECD UNEMPL. RATE (%)	INCOME DISTRIBUTION QUINTILES		
						BOTTOM (INDEX)	MIDDLE (INDEX)	TOP (INDEX)
1960	876	0.6	0.07					
1961	895	0.3	0.03					
1962	911	0.8	0.09					
1963	930	0.9	0.10					
1964	958	0.6	0.06					
1965	991	0.6	0.06					
1966	1026	0.4	0.04					
1967	1053	1.0	0.10					
1968	1043	8.5	0.81		2.7			
1969	1061	2.8	0.26		2.9			
1970	1091	1.4	0.13		2.8			
1971	1112	1.4	0.13		2.8			
1972	1123	4.7	0.42		2.9			
1973	1150	2.5	0.22		3.0			
1974	1191	0.7	0.06		3.0			
1975	1208	3.1	0.26		3.5			
1976	1222	4.9	0.40		4.4			
1977	1230	4.1	0.33		4.7			
1978	1266	22	1.74		4.9			
1979	1283	25	1.95		5.6			
1980	1303	29	2.23		6.3	98.9	99.5	101.1
1981	1322	49	3.71		7.2	102.7	103.0	102.8
1982	1340	47	3.51		8.2	101.5	100.6	98.9
1983	1355	76	5.61		9.4	97.1	98.0	107.7
1984	1371	78	5.69		10.5	96.6	97.7	106.6
1985	1329	62	4.65		10.7	94.6	91.1	98.4
1986	1417	53	3.75		10.5	94.0	91.8	97.2
1987	1425	73	5.15	4.0	10.1	96.0	95.2	101.9
1988	1448	91	6.28	4.3	9.7	94.0	93.6	98.7
1989	1449	131	9.02	6.2	9.4	97.0	97.8	110.3
1990	1468	149	10.15	7.1	8.9	95.0	96.4	108.8
Page:	8	8	8	8	8	10	10	10

MARCH YEAR	BoP CURRENT ACCOUNT (%GDP)	TABLE 2 BUDGET SURPLUS (%GDP)	GFS FINANCIAL SURPLUS (%GDP)	GDP DEFLATOR 1978=100 (INDEX)	REAL PRIVATE CONS. ($m)	REAL PUBLIC CONS. ($m)	REAL INVEST-MENT ($m)	REAL NET EXPORTS ($m)
1960	3.11	-3.66		29.4				
1961	-3.87	-2.85		30.0				
1962	-3.91	-2.35		31.0	6367	1028	2028	-119
1963	-1.48	-3.93		32.6	6365	1082	1879	80
1964	-0.89	-3.18		33.6	6700	1103	2033	247
1965	-1.00	-2.40		34.6	6964	1187	2295	110
1966	-4.65	-2.86		35.2	7443	1423	2500	-253
1967	-4.18	-3.22		35.4	7905	1635	2592	-260
1968	-2.55	-2.54		37.3	7779	1485	2383	-32
1969	0.55	-2.38		38.8	7898	1540	2217	183
1970	0.24	-1.53		40.8	8197	1576	2466	297
1971	-3.95	-1.41		44.7	8373	1723	2716	-358
1972	0.04	-1.07	1.2	51.3	8199	1747	2748	86
1973	1.97	-2.65	-1.2	56.4	8407	1811	3120	390
1974	-0.93	-2.68	0.1	61.3	8880	1920	3369	-10
1975	-14.01	-4.00	0.1	64.8	9576	2238	3971	-1946
1976	-9.28	-9.14	-3.4	73.6	9704	2352	4246	-1078
1977	-5.92	-3.81	0.0	88.9	9337	2197	3895	-484
1978	-4.67	-4.67	-0.6	100.0	9181	2363	3545	-253
1979	-2.80	-8.58	-4.5	113.1	9158	2549	3432	35
1980	-4.19	-5.22	-2.6	128.8	9401	2574	3159	-202
1981	-3.59	-6.65	-4.1	148.5	9593	2784	3202	-181
1982	-5.87	-6.55	-4.8	171.2	9711	2913	3853	-537
1983	-6.25	-6.94	-5.4	191.2	9943	2906	4051	-568
1984	-5.79	-9.02	-7.0	205.4	9973	2852	4112	-309
1985	-9.28	-7.18	-6.4	220.6	10505	2871	4407	-740
1986	-9.38	-4.19	-3.2	251.0	10845	2924	4593	-654
1987	-5.22	-3.62	-3.8	295.8	10743	3017	4069	-108
1988	-3.27	0.78	-2.1	326.4	11141	3102	4076	122
1989	-1.29	2.68	-1.8	358.5	11100	3075	3556	435
1990	-5.98	3.79	-0.4	382.0	11184	2990	3844	-307
Page:	12	14	14	6	16	16	16	16

MARCH YEAR	AFTER TAX WAGES (%GDP)	AFTER TAX PROFITS (%GDP)	TOTAL TAX (%GDP)	CONSUMER PRICE INFLATION (%)	PREV'LING WAGE INFLATION (%)	PRODUCER PRICES INFLATION (%)	FULL-TIME EMPL. (000)	PART-TIME EMPL. (000)
1960				1.2	5.6	5.1	619.1	33.6
1961	39.0	35.9	25.0	1.2	1.6	-2.7	638.7	39.7
1962	40.7	33.1	26.2	2.3	1.6	-0.8	656.4	43.4
1963	39.9	36.9	23.2	2.3	3.6	0.5	672.1	44.6
1964	39.6	37.1	23.2	2.2	1.5	7.1	696.9	49.0
1965	39.8	36.2	24.0	4.3	7.9	1.3	726.1	54.2
1966	40.2	35.7	24.1	3.1	2.1	2.9	755.4	62.2
1967	41.3	33.7	25.0	4.0	5.5	-1.6	778.0	68.3
1968	41.3	33.5	25.1	4.9	2.3	3.2	769.3	67.0
1969	40.9	34.3	24.9	5.6	6.6	5.0	781.2	72.1
1970	40.3	34.9	24.8	5.3	7.1	3.7	805.3	82.5
1971	42.5	31.2	26.4	10.0	26.9	7.6	827.8	93.4
1972	41.9	32.3	25.8	8.3	11.4	8.6	837.7	97.5
1973	40.9	33.7	25.4	6.3	8.6	22.3	855.4	103.6
1974	41.1	32.0	26.9	10.5	12.3	6.7	890.3	119.8
1975	44.1	26.6	29.3	13.1	17.0	-3.5	916.7	128.6
1976	45.1	27.0	28.0	16.8	10.6	22.9	929.6	128.7
1977	39.5	30.7	29.8	14.0	17.3	23.5	939.9	134.5
1978	39.8	28.4	31.8	14.6	8.9	10.6	934.8	139.9
1979	40.5	29.8	29.8	10.3	16.5	13.3	943.7	144.8
1980	40.3	28.4	31.3	18.1	17.1	19.5	954.9	147.6
1981	40.1	27.9	32.0	15.3	19.2	15.7	948.6	150.7
1982	38.9	29.0	32.1	15.8	17.2	16.0	954.6	155.9
1983	38.7	28.5	32.8	12.7	1.3	8.3	954.8	161.0
1984	34.9	33.9	31.2	3.5	0.0	3.9	945.9	163.4
1985	33.6	34.6	31.8	13.2	8.8	14.7	973.5	174.8
1986	32.8	33.3	33.9	13.0	16.8	9.3	991.9	185.8
1987	32.8	32.1	35.1	18.3	8.8	10.1	962.3	205.2
1988	33.8	28.6	37.6	9.0	8.1	5.9	958.6	202.6
1989	35.4	27.4	37.2	4.0	4.9	7.4	912.7	206.3
1990	29.7	30.4	39.8	7.0	4.2	6.3	899.0	201.9
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MARCH YEAR	SURVEYED EMPL. (000)	EMPL. GROWTH (%)	OUTPUT EXCL. AGRIC. ($m)	PRODUCTIVITY 1983$ (INDEX)	SMOOTHED PROD'ITY GROWTH (%)	EXPORTS (%GDP)	IMPORTS (%GDP)	BALANCE OF TRADE (%GDP)
1960	635.9	1.91	13513	21249		23.9	17.0	6.9
1961	658.5	3.56	14404	21872	2.00	20.3	19.4	0.9
1962	678.1	2.97	14927	22014	1.24	20.2	19.2	0.9
1963	694.4	2.40	15303	22039	1.20	19.4	16.4	3.1
1964	721.4	3.90	16347	22660	1.79	21.2	17.8	3.4
1965	753.2	4.40	17468	23193	2.25	20.6	16.6	4.0
1966	786.5	4.42	18505	23530	1.49	18.6	18.0	0.6
1967	812.1	3.26	19226	23673	0.54	18.6	17.4	1.2
1968	802.8	-1.15	18923	23572	0.14	16.8	14.8	2.1
1969	817.2	1.80	19309	23628	0.78	20.8	15.7	5.1
1970	846.5	3.58	20507	24226	1.15	21.7	16.3	5.4
1971	874.5	3.31	21326	24386	1.46	19.2	18.6	0.5
1972	886.4	1.36	21859	24660	2.12	19.3	16.1	3.2
1973	907.2	2.35	23377	25768	3.28	21.1	15.9	5.2
1974	950.3	4.75	25452	26785	2.71	20.5	17.8	2.8
1975	981.0	3.24	26157	26663	1.07	16.7	26.6	-9.9
1976	993.9	1.31	26434	26596	-0.63	18.6	23.8	-5.2
1977	1007.2	1.34	26468	26279	-1.20	22.7	23.7	-1.0
1978	1004.8	-0.24	25822	25700	-1.18	22.3	21.6	0.7
1979	1016.1	1.12	26065	25653	-0.72	23.0	19.6	3.4
1980	1028.7	1.25	26450	25712	0.10	24.8	23.3	1.4
1981	1023.9	-0.46	26397	25780	1.82	24.8	22.6	2.2
1982	1032.5	0.84	27936	27057	2.95	23.9	23.9	-0.1
1983	1035.3	0.28	28980	27991	4.43	23.6	23.6	0.0
1984	1027.6	-0.75	30009	29203	3.39	23.9	23.7	0.2
1985	1060.9	3.24	31626	29810	1.29	26.5	28.4	-1.9
1986	1084.8	2.25	31537	29073	1.28	24.1	25.5	-1.5
1987	1064.9	-1.83	32289	30320	0.42	21.3	20.0	1.3
1988	1059.9	-0.47	31993	30185	2.40	21.2	18.5	2.6
1989	1015.8	-4.16	31656	31163	1.95	21.4	16.5	4.9
1990	1000.0	-1.56	32091	32092		21.3	19.8	1.5
Page:	24	24	24	24	24	26	26	26

MARCH YEAR	BALANCE INVI-SIBLES (%GDP)	GOV'T REVENUE (%GDP)	GOV'T EXPEND. (%GDP)	INTERNAL PUBLIC DEBT (%GDP)	EXTERNAL PUBLIC DEBT (%GDP)	TOTAL PUBLIC DEBT (%GDP)	TOTAL LT O/S DEBT (%GDP)	TOTAL LT O/S DEBT ($m)
1960	-3.8	27.5	31.1	54.3	10.5	64.8		
1961	-4.8	28.2	31.1	52.7	9.0	61.7		
1962	-4.9	29.1	31.4	53.3	9.7	63.1		
1963	-4.6	26.2	30.1	52.1	10.1	62.2		
1964	-4.3	26.5	29.7	50.4	9.5	59.9		
1965	-5.0	26.8	29.2	48.8	8.9	57.7		
1966	-5.2	26.4	29.3	48.1	8.3	56.4		
1967	-5.4	27.3	30.5	48.5	9.4	57.9		
1968	-4.6	27.3	29.8	49.0	11.6	60.6		
1969	-4.5	27.0	29.4	49.3	11.3	60.6		
1970	-5.2	27.3	28.8	46.2	10.3	56.6		
1971	-4.5	28.9	30.3	42.5	10.1	52.6	13.2	757
1972	-3.2	28.2	27.0	37.5	9.7	47.2	12.6	850
1973	-3.2	27.6	28.7	37.9	7.3	45.1	9.4	733
1974	-3.7	29.2	29.0	36.3	5.2	41.5	6.7	605
1975	-4.1	32.0	31.8	34.2	8.8	43.0	14.4	1405
1976	-4.1	31.9	35.3	37.4	13.4	50.7	23.5	2578
1977	-5.0	32.2	32.2	33.6	13.8	47.3	25.1	3332
1978	-5.4	34.6	35.2	33.9	16.4	50.3	28.5	4233
1979	-6.2	33.5	38.0	35.0	17.3	52.3	28.4	4779
1980	-5.6	34.7	37.3	34.4	18.1	52.6	28.4	5586
1981	-5.8	34.3	38.4	32.2	18.5	50.6	27.3	6252
1982	-5.8	35.1	39.9	31.8	20.0	51.8	35.8	9924
1983	-6.3	36.0	41.4	35.3	25.0	60.2	47.4	14725
1984	-6.0	34.1	41.0	39.7	23.9	63.6	47.6	16360
1985	-7.4	35.3	41.7	40.9	32.0	72.9	63.5	24614
1986	-7.9	37.9	41.1	38.7	33.0	71.7	59.2	26424
1987	-6.5	38.4	42.2	38.5	40.3	78.8	67.3	36237
1988	-5.9	44.5	46.5	36.6	28.9	65.4	55.7	33276
1989	-6.2	41.7	44.0	35.5	25.6	61.2	46.2	29902
1990	-7.4	43.5	44.9	32.8	28.9	61.7	37.7	26325
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MARCH YEAR	TERMS OF TRADE (INDEX)	REAL PRICE WOOL (INDEX)	REAL PRICE OIL (INDEX)	NOMINAL EXCHANGE RATE (INDEX)	REAL EXCHANGE RATE (INDEX)	NOMINAL INTEREST RATE (%)	NZ REAL INTEREST RATE (%)	UK REAL INTEREST RATE (%)
1960	116			121.3	84.0	5.01	2.11	
1961	106	88.6	5.30	121.3	84.7	5.01	3.02	
1962	102	85.4	6.13	121.3	84.8	5.27	1.84	2.4
1963	109	81.3	6.07	121.3	86.0	5.51	0.31	2.1
1964	121	95.6	5.98	121.3	86.6	5.70	2.88	3.3
1965	124	99.6	5.92	121.3	86.3	5.78	2.55	2.4
1966	120	82.8	5.82	121.3	83.6	6.07	4.44	1.8
1967	117	81.1	5.65	121.3	80.3	6.32	5.70	2.4
1968	102	64.4	5.50	114.0	77.1	7.13	1.81	3.7
1969	99	50.9	5.28	114.0	77.1	7.11	3.22	3.3
1970	100	50.0	5.00	114.0	77.0	7.15	1.89	3.8
1971	94	43.3	4.72	113.9	79.3	7.32	-2.24	1.5
1972	101	42.1	5.79	111.3	84.1	7.90	-6.99	-0.3
1973	119	69.7	6.00	121.8	95.8	8.10	-1.82	0.5
1974	137	114.6	8.50	134.2	105.8	8.23	-0.31	4.2
1975	95	80.9	22.03	125.8	93.4	8.82	3.05	-0.3
1976	80	60.9	21.47	107.0	80.8	9.68	-3.98	-12.8
1977	87	78.7	21.02	106.2	89.8	10.62	-10.06	-0.6
1978	88	78.2	21.74	106.2	94.0	11.17	-1.35	-1.3
1979	93	74.5	20.20	106.2	98.7	11.81	-1.24	1.5
1980	97	81.3	24.49	97.0	96.6	12.53	-1.37	-1.3
1981	86	72.9	35.51	89.2	98.2	14.30	-1.01	-5.9
1982	87	60.2	37.36	83.8	99.1	15.79	0.47	3.3
1983	84	49.7	35.19	77.3	100.7	17.04	5.38	5.2
1984	85	45.0	29.85	76.3	99.0	16.09	8.64	5.7
1985	83	42.5	27.58	61.3	86.6	14.69	7.30	6.0
1986	81	39.2	26.06	61.7	92.3	18.51	4.75	4.9
1987	84	41.6	11.22	60.3	95.4	18.58	0.73	6.4
1988	93	50.2	15.52	64.1	112.6	19.71	9.36	4.7
1989	99	55.3	11.34	60.9	103.7	16.00	6.15	2.7
1990	103	47.6	13.14	61.7	101.4	14.97	8.42	2.6
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MARCH YEAR	NOMINAL M3 (OS) ($m)	NOMINAL M3 (NS) ($m)	NOMINAL M3 GROWTH (%)	REAL MONEY SUPPLY (INDEX)	REAL MONEY GROWTH (%)	INCOME VELOCITY OF MONEY (INDEX)	REAL PROPERTY PRICES (INDEX)	REAL BARCLAYS SHARE (INDEX)
1960	1627		9.13	7042	6.06	1.31		61.7
1961	1729		6.28	7338	4.20	1.32		73.5
1962	1737		0.46	7127	-2.87	1.30		69.6
1963	1841		5.99	7181	0.76	1.36	91.2	71.8
1964	2012		9.30	7633	6.30	1.38	92.6	85.2
1965	2160		7.31	7936	3.96	1.40	95.3	89.3
1966	2245		3.94	8116	2.27	1.43	99.1	82.3
1967	2360		5.13	8479	4.48	1.42	103.7	71.0
1968	2448		3.73	8351	-1.51	1.41	99.8	77.1
1969	2625		7.24	8621	3.23	1.42	99.7	96.0
1970	2865		9.12	8936	3.66	1.46	100.0	100.0
1971	3081		7.55	8772	-1.84	1.51	100.7	76.3
1972	3399		10.33	8424	-3.97	1.64	98.1	68.0
1973	4190		23.27	9448	12.15	1.61	106.5	78.0
1974	4838		15.46	10050	6.38	1.57	136.8	73.0
1975	4971		2.75	9763	-2.86	1.56	155.8	57.1
1976	5818		17.04	10053	2.97	1.60	145.2	51.3
1977	6726		15.61	9631	-4.20	1.66	129.0	42.1
1978	7621		13.31	9698	0.70	1.63	118.2	38.7
1979	9336		22.50	10509	8.36	1.56	109.0	36.8
1980	10800		15.68	10674	1.57	1.54	102.0	36.8
1981	12336		14.22	10573	-0.95	1.56	103.2	49.5
1982	14403		16.76	10705	1.25	1.63	120.3	45.3
1983	16107		11.83	10721	0.16	1.60	123.8	44.8
1984	17996		11.73	11148	3.98	1.58	128.1	73.2
1985	20646		14.73	11910	6.83	1.58	135.2	81.7
1986	25449	32386	23.26	12905	8.36	1.52	134.2	112.6
1987		38543	19.01	13032	0.98	1.52	128.3	136.1
1988		44759	16.13	13715	5.24	1.44	140.4	75.5
1989		46231	3.29	12895	-5.98	1.42	N/A	64.6
1990		47117	1.92	12335	-4.35	1.50	N/A	55.4
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