Economics Department

Quarterly Bulletin

Volume III, Issue 1
Mar 2001

MAS Monetary Authority of Singapore

Contents

Overview

Against the backdrop of a favourable external environment, the Singapore economy registered a strong, broad-based cyclical rebound in 2000, with GDP growth reaching a robust 9.9% for the year. Underpinned by strong global electronics demand, the manufacturing sector proved to be the key driver behind Singapore's economic growth last year. Manufacturing value-added rose steadily throughout 2000 to record robust growth of 15%, largely due to a 25% increase in electronics output, with the semiconductor industry in particular chalking up record growth rates. In comparison, the non-electronics sector grew by a more moderate 8%, curtailed by weakness in the chemicals and transport equipment industries. The strength in electronics exports, coupled with the recovery in the regional economies, had positive spillover effects on the other services sectors, especially the commerce and transport & communications sectors.

Since late September 2000 however, sentiment in the global electronics industry has turned negative, as a spate of profit warnings by major US electronics firms cast doubt on the sustainability of rapid rates of expansion in the industry. Conditions in the industry deteriorated further in early 2001, reflecting a sharper-than-expected slowdown in the US economy and emergence of an inventory overhang. In line with the downturn in the global electronics cycle, domestic electronics output showed signs of moderation towards the end of 2000, although this was partly offset by a surge in output from the chemicals industry. Weakened external conditions have also led to slower growth momentum in most of the services sectors in recent months, especially the commerce and transport & communications sectors, which have high external orientations.

The outlook for the Singapore economy has become less favourable, with the slowdowns in the US economy and the global electronics industry. In the last few months, the US economy has slowed sharply, precipitating steep corrections in the US stock market. The global electronics downturn has also deepened, and more quickly than expected. It is not clear how soon things will rebound. There is a possibility that the weakness in the US economy and the electronics industry may persist into H2 2001. This would adversely affect Singapore's economic outlook. In view of the weaker external conditions, the government is currently revising the 5-7% GDP growth forecast for this year. The Ministry of Trade and Industry (MTI) will be releasing the revised forecast soon.

The downturn in the US economy and weaker global electronics demand will affect growth in the manufacturing sector, which would in turn spill over to the other services sectors, especially the transport & communications and commerce sectors. At this time, most analysts still expect the global electronics industry to turn around in the later part of the year, as inventory is gradually cleared and demand is generated from replacement spending and new end-market technology developments.

CPI inflation is forecast to come in at a slightly higher rate this year compared to 2000, though still remaining within the 1.0-2.0% range. Domestic cost pressures are expected to be the main source of inflation, with unit labour costs projected to show a moderate rise of 3-5% this year, compared with a slight decline in 2000. External price pressures, on the other hand, will be more subdued as oil prices ease, although some spillover effects from the surge in oil prices last year are expected to persist into early 2001.

Domestic monetary conditions have remained generally easy. Interest rates, which were relatively stable throughout 2000, have come down more recently in line with the easing of monetary policy by the US Federal Reserve. The three-month domestic interbank rate declined to 2% at end-March, while retail lending rates have stayed low. Although domestic credit growth has picked up since the second half of last year, the loan-to-deposit ratio of the banking system has remained well below 1.0.

In February this year, the MAS announced that it would maintain its current monetary policy stance, and continue to allow a gradual, modest appreciation of the Singapore dollar on a trade-weighted basis. The policy stance was assessed to be appropriately supportive of economic activity, while remaining vigilant against incipient inflationary pressures. The FY2001 Budget, which was released at around the same time, included a number of incentives and rebates, as well as reductions in the personal income, corporate, and property tax rates. The Budget is expected to be mildly expansionary over the next two years, with most of the impact falling in 2002, when the cuts to personal income and corporate tax rates come into force.

In light of the increased uncertainty in the external environment and economic outlook, policies would be reviewed to ensure that they remain consistent with the underlying economic conditions. The Minister for Finance indicated that the government stood ready to take whatever measures were needed to stabilise the economy. The MAS will also monitor closely external developments and review the monetary policy stance in the middle of the year.

1 Macroeconomic Developments

1.1 External Developments

THE WORLD ECONOMY BEGAN 2000 WITH STRONG GROWTH

The year 2000 started on a bright note, with the US, Japan and the Euro zone all recording significant growth. Fuelled by gains in the equity market and strong demand for technology products, private consumption and business investment in the US surged, supporting an average real GDP growth rate of 5.5% in the first three quarters of the year, a 15-year record high.

In Japan, businesses re-channeled strong profit earnings into new investments, leading to increased production and exports. This, in turn, provided a powerful stimulus for imports from the rest of the world.

The Euro zone witnessed strong broad-based expansion, with household consumption, business investment and exports all recording significant growth. Overall real GDP growth peaked at 3.7% in Q2 2000, the highest rate in the past decade. (Chart 1.1)

The East Asian economies also expanded strongly, with average growth reaching 7.5% in the first three quarters of 2000. The region's exports in US dollar terms rose by an average of 24%, benefiting from strong external demand, particularly for electronics. Domestic demand also picked up, with private investment, which declined in virtually all the regional economies in 1999, recording double-digit growth. (Charts 1.2 and 1.3)

GLOBAL ECONOMIC GROWTH BEGAN TO MODERATE IN Q4

The strong economic performance across most regions, however, was not sustained. The US economy slowed significantly in the fourth quarter of 2000 on the back of a major downturn in the electronics industry along with a sharp correction in the technology-heavy Nasdaq. (Chart 1.4) Consumers pulled back spending in response to greater economic uncertainty. Consumer confidence was badly shaken, with the Conference Board consumer confidence index falling from its peak of 142.5 in September 2000 to 128.6 in December 2000 and 106.8 in February 2001. Data on retail sales in the first two

Chart 1.1
GDP Growth in the US, the Euro Zone & Japan

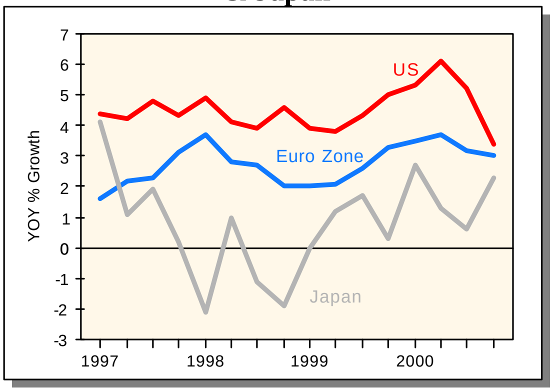


Chart 1.2
GDP Growth in Northeast Asia

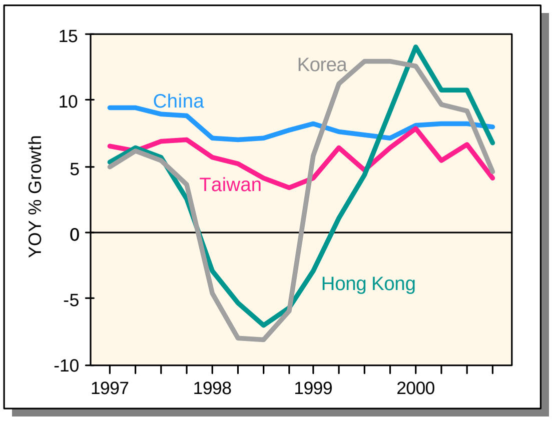
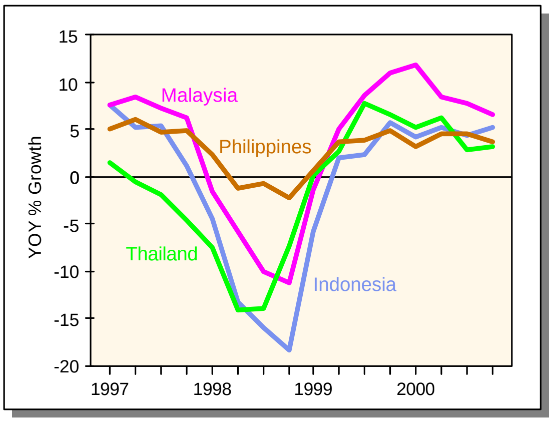


Chart 1.3
GDP Growth in the ASEAN-4



months this year suggest that consumers remain guarded, although a little less pessimistic than in the final quarter of 2000. Businesses have also cut back on non-residential fixed assets investment, which contracted for the first time in almost nine years, hitting –0.2% quarter-on-quarter (QOQ) in Q4 2000. In addition, investment in the key information technology (IT) sector, while continuing to expand, slowed significantly to only slightly more than a third of the pace at the start of the year.

Although businesses in Japan continued to invest in plants and equipment and exporters continued to enjoy strong demand in the second half of 2000, these were insufficient to offset the contraction in private consumption, which accounts for slightly more than half of the country's GDP.

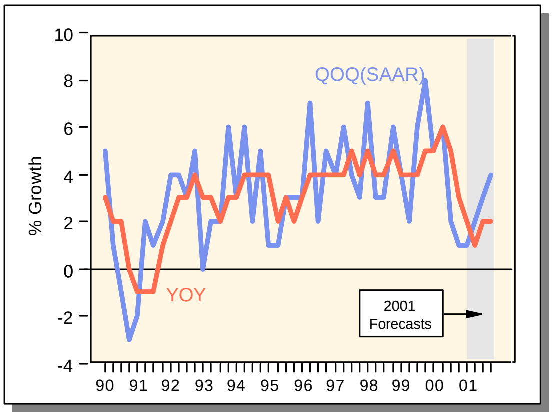
The Euro zone economies were also not spared, although strong domestic demand and the limited exposure to the US meant that the slowdown was much more moderate. Capital investment spending was volatile, but continued to be broadly supportive of growth. Private consumption growth, however, continued to show weak momentum.

The world economy slowed significantly in Q4 2000 weighed down by the downswing in the global electronics industry and a slowdown in the US economy.

Economic growth in East Asia weakened significantly towards the end of 2000. Real GDP growth decelerated from an average of 7.2% in Q3 2000 to 5.8% in Q4 2000, and indications are that growth had slowed further into the early part of this year.

The main factor behind this was the sharp fall-off in external demand, brought about by the slowdown in its largest market, the US, and the downswing in the global electronics industry. As a result, East Asian exports in US dollar terms, which recorded an average growth of 25% in June 2000, decelerated sharply to average growth of just 2% in January 2001. As in external demand, domestic demand growth also softened late last year. Gross fixed capital formation, which witnessed the sharpest downturn during the financial crisis, again led the slowdown in the economy. Investment growth in Q4 2000 was half of that in Q3 2000. Except for Indonesia and the Philippines, consumer spending moderated as the decline in equity prices and uncertainty in the labour market continued to dampen confidence. Government consumption was broadly neutral to growth in the final quarter, with the exception of Indonesia and Taiwan.

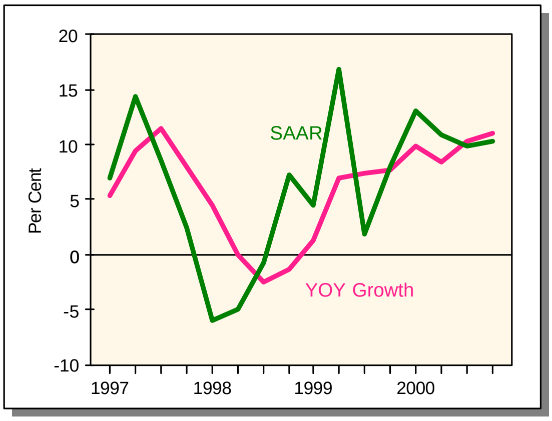
Chart 1.4
GDP Growth in the US



1.2 Domestic Output

Against the backdrop of a favourable external environment for the most part of 2000, the Singapore economy experienced a strong cyclical rebound. GDP grew by 9.9% in 2000, following growth of 5.9% in 1999 and 0.1% in 1998. However, growth momentum, as measured by the seasonally adjusted quarter-on-quarter annualised (SAAR) GDP growth, has moderated gradually over the year. (Chart 1.5)

Chart 1.5
GDP Growth



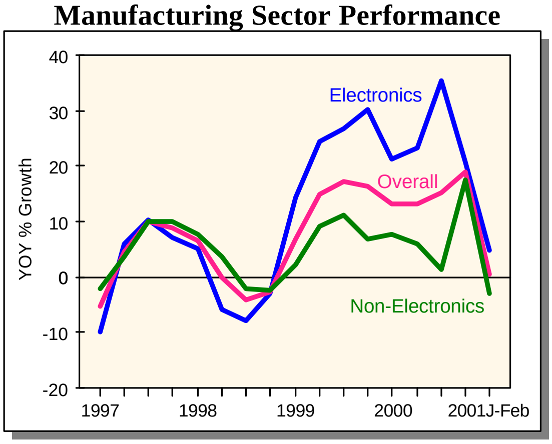
GLOBAL ELECTRONICS BOOM IN 2000

Year 2000 was a strong year for the global electronics sector. IT spending of major industrial and Asian markets surged, underpinned by the introduction of new applications in e-commerce, wireless communication and related products. The semiconductor industry, in particular, was a major beneficiary of the "New Economy" boom, with global chip sales expanding by 37% for the year as a whole. There was also some pent-up demand in early 2000 from delayed IT spending in the previous year due to concerns over the Y2K bug.

SINGAPORE'S MANUFACTURING OUTPUT SURGED

Singapore's manufacturing sector benefited from this boom, as value-added rose steadily throughout 2000 to record robust growth of 15% for the year as a whole. Electronics output rose by 25%, led by the semiconductor segment. In comparison, the non-electronics sector grew by a more moderate 8% in 2000, dampened by the weakness in the chemicals and transport equipment industries. (Chart 1.6)

Chart 1.6
Manufacturing Sector Performance

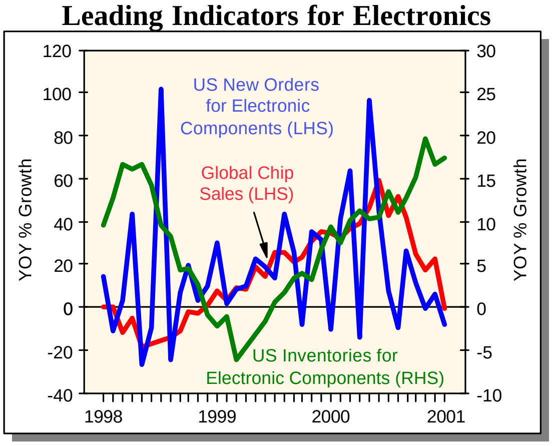


MOUNTING SIGNS OF WEAKNESS IN THE GLOBAL ELECTRONICS INDUSTRY

Since late September 2000 however, sentiment in the global electronics industry has turned negative, as a spate of profit warnings by major US electronics firms cast doubt on the sustainability of rapid rates of expansion in the industry.

US new orders for electronic components moderated to low single-digit growth in Q4 2000, and subsequently went into negative territory in January 2001, while inventory for the segment recorded double-digit increases both in Q4 2000 and January 2001. Global chip sales contracted in January 2001 after 25 months of consecutive expansions. (Chart 1.7) Other forward-looking indicators such as the book-to-bill ratio for

Chart 1.7
Leading Indicators for Electronics



semiconductor equipment and the similar ratio for PC-related electronics had fallen below one in January 2001, indicating that the industry is experiencing a contraction. (Chart 1.8)

The slowdown in the global electronics industry reflected softening demand, which was mainly precipitated by the weakening growth in the US economy, and an oversupply of electronics components.

The weakness in the global electronics industry can be traced to two main factors. First, demand conditions had deteriorated significantly since Q4 2000, contributed primarily by the softening of the US economy. In particular, US corporate IT spending, which has an important influence on the global semiconductor cycle, had moderated from its peak in Q4 2000. Shipments to the Asia Pacific have also come down sharply.

Second, over-investment, especially in the semiconductor segment last year, had culminated in a huge inventory build-up since late last year. Of particular concern has been the protracted decline of semiconductor prices as a result of the over-capacity situation, to levels that some industry analysts regard as below the cost of production. (Chart 1.9) With revenues being squeezed, manufacturers could cut output further to minimise their losses.

Reflecting the deterioration in outlook, forecasts of global chip sales have been cut since the beginning of this year. Many industry analysts expect single-digit growth in global chip sales for 2001, compared to the 37% growth recorded in 2000, with a handful expecting negative growth for the year. (Chart 1.10)

ELECTRONICS PRODUCTION IN SINGAPORE HAS ALSO BEEN HIT

In line with the recent weakening of the global electronics industry, Singapore's output of electronics moderated in the final quarter of 2000 and early 2001. Growth of electronics output and electronics exports increased by modest rates of 4.8% and 0.8% in the first two months of 2001 respectively.

Production of major electronics items such as semiconductor and computers & peripherals has generally come off their highs since late last year. Output of telecommunication equipment has plunged sharply into negative territory, on the back of slower demand for cellular phones, as well as on-going restructuring in some companies. Reflecting the

Chart 1.8
Book-to-Bill Ratios

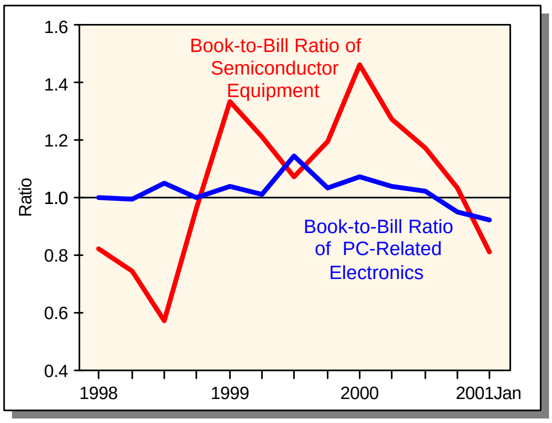


Chart 1.9
64M & 128M DRAM Prices

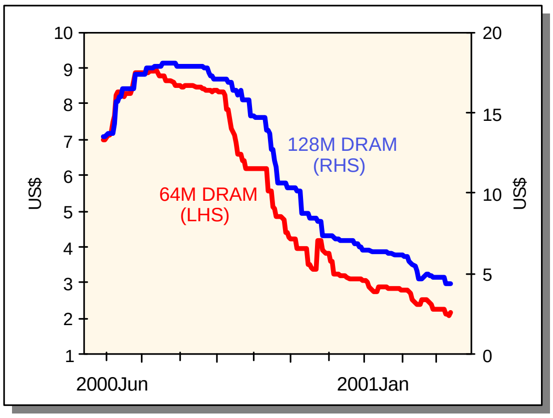
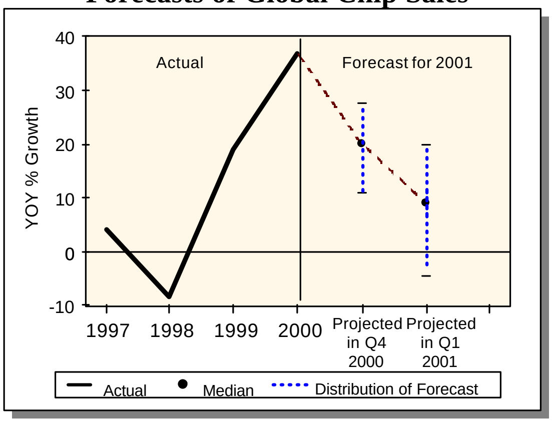


Chart 1.10
Forecasts of Global Chip Sales



weaknesses in the electronics industry, the Electronics Purchasing Managers' Index (PMI) declined for the sixth consecutive month in February.

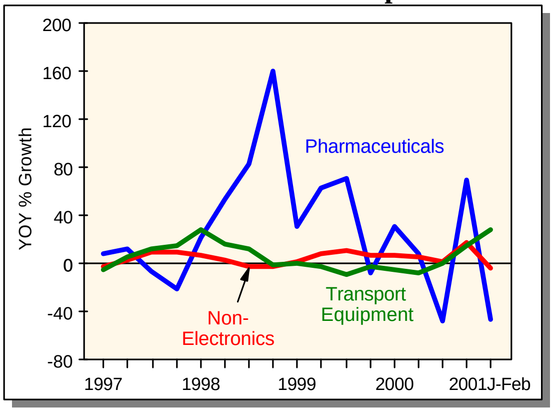
NON-ELECTRONICS OUTPUT HOLDS UP

The moderation in electronics output was however, partly offset by the surge in the non-electronics segment in late 2000. Production of non-electronics grew by 17% in Q4 2000 due to strong growth in the pharmaceutical and transport equipment industries during the quarter.

Growth in the non-electronics sector was supported by the pharmaceuticals and transport equipment industries.

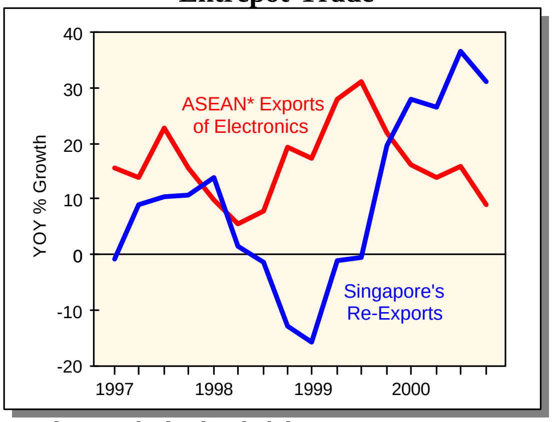
The 41% surge in the chemicals industry was largely due to a major pharmaceutical manufacturer switching production to high value-added intermediates in the last quarter of the year. The transport equipment industry grew by 16% in Q4 2000 after six quarters of contractions, supported by strength in the marine transport equipment industry, as more contracts were awarded to local shipyards. This partly reflected the improvement in the competitiveness of the industry, following the recent consolidation of the major yards in Singapore. Also, the surge in oil prices last year led to increased oil exploration activities, which in turn translated into more rig-building and conversion contracts. (Chart 1.11)

Chart 1.11
Non-Electronics Output



The pick-up in the transport equipment industry continued into January-February 2001, although pharmaceutical output contracted. However, the impending start-up of two new pharmaceutical plants (Merck Sharp & Dohme, and Wyeth-Ayerst) in the latter half of the year is expected to give some boost to the manufacturing sector.

Chart 1.12
Entrepôt Trade



* Malaysia, Thailand and Philippines

SERVICES SECTORS AFFECTED BY ELECTRONICS SLOWDOWN

The strong performance of the manufacturing sector had positive spillover effects on the other services sectors for the most part of 2000. Growth in the commerce sector more than doubled to 14% in 2000, while the transport & communications sector recorded robust expansion of 9.0%, with growth coming mainly from the trade-related air transport and telecommunications sub-sectors.

Nevertheless, the softening in external conditions has led to a moderation in growth momentum in some of these sectors in recent months. In the commerce sector, both entrepot trade and domestic retail sales registered slower growth, the former due to the slowdown in global electronics exports and the latter reflecting the weaker growth in visitor arrivals and more cautious domestic consumption. The slower increase in visitor arrivals also led to weaker growth in the hotel and restaurant industry, with the average occupancy rate at hotels declining to 73% in January this year, the lowest rate since May 99. (Charts 1.12 and 1.13)

The transport & communications sector also saw more moderate growth in Q4 2000, reflecting the slowdown in global electronics demand as well as competition from regional ports. Given that the bulk of electronics exports are air flown, the slowdown in electronics exports contributed to a moderation in air transport growth. Nevertheless, the communications industry continued to benefit from the spin-offs generated from the liberalisation of the telecommunications sector. Mobile phone and internet subscriptions continued to increase at a sustained rate, while cheaper overseas call rates saw longer durations for IDD calls. (Chart 1.14)

FINANCIAL SECTOR BENEFITED FROM LIBERALISATION MEASURES

The financial services sector saw signs of recovery in 2000, expanding by 4.1% following marginal growth of 0.8% in 1999. The upturn was led by the insurance and investment advisors segments, which chalked up strong growth rates. (Chart 1.15) The strong performance of the insurance sector reflected the popularity of investment-linked products, as CPF funds were channeled for investment in single-premium policies.[1]

Unit trusts have also gained favour as a form of investment. According to Standard and Poor's Fund Services data, there was a net inflow of $1 billion into unit trusts during 2000. However, funds placed in unit trusts declined in value following the correction in the global stock markets in the second half of the year. The correction in the local stock market in H2 2000 also saw slower trading activity and fewer Initial Public Offerings (IPO) listed. (Chart 1.16) In contrast, the value of bonds issued continued to increase, partly reflecting the government-led initiatives to develop the debt market.

[1] Single premium business rose 100% in Q4 2000, bringing the total sales of single premium policies in 2000 to $3.3 billion, up from $1.79 billion in 1999. At end of December 2000, investments in insurance policies under the CPFIS rose 24% from end of Q1 2000.

Chart 1.13
Commerce Sector Performance

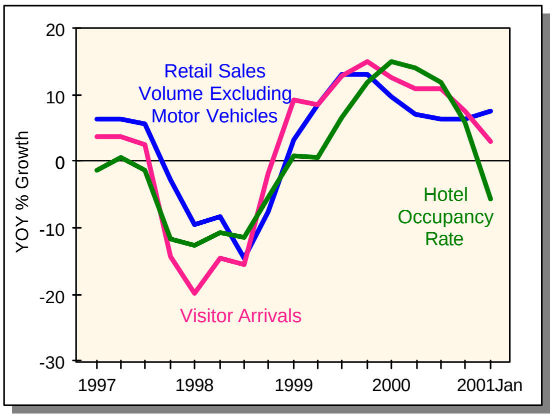


Chart 1.14
Mobile, Internet & IDD Usage

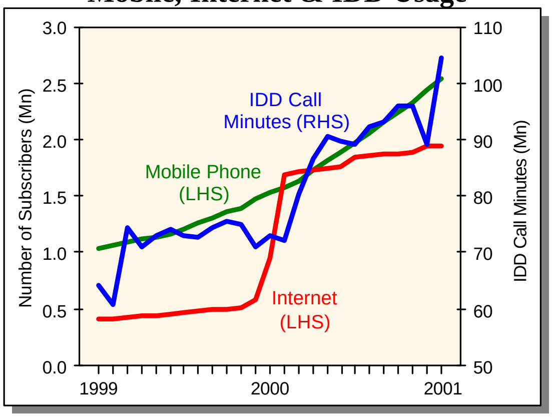
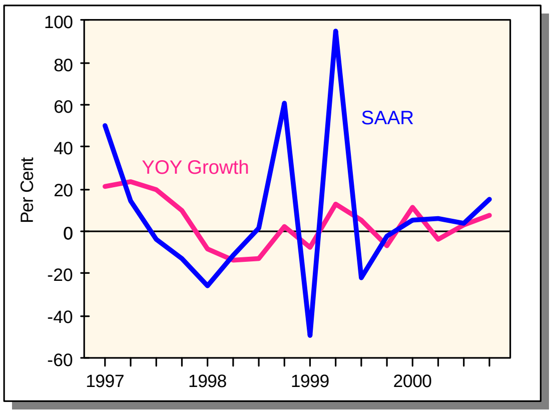


Chart 1.15
Financial Services Sector



Commercial banks in turn benefited from the higher fees and commissions earned for underwriting the IPO and bond issuances. The continued recovery in commercial bank loans to non-bank customers also led to higher interest income.

BUSINESS SERVICES REFLECT GROWTH IN OTHER SECTORS OF THE ECONOMY

The business services sector recorded significantly stronger growth in 2000, supported by robust demand for IT, legal, accounting, and other services from the rest of the economy. Real estate services, which also fall under this sector, turned around from a contraction in 1999 to grow by 3.1% last year, supported by the recovery in commercial property (office and shop space), and high-tech industrial space amidst tight supply.

CONSTRUCTION SECTOR CONTINUES TO CONTRACT

The relatively high overall GDP figure for 2000 masked continued weakness in the construction sector. Nevertheless, the rate of contraction in the sector did moderate to 4.6% compared to 8.8% in 1999. Growth continued to be dragged down by the sharp decline in residential construction activity. (Chart 1.17) Public residential construction was dampened by the cutback in the building of new HDB flats, from about 40,800 in 1999 to 24,100 units in 2000, in response to the shorter queues for new flats. At the same time, private residential construction continued to weaken due to poor demand and excess supply of private housing units.

In contrast, the rate of decline in non-residential (excluding civil engineering) construction activity moderated significantly in 2000. The improvement was led by the construction of private non-residential buildings, underpinned by a surge in private industrial construction.[2] Strong growth in the manufacturing sector over the last two years had encouraged several manufacturers to expand their production capacity, with several new plants coming onstream during 2000. The growth in industrial construction more than offset the decline in the construction of commercial buildings. (Chart 1.18) A more detailed review of developments in the Singapore property market is provided in Chapter 5.

Chart 1.16
Capital Market Performance

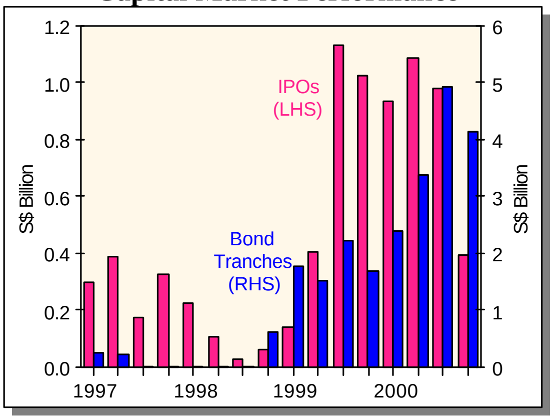


Chart 1.17
Construction Certified Payments

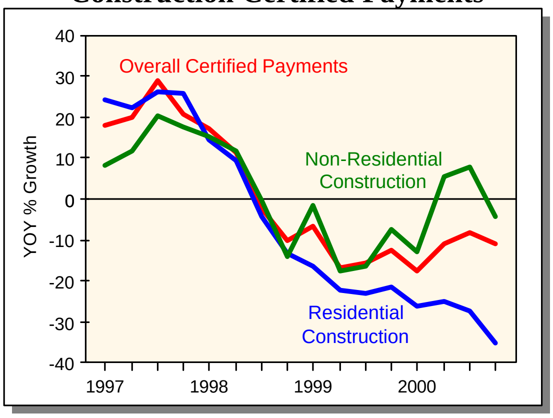
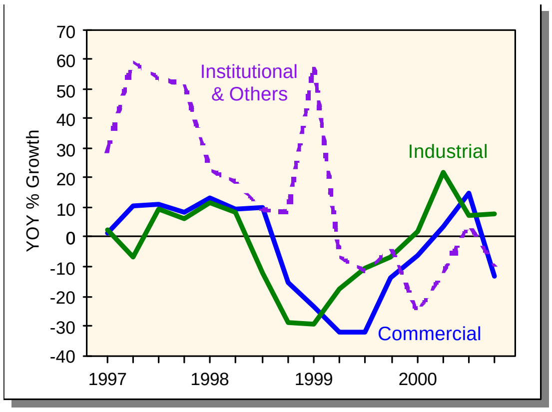


Chart 1.18
Certified Payments in Non-Residential Construction



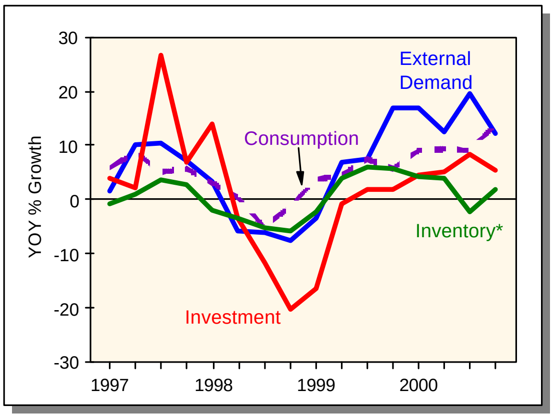
2 Projects include wafer fabrication plants by Chartered Semiconductor Manufacturing and ST Microelectronics, a power plant by Power Seraya, and pharmaceutical plants by Schering Plough and Wyeth-Ayerst.

1.3 Aggregate Demand

ECONOMIC ACTIVITY BOOSTED BY STRONG EXTERNAL DEMAND

From an expenditure perspective, the surge in economic activity in 2000 was largely supported by strong growth in external demand, although more recently Singapore's export performance has softened somewhat. Growth of fixed investment moderated as well, after rising strongly in the first three quarters of the year. Consumption growth, however, picked up sharply, posting its fourth consecutive quarter of robust growth in Q4 2000. (Chart 1.19 and Table 1.1)

Chart 1.19
Domestic vs External Demand



* Refers to the change in the increase in stocks as % of GDP of the previous year.

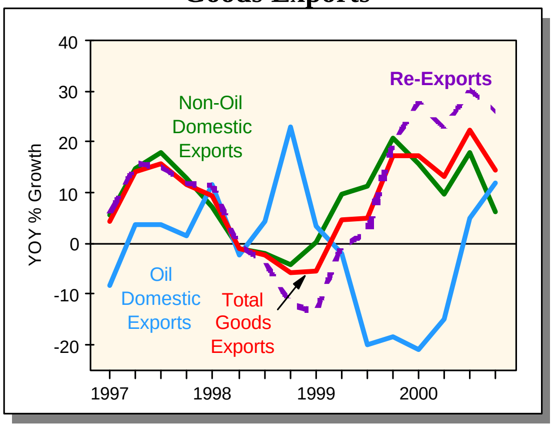
Table 1.1
Contribution to GDP Growth

% point

	1999					2000				
	Q1	Q2	Q3	Q4	Annual	Q1	Q2	Q3	Q4	Annual
GDP	**1.3**	**6.9**	**7.4**	**7.7**	**5.9**	**9.8**	**8.4**	**10.3**	**11.0**	**9.9**
Consumption Expenditure	2.0	2.1	3.6	2.7	2.6	5.1	4.4	4.3	6.7	5.1
Public	2.6	-0.2	0.0	-0.3	0.5	1.2	0.5	0.5	3.5	1.4
Private	-0.6	2.4	3.5	3.0	2.1	3.9	3.9	3.8	3.2	3.7
Gross Fixed Capital Formation	-7.1	-0.4	0.7	0.7	-1.5	1.6	1.8	3.0	1.8	2.1
Increase in Stocks	-2.3	3.9	6.1	5.6	3.4	4.2	3.8	-2.3	1.8	1.8
Net Exports of Goods & Services	8.9	1.6	-2.7	-1.3	1.6	-0.8	-1.6	5.2	0.8	0.9
Statistical Discrepancy	-0.2	-0.4	-0.2	-0.1	-0.2	-0.3	0.0	0.0	-0.1	-0.1

Growth in external demand for Singapore's goods and services more than doubled in 2000, to 15%. Total merchandise exports surged strongly in 2000, on the back of an over-20% increase in re-exports and a pick-up in domestic exports. These were in turn supported by the upturn in the global electronics cycle as well as the recovery in the regional economies. In the final quarter of 2000, however, external demand growth slowed markedly, reflecting a sharp decline in the growth of non-oil domestic exports, which were dragged down by weak electronics export growth. While re-export growth remained strong in Q4 2000 as a whole, it had moderated somewhat starting December last year. (Chart 1.20)

Chart 1.20
Goods Exports



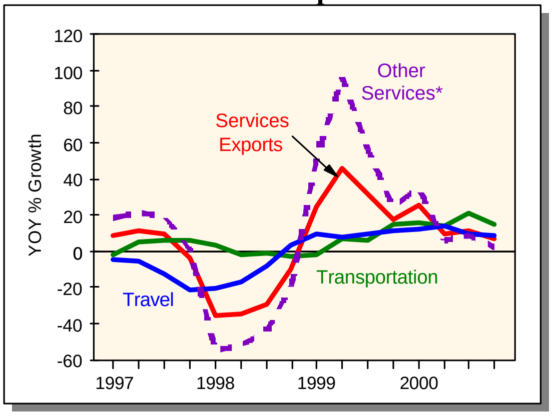
Growth in services exports remained fairly strong at 13% in 2000, underpinned by the strong expansion in exports of transportation services, as receipts from freight services surged on the back of a pick-up in merchandise exports. Exports of travel services saw a healthy expansion in 2000 as well, reflecting continued double-digit growth in visitor arrivals. In Q4 2000, however, growth of overall services exports fell, dragged down by the slowdown in merchandise export growth. (Chart 1.21)

The strength in domestic demand has been underpinned by robust consumption growth and a turnaround in fixed investment.

On the domestic front, growth was driven by robust growth in consumption, as well as a turnaround in fixed investment. Private consumption recorded a sharp 9.4% increase in 2000, driven by rapid growth in personal disposable income, as well as upbeat consumer sentiments. Public consumption rose sharply as well, buoyed by the July increase in civil servants' pay, and higher year-end bonuses compared with 1999. (Chart 1.22)

Fixed investment returned to growth in 2000, after two years of decline. In the private sector, investment in machinery and transport equipment surged as the outlook for business conditions brightened, particularly in the first three quarters of the year. Expectations of healthy demand growth amidst the regional recovery also led to capacity expansion in the manufacturing sector, providing a strong boost to investment in machinery & transport equipment and non-residential buildings. On the other hand, the construction of private residential buildings continued to decline in the face of continued weakness in the property market. Public fixed investment contracted throughout much of 2000, mainly reflecting a cut-back in the HDB building programme. In Q4, however, public fixed investment turned around, on the back of double-digit growth in other construction works. (Chart 1.23)

Chart 1.21
Services Exports



* comprises passenger fare, financial, communication, merchanting, professional and business services

Chart 1.22
Consumption

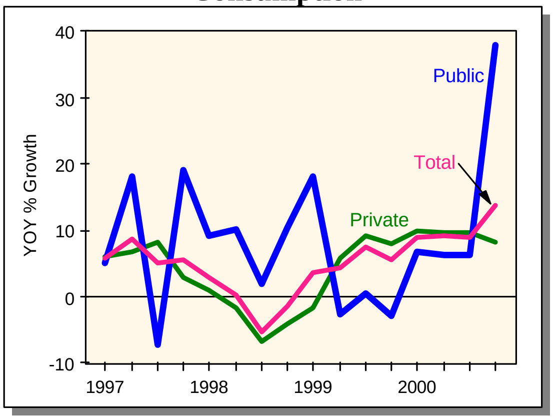
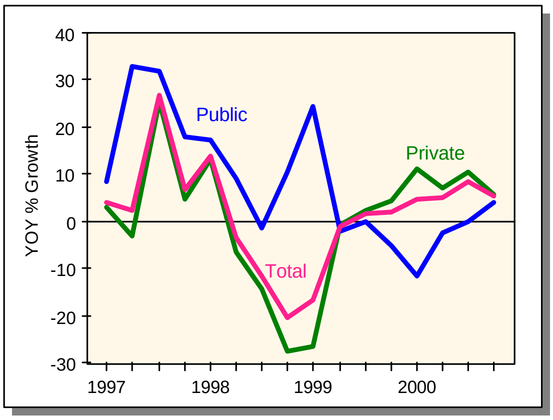


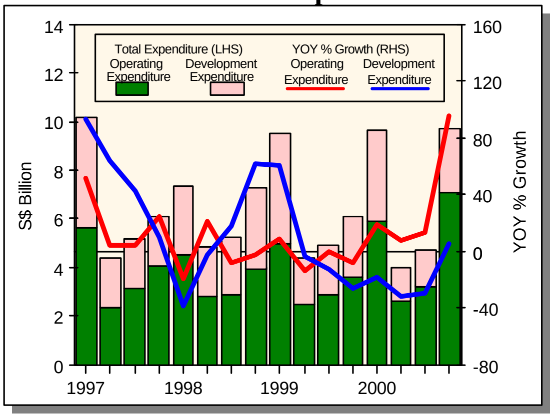
Chart 1.23
Investment



1.4 Fiscal Developments

Government finances were boosted by the exceptional performance of the Singapore economy in 2000. Although expenditures rose strongly, revenue receipts were significantly higher than in 1999. Operating revenues reached 21% of nominal GDP, which was more than adequate to finance total expenditures amounting to 18% of GDP. As a result, the surplus increased by 50% to $5.5 billion (3.5% of GDP) in 2000, compared with $3.7 billion (2.6%) in 1999.

Chart 1.24
Government Expenditure



GOVERNMENT SPENDING ROSE

Government expenditure on operating and development activities picked up in 2000, expanding by 12% to a total $28 billion. (Chart 1.24) The rise in spending was largely fuelled by increases in operating expenses, in contrast to the previous few years when development projects absorbed the largest share of the increases.

BROAD-BASED INCREASE IN OPERATING EXPENSES

After declining over the past two years, operating expenditure recorded a 36% increase in 2000. The increase was broad-based, with most ministries registering higher spending due to the sharp uptick in the wage bill, reflecting upward salary revisions and higher bonuses. Compensation amounting to $1.9 billion was also paid out to SingTel and Starhub for early termination of their duopoly, enlarging operating expenditure further.

In addition, the government addressed specific spending needs in various sectors[3]. Education received the largest boost in the social and community sector, as more teachers were employed to cater to the increase in student intake. There was also a hike in the salaries of doctors in the public sector, by an average of 22%, leading to a rise in government's spending on health.

DEVELOPMENT EXPENSES SHRANK

In contrast, development expenditure was lower in 2000 compared to 1999. One reason for this was that a number of projects were brought forward to provide

---

3 In his 2001 Budget Speech, the Minister of Finance announced changes to the budget presentation. However, this write-up is based on the earlier presentation pending the receipt of data with the new classification of sectors.

some support to the economy in early 1999. There was also a slowdown in the building of HDB flats. (See also section on property market developments.)

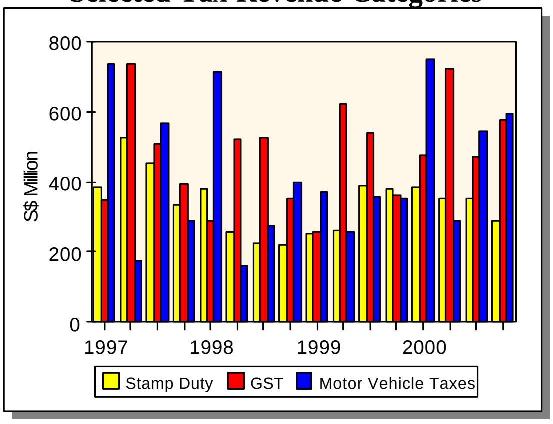
However, there was some expansion in expenditure in the economic services. These included higher expenditure in the communication sector reflecting the speeding up of various road projects in new housing estates like Punggol 21 and Sengkang. At the same time, spending on reclamation helped sustain expenditure of more than $1.5 billion in the trade and industry sector.

STRONG REBOUND IN TAX REVENUE

Underpinned by the strong recovery in the economy, operating revenue reached a peak of $33.5 billion in 2000. The pick-up in employment, higher monthly income in the top 10% of households, and larger profits of companies combined to propel income tax revenue up by more than 15% to $13.4 billion following growth of 6% in 1999.

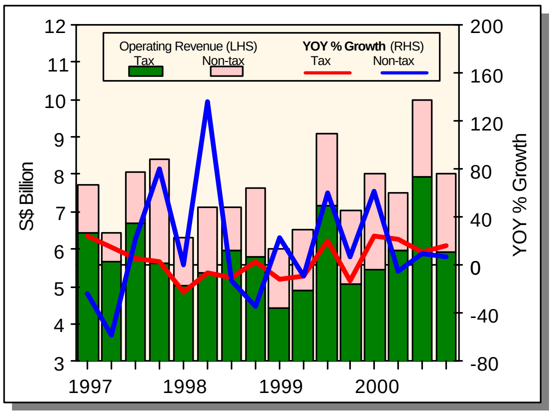
The buoyant economic environment in 2000 also led to increases in consumption-related taxes such as GST, and customs and excise duties. Reflecting the surge in motor-vehicle sales, revenue collection from motor vehicle taxes grew by 63%, reversing the downward trend since 1997. Conversely, the slowdown in the property market in the latter half of 2000 resulted in the lower growth in stamp duty collection compared with 1999. (Chart 1.25)

Chart 1.25
Selected Tax Revenue Categories



Tax revenue receipts accounted for most of the increase in operating revenue collection in 2000, but revenue from non-tax sources also expanded more rapidly. (Chart 1.26) Fees and charges collected from licences and permits rose in tandem with receipts from COE premiums, reflecting the sharp increase in car purchases. Although COE premiums declined compared to 1999, there was a significant increase in total number of COEs released in 2000.

Chart 1.26
Tax & Non-Tax Revenue



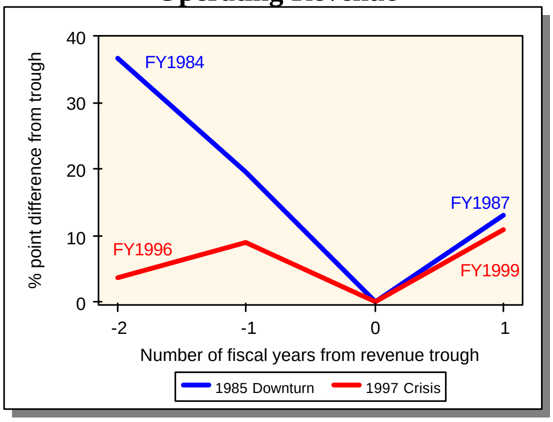
IMPACT OF THE AUTOMATIC STABILISER IN OPERATING REVENUE

The recovery of operating revenue in 2000 reflected the cyclical upturn in the economy. Government receipts vary to some extent with the business cycle, growing during booms and shrinking in recessions. For Singapore, this automatic stabiliser effect is largely manifested in taxes, particularly income taxes, which help moderate the fall in income when private economic activity declines and restrain the increase in income when activity rises.

The effect of the automatic stabiliser was evident in the past two economic downturns.

The effect of the automatic stabiliser was observed in both the recent economic downturn, as well as the mid-1980s recession, when operating revenue declined and picked up subsequently as the economy recovered. Chart 1.27 shows the cycles of operating revenue for both periods: fiscal year (FY) 1984-87 and FY1996-99. The solid red and blue lines show the contraction (left downward slope) and recovery (right upward slope) in operating revenues relative to the troughs reached in each period. During the mid-1980s economic downturn, operating revenue collection declined for two years before picking up in FY1987. In contrast, revenue contracted only in FY1998 during the recent slowdown. At the same time, the rate of contraction in the 1980s was much faster than that in the 1990s, reflecting the relatively more severe recession in the earlier period when nominal GDP shrank by 5.2% in FY1985, compared to the 4.4% decline in FY1998.

Chart 1.27
Operating Revenue



However, the rebound in operating revenue in the 1980s was also quicker. These trends in operating revenue would have been influenced by three factors, which should be adjusted for before any inferences on the automatic stabilisers can be made. First, in both the mid-1980s and recent crisis, discretionary policy measures were implemented to help support the economy during the downturn. The impact of these measures was quantified based on estimates in budget speeches and off-budget announcements, and adjusted for in operating revenue (Please refer to Box Item 1.1.) Second, there appears to have been a change in the lag structure between revenue collection and GDP, with a faster response in operating revenue in the 1990s, in tandem with GDP changes. In contrast, GDP turned around in FY1986, but operating revenue did not pick up until FY1987. Lastly, the impact of the differing pace of GDP contraction and resurgence in the two periods was adjusted for by scaling the revenue receipts by nominal GDP.

Box Item 1.1: Impact of Discretionary Fiscal Policy on Operating Revenue

We quantified the discretionary policy changes affecting operating revenue from the annual Budgets of FY1985-86 and FY1998-99, as well as from the off-budget announcements. The revenue loss (gain) was then added to (subtracted from) the actual operating revenue data. Table A lists some of the main policy changes and their impact on revenue.

Table A

	Policy changes	Estimated revenue loss per annum ($m)
FY85 Budget	Suspension of payroll and telecom tax	-176
	Reduction in entertainment duty	-26
Off-budget 26 July 1985	30% property tax rebate wef 1 July 1985, for 1½ years	-260
Off-budget 31 August 1985	Reduction in ad valorem duty on petrol from 60% to 50%	-122
Off-budget 24 October 1985	Suspension of 10% tax on PUB gas and electricity charges	-92
FY86 Budget	50% property tax rebate for the year	-440
	25% rebate on personal income tax for YA 1986	-250
FY98 Budget	5% tax rebate on personal income tax for YA 1998	-130
	15% property tax rebate	-145
	Property tax exemption for land under development	-200
	Abolition of stamp duty on all instruments, except those which are related to stock and shares an immovable properties	-33
Off-budget June 1998	Additional 40% property tax rebate	-400
	Suspension of carpark surcharge	-37
	Deferment of stamp duty by buyer of uncompleted property	-85
	Suspension of stamp duty on contract notes	-50
Off-budget November 1998	10% corporate tax rebate in YA 1999.	-450
	Extension of property tax rebate till June 2000	-680
	Extension in the suspension of stamp duty on contract notes till June 2000.	-70
	Reduction in foreign worker levy	-204
	Reduction in custom duty on car	-47
	Extension a second year for road tax rebate	-166
	Reduction in petrol excise duty	-75
	Removal speed diesel excise duty	-32
	Increase in electricity tariff rebate and removal of tax on household bill	-372
FY99 Budget	10% tax rebate on personal income tax in YA 1999	-275
November 1999 Announcement	Reduction in foreign worker levy to be extended by an additional year	-204

The resulting series gives the operating revenue excluding the effects from discretionary policies. For example, in FY1985, our calculation indicates that the net impact of discretionary policy changes was $522.4 million. Hence, the adjusted revenue would come in at $8.983 billion, compared to the actual collection of $8.461 billion. (See Table B)

Table B

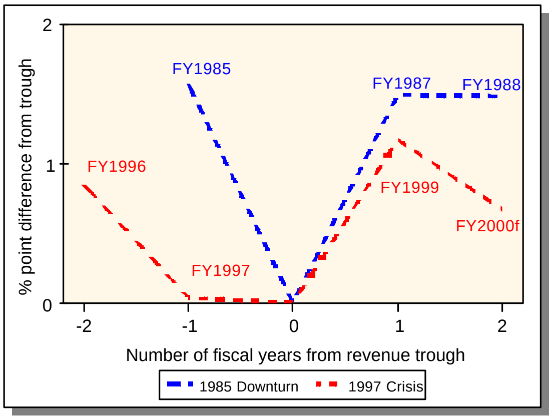
FY	Nominal Operating Revenue		Revenue Loss from Policy Changes ($ mil)	Nominal Operating Revenue (adjusted)	
	Levels ($ mil)	YOY % change		Levels ($ mil)	YOY % change
1983	9,321.4	n.a.	0.0	9,321.4	n.a.
1984	9,682.4	3.9	0.0	9,682.4	3.9
1985	8,460.7	-12.6	-522.4	8,983.1	-7.2
1986	7,083.0	-16.3	-829.6	7,912.6	-11.9
1987	8,005.7	13.0	-746.4	8,752.1	10.6
1996	27,052.5	9.8	0.0	27,052.5	9.8
1997	28,479.7	5.3	0.0	28,479.7	5.3
1998	26,111.3	-8.3	-1,061.0	27,172.3	-4.6
1999	28,968.9	10.9	-2,004.3	30,973.2	14.0

The effect of the automatic stabiliser in the tax system appears to have declined over time.

Chart 1.28 incorporates all three adjustments. The contraction and subsequent recovery in the ratio of operating revenue to GDP was faster in the 1980s, compared with that in the most recent downturn, suggesting that the magnitude of automatic stabilisers in the government's tax system may have declined over the years.

Two main factors determine the effectiveness of the automatic stabilisers – the elasticity of revenue items with respect to GDP and the effective tax rate.[4] The automatic stabiliser effect is generally stronger the higher the effective tax rate. Similarly, the effectiveness of a tax system in cushioning changes in income is greater the higher its elasticity with respect to its base.

Chart 1.28
Ratio of Adjusted Operating Revenue to GDP



[4] A measure of the automatic stabiliser is the change in tax revenue per unit of change in income, dT/dY. Elasticity is the ratio of the percentage change in tax revenues per unit of change in income, (dT/dY)(Y/T).

Therefore dT/dY = (dT/dY)(Y/T) * (T/Y)
or measure of automatic stabiliser
= elasticity * effective tax rate

Reliance on indirect taxes has risen, leading to lower tax elasticities, which in turn implies that the automatic stabiliser would be less effective.

MAS' econometric estimates show that the elasticities of revenue have in fact declined compared with estimates obtained from an earlier study done in 1995. (Table 1.2) The decline captures the impact from the increasing reliance on broad-based indirect taxes like GST, which generally have lower elasticities.

Table 1.2
Tax & Non-Tax Elasticities[5]

Singapore	Total Tax	Direct	Indirect	Non-Tax*
2000	2.03	2.14	1.87	0.95
1995	N.A.	3.35	2.40	2.00

* This refers to non-tax operating revenue.

With the introduction of GST in 1994 and the gradual reduction in income taxes, the proportion of indirect taxes increased to 34% of total operating revenue in the late 1990s from 27% in early to mid-1980s. (Chart 1.29) Note, however, that the shorter lags involved in GST collections also work to enhance the stabiliser effect of the tax system, although on balance, it appears that the introduction of the broad-based tax has reduced the cyclical response of government tax revenue. In general, GST has smaller stabiliser effects, as fluctuations in consumption spending are usually not as pronounced as that of income cycles.[6]

[5] **Tax Elasticities in Selected Euro Zone and Other EU Countries (1999)**

	Corporate Tax	Individual Tax	Indirect Tax
France	1.50	0.90	1.00
Germany	2.50	0.90	1.00
U.K.	6.50	1.00	1.40

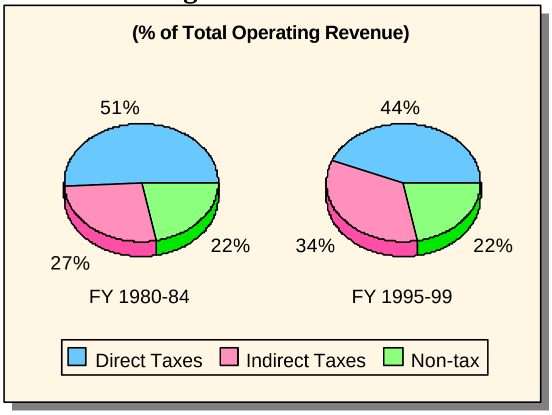
Source: OECD and IMF staff estimates.

[6] The standard deviation of the growth rates of real private consumption was 4.2 over the period 1981-2000 compared to 9.8 for the MAS macro model's estimate of real disposable income. In addition, it is useful to note that automatic stabiliser effects are greater for income taxes, which are progressive, i.e. the ratio of tax to income rises when moving up the income scale. Receipts from a consumption tax, on the other hand, tend to respond in proportion to changes in income.

A gradual reduction in the effective tax rate has also lowered the effectiveness of the automatic stabiliser effect in Singapore.

Over the years, there has also been a gradual reduction in the effective tax rate. The effective personal income tax rate has fallen from 10% in the 1980s to 9.5% in the 1990s.[7] In addition, the progressive structure (and therefore stabiliser effects) of the personal income tax system has come down slightly with the reduction of the number of income brackets from 13 in 1984 to 10 in 1997. At the same time, the potential stabiliser effects of corporate income tax has fallen over the years with the reduction in the statutory rate from 38.25% in 1984-85 to 26% in 1998-99.

Chart 1.29
Changes in Tax Structure

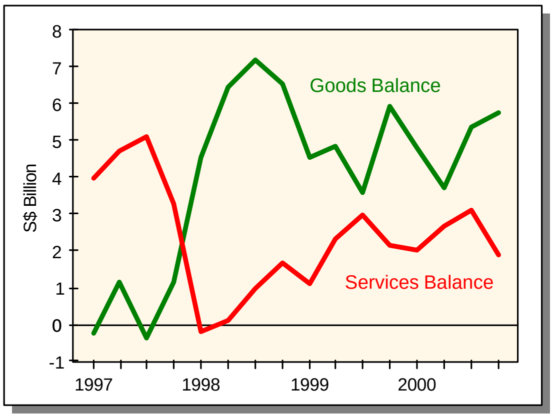


1.5 Balance of Payments

TRADE IN GOODS AND SERVICES BOOST CURRENT ACCOUNT SURPLUS IN 2000

The strong performance of Singapore's manufacturing and services sectors in 2000 was reflected in the larger surpluses recorded in both the goods and services accounts of the balance of payments. (Chart 1.30) However, due to the dependence of the export sector on imported inputs, the increase in the goods account surplus was smaller than that in the services account, which swelled by $1.1 billion.

Chart 1.30
Goods and Services Accounts



MERCHANDISE GOODS ACCOUNT MODERATED DESPITE STRONG GROWTH IN EXPORTS

Despite the strength of goods exports in 2000, the balance on the merchandise goods account actually contracted, as the expansion in payments for imports outweighed that of receipts from exports. Aside from the boost to imports from the components and parts required by the burgeoning domestic electronics industry, there was also a significant rise in the import cost of oil-related products due to run up in crude oil prices. Prices of oil-related exports were slower in picking up though, resulting in the margin squeeze in the petrol-refining and petrochemical industries last year. In contrast, there was a jump in the surplus from net

[7] The effective tax rates are calculated based on net tax payable and total chargeable income. Estimates of the effective tax rate for personal income from the MAS macromodel, based on calculations of private disposable income, also showed a decrease, of about 2% points between the mid-1980s and 1997-99.

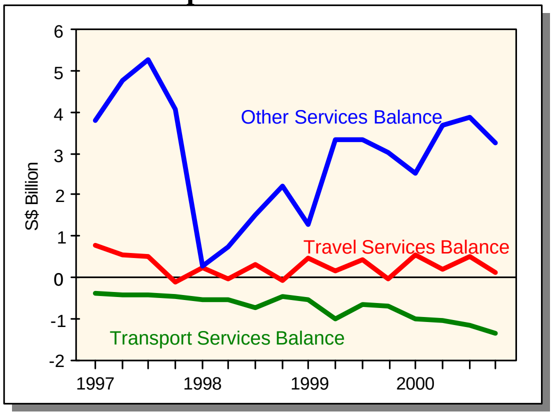
exports of bunkers (fuel for ships) & ship stores. Although the value of bunker sales would have also been inflated by the higher oil prices, the volume of sales rose as well, reflecting Singapore's position as a top bunkering port.

SERVICES ACCOUNTS SAW SPILLOVER EFFECTS FROM TRADE

Services rendered and acquired for trade-related activities also experienced an upsurge. Receipts accruing to Singapore-flagged ships and SIA for carriage of cargo for non-residents rose at double-digit rates, but this was outweighed by the expansion of freight payments for imports. Coupled with a larger port services deficit, due to more frequent calls at foreign ports by Singapore-flagged ships, the transportation account recorded a net increase in payments. (Chart 1.31)

However, all other services accounts ranging from insurance to travel and miscellaneous services recorded improved balances, reflecting a buoyant external environment on the whole.

Chart 1.31
Selected Components of Services Account



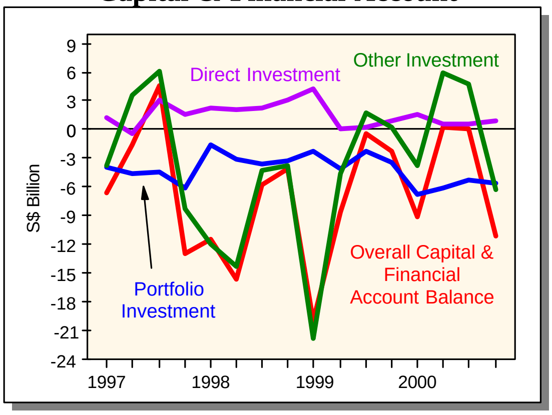
DECLINE IN NET OUTFLOW OF INVESTMENTS

The current account surplus, amounting to $37.6 billion in 2000, financed Singapore's direct, portfolio and banking sector ('Other') investments overseas over the period. After taking into account the offsetting inward investment flows, there was a net outflow amounting to $19.7 billion. This was much smaller than the $31 billion outflow in 1999. (Chart 1.32)

The improvement in the financial account largely reflected the inflow of bank-related funds.

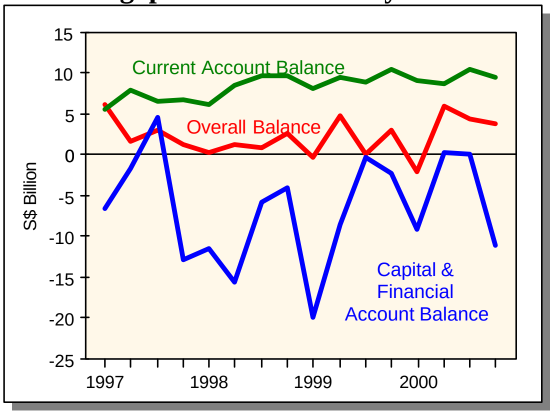
The greater part of the reduction in financial account outflows in 2000 was due to the reversal of bank funding extended overseas. There was a net repayment of loans, largely by Asian Currency Units (ACUs), which had borrowed a significant amount of funds from resident banks in 1999 and in the earlier part of 2000. These funds appear to have been in turn extended to banks in European countries as syndicated loan activity grew in that region. While these ACU loans have continued to be extended to these countries, growth has become somewhat patchy.

Chart 1.32
Capital & Financial Account



At the same time, resident banks also received deposits from foreign banks and ACUs. This has helped offset the decline in deposits from the resident non-bank sector, and has gone some way towards funding the larger increase in domestic non-bank loans extended by resident banks in recent months.

Chart 1.33
Singapore Balance of Payments



EXPANSION IN OVERALL SURPLUS IN 2000

Singapore's transactions with the rest of the world resulted in a strengthening of its overall surplus position in 2000. (Table 1.3 & Chart 1.33) There was an accumulation of $11.8 billion in the balance of payments, compared with $7.3 billion in 1999. Relative to the size of economic activity, the surplus reached 7.4% of GDP, from below 4% in 1998.

Table 1.3
Summary of Accounts

$ Billion

	1999	2000p
Goods Balance	18.9	19.6
Exports of Goods	195.8	239.5
Imports of Goods	176.9	219.9
Services Balance	8.6	9.7
Current Account Balance	36.9	37.6
Financial Account Balance	-31.0	-19.7
Overall Balance	7.3	11.8
Official Foreign Reserves (End of Period)	128.5	139.3

SURPLUSES CONTRIBUTED TO THE ACCUMULATION OF OFR

The surpluses went towards the buildup of reserve assets, with Singapore's Official Foreign Reserves (OFR) rising to $139 billion, an amount sufficient to finance more than 7 months of imports as at December 2000. However, the increase in OFR was lower than indicated by the balance of payments due to exchange rate translation losses[8]. Over the year, translation losses amounted to over $1.0 billion, reflecting the general strengthening of the Singapore dollar against the currencies in which the country's foreign assets are held.

[8] Balance of payments are valued at book-cost. On the other hand, since May 1999, the book value of foreign reserve assets has been translated at market exchange rates prevailing at the end of each period.

2 Financial Market Developments[9]

2.1 International Financial Markets

Tighter monetary policy and slowing growth were major factors affecting international financial markets in 2000. The year began on an optimistic note, with the smooth passage of the Y2K crossover and expectations for continued strong global economic growth. The technology sector, in particular, was to be the foundation of a "New Economy", characterised by low inflation and the death of recessions. Through the year, however, this optimism changed to concern as the hype surrounding companies in the technology sector ended, monetary policy tightened, and US growth slowed.

Financial markets adjusted to reflect changes in these views. This was most apparent in the foreign exchange market. Initially, the US dollar remained strong against both the Euro and the Yen, as the US economy outperformed the European and Japanese economies. However, the Euro rose against the US dollar in the last few months of 2000, as market participants assessed that Europe was likely to be most resilient to a US slowdown. Movements of global interest rates and equity prices also reflected these changing expectations throughout the course of the year. Bond yields declined steadily from Q1, coinciding with the peak in expectations for growth. Equity prices have also declined steadily after peaking in Q1, though this trend was interrupted by a number of short-lived rallies. (Table 2.1)

More recently, the revaluation of the technology, media and telecommunications sector, expectations of drastically slower US growth and consequent monetary easing were dominant factors affecting financial markets.

As was the case for the first three quarters of 2000, changing expectations of economic growth, especially in the US, continued to be the dominant factor influencing international markets in Q4 2000 and the early part of this year. Initially, emerging evidence of a rapid

Table 2.1

	Level as at 1 Jan 2000	Level as at 23 Mar 2001	Change
Equity Indices			
Nasdaq	4131	1929	-53%
S&P 500	1453	1139	-22%
Dow	11358	9505	-16%
DAX	6751	5545	-18%
FTSE	6666	5402	-19%
Nikkei 225	18934	13215	-30%
Interest Rates			
Federal Funds Target Rate	5.5%	5.0%	-50 bps
BOJ Overnight Call Rate	0.25%	0.03%	-22 bps
ECB Minimum Repo Bid Rate	3.00%	4.75%	+175 bps

[9] For more detailed and up-to-date discussions of financial markets see MAS's Financial Market Reports at http://www.mas.gov.sg/resource/index.html.

slowdown in the US high-tech sector led to sharp declines in the share prices of companies in the technology, media, and telecommunications (TMT) sector, with broader markets relatively more stable. Further, the fear of a broader and deeper economic slowdown was temporarily alleviated by a surprise 50 basis point (bps) rate cut by the Fed in early January 2001 and a 50 bps rate cut at end-January 2001.

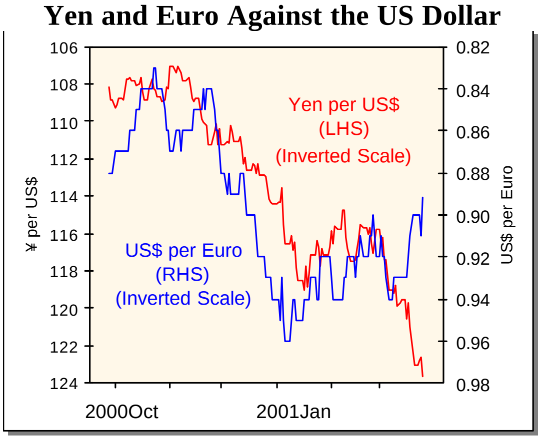
However, this optimism was soon overshadowed by concerns that the economic slowdown in the US would turn out to be much more broad-based than expected. Sanguine expectations of an inventory adjustment followed by a quick rebound were replaced by more pessimistic forecasts – even a 50bps rate cut in late-March by the Fed disappointed markets which were expecting a larger reduction to reflect a perceived weaker US economy. The change in investors' perception of the global economic outlook was reflected in declining interest rates and general weakness in global equity prices.

INDUSTRIAL COUNTRIES

The Euro reversed its weakness while the Yen remained weak. The currencies' strength mirrored expectations for near-term growth: best for Europe while worst for Japan.

After gradually declining against the US dollar in the first three quarters of 2000, the Euro strengthened in Q4, gaining 17% against the Yen and 8% against the US dollar between 1 October 2000 and mid-March 2001. The turning point for the Euro's decline coincided with joint foreign exchange interventions by industrial countries' central banks sometime in early October. This also coincided with expectations of better short-term growth prospects in Europe compared to the US and Japan. The Euro's appreciation was supported by the absence of factors that had been cited for the Euro's decline in 1999 and much of 2000, such as large foreign direct investment outflows and the exceptional performance of the US equity market. (Chart 2.1)

Chart 2.1
Yen and Euro Against the US Dollar



In contrast, the Yen continued on its weakening trend. Its depreciation against both the US dollar and Euro in the Q4 was attributed to domestic political uncertainty, the relatively poor performance of the Japanese equity market, and persistent concerns that the Japanese economy would once again slip into recession. Until recently, the Yen's weakness was reportedly supported by comments from Japanese officials that they were open to a further weakening of the Yen.

Interest rates fell in line with expectations for slower growth.

Short-term rates on the US dollar and the Yen were considerably lower compared to the levels in early October 2000, as the Fed and the Bank of Japan (BOJ) eased monetary policy. After maintaining a tightening stance for much of last year, the Fed signaled its intention to loosen monetary policy by moving towards a weakening bias in mid-December. It subsequently cut the Federal Funds target rate by 50 bps on 3 January 2001, 31 January 2001, and 20 March 2001, reducing the target rate to 5%. (Table 2.2)

The BOJ also moved to loosen monetary policy, reversing its 25 bps hike in the overnight call rate in August 2000. Initially it only lowered the more "symbolic" official discount rate (by 15 bps) on 9 February 2001. Subsequently, the BOJ reduced the overnight call rate to 0.15% from 0.25% on 28 February 2001. Finally, on 19 March 2001, it announced a change in its monetary operation framework to target bank reserves in a *de facto* return to the zero rate policy.

The European Central Bank (ECB), on the other hand, raised its reference rate by 25 bps in October 2000. This was a continuation of the tightening stance that was maintained throughout the whole of 2000. The move was reportedly made in response to mounting Euro zone inflation pressures. Since then, it has left the reference rate unchanged. Even so, market expectations of future rate cuts have led to lower short-term interest rates. (Chart 2.2)

As might be expected, government bond yields in the US and Japan fell in line with mounting concerns over a global economic slowdown and interest rate cuts by the Fed and the BOJ. Even as the ECB raised interest rates, government bond yields in the Euro zone also fell, as market participants expected the ECB to follow the Fed and the BOJ and lower interest rates in the near future. (Chart 2.3)

Equity markets in industrial countries were weaker on concerns over the TMT sector and slower economic growth.

In Q4 2000 and early 2001, equity markets in industrial countries continued their slide from their highs in March 2000. Share prices fell as concerns over deteriorating macroeconomic conditions in industrial countries added further gloom to markets already jittery over the TMT sector. The reversal in the TMT sector is perhaps the starkest. Since its peak in March 2000, the Nasdaq

Table 2.2

End of Period	Federal Funds Target Rate	Japan Overnight Call Rate	ECB Reference Rate
2000 Oct	6.5	0.25	4.75
2000 Nov	6.5	0.25	4.75
2000 Dec	6.5	0.25	4.75
2001 Jan	5.5	0.25	4.75
2001 Feb	5.5	0.25	4.75
2001 Mar*	5.0	0.03	4.75

* as at 23 Mar 2001

Chart 2.2
Change in LIBOR Rates

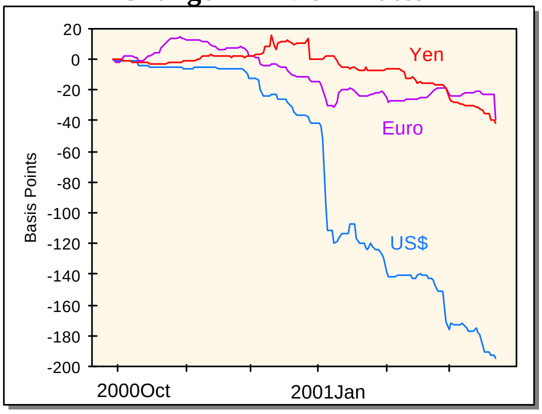
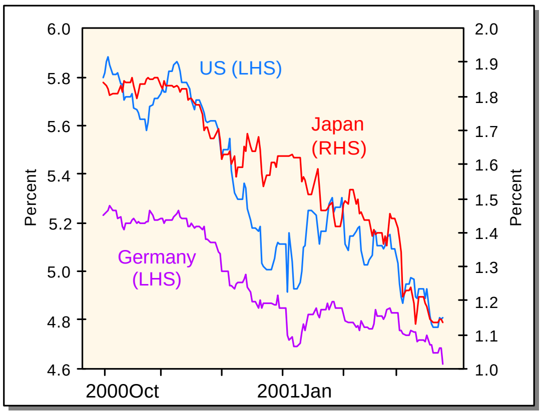


Chart 2.3
Yields on G3 10-Year Government Bonds



composite index has lost slightly over 60% of its value–much more than declines in broader indices. In late 2000, concern over the TMT sector spread to concern that the US economy was slowing much faster than expected. In particular, weaker production, investment, and consumer confidence data led investors to lower their expectations of near term economic growth prospects. The Fed's surprise 50 bps cut in early January only temporarily arrested the equity markets' downward trend, even though the cut had not been widely anticipated by investors. (Chart 2.4)

NORTH AND SOUTHEAST ASIA

Asian currencies continued to weaken against the dollar, reflecting the global slowdown, weaker Yen, and concerns over domestic factors.

Asian currencies were generally weaker against the US dollar in line with expectations of weaker external demand, slower economic growth and lower capital inflows. The Yen's weakness also contributed to the fall of some regional currencies, particularly the Won and New Taiwan dollar. In addition, Asian currencies were also affected by domestic factors such as political developments and structural problems. For example, the Won weakened on negative news about corporate reforms, strikes, and weak export numbers. The New Taiwan dollar, on the other hand, suffered from expectations of a slowdown in the electronics exports sector.

Political instability, coupled with onshore corporate demand for US dollar, were important factors behind the depreciation of the Baht, Peso and Rupiah against the US dollar. The Baht and Peso, however, partially recovered some of the losses in early 2001 on expectations that new political leadership would improve growth prospects. In contrast, the Rupiah's decline against the US dollar accelerated in early 2001, leading to a loss of about 15% against the US dollar between early October and late March 2001. (Chart 2.5)

Asian short-term interest rates eased in line with Fed cuts and expectations for slower growth.

After recording moderate increases for much of 2000, short-term interbank rates in Asia were generally lower compared to their levels in early October last year. Slower economic growth and monetary easing in the US and Japan accorded Asian central banks with ample room to loosen their monetary policy stances. The Bank of Korea cut its target key overnight call rate by 25 bps to 5% on 8 February 2001. The Taiwanese central bank cut

Chart 2.4
Movements of Industrial Countries' Stock Market Indices

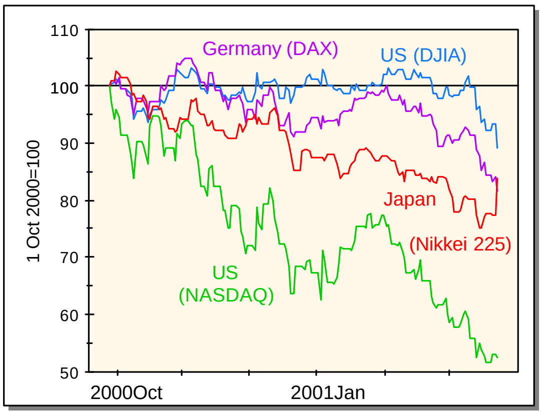


Chart 2.5
Movements of Selected Asian Currencies

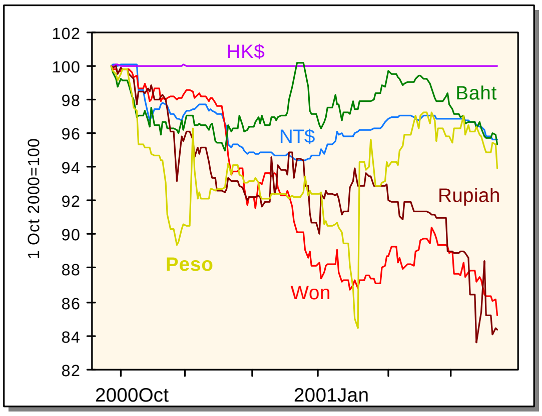
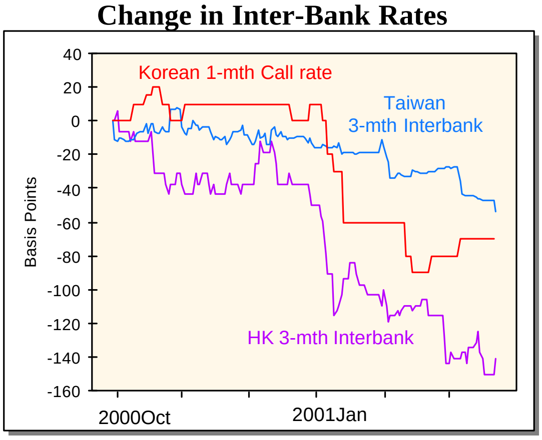


Chart 2.6
Change in Inter-Bank Rates



interest rates by 12.5 bps on 26 December 2000 and 25 bps subsequently on 1 February 2001.
Short-term interest rates in the Philippines and Thailand rose due to concerns over political instability. However, the spikes were not sustained and short-term interest rates as of late March were significantly lower compared to the levels in early October 2000. The only exception to general trend of lower short-term interest rates was Indonesia, where the central bank reportedly held back liquidity injections to support the Rupiah. (Charts 2.6 and 2.7)

Asian equities, with the exception of the Chinese stock market, continued to decline on increasing pessimism about near-term global economic prospects.

Asian equities, as with other global equities, generally ended the period weaker amidst poor domestic and global economic conditions. Hopes that the US monetary easing would support economic growth temporarily boosted stocks in early 2001 but this rally did not last given continued falls on the Nasdaq and the weakening global macroeconomic environment. Only the Thai and Philippines' markets ended the period higher after rising in early 2001 on optimism over new political leadership. Chinese stock prices seem little affected by developments in industrial and regional countries, rising instead on demand by domestic investors, particularly after the change in restrictions on domestic ownership of "B" shares. (Charts 2.8 and 2.9)

Chart 2.7
Change in Inter-Bank Rates

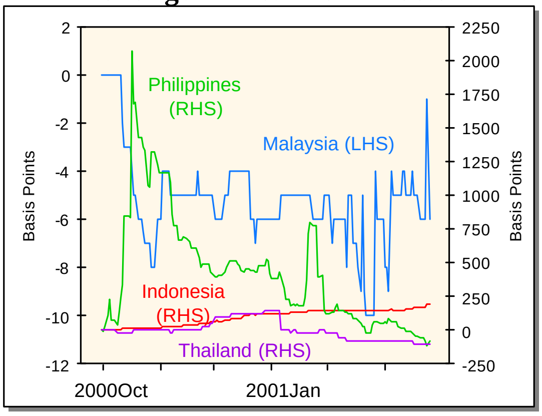


Chart 2.8
Movements of North Asian Stockmarket Indices

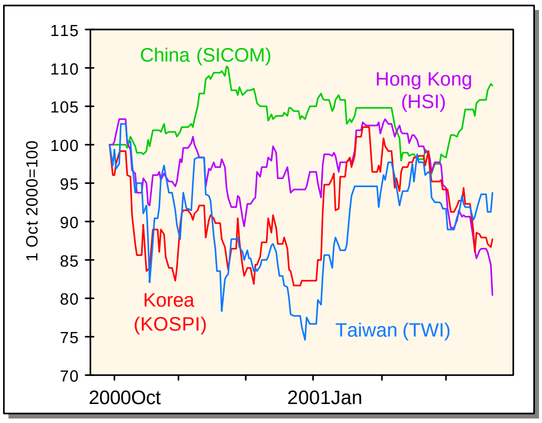
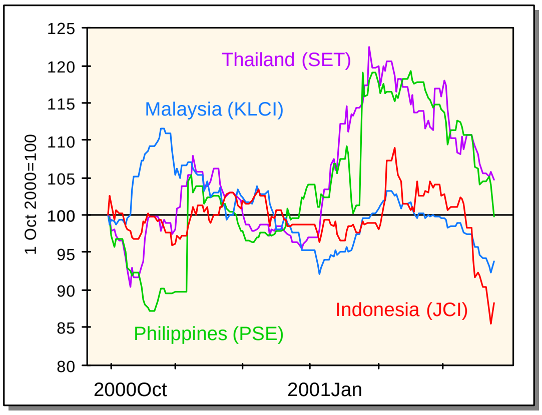


Chart 2.9
Movements of Southeast Asian Stockmarket Indices



2.2 Domestic Financial Markets

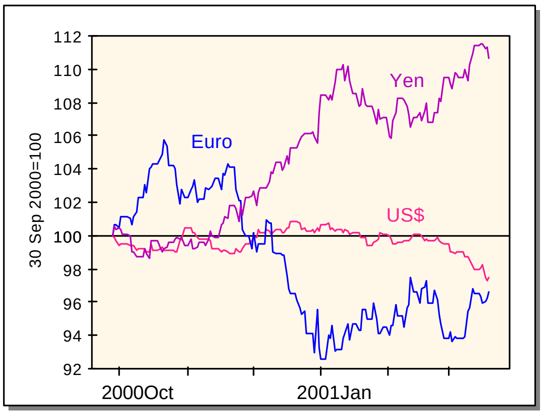
Domestic financial markets during the past year have evolved closely with global macroeconomic developments. Consequently, the downward revaluation of the TMT sector, concern over slowing US growth, and the subsequent monetary easing by the Fed have been major factors affecting Singapore's financial markets.

EXCHANGE RATES

The Singapore dollar weakened against the US dollar and strengthened against the Euro and Yen.

Through 2000, the Singapore dollar weakened against the US dollar and appreciated against the Euro and Yen. Since the Q4 2000 however, the performance of the Singapore dollar against the three main reserve currencies has been mixed. Against the greenback, the Singapore dollar initially saw little variation from October 2000 to end of February 2001. Going into March, it depreciated steadily to US$1.78 compared to US$1.74 at October 2000. The Euro, on the other hand, picked up vis-à-vis the US dollar and the Yen from December 2000, reflecting the better prospects of the Euro zone economies compared to the US and Japan. As a result, the Singapore dollar weakened by about 4% against the Euro at end of March 2001, compared to its initial gain of nearly 6% in early Q4 2000. Against the Yen, it appreciated by 12% as the Japanese economy teetered on the brink of recession. (Chart 2.10)

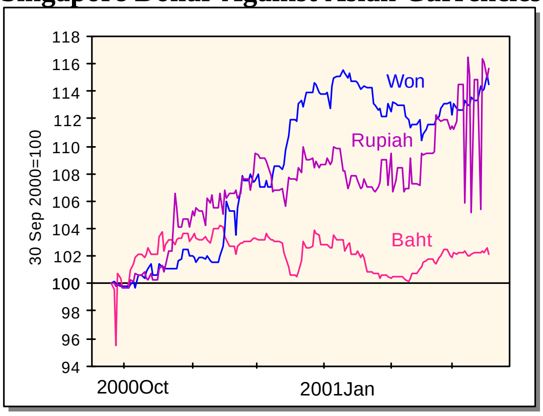
Chart 2.10
Singapore Dollar Against US Dollar, Euro and Yen



Reflecting developments vis-à-vis G3 currencies, the Singapore dollar appreciated against most regional currencies.

The Singapore dollar has appreciated against regional currencies. Since late last year, it has risen about 14% against Korean Won in tandem with the weakening Yen. Reflecting the political woes of the Indonesia as well as the demand of US dollar by onshore corporates for repayment of dollar-denominated debt, the Singapore dollar strengthened against the Rupiah by a slightly higher margin. Against the Baht, the Singapore dollar was relatively stable, gaining marginally by 2% at end of March 2001. (Chart 2.11)

Chart 2.11
Singapore Dollar Against Asian Currencies

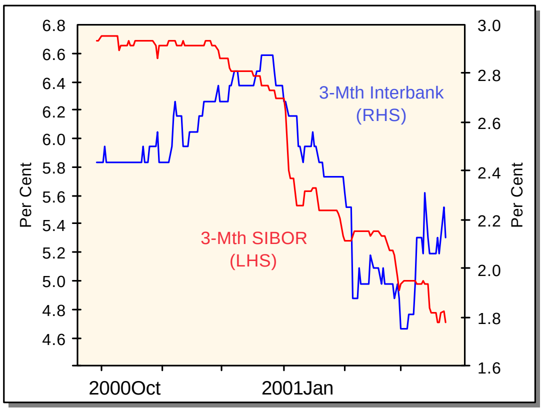


INTEREST RATES

Local interest rates, which reflect domestic credit conditions as well as monetary policies of major industrial countries, rose through 2000 before declining in early 2001.

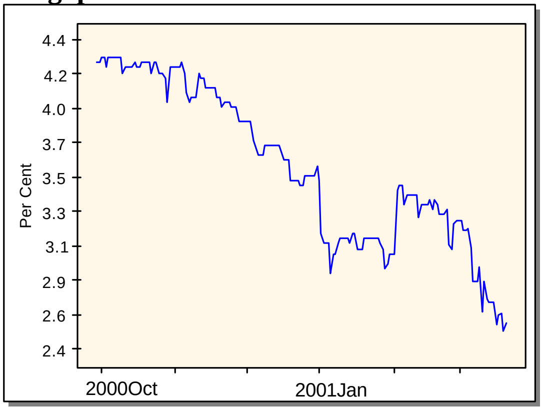
Going into 2000, both Singapore dollar and US dollar 3-month interest rates fell as the Y2K cross-over passed without any hitches. The rates subsequently bounced back as the US tightened its monetary policy, raising the Federal Funds rate by 100 bps during the first half of the year. Concern over an over-heated US economy led the Fed to maintain its "tightening" bias through most of 2000. This in turn exerted upward pressure on the domestic rates. Between the two rates, the rise of the Singapore dollar 3-month interbank rate was more limited as domestic credit conditions remained lax. Towards the end of the year tightened domestic liquidity conditions prior to the festive season and year-end settlement by businesses led to a small rise in the Singapore dollar 3-month interbank interest rate. (Chart 2.12)

Chart 2.12
3-Month Interbank Rates



However, both rates began to fall as softening demand conditions emerged in the US economy. The US dollar 3-month interbank fell by a larger extent, having risen by more than domestic rates through 2000. As a result, the interest rate differential between the two rates narrowed from 4.6% at end of September to 3.53% at end of December. (Chart 2.13) The sudden rate cut by the Fed in early January reinforced already prevalent market expectations that there would be further rate cuts. This led to a fall in both the 3-month interbank rate for US dollar and the Singapore dollar. The former continued its decline into February and March on expectation of another reduction of the Federal Funds target rate at the March FOMC meeting. Towards the end of March, the US dollar 3-month interbank rate fell to 4.705%, some 198 bps lower compared to 1 October 2000 while the Singapore dollar rate ended lower by 37 bps at 2.06%.

Chart 2.13
Differential Between US Dollar and Singapore Dollar 3-Month Interbank Rate



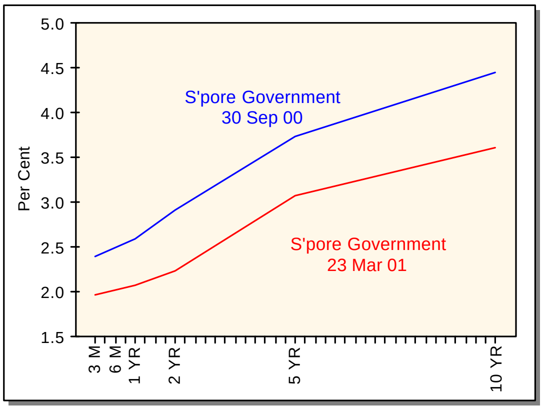
In tandem with low interbank rates, retail interest rates have also fallen marginally, with the average prime lending rate and 12-month deposit rate moderating to 5.8% and 2.38% respectively.

SGS BOND YIELDS

SGS yields across all maturities fell in line with US monetary easing.

Easier monetary policies in the major industrial countries were favourable to the SGS (Singapore Government Securities) market. Local interest rates fell as a result and consequently led yields of SGS to decline across all maturities. Declining yields have attracted corporations to raise capital through bond issuance. Singapore dollar bonds issued year-to-date totalled $3.5 billion, compared to $2.4 billion in Q1 2000. (Chart 2.14)

Chart 2.14
Yields of SGS

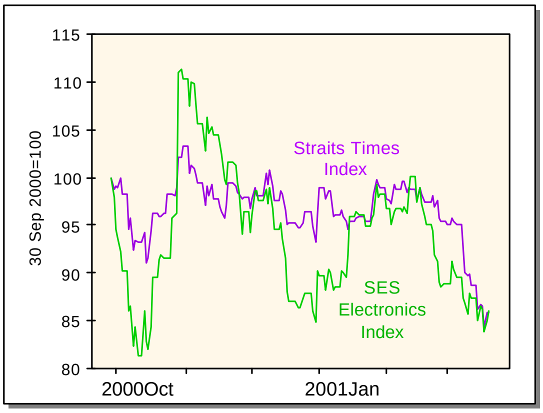


STOCK MARKET

Singapore equities were generally weaker. TMT related shares saw relatively larger declines, mirroring the performance of US markets.

The stock market began 2000 with the benchmark Straits Times Index hitting a record high of 2,583 on 3 January 2000. This turned out to be the year's high, as stock prices subsequently tumbled to a 13-month low in May. Benign economic data out of the US brought relief to the market in June, and prices continued to rise in July and August. However, profit warnings from global technology heavyweights in September soon erased earlier gains, and share prices drifted downwards in the last quarter of 2000, amidst seasonally poor liquidity. Reflecting concerns over the TMT sector, technology stocks saw large declines, with the SES Electronics Index losing 12% during the last quarter of 2000. In contrast, the broader Straits Times Index was relatively sheltered from the onslaught, shedding just 3.5% over the same period. (Chart 2.15)

Chart 2.15
Straits Times Index
& SES Electronics Index



The local bourse received a brief respite with the surprise 50 bps rate cut by the Fed in early January 2001. However, despite this cut and two subsequent rate cuts by the Fed in late January and mid March, investor sentiment remained negative, and both the Straits Times Index and the SES Electronics index were some 13% lower than levels at end-Q3 2000.

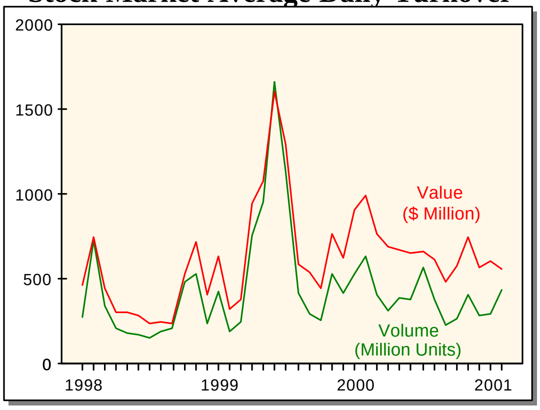
The number of IPOs declined, reflecting weaker demand for equities.

Reflecting the gloomy sentiments in the stock market, there were only 12 IPOs launched from the start of the year till 23 March 2001 even though 38 companies had received in-principle approval for listing as at end-January. The small number of issues in the first quarter of this year was in line with the trend of declining IPOs since the last quarter in 2000. The euphoria of the stock market in early 2000 had triggered off a flurry of IPOs in H1 2000, worth some S$2 billion. However, the batch of IPOs launched in the second half of the year was only valued at S$1.4 billion, some 30% lower than those launched in H1 2000. In addition, at least 10 potential firms had deferred their listing in Q4 2000, citing poor market sentiment.

The volume and value of equities traded remains low.

The average daily value of shares traded on SGX in January and February 2001 fell by 13% and 20% respectively compared to the daily average in 2000. In volume terms, the turnover in January was 27% lower compared to the same period. Although the size of trading rebounded strongly subsequently in February, the corresponding low value of traded shares implied that the stock market was still weak. The reduction of the settlement period from T+5 to T+3 in March 2000, coupled with the raising of the minimum brokerage fee from S$10 to S$30 for small trades, could have also led retail investors to stay away from the stock market. (Chart 2.16)

Chart 2.16
Stock Market Average Daily Turnover



DOMESTIC CREDIT

Credit growth, especially loans to individuals, picked up in the latter half of 2000.

In contrast to the sharp rebound in economic activity last year, the recovery in loans was sluggish and uneven throughout 2000, and largely concentrated in loans to individuals rather than to the business sector. Growth of loans to non-bank customers remained negative through the first few months of the year, and only began to pick up towards the latter half of 2000.

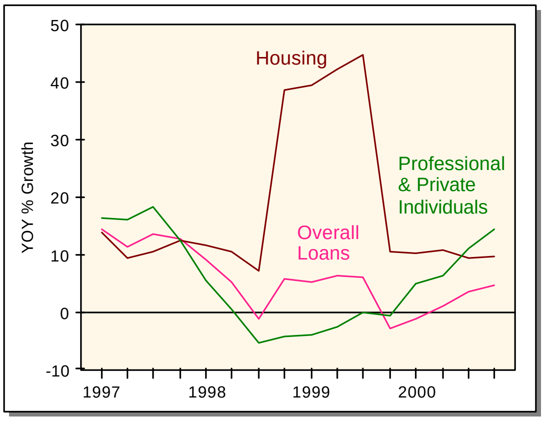
Loans growth has since strengthened from 0.6% in May to reach 4.7% at end-December and 7.1% at end-February 2001[10]. This pick-up in domestic credit was reflected in the increase in the loan-to-deposit ratio over the year. Nevertheless the ratio remained well below 1.0 despite contractions in fixed and savings deposits.

In particular, loans to professional and private individuals surged at double-digit rates towards the end

10 Loans growth in 2001 was also boosted by the inclusion of some finance company loans in the banking sector loan portfolio after the merger of a bank and finance company. This was mirrored in the double-digit drop in total lending by finance companies since January 2001.

of the year, on the back of improved consumer sentiment in 2000. Despite the continued slump in the residential property market, housing loans also saw sustained growth of around 10% throughout the year. This could reflect the refinancing of mortgage loans given the low interest rate environment, as the volume of property transactions has remained low throughout the year. (Chart 2.17)

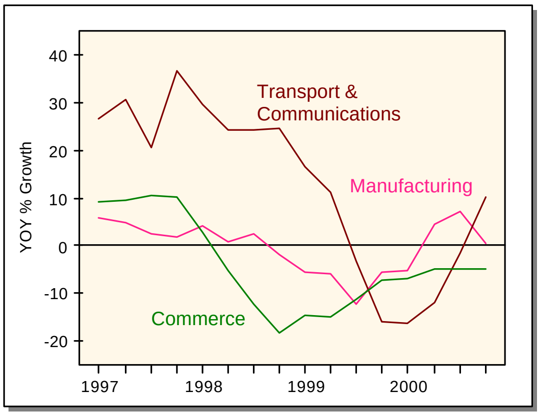
Chart 2.17
Domestic Credit



Loans to businesses, however, continue to be weak.

On the other hand, the recovery in loans to the various business sectors have lagged the pick-up in economic activity, with loans growth to most business sectors only turning positive in the second half of the year. The double-digit growth in manufacturing output that was sustained throughout 2000 contrasted sharply with the sluggish and uneven recovery in credit extended to that sector. Similarly, credit extended to the commerce and transport & communications sectors continued to contract throughout most of 2000, despite the strong growth in activity in these sectors. (Chart 2.18)

Chart 2.18
Loans to Selected Sectors



Demand for bank credit may have declined as corporates raise capital directly through bonds and IPOs. Weak demand for bank loans may also reflect the weaker economic performance of small and medium sized enterprises.

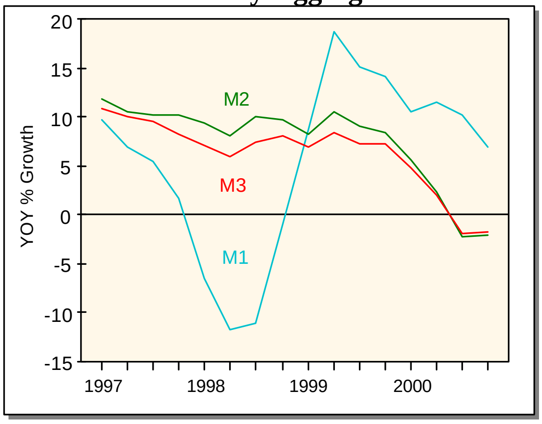
The discrepancy between real activity and loans growth could reflect the fact that an increasing number of local corporates have been turning to the capital market as a source of funding, given the record number of IPOs launched last year as well as the sharp rise in corporate bond issues. In addition, most of the stellar growth recorded last year, especially for the manufacturing sector, was concentrated in the large MNCs, which usually have their own internal sources of funding. In contrast, the small and medium sized local enterprises, which rely more heavily on domestic sources of financing, have not performed as well. This trend was reflected in the results of a recent survey conducted by NUS' Centre for Business Research and Development (CBRD) and the Business Times. The survey saw a greater proportion of firms anticipating poorer business conditions in H1 2001, with small and local enterprises worst-hit by the downturn in sales and profits, especially in the final quarter of 2000.

MONETARY AGGREGATES

M1 continues to growth strongly while the broader monetary aggregates, M2 and M3, saw smaller contractions.

The narrow measure of money supply, M1, which is most closely related to economic activity, recorded strong growth of around 7% in 2000. In contrast, broad money measures, M2 and M3, have posted negative growth since August last year, reflecting contractions in fixed and savings deposits. More recently, however, the decline in broad monetary aggregates has moderated in 2001, in line with the smaller contractions recorded by both fixed and savings deposits. (Chart 2.19)

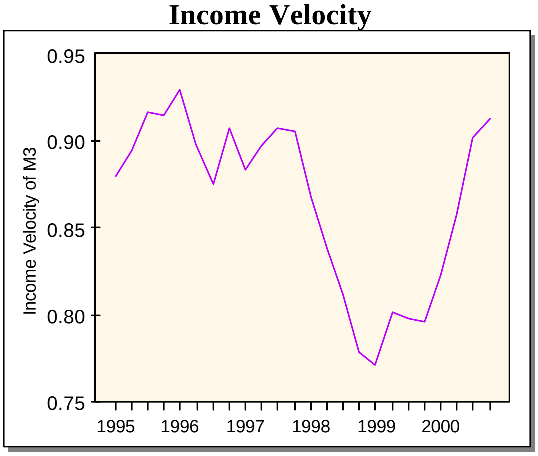
Chart 2.19
Monetary Aggregates



The decline in broad monetary aggregates likely reflects a shift out of savings and time deposits into other investment products.

The decline in broad monetary aggregates throughout the latter part of 2000 does not indicate a tightening of monetary conditions in Singapore, which have remained largely neutral since mid-1999. Instead, the contraction in M2 and M3 amidst a low interest rate environment could be attributed in part to the shift in funds from fixed and savings deposits which had grown during 1998-99 to non-deposit investments such as unit trusts, and the popularity of investment-linked insurance products. From an alternative perspective, this trend may reflect the increasing efficiency with which money is used. Given the rise in the level of income and the absence of deflationary pressures in 2000, the decline in monetary aggregates may result from an increase in the turnover of money for a given level of national income, or the income velocity of money. Indeed, we observe that the velocity of money has risen steadily over the past year (from 0.82 in March 2000 to 0.91 in December 2000). One reason for this increase in efficiency could be the greater prevalence of electronic or cashless payments. (Chart 2.20)

Chart 2.20
Income Velocity



3 Wage-Price Dynamics in the Singapore Economy

CPI INFLATION PICKED-UP DURING 2000

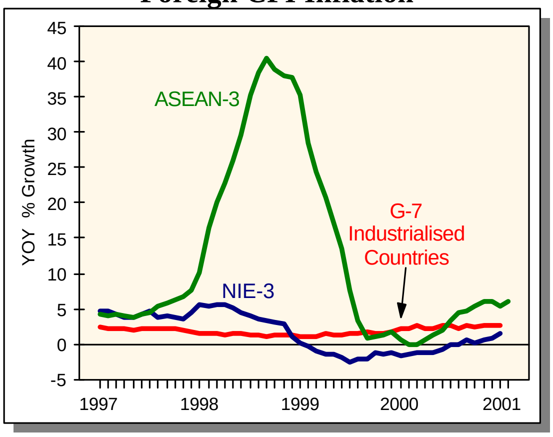
CPI inflation in Singapore trended upwards in 2000, to average 1.3%, compared to 0% the year before. The higher CPI inflation was largely due to the surge in oil prices, although domestic inflationary pressures also rose, in line with a tightening labour market and the recovery in domestic demand.

3.1 External Inflation

SOME RISE IN GLOBAL INFLATION DUE TO SPIKE IN OIL PRICES

Inflation in Singapore's main trading partners rose steadily throughout 2000, from 1.2% in Q1 to 2.6% in Q4[11], largely on account of the sharp increase in commodity prices. Headline CPI inflation in many of Singapore's key trading partners had picked up since the second half of 2000, as the effects of the global oil price shock filtered into higher domestic costs. While the core inflation measures in the industrial countries remained largely subdued, demand-side induced price pressures in the Asian countries were evident amidst a strengthening in domestic spending. (Chart 3.1)

Chart 3.1
Foreign CPI Inflation



* ASEAN-3 refers to Malaysia, Indonesia and Thailand

Inflation in G7 countries was subdued reflecting rising productivity growth and central bank vigilance.

Inflation in the G7 countries was well-contained despite strengthening growth in the first three quarters of the year and higher oil prices, mainly reflecting rising productivity growth and central bank vigilance against any resurgence in inflation. US inflation remained fairly benign throughout 2000, averaging 3.4%. Although there was a pick-up in January's inflation rate, the increase was widely assessed to be an aberration rather than signaling an uptrend in prices. Other G7 countries

[11] Inflation in Singapore's main trading partners is calculated as a weighted average of CPI inflation in these countries.

also enjoyed relatively low inflation rates, averaging about 1.9% in 2000, with Japan still experiencing some deflationary pressures. These benign inflationary trends are likely to continue into 2001, due to weaker demand growth, and the receding impact of higher oil prices.

Weaker currencies in some Asian economies may drive inflation higher.

Inflationary pressures emerged in a number of the Asian countries last year, reflecting spiralling energy prices, strengthening domestic demand, as well as the weakness in currencies. The latter has raised concerns that imported inflation might adversely affect these countries' inflation outcomes in 2001.

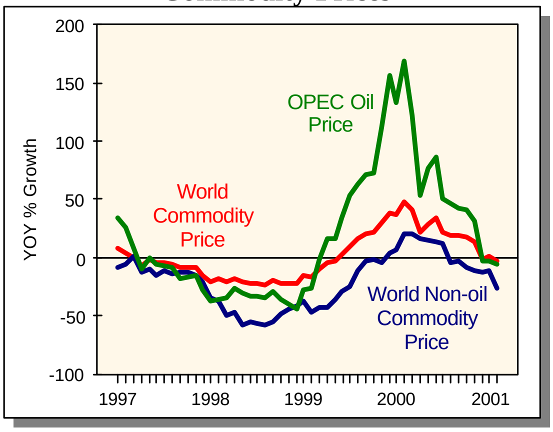
Although CPI inflation in Korea last year remained modest by pre-crisis standards, at an average 2.3%, a sharp depreciation of the Won since mid-September has led to higher prices of imported raw materials, capital goods and consumer products. Reflecting the persistently weak Rupiah, consumer prices in Indonesia also rose during the course of the year to average increases of 7.3% in H2, compared with 0.3% in H1.

In Thailand and Malaysia, consumer prices rose from their levels in 1999, though inflation still remained relatively benign in 2000 at just below 2%, reflecting in part the prevalence of excess capacity in some sectors of the economy. These moderate upward trends in price pressures are likely to continue into 2001, reflecting the lagged effects of higher fuel prices.

COMMODITY PRICES ROSE SHARPLY IN H1

World commodity prices increased sharply in the first half of 2000, largely due to the effects of the spike in crude oil prices, as well as some modest increases in non-oil commodities. Since Q3 2000, however, price increases slowed down substantially, underpinned by the moderation in oil prices and falling prices of a number of non-oil commodities, including coffee, rice and palm oil. Sugar prices, on the other hand, had continued to soar due to weather-related problems in the major producing countries. (Chart 3.2)

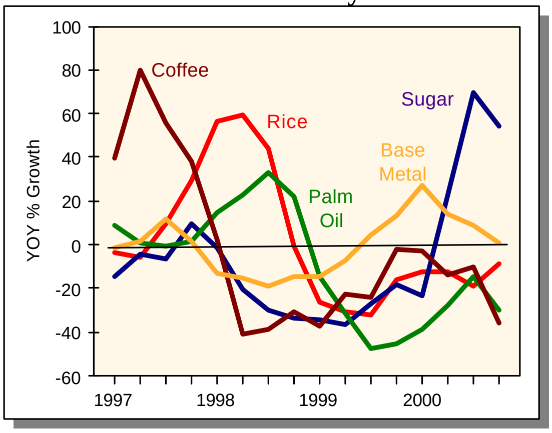
Chart 3.2
Commodity Prices



Oil prices began to decline in late 2000 while other non-oil commodity prices remained subdued.

Oil prices started to ease towards the close of 2000 and into early 2001, following several increases in output by OPEC and weaker demand from the slowing global economy. Although oil prices have recovered slightly in recent months, due to some pull-back in output by OPEC in February, they are likely to remain well below last year's highs. Most analysts are forecasting oil prices to average around US$25 per barrel. With the exception of metals, prices of major non-oil commodities declined in 2000, reflecting abundant production and ample consumer stocks of some soft commodities such as coffee, rice, and palm oil. Prices of metals also saw a significant moderation in recent months, on the back of the slowdown in world demand for industrial production. Nonetheless, prices of soft commodities may find some support in the near future. Malaysia, for instance, has recently taken some measures to ease the supply glut of palm oil[12]. Moreover, leading coffee producers have proposed an export retention plan with the aim of pushing up coffee prices. (Chart 3.3)

Chart 3.3
Non-Oil Commodity Prices



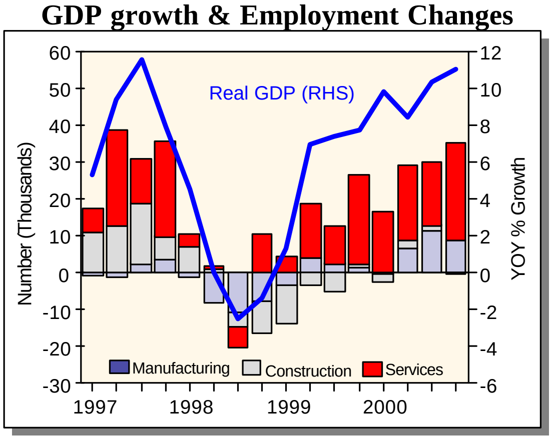
3.2 Domestic Price Pressures

STRONG UPWARD PRESSURES IN THE LABOUR MARKET, BUT SOME SIGNS OF EASING IN Q4

On the domestic front, the labour market tightened considerably in 2000, as reflected in the falling unemployment rate and robust wage growth. Towards the end of the year, however, demand for labour began to ease somewhat as business prospects became less rosy with the deterioration in the outlook for external economies.

Employment creation rose strongly in 2000. A total of 108,500 jobs were added, up markedly from the previous year. (Chart 3.4) This reflected continued strong employment creation in the services sector, a sharp pick-up in manufacturing employment and a turnaround in construction employment.

Chart 3.4
GDP growth & Employment Changes



As in previous years, the services sector was the largest employment generator, accounting for almost three quarters of the total net job gains in 2000. Within the services sector, the financial & business services industry recorded the largest increase in employment, followed by the community, social & personal services industry. In the manufacturing sector, employment picked up strongly from Q2 2000, to post a five-fold increase from

[12] These have included a replanting program as well as the conversion of excess crude palm oil into bio-diesel oil, a kind of industrial fuel.

1999 for the year as a whole. This reflected strong employment gains in the electronics industry, on the back of the global electronics upturn. After two years of decline, construction employment turned around in Q2 2000, to register modest net job gains in 2000.

In line with the strong employment creation, the unemployment rate came in at an average of 3.1% in 2000, down from 3.5% the year before. However, these figures mask a slight uptick in the seasonally adjusted unemployment rate in Q4, following seven quarters of trend decline.[13]

The seasonally adjusted unemployment rate edged upwards to 2.8% in Q4, in line with some weakening in demand for labour, particularly in the manufacturing sector.

The small increase in the seasonally adjusted unemployment rate reflected a softening of labour demand towards the close of the year. Recruitment rates, which had been trending steadily upwards since the beginning of 1999 to pre-crisis rates, fell sharply in Q4. At the same time, job vacancy rates declined significantly. Labour demand in the manufacturing sector, Singapore's most externally oriented sector, was the worst affected. (Charts 3.5 and 3.6)

Growth in average nominal earnings, however, strengthened further in Q4, bringing the full-year growth rate to 8.9%. The strong Q4 growth mainly reflected a surge of over 20% in wages in the community, social and personal services (CSP) industry. In particular, civil servants, who make up a considerable proportion of the CSP industry, received higher year-end bonuses in 2000 compared with 1999.[14] Q4 nominal earnings growth in other major industries, on the other hand, either declined or rose at a more moderate pace. (Chart 3.7)

Unit labour costs declined slightly, as the impact of fairly strong productivity gains more than offset the effects of robust wage growth and the restoration in the employers' CPF contribution rate.

At the same time, productivity growth has continued to moderate from its cyclical peak in Q2 1999, bringing

[13] The dip in the seasonally adjusted unemployment rate in December 1999 reflected a higher-than-usual increase in employment towards the end of the year due to the Millennium celebrations.

[14] Civil servants received a 2¼ month year-end bonus in 2000, up from 1¾ month in the previous year.

Chart 3.5
Recruitment Rate (SA) by Sector

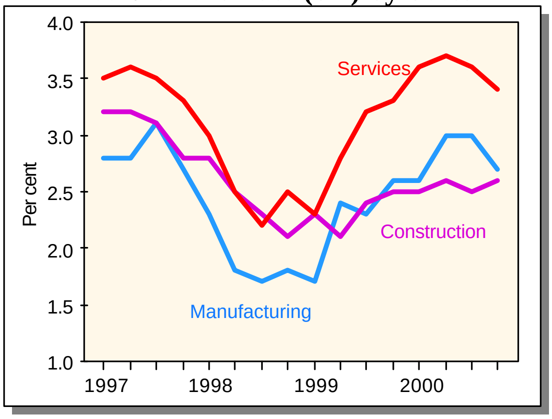


Chart 3.6
Job Vacancy Rate (SA) by Sector

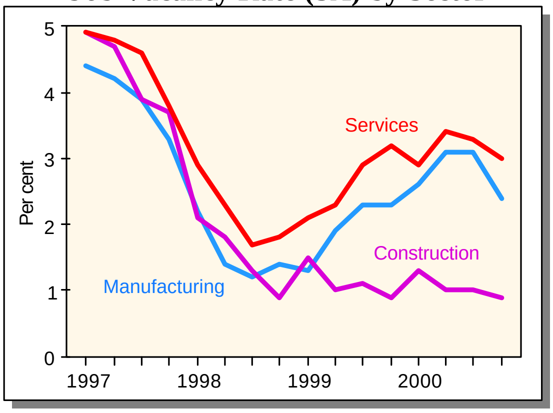
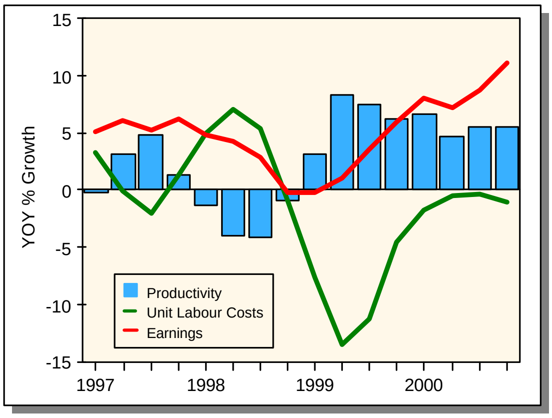


Chart 3.7
Earnings, Productivity
& Unit Labour Costs



productivity growth for the year as a whole to 5.6%. While this is weaker than that recorded in 1999, it remains higher than the historical average of around 4%. The relatively strong gains in productivity helped to cap unit labour costs, which moderated slightly in spite of rapid growth in nominal earnings and a two percentage point hike in the employers' CPF contribution rate in April 2000.

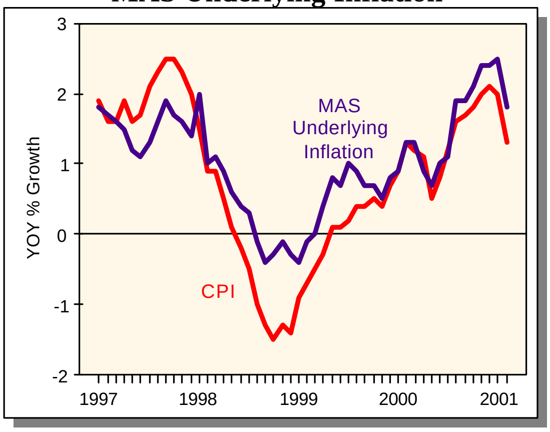
The decline in unit labour costs moderated the impact of rising import prices, which is estimated to have contributed just over two percentage points to CPI inflation in 2000. (Box Item 3.1 provides some empirical evidence on the nature of the inflation dynamics in Singapore over the period 1985 to 2000.)

3.3 CPI Inflation in Singapore

CPI INFLATION ROSE STEADILY

Against the backdrop of rising external inflationary pressures, and the tightening in factor markets due to the exceptionally strong pace of economic growth, CPI inflation in Singapore rose steadily from about 1.0% in the first half of 2000, to 1.5% in Q3, before reaching a peak of 2.0% in Q4. This brought overall inflation to 1.3% for 2000 as a whole. The easing of commodity prices in recent months, and some slowdown in the economy, has brought inflation down to slightly below 2.0% in the early part of 2001, unchanged from the last quarter of 2000. The domestic underlying price level, measured by the MAS underlying inflation[15], had also risen from 1.2% in Q1-Q3 to 2.3% in the last quarter of the year. (Chart 3.8) All other measures of core inflation, which exclude components that exhibit excessive price volatility from the CPI basket, also registered increases ranging from 0.4-0.9% in 2000[16]. (Chart 3.9)

Chart 3.8
Overall CPI and
MAS Underlying Inflation



---

15 MAS underlying inflation was slightly higher than overall CPI inflation in 2000 due to the exclusion of accommodation costs, which have been on a decline throughout most of the year.

16 These measures include the volatility-adjusted inflation (which exclude items that exhibit volatile price inflation); the median inflation (which refers to the 50th percentile inflation rate at which half the components in the CPI basket have higher inflation and the other half lower); and the 30%-trimmed mean (which is calculated after removing 15% each of the components with smallest and largest inflation rates).

Box Item 3.1: Modelling Inflation Dynamics in Singapore

The cost mark-up model, which expresses consumer prices as a mark-up over production costs, is a well-known framework used for studies on inflationary pressures in an economy. Employing this model, we attempt to characterise the inflation process in Singapore in the past fifteen years or so, with the objective of isolating the separate influences of domestic and external factors on price pressures.

Our model specification, which follows broadly the framework of de Brouwer and Ericsson (1995)[1], expresses Singapore's CPI as a mark-up over domestic unit labour cost (ULC) and Singapore dollar-denominated import prices (IMP) i.e.

$$CPI = \alpha\,(ULC)^{\beta}\,(IMP)^{\gamma}$$

where (α-1), β and γ are the retail mark-up over costs and elasticities of the CPI with respect to ULC and IMP, respectively.

Based on the 1993 input-output tables, ULC accounts for about 46% of unit business costs faced by manufacturing firms. This share has declined slightly over the years, from 49% in 1988, reflecting the shift towards higher value-added, more knowledge- and capital-intensive industries, which have reduced reliance on labour as input into production. The importance of IMP in the domestic inflationary process reflects the high import dependence of the economy. The table below summarises the 1990 input-output table estimates of the import leakage of various expenditure items. On average, Singapore's spending on imports amounts to about one and a half times its GDP.

Table A
Import per Dollar of Final Expenditure

Total	**0.54**
Domestic Consumption (1+2+3)	0.46
1. Consumption (A+B)	0.33
A. Private	0.34
B. Government	0.30
2. Gross Fixed Capital Formation	0.63
3. Change in Stocks	0.84
Exports	0.60
Manufacturing	0.69
Petroleum	0.90
Non-oil	0.62
Services	0.29

Chart A
CPI, ULC (SA) and IMP

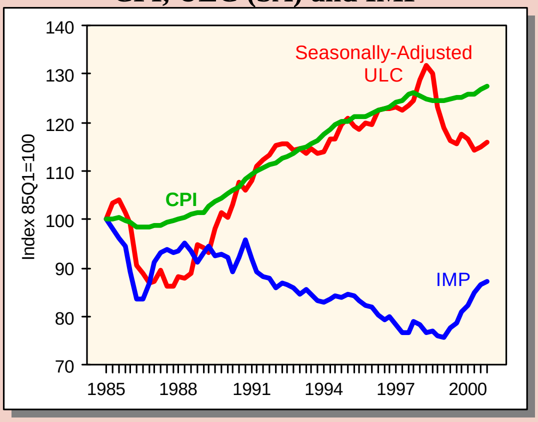


Chart A illustrates the movement of the CPI, (seasonally-adjusted) ULC and IMP from 1985 to 2000. For most of the period shown, the CPI followed the general movements of the ULC, although the rate of increase was less, due to the dampening effect of the falling IMP series. However, during the recent period over 1999-2000, the sharp rise in the IMP, due primarily to escalating world oil prices, was partly offset by the decline in the ULC, which helped to cap overall increases in the CPI.

Using quarterly data from Q1 1985 to Q4 2000, we estimated, using non-linear least squares, an error-correction model (ECM), which nests the above mark-up model in a specification that allows for short-run dynamics. The ECM specifies that changes in the CPI is affected by the deviation of the CPI from its long-run equilibrium value, as determined by the cost mark-up model, and changes in the CPI, ULC and IMP in the previous few quarters. The lag terms of changes in the CPI, ULC and IMP were chosen using the general to specific modelling approach. Prior to that, we had conducted standard pre-requisite tests, which found all three series (logs of) CPI, ULC and IMP to be integrated of order one and co-integrated. The estimated equation is given below.

Three dummy variables have been included to account for seasonality and the implementation of the Goods & Services Tax in 1994 and Vehicle Quota System (which requires the purchase of a licence called the Certificate of Entitlement (COE) before a car can be bought) since 1990, respectively. In addition, we imposed the assumption of unit homogeneity in prices, which requires the elasticities of the CPI with respect to ULC and IMP, β and γ, to sum to one. Diagnostic test results show that all key variables included in the error-correction model are statistically significant and the corresponding residuals are normally distributed, with neither serial correlation nor heteroscedasticity. The assumption of unit price homogeneity also could not be rejected.

Table B
Estimation and Test Results

Variable	Coeff.	Std. Err.	t-stat.	Prob.		
error-correction term	-0.085	0.017	-5.135	0.000		
log(IMP(-1)), *within error-correction*	-0.469	0.071	-6.619	0.000		
log(ULC(-1)), *within error-correction*	-0.531	*	*	*		
constant, *within error-correction*	0.154	0.022	7.041	0.000		
dlog(CPI(-1))	0.293	0.120	2.447	0.019		
dlog(CPI(-7))	-0.417	0.118	-3.548	0.001		
dlog(IMP(-2))	-0.044	0.024	-1.828	0.075		
dlog(IMP(-4))	-0.049	0.024	-2.045	0.047		
dlog(IMP(-6))	0.046	0.020	2.333	0.025		
dlog(IMP(-8))	0.030	0.019	1.569	0.124		
dlog(ULC(-1))	-0.062	0.014	-4.478	0.000	R-squared	0.682
dlog(ULC(-3))	-0.058	0.018	-3.152	0.003	adjusted R-squared	0.570
dlog(ULC(-7))	-0.040	0.014	-2.829	0.007	Jarque-Bera Normality test (prob)	0.718
seasonal dummy	0.018	0.004	4.323	0.000	Serial Correlation LM test (prob)	0.819
GST dummy	0.004	0.002	2.389	0.022	White's Hetero test (prob)	0.133
VQS dummy	0.007	0.002	3.804	0.000	Price Homogeneity test (prob)	0.687

* coefficient imposed for homogeneity constraint

On average, the long-run coefficients show that a 1% increase in ULC leads to a 0.53% increase in the CPI. These results indicate a greater weight on the ULC in determining domestic inflation outcomes than those obtained in previous studies. The increased weight on ULC could reflect the rising share of services items - which are typically characterised by higher labour intensity - in the CPI basket, from 39% in 1987-88 to 44% in 1992-93 and 49% in 1997-98.

Chart B
Response of CPI to a shock in ULC and IMP

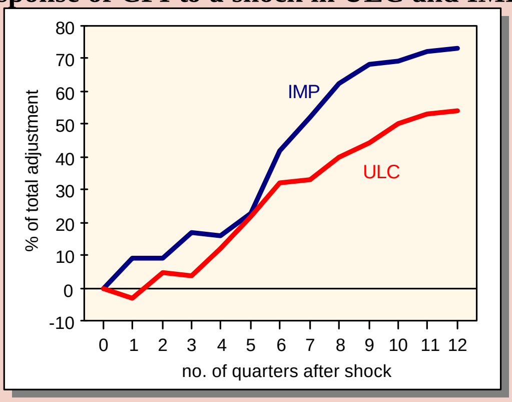
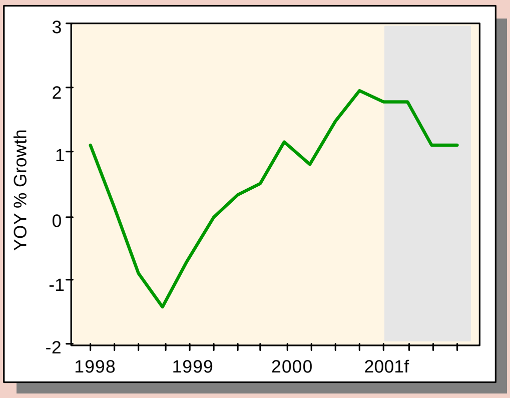


Chart C
CPI inflation*



* forecast produced by ECM model

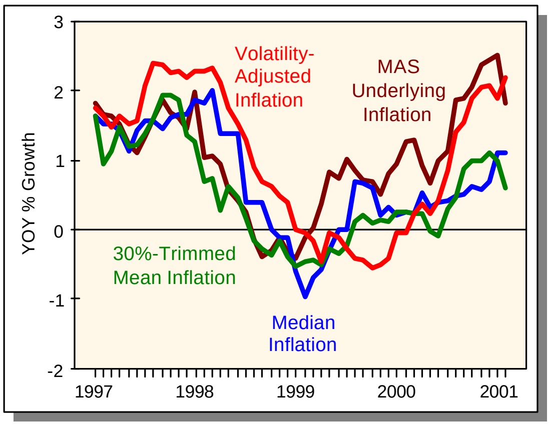
We can also analyse the time taken for changes in the ULC and IMP to pass through to the CPI, by expressing the error-correction model in a general auto-regressive distributed lag form. Chart B shows the adjustments in the CPI, to a 1% increase in each of the ULC and IMP, to be drawn-out processes. After one-year, the CPI has completed less than 20% of the adjustment given the shock in the values for both the ULC and IMP; after two years, the percentage of adjustment completed rose to around 40% for ULC and 60% for IMP. Thus, changes in the ULC, as compared to the IMP, take a longer time to show up in the CPI.

Chart C shows the forecasts (highlighted region) produced by this error-correction model, which are close to those obtained using our other forecasting tools. This year, inflation is forecast at 1-2%, with higher inflation expected in H1 than in H2. (See also Chapter 4 of this paper for further details on the inflation outlook.)

[1] de Brouwer and Ericsson (1995), "Modelling Inflation in Australia", Research Discussion Paper 9510, Economic Analysis and Economic Research Departments, Reserve Bank of Australia.

The rise in CPI inflation in 2000 was driven by three main factors. First, the one-off increases in oil prices and administrative charges had passed through the system, accounting for more than three-quarters of the increase in last year's CPI[17]. Second, the prices of a number of the consumer goods and services, which had been relatively stable or declined during the period of the Asian crisis, began to see some increases during 2000. These included healthcare services, education, and some retail goods and services. Third, the inflationary pressures from the previous two factors were partially offset by the fall in prices of several consumer items, reflecting ongoing structural changes in specific sectors of the domestic economy.

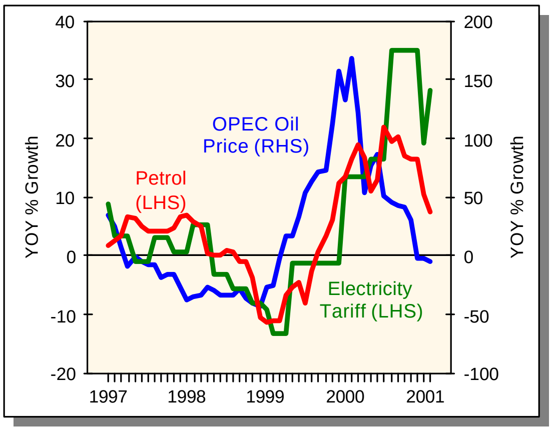
Chart 3.9
Measures of Core Inflation



The uptrend in CPI inflation was mainly due to higher oil prices and hikes in several administrative charges.

The increase in overall CPI inflation in 2000 largely reflected the one-off effects of the oil price shock and hikes in several administrative charges. (Chart 3.10) The surge in oil prices had resulted in double-digit year-on-year increases for both petrol and electricity tariffs, which were adjusted upwards five and three times respectively throughout last year. Nonetheless, there was a cut in local retail petrol prices at end-December in view of the easing of world oil prices as the effects of four output production increases by OPEC set in. Electricity tariffs were raised again in February this year, largely reflecting the time lag between changes in oil prices and tariff revisions by Singapore Power.

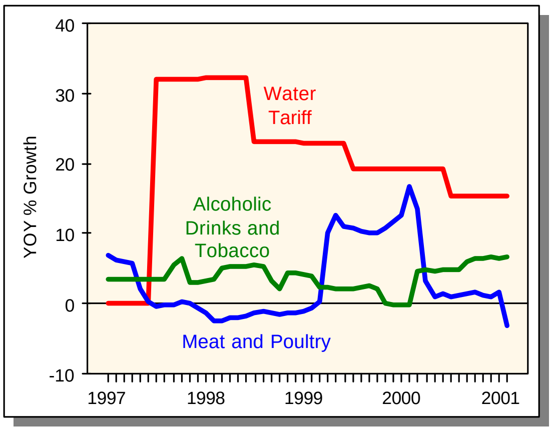
Chart 3.10
OPEC Oil Prices and Selected CPI Inflation



[17] Of the 1.3% increase in CPI last year, it was estimated that 0.7% points could be attributed to the oil price shock (via increases in petrol prices and electricity tariffs), and 0.3% points to increases in administrative charges.

Adjustments in administrative charges also impacted the prices of meat, tobacco and water in 2000. (Chart 3.11) The mandatory installation of the cold-chain system imposed by the government following the outbreak of pig-related diseases in April 1999, had translated into higher operating costs among meat sellers. In addition, the ban on live pigs from Malaysia, which had previously been our largest source of pork, resulted in a switch towards imports of more expensive processed pork from Australia and the United States. Other administrative charges that contributed to higher CPI in 2000 included the hike in excise duty on tobacco in March, while water charges were raised in July as part of a four-year plan (1997-2000) to promote water conservation.

Chart 3.11
Selected CPI Inflation

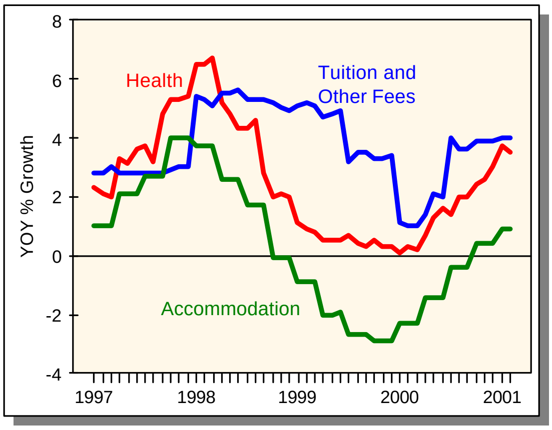


However, these one-off price increases do not necessarily reflect the underlying inflationary pressures emerging from the cyclical tightness in the economy, and are unlikely to contribute to further increases in the general price level beyond their first-round impact.

Prices of consumer items such as healthcare, education and accommodation rose somewhat in 2000, after remaining stable or declining previously.

The cost of healthcare, education, and accommodation rose in 2000, following previously stable or declining prices. (Chart 3.12) The cost of healthcare services has risen significantly, especially since the second half of 2000, partly reflecting the trend of rising labour cost in the industry, as well as increased demand for such services. Remuneration costs, which account for almost half of the total operating expenditure of health institutions[18], had risen significantly. In particular, remuneration costs increased sharply since July last year, when pay in the public sector was raised by an average of 22%. This was part of the government's effort to stem the exodus of public sector doctors to the private sector. The rising trend in demand for medical services has been underpinned by Singapore's ageing population, greater health-consciousness among Singaporeans[19], and the availability of new medical techniques and procedures which allow earlier detection of diseases and their treatment.

Chart 3.12
Selected CPI Inflation



[18] According the Department of Statistics' 1998 annual survey of the 'Community, Social and Personal Services' sector.

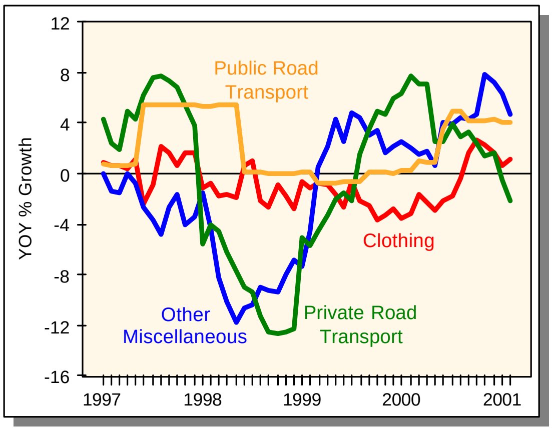
[19] According to the Yearbook of Statistics 2000, attendance at specialist outpatient clinics in the public sector increased by over 230,000 from 1998 to 1999, almost double the increase from 1990 to 1991 of 120,000.

Although local university tuition fees were frozen for the past two years, as part the government's cost-cutting package of measures, there was an upward adjustment in overseas university tuition fees in July last year. This had fed into higher education costs, of 3.8% in H2 2000, compared with 1.4% in the first half of the year. In addition, higher training costs and wages for teachers in childcare centres had also translated into higher fees for kindergarten and nursery classes in early 2001.

Accommodation costs, which had been on a decline in the past two years, also turned around in the last quarter of 2000, reflecting the recovery in the private residential property prices last year (at least till Q3 2000).

There was an uptick in clothing inflation in the last quarter of the year, largely due to stronger demand in the retail sector, underpinned by the healthy performance of the economy. However, in general, competitive pressures in the retail sector have remained intense, and contributed to lower prices of most other retail items such as household goods (both durables and non-durables), clothing and footwear, as well as personal effects (e.g. leather handbags and watches). In addition, the cost of 'other miscellaneous' items, which comprises mainly holiday and tour packages, also contributed to the higher overall CPI, reflecting increasing demand for such services in recent years. (Chart 3.13)

Chart 3.13
Selected CPI Inflation

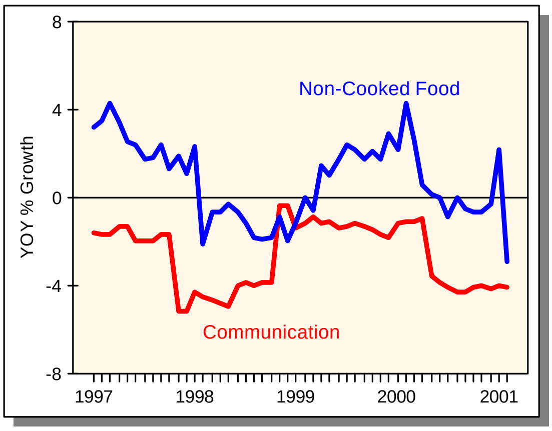


Structural changes in several sectors led to lower prices in some consumer items.

A number of structural changes in the economy had affected consumer prices in 2000. The telecommunications industry, for example, was opened to full competition in April 2000, with the entrance of a new player Starhub. Communication costs have been on a trend decline, particularly in IDD rates, since the introduction of the budget and Internet-based telephone services in the second half of 2000. This has resulted in outgoing IDD rates falling by up to 80%[20].

The food industry had also benefited from better cost management by supermarkets recently, with active sourcing of lower-cost supplies, including from non-traditional markets like Latin America, South Asia and Africa. This had helped to rein in overall food inflation, particularly that of non-cooked food. (Chart 3.14)

Chart 3.14
Selected CPI Inflation



[20] According to a recent report, 'Counting the Numbers' by Indosuez W.I. Carr Securities in January 2001.

On balance, however, the effects of the oil price increase, and increasing cost pressures in some of the services sector, including health and education, dominated the inflation dynamics in the Singapore economy, leading to a moderately rising trend in the headline CPI inflation rate in 2000. Our policy stance of allowing a gradual, modest appreciation of the Singapore dollar on a trade-weighted basis ensured that the temporary factors in 2000 only had a "once-off" effect on the price level and would not be entrenched in the ongoing inflation rate.

4 Outlook

4.1 External Outlook

WORLD ECONOMY SET TO SLOW

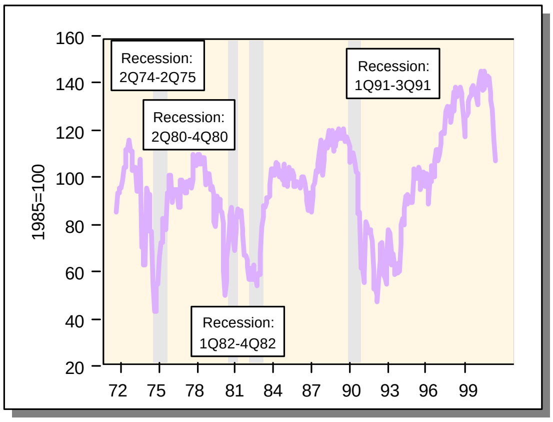
After recording one of the fastest growth rates in the past 20 years in 2000, the world economy is set to slow this year. Of the three major blocs, ie. the US, Japan and the Euro zone, two are expected to witness slower growth. The US slowdown is already evident and is unlikely to turn around until the second half of this year, while Japan's investment-led growth in 2000 also appears unlikely to be sustained given sharp profit downgrades and a reduction in machinery orders. The Euro zone is the only bright spot and will provide some cushion to the global economic downswing. In the region, growth has fallen off while concerns over the pace of reforms and political uncertainty continued to delay much needed investments. However, the benign inflationary climate has allowed regional central banks to adopt an easier monetary policy stance, thus providing for some support to domestic spending this year.

The second half of the year could see a recovery in the US economy if consumer sentiment holds up, and if falling equity prices can be reined in.

The US economy is expected to remain relatively weak in the first half of 2001, but to rebound in the second half. This is based on expectations that consumer spending will hold up. While the consumer confidence index has been falling, it is nowhere near the level that historically triggered a recession, although this may all change if equity prices continue to fall. (Chart 4.1) Nonetheless, both the labour and housing markets remained strong, providing some support to households' permanent income and net wealth. Also, with more policy options available, both monetary and fiscal (Greenspan and Congress seem quite ready to act swiftly), the downside risk can be contained.

However, it may take some time before business investment picks up. Investment in IT, in particular, enjoyed a boom in the 1990s, with its share of GDP rising from 2% in 1992 to 6% in 1999. Following weaker sales and profit forecasts, firms are now left with surplus capacity and have begun to scale back their IT

Chart 4.1
US Consumer Confidence Index



spending. Investments are expected to rebound later in the cycle, after the economic recovery has cleared the existing surplus capacity.

Downside risk will plague the Japanese economy as investment-led growth diminishes and domestic demand plummets.

In Japan, the investment-led growth in the past one year is unlikely to be sustained into 2001, given the recent spate of profit downgrades from major Japanese firms and the sharp slowdown in machinery orders. Overall corporate profit growth in Japan is projected at about half the level of 2000, with risks biased toward the downside. Growth of machinery orders had fallen from 30% in June 2000 to –1% in January this year. Private consumption is expected to remain flat in 2001 as corporate bankruptcy continues to rise and the unemployment rate remains at a record high. In an early sign that domestic demand may be slowing sharply, imports fell 5.1% on a month-on-month (MOM) seasonally-adjusted annualised rate (SAAR) basis in February while exports grew 6.9% MOM SAAR, resulting in a larger trade surplus. Businesses have been buying less raw materials and capital goods in line with the cut in production. This is consistent with the latest reading of the all-industry index, which declined 1.8% MOM in January.

Growth in the Euro zone economies may surpass that of the US, thanks to resilient domestic demand, structural reforms, and accommodative macroeconomic policies.

The Euro zone economies will be an important source of support for global growth in 2001. It is expected to slow just a shade compared to last year and outpace that of the US for the first time since 1991. Growth will be supported broadly by four factors. First, domestic demand, which accounts for over 70% of total demand, is likely to remain relatively resilient. Exposure to the slowdown of the US economy is limited as about three-quarters of exports comprises intra-Europe trade. Second, structural reforms resulting in privatisation and deregulation have helped to energise businesses and have made the Euro zone more dynamic and competitive. Third, monetary policy is likely to be eased over the course of the year due to expectations of more sanguine inflation risks. Fourth, fiscal policy is expected to be broadly stimulative to growth, especially with the tax cuts to be introduced in Germany and France.

East Asia is expected to come off the highs it posted last year, given its high exposure to the weakening US market and electronics industry.

After a sterling performance in 2000, the East Asian economies are set to slow this year. On the external front, the high exposure to the US market and electronics industry, which accounts for 22% and 34% respectively of East Asia's total exports, will make the region vulnerable. Except possibly for China, the rest of the region is also likely to face weaker domestic demand. Household spending is anticipated to be adversely affected by the sharp fall in equity prices and uncertainty in the labour market. Long-term business investments are expected to be put on hold until the political situations in some of the regional countries are clearer and the corporate reform processes are more deeply entrenched. (Chart 4.2) The exception again is China, which has already attracted significant capital inflows ahead of its impending entry into the WTO. The regional governments may continue to resort to easier fiscal policy to stimulate growth. (Chart 4.3) Nonetheless, the high level of debt, including the cost of cleaning up the financial sector, has already imposed a heavy burden on the public sector and thus the scope for huge pump-priming packages will be constrained.

Chart 4.2
Approved Foreign Direct Investment in East Asia

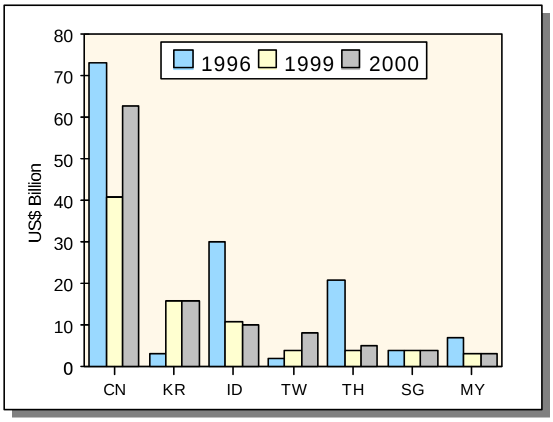
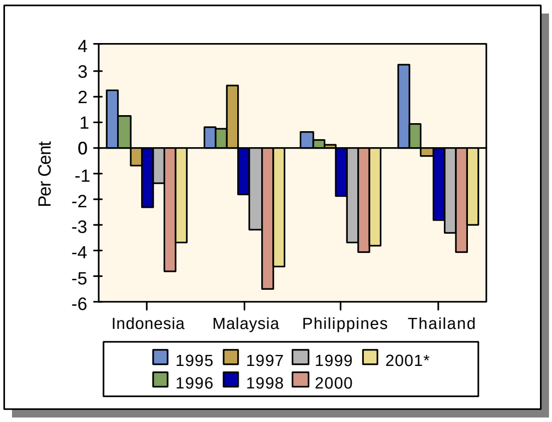


Chart 4.3
Fiscal Balance as % of GDP for ASEAN-4 Countries



* government projections

4.2 Domestic Output

GDP GROWTH TO MODERATE

GDP growth is expected to weaken in the quarters ahead, in view of the weaker external environment.

GDP growth in the Singapore economy is expected to come off its cyclical high and weaken in the quarters ahead. In the last few months, the US economy has slowed sharply, precipitating steep corrections in the US stock market. The global electronics downturn has also deepened, and more quickly than expected. It is not clear how soon things will rebound. There is a possibility that the weakness in the US economy and the electronics industry may persist into H2 2001, and this would adversely affect Singapore's economic outlook.

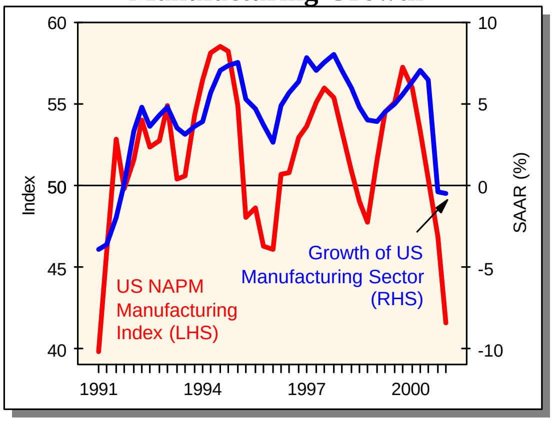
In view of the sharp deterioration in external conditions, the MAS Forecasters have shaved down their expectations of Singapore's GDP growth this year, with the median forecast reduced to 5% in the March 2001 Survey. The government is currently revising the 5-7% GDP growth forecast for this year, and the Ministry of Trade and Industry (MTI) will be releasing the revised forecast soon.

DECLINE IN DOMESTIC ELECTRONICS OUTPUT GROWTH

The backdrop of a slowdown in the US economy and weakening global electronics demand will put a damper on the performance of the domestic manufacturing sector this year.

The US National Association of Purchasing Managers (NAPM) manufacturing index fell to 41.2 and 41.9 in January and February 2001 respectively[21], amidst more news of retrenchments by US manufacturing firms. (Chart 4.4) The manufacturing index of production had also been contracting (on a MOM SAAR basis) for four consecutive months. Even if the US economy should start recovering this year, there could be some lag before this translates into improved output and export performance in the domestic manufacturing sector. In particular, the outlook for the global electronics industry is expected to remain weak in the first half of the year, as it undergoes a period of inventory correction.

Chart 4.4
US NAPM Manufacturing Index & Manufacturing Growth



The electronics industry may well see an upturn later in the year, augmented by replacement spending as well as support from new end-market technology developments.

Several factors point to some recovery in the electronics industry later this year. First, corporate computer demand, which typically has a three-year replacement cycle, should be up for replacement in the later part of this year and early next year. Second, demand in H2 2001 could also receive some support from new technology developments in end markets such as Internet infrastructure, wireless communication equipment and digital consumer applications.

In addition, with the global electronics industry now more responsive to changes in demand, the downturn could also reverse sooner, as inventory is cleared at a faster rate. Indeed, the correction appeared to be much sharper than previous downturns in 1996 and 1998. The

21 A reading below 50 indicates that the sector is contracting.

more efficient production-side response reflects some structural changes in the industry. As noted by Alan Greenspan in his testimony to Congress on 13 February 2001, *"new technologies for supply-chain management and flexible manufacturing imply that businesses can perceive imbalances in inventories at a very early state and can cut production promptly in response to the developing signs of unintended inventory building"*.

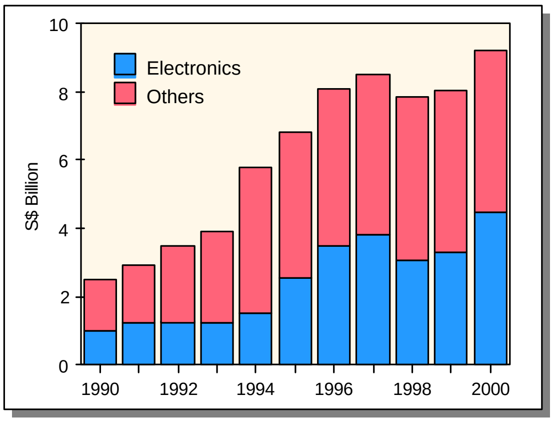
While there are considerable uncertainties to the outlook for the electronics sector, we believe that some of these factors could support a turnaround in the sector from the third quarter of the year, although a sustained strengthening in activity is only expected from Q4 2001 onwards.

Medium to long-term prospects for the domestic electronics sector remain intact.

On the supply side, the weak outlook for the electronics market has resulted in the delay of a number of new plants previously scheduled to commence production in 2001. For instance, Chartered Semiconductor Manufacturing announced on January 29 that the pilot run for its proposed US$2 billion Fab-7 will be delayed for a year from its expected commencement date in mid-2001.

Nevertheless, Singapore remains an attractive location for high-end electronics production and design activity in the region. Investment commitments have remained strong, with $9.2 billion worth of projects committed in 2000. (Chart 4.5) Two wafer fabs, from Chartered Semiconductor and Micron, are expected to commence operations in 2002. There have also been several high value-added investment projects[22] committed in the first quarter of 2001, which will further strengthen the sector when it begins production in 2003/2004.

Chart 4.5
Investment Commitments



22 In January, Taiwan's United Microelectronics Corporation (UMC) announced that it will be investing US$3.6 billion in Singapore for the world's most advanced 12-inch wafer foundry. In addition, Toshiba and Matsushita announced a joint venture to manufacture low temperature polysilicon LCD (liquid crystal display) panels in Singapore.

NON-ELECTRONICS INDUSTRIES TO SUPPORT GROWTH

The overall growth of the manufacturing sector would also receive some support from the chemical cluster, with two major pharmaceutical plants coming onstream in H2 2001.[23] The marine industry should also strengthen further in 2001 given the larger number of contracts awarded to the local shipyards. On balance, the manufacturing sector is expected to experience significantly slower growth this year.

WEAKER MANUFACTURING GROWTH TO SPILL OVER TO SERVICES SECTORS

The slower growth forecast for the manufacturing sector this year is expected to spill over to the other services sectors, especially the transport and commerce sectors. With the softening in global electronics demand and slower regional growth, entrepot trade is expected to moderate sharply, bringing growth in the commerce sector to single digits this year. Visitor arrivals, however, have been forecast by the Singapore Tourism Board (STB) to increase by a further 6-8% this year, to more than 8 million visitors.

The transport & communications sector is also likely to see growth easing this year, due to weakness in the transport sub-sector, as air cargo traffic slows down in line with the moderation in global electronics demand. Sea transport is also likely to achieve more modest growth this year in line with lower regional trade and the decision by Maersk Sealand – which is estimated to account for 10-12% of Port of Singapore Authority's (PSA) throughput – to shift their cargo traffic from PSA to Malaysia's Port of Tanjung Pelepas (PTP).

---

[23] Merck Sharp and Dohme's US$300 million bulk pharmaceutical manufacturing plant is expected to be ready by H2 2001. The plant will produce active ingredients for Singulair, a new medication to control asthma, and Vioxxtm, which is used to treat the signs and symptoms of osteoarthritis and to relieve pain. In addition, Wyeth-Ayerst, a subsidiary of American Home Products Corporation, will be starting up a US$300 million plant to make hormone replacement therapy and infant nutritional formula products for the Asia-Pacific.

4.3 Aggregate Demand

EXTERNAL DEMAND TO WEAKEN BEFORE RECOVERY LATER IN 2001

From an expenditure perspective, external demand for Singapore's goods and services is expected to decline sharply in the first half of the year. However, we expect a recovery in the later part of the year, in line with our projections of a turnaround in global electronics demand.

Dampened consumption sentiments will moderate household spending, though Budget measures will provide some support going forward.

Softer growth in external demand would have a significant impact on economic activity, given the high degree of external orientation of the Singapore economy. The slowdown in economic growth, especially in the early part of the year, would drag down growth in average nominal earnings and dampen consumer sentiments.

Growth in private consumption is expected to almost halve to 4-6%, just slightly below the historical average of 6%. The stimulatory effect of the fiscal boosts from the FY2001 Budget is expected to influence private spending only in the later part of calendar year (CY) 2001. MAS' econometric estimates show that the budget measures would have a negligible effect on private consumption growth in CY2001, but would lift it by 0.5–1.0 percentage points in the following year, as the permanent effects of the cut in marginal tax rates filter through. This reflects the fact that a significant portion of the revenue reduction measures is in the form of transfers that do not directly increase households' disposable income. In addition, households are expected to save some of their income gains arising from the various rebates – such as on income tax and other utilities – given the uncertain prospects for the economy.

But investment spending is expected to hold up this year.

Growth in fixed investment is expected to rise slightly to 6-8%, as indicated by strong net investment data last year.

Moreover, the expected favourable interest rate conditions would be supportive of strengthening investment growth, and in our estimation, offset the negative impact of a cyclical decline in the return on capital services due to slower growth in the economy.

Investment spending will also reap the benefits of the more competitive tax regime envisaged in the recent Budget. Econometric estimates suggest that private non-residential investment will be boosted by 0.2% points in the next two years, as a result of the budgetary measures (including cuts in the personal income, corporate and property tax rates, as well as incentives and rebates) which have the effect of increasing the return on private capital.

BUDGET EXPECTED TO PROVIDE MILD BOOST TO GDP OVER THE NEXT TWO YEARS

Box Item 4.1 summarises some of the key parameters of the recently announced Budget for FY2001. While revenue growth is expected to moderate to about 2.8% (from 8.7% in the previous year), it is expected to outstrip the budgeted increase in total expenditure by about 0.4%. (See footnote 2 in Box Item 4.1.) This would increase the budget surplus by 15.5% to $6.2 billion or an estimated 3.7% of GDP in FY2001. Our estimates from the MMS macroeconometric model show that on balance, the budget is expected to be mildly expansionary over the next two years, boosting real GDP growth by about 0.2% points in calendar year (CY) 2001, and 0.4% points in CY2002. (Table 4.1)

Table 4.1
MMS Simulations of Budget Measures

% point deviation from baseline

	2001	2002
Real GDP	0.2	0.4
Private Consumption	0.1	0.7
Private Investment (Non-Residential)	0.2	0.6

Box Item 4.1: Budget 2001

The government expects to accumulate a surplus of $6.2 billion in FY2001, compared with $5.4 billion in FY2000. (Table A) Operating revenue is estimated to grow by 2.8% in FY2001[1], as tax revenue continues to expand strongly on the back of the sharp pick-up in income and consumption growth last year. Total expenditure is estimated to rise by only 0.4%, although this reflects the effect of the change in classification of budget items, to exclude land reclamation projects from development expenditure[2]. If land-related expenditure were excluded from FY2000, the government's development spending in FY2001 would have recorded an increase of about 14%, boosting total expenditure by about 4.8%.

Several reductions in tax rates were announced in the FY2001 budget. These included the lowering of personal and corporate tax rates which will take effect from Year of Assessment (YA) 2002, a cut in the property tax rate from July 2001, as well as various tax exemption schemes.

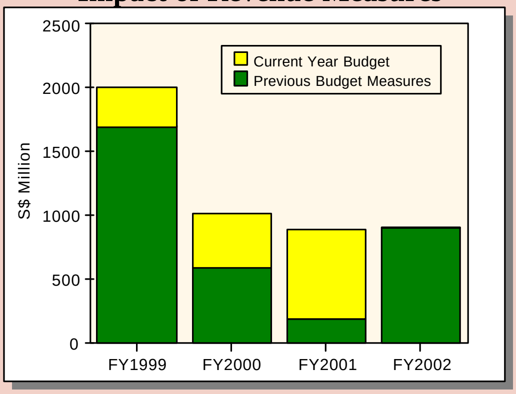
The implications of the new tax changes for revenue collection are shown in Chart A. It distinguishes between the effects of measures announced in each year's current budget (in yellow) as well as the lagged effect of previous years' policy announcement (in green) on government revenue. In FY2001, discretionary changes announced in the recent budget statement are expected to reduce the government's revenue by about $0.9 billion, similar to that in FY2000. Special transfers to various endowment funds and CPF top-ups amount to a further $1.9 billion, thus reducing the government's budget surplus by about $2.9 billion (or an estimated 1.7% of GDP) in FY2001.

Table A
Government Finance

% of GDP in parentheses

	FY1999	FY2000E	FY2001B
Operating Revenue	$30.6 b (20.9)	$33.3 b (20.8)	$34.3 b (20.4)
Total Expenditure	$25.1 b (17.1)	$27.9 b (17.4)	$28.1 b (16.7)
Surplus	$5.6 b (3.8)	$5.4 b (3.4)	$6.2 b (3.7)

Chart A
Impact of Revenue Measures



1 Operating revenue includes the contributions from net investment income in this box item, reflecting the change in budget presentation for Budget 2001.

2 The government has reclassified expenditure on land reclamation projects under land-related expenditure, to be funded by receipts from land sales rather than operating revenue.

4.4 Labour Market

LABOUR DEMAND TO SLOW BUT REMAIN HEALTHY

With economic growth slowing but remaining positive, labour demand is expected to ease somewhat but remain healthy in the quarters ahead. This largely reflects the less sanguine outlook for the manufacturing sector, which accounts for about one-fifth of employment.

Growth in average nominal earnings, which exclude employers' CPF contribution, is projected to moderate to 3-5% in 2001, partly due to a slowdown in GDP growth. The moderation in average nominal earnings growth also reflects the effects of the high base in 2000, when the recovering economy and an optimistic outlook prompted firms to pay out higher increments and bonuses.

While the cyclical component of productivity growth has dissipated, there appears to be signs of a structural improvement in productivity over the past few years, especially in the manufacturing sector. (Chart 4.6 and 4.7) We therefore expect productivity to remain at 3-5% in 2001, which is fairly strong for this stage of the business cycle. The effects of the slowdown in productivity growth and the January hike in the employers' CPF contribution rate is likely to more than offset the moderation in average nominal earnings growth, resulting in a 3-5% increase in unit labour costs, following a slight decline in 2000.

Chart 4.6
Productivity Growth - Overall

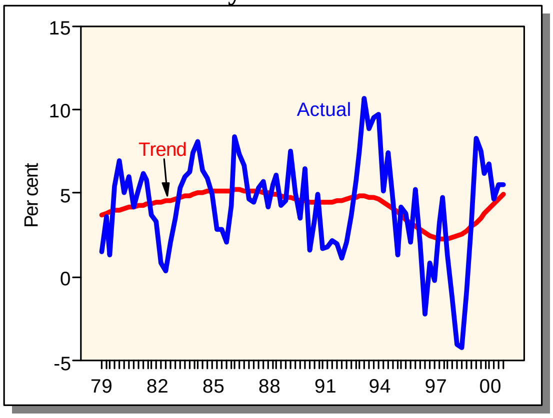
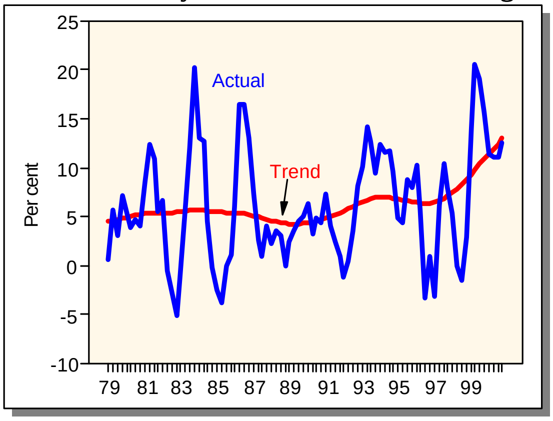


Chart 4.7
Productivity Growth - Manufacturing



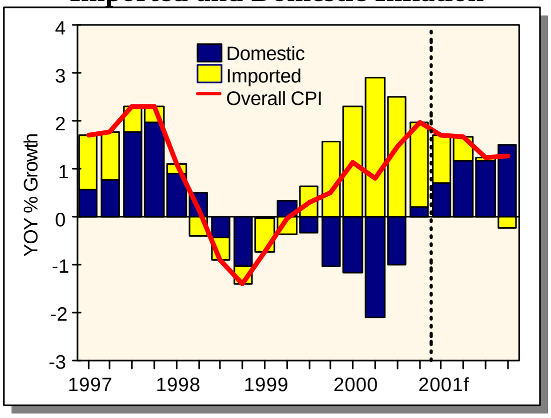
4.5 Inflation

RISING UNIT LABOUR COSTS TO HEIGHTEN DOMESTIC PRICE PRESSURES

The hike in unit labour costs will also serve to augment domestic price pressures, and is likely to contribute most significantly to overall CPI inflation. This contrasts with the scenario last year, when imported inflation was the key contributor to overall CPI inflation. (Chart 4.8)

Following the rapid economic growth in H2 2000 and significant tightening in the labour market, the economy's output gap has narrowed and is estimated to have turned slightly positive by the end of last year. (Chart 4.9)

Chart 4.8
Imported and Domestic Inflation



IMPORTED INFLATION RELATIVELY BENIGN

Imported inflation, which was the main source of price pressure in 2000, is expected to be more subdued this year, notwithstanding some spillover effects from last year's oil price shock. The moderation in imported inflation largely reflects the expectations of a decline in wholesale price inflation in most of Singapore's trading partners as well as easing world oil prices.

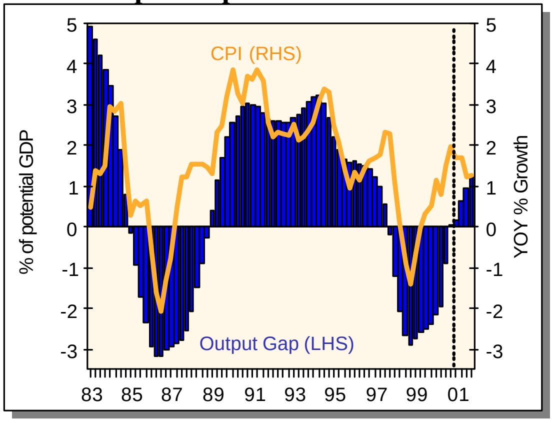
CPI INFLATION TO PEAK IN H1 2001 BEFORE MODERATING SLIGHTLY

Looking forward, CPI inflation is likely to see the spillover effects of last year's oil price shock in early 2001, via the February hike in electricity tariffs. However, with the recent moderation in the price crude oil, Singapore Power is expected to reduce its rates, albeit still keeping them higher compared with 2000.

Some price increases can be expected in a number of other categories in the CPI basket. Accommodation costs are likely to record modest increases as rentals recover. In addition, food prices are expected to be slightly higher. Inflation of other miscellaneous items, which had begun to increase, could also see a further pick-up, while higher operating costs could prompt increases in public road transport fares. Education and health costs could see further upside as well.

Together, these factors imply a slightly higher CPI inflation rate in 2001 compared to the year before, although it is expected to remain within the 1.0-2.0% range. Overall inflation is expected to peak in early 2001, at slightly under 2.0%, before moderating to 1.0-1.5% for the rest of the year. (See Box Item 4.2 for a more detailed discussion of the factors influencing our CPI forecast range.)

Chart 4.9
Output Gap and CPI Inflation



Box Item 4.2: Uncertainty in CPI Inflation Projections for 2001

Our forecast range for CPI inflation of 1-2% is shown in Chart A. Chart B presents a radar chart that exhibits the seven main components of the CPI basket, and gives an indication of the importance of the various components of the CPI basket that are likely to influence the inflation outcome in 2001. (NB: The chart shows the percentage point contribution of each item to the overall CPI inflation.)

Chart A: CPI Forecasts for 2001

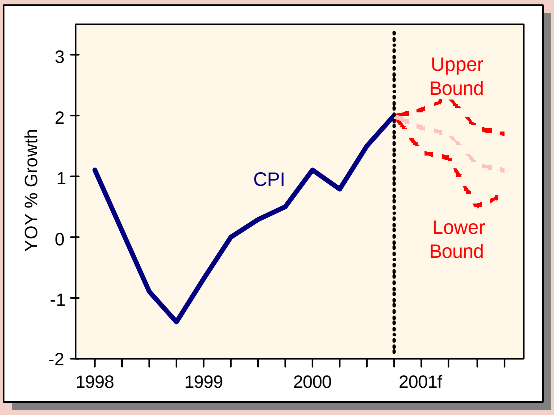
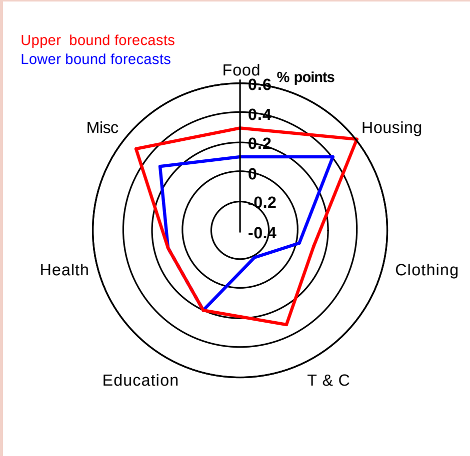


Chart B: Contributions to CPI Forecasts for 2001



The key factors that could drive overall inflation to the upper bound (2.0%) of our forecast range will primarily emerge from the transport & communication component of the CPI basket. This would reflect the possible risk of a renewed increase in oil prices. Recent attempts by OPEC to cut production output, coupled with the unrest in the Middle East may cause further spikes in the price of crude oil, leading to the pass-through of these higher costs to some components of the domestic CPI basket, including fuel & utilities and local petrol pump prices. In addition, there could be some upside risks to the price of several commodities. Since late December last year, for instance, the persistent drought in one of Brazil's sugar cane regions have caused some disruption in supply of sugar. Palm oil prices may also increase following recent measures taken by Malaysia – the world's largest producer of palm oil - to support prices in world markets.

Conversely, a number of other factors could dampen inflationary pressures and support a CPI inflation number closer to the lower bound of the forecast range (1.0%). Chart B again isolates the transport and communication component of the CPI basket as containing the main downside risk to our projections. Cautious consumer sentiments coupled with the anticipation of a larger number of COE for small and medium-sized cars in the new quota year could help to cap price increases. Other factors that could moderate transport costs include the effects of the recent government plans to further streamline import procedures and thus facilitate parallel car imports.

There remains the possibility that food prices - which bear a weight of 28% in the consumer-spending basket - could come in weaker in 2001. There are indications, for example that, the prices for Thailand's fragrant rice could continue to decline, reflecting the sluggish global demand and competition from a new hybrid of the rice, which is expected to be introduced in the market by the middle of the year.

On balance, after incorporating our best assessment of the implications of these uncertainties, we expect average CPI inflation for 2001 to come in slightly higher than last year, at close to the mid-point of our forecast range.

5 Special Feature on Recent Developments in the Property Market[24]

5.1 Introduction and Overview

In this chapter, we review the state of the property market in Singapore, and highlight some divergent trends in the different market segments.

INCONSISTENT RECOVERY IN THE PROPERTY MARKET

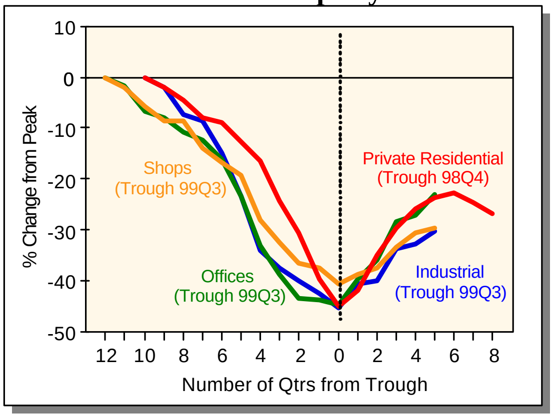
In general, the recovery in the property market has been patchy, despite the steady economic rebound over the past two years. Property prices corrected by about the same magnitude (ranging from 40-45%) across the various segments of the property market during the Asian Crisis. (Chart 5.1) Even prior to the crisis, prices in the residential property market had already started declining following the May 1996 anti-speculative measures. Emerging from the downturn, however, the pace of recovery has varied across the various segments of the property market.

Prices in the private residential and office space markets have strengthened the most, the latter underpinned by the tight supply of space and strong demand from companies in the information technology (IT) sector and financial institutions. In contrast, the price recovery has been more gradual in the shop space and industrial space markets, although within the industrial space market, strong demand for high-tech industrial space contrasted with excess supply in the more conventional type of space.

A favourable outlook is expected for the commercial and industrial space markets.

Despite their slow start, prospects for the commercial and industrial space markets look more favourable going

Chart 5.1
Movements in Property Prices



[24] This section has benefited from inputs from the Urban Redevelopment Authority (Property Research Section).

forward, with analysts expecting island-wide office vacancy rates to tighten and rentals (especially for newer buildings in prime locations) to strengthen further in 2001. Rentals for prime retail space along Orchard Road, as well as for high-tech industrial space, are also expected to face upward pressure, although the extent of this is conditional on the overall economy's performance.

However, the private residential property market remains lacklustre.

In contrast, weak sentiments continue to plague the private residential property market, where the recovery appears to have stalled after a sharp uptake in 1999. While some analysts forecast a further decline in prices amid weak sentiments and an uncertain outlook for the US and regional economies, other property consultants are of the view that prices could consolidate if the outlook for the global economy turns positive in the second half of the year. The weak HDB resale market could act as a drag on the private residential property market, while the existing stock of unsold units (though not high by historical standards) will also place a cap on the pace of recovery.

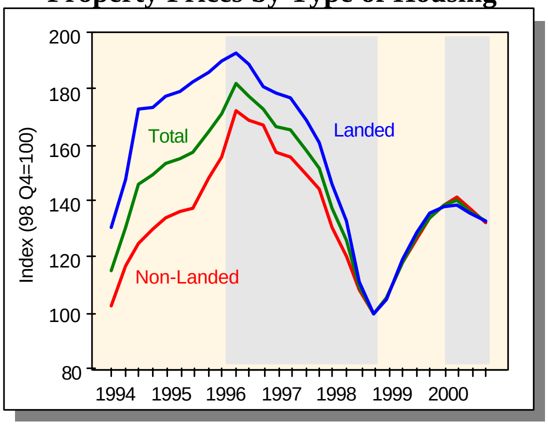
The following sections of this chapter examine recent developments in the private residential, commercial (office and retail) and industrial space markets respectively. Box Item 5.1 below provides a historical overview of property price trends.

5.2 The Private Residential Property Market

STALLING PROPERTY MARKET PRICES SINCE 1999 RECOVERY

Private residential property prices picked up strongly in 1999 (by 34%), underpinned by the rebound in equity prices and improved outlook for the domestic and regional economies. However, the rapid recovery in prices was not sustained and property prices have stagnated in 2000. Following an increase of 4.6% in H1 2000, property prices declined by 5.4% in H2. (This contrasts with the mid-1980s, when the recovery from the downturn was more gradual and steady, with prices increasing by 24% in the first year and 8% in the second year.)

Chart 5.2
Property Prices by Type of Housing



Compared to its peak in Q2 1996, private residential property prices at the end of last year were about 27% lower. (Chart 5.2) Landed property prices, which saw the largest correction since 1996, remained 31% lower

Box Item 5.1: Historical Property Price Trends

Prices across the various segments of the property market have generally moved together over the years, and track GDP growth quite closely. (Charts A and B)

Chart A
Property Market Price Movements

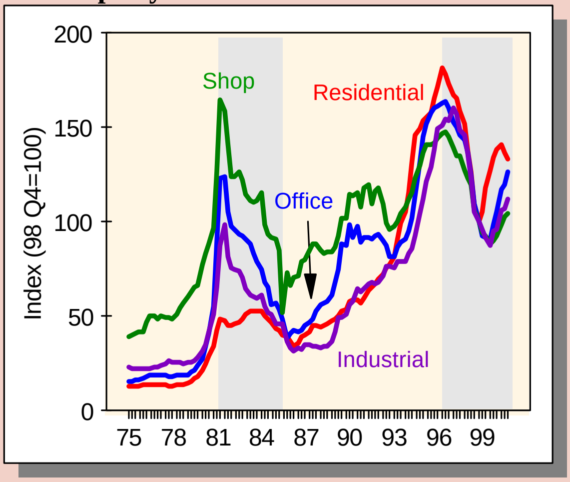
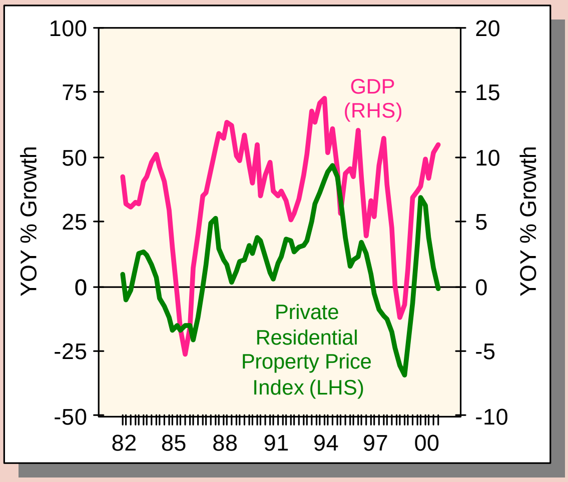


Chart B
GDP Growth & Private Residential Prices



The sharp run-up in property prices in the early 1980s occurred in a period of strong economic growth and a shortage of housing and non-residential buildings. Commercial property prices recorded the sharpest increase of about 300% between 1979 to mid-1981, as the growing importance of Singapore as a financial and service centre increased demand for commercial space. Price increases of about 253% were recorded for the residential segment over this period.

The increase in prices was halted in mid-1981 following the crash of the local stock market and the subsequent sharp slowdown in GDP growth. A number of administrative measures introduced in 1981-82 also had the effect of increasing transaction costs in the residential market. These included raising the booking fee from 1% in 1980 to 10% in 1981 and imposing stiffer penalties against developers for undue delays in construction on land with planning approval. The massive potential supply of residential, commercial and industrial properties coming onto the market also put downward pressure on prices.

During the downturn in the 1980s, residential property prices saw the smallest correction, while the shop space sector experienced the largest drop in prices. In fact, prices of shop space have never quite recovered back to the levels in the early 1980s.

Since the mid-1980s, property prices in the residential and industrial markets have been on a secular uptrend. In the boom years of 1993-96, prices in the residential and industrial space markets more than doubled. Prices in the residential segment were underpinned by a number of factors, including strong income growth and the liberalisation of the CPF to allow up to 90% of CPF savings to be used for private housing purchases. Prices in the commercial (office and retail space) market have been more volatile, however. Following relatively flat growth between 1990-91, commercial property prices corrected in 1992 due to the oversupply of new space. They subsequently rose strongly (by 77%) between 1993-96.

than the 1996 peak, while non-landed property prices were 23% below peak.

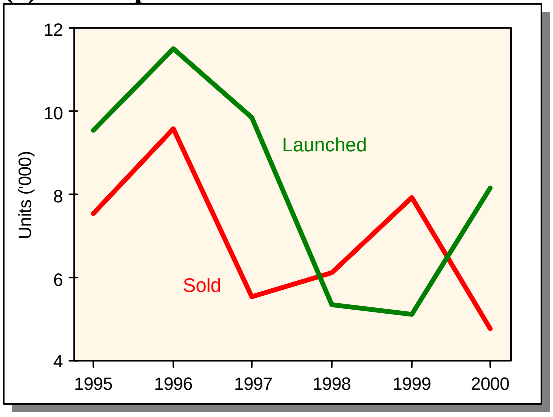
Demand has been sluggish, in both the markets for new developments as well as resale units.

Reflecting the weak market sentiments in the residential property market, take-up at new developments has been sluggish. (Chart 5.3a) The number of units sold directly by developers totalled just 5,406 in 2000, significantly less than 8,170 units in 1999 and even lower than the levels during the Asian crisis in 1997.[25] As a result, a total of 4,825 launched units remained unsold at Q4 2000. (Chart 5.3b.)

Partly contributing to this soft demand was the lacklustre performance of the stock market and uncertainty in the outlook for the US and regional economies. Weakness in the HDB resale market has also dampened private housing demand from potential HDB upgraders.

HDB upgraders, who form a major source of demand for private property, typically rely on capital gains on their HDB flats to fund the mandatory 20% cash down payment. Hence, the weak HDB resale market has squeezed their capital gains, especially given that the emerging pool of upgraders bought their HDB flats during the 1995/96 boom. HDB resale prices have risen by only 7% from its nadir compared to 33% for private properties.[26] (Chart 5.4)

Chart 5.3
(a) Uncompleted Units Launched and Sold



(b) Unsold Units with Sale Licenses

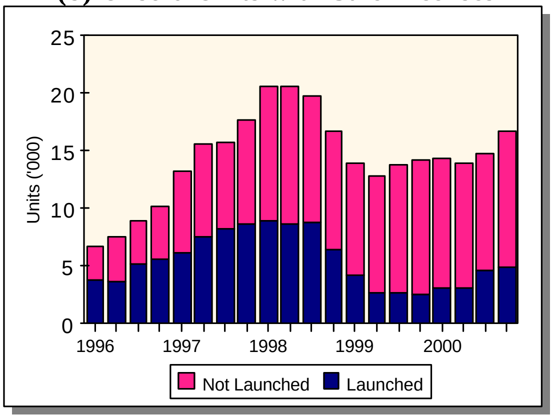
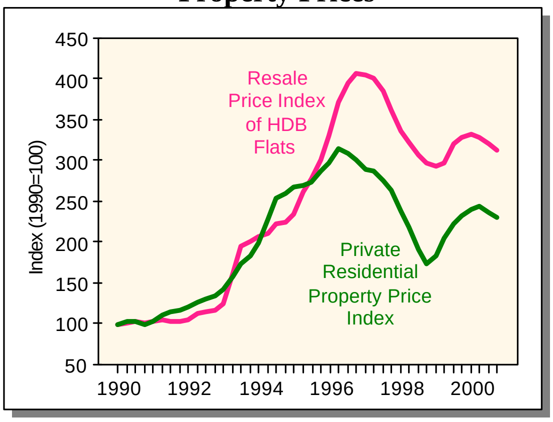


Chart 5.4
Private and Public Residential Property Prices

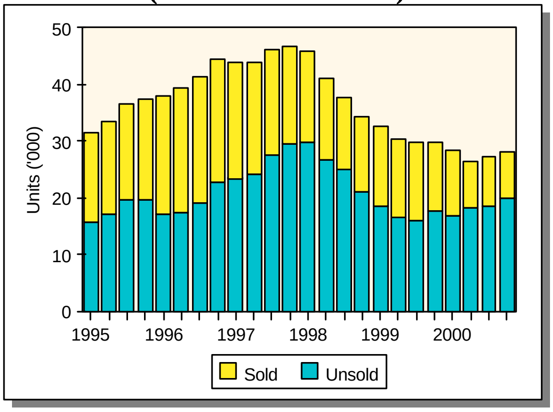


25 Total caveats lodged for private housing (both primary and secondary sales) amounted to 11,719 last year, more than half of the 22,013 caveats in 1999.

26 Historically from 1990-96, public housing prices have increased at a faster annual rate of 24%, compared to the average annual gain of 19% in private residential properties.

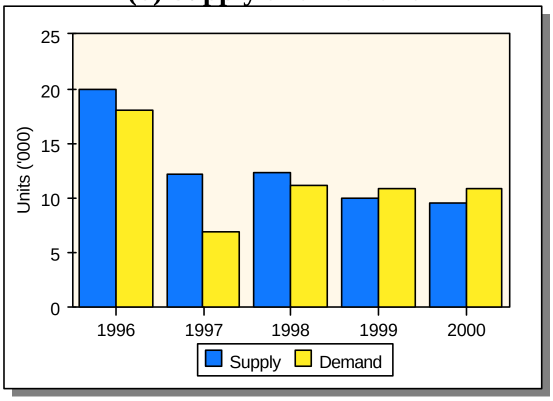
Recent measures introduced by the government in the public housing market could have led to the weaker upgrader demand for private housing.[27] According to Singapore Institute of Surveyors and Valuers, HDB upgraders accounted for 47% of caveats lodged for new private homes in 2000 compared to 63% in 1999. Similarly, their share of caveats lodged for secondary transactions declined from 40% in 1999 to 34% in 2000. An additional factor contributing to the weaker demand for private property has been the fall-off in foreign demand, reflecting the weakness in the regional economies.

Chart 5.5
(a) Potential Supply of Private Housing (under construction)



Weak demand side factors rather than an unusually large supply overhang, have been responsible for the softness in current private residential property prices. The current potential supply of housing does not appear high by historical standards. (Chart 5.5a) The large potential supply of housing co-existing with increasing property prices during the first half of the 1990s reflected the lack of accessible information on the available units in the market and the transacted prices, which had increased the likelihood of a mismatch between demand and supply in the market. Since then, more information has become available on housing units in the market and recent trends in transaction prices. This has enabled buyers and developers to make more informed decisions and have presumably led to a more efficient market.[28]

(b) Supply and Demand



Nevertheless, with weak demand conditions expected to persist this year, there is a general expectation that prices will also remain soft. Coupled with the existing stock of supply – estimated to be adequate for 3.3 years of demand, given unsold private housing stock of about 19,800 units and assuming an annual take-up rate of

[27] These measures included the reduction of CPF Housing grants for first-time home buyers of HDB resale flats in 1999 and the withdrawal of subsidised housing loans for downgraders and lateral movers in September 1999. Shorter queues for new HDB flats also encourage first-time buyers back to the queue and away from the resale market.

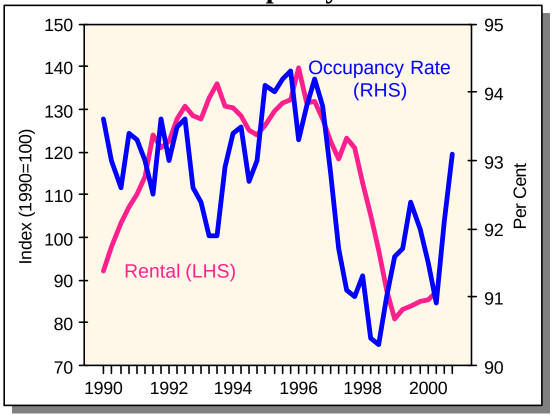
[28] Real estate data was first released on URA's website in 1995. Since then, URA has been gradually increasing the amount of real estate data in subsequent quarterly releases.

6,000 units – analysts have forecast residential prices to fall further during the year.[29]

RENTAL MARKET CONTINUES TO IMPROVE

In contrast to the weak sales market, the rental market has seen a slow and steady improvement since bottoming out in March 1999. (Chart 5.6) Overall rentals rose by about 2.5% in the first half of 2000, following an increase of 5% from Q2 to Q4 1999. The improvement in rentals reflected the rising occupancy rates – defined as occupied units as a proportion of available units – since mid-1997 to a four-year high of 93.1% at the end of last year. This brought occupancy rates back to the average pre-crisis level between 1990-96. (Chart 5.6) Although demand for housing has increased over the past few years, including by expatriates, there has also been a decline in the number of units completed. (Chart 5.5b) With the number of units completed expected to decline further over the next two years, coupled with continued growth in demand, rentals are expected to improve further going forward[30].

Chart 5.6
Private Residential Rentals and Occupancy Rate



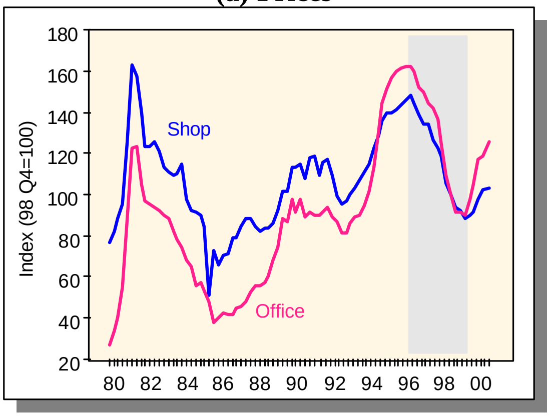
5.3 Commercial Property Market

PRICES AND RENTALS HAVE STRENGTHENED

In contrast to the languishing private residential property market, the commercial property market has picked up strongly over the past year. Both prices and rentals in the office and shop space markets have continued to strengthen in Q4 2000, underpinned by strong demand and an impending shortage of space. (Chart 5.7)

Compared to the previous quarter, rentals of office and shop space rose by 3% and 4% respectively in Q4 2000, bringing the aggregate increase in rentals to about 15% (for both sectors) since they bottomed out in Q3 1999. In the prime Orchard Road/Scotts Road corridor, retail rentals were reported to have increased by a higher 20%

Chart 5.7
Commercial Property
(a) Prices



[29] Merill Lynch expects prime and suburban residential prices to fall by 15-25% and 10% respectively in 2001. At the other end, Jones Lang LaSalle expect prices to be flat, with possible pockets of upside. Similarly, CB Richard Ellis predict that prices could increase by 5-10% if overall economic conditions improve in 2001. On the other hand, prices could face a further decline of 4-6% if the outlook remains pessimistic.

[30] About 8,100 and 7,500 units are scheduled for completion in 2001 and 2002 respectively compared to the annual average 10,500 units in 1998-2000.

during 2000, with the increase in rentals for prime shop space in suburban malls higher at 24% for 2000.[31] Concomitantly, prime office space rentals in Raffles Place were estimated to have risen by 27% last year[32].

The increase in commercial property prices was also significant. Since bottoming out in Q3 1999, prices of office space have risen by 39%, while that of shops has increased by 19%. The decline in shop space prices took place even prior to the onset of the Asian crisis, and turned around about a year after the retail industry started to recover, as proxied by the retail sales series. (Chart 5.8)

The sharp increase in rentals and prices came on the back of a decline in vacancy rates. (Chart 5.9a) In the retail sector, vacancy rates have fallen to 7.8% in Q4 2000 island-wide, back to the pre-crisis level. Space was particularly tight in the Orchard Road belt, where vacancy rates had fallen to 4.5%, reflecting the lack of new space. There has been no new additional space in the prime Orchard Road/Scotts Road shopping belt for the past two years and none is scheduled for completion in 2001.

Although vacancy rates were not as low in the office sector, they have come down to 11.3% in Q4 2000, a level not seen since Q4 1997. (Chart 5.9b) While 45,000 sq m of office space was added during Q4 2000, new take-up for office space was significantly higher at 71,000 sq m. Indeed, semi-annual figures for new take-up has risen steadily since H1 1998, and compared to historical annual demand, demand for office space in 2000 was the highest ever recorded in any one year.

The liberalisation of financial and telecommunications industries, and the formation of new high-tech related companies have underpinned the strong demand for office space. As at end of Q4 2000, vacancy rates for Marina Centre (including Suntec City) - a favourite for IT related firms - have fallen below 2%, while other prime districts, including Raffles Place, City Hall and

(b) Rentals

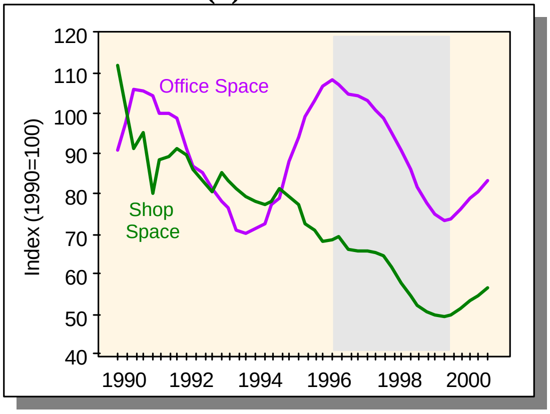


Chart 5.8
Shop Space Prices and Retail Sales

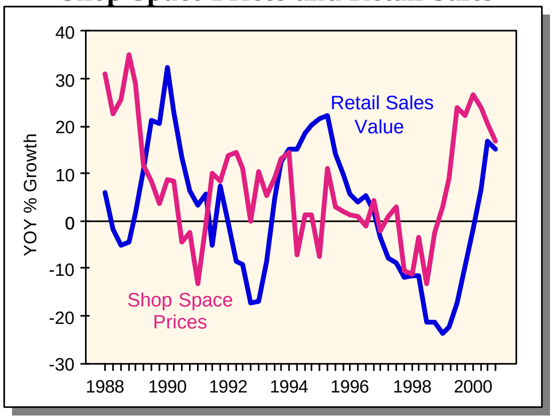
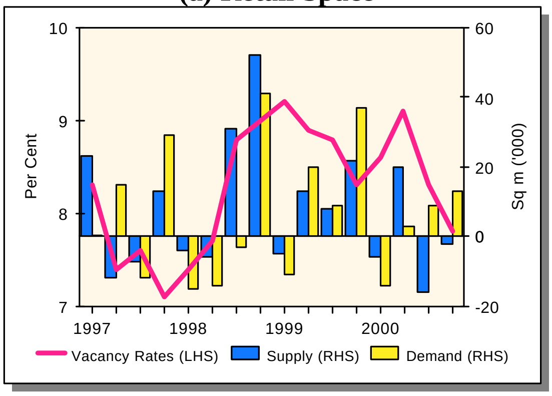


Chart 5.9
Supply, Demand and Vacancy Rates
(a) Retail Space



31 Source: Singapore Market Index Brief (Market Review 2000), CB Richard Ellis

32 Source: Property Research Paper - Singapore (Q4 2000), Jones Lang LaSalle

Orchard Road, have seen their occupancy rates maintained at over 90%.[33]

Some supply tightness in the shop and office space sectors is likely to remain.

Supply is expected to remain tight in both the shop and office space sectors over the next few years. (Chart 5.10) Annual supply of retail space in the next three years is projected to average a modest 53,000 sq m, with less than 8% targeted for the prime Orchard/Scotts Road area. Reflecting the freeze in government land sales during the Asian crisis, the Urban Redevelopment Authority (URA) projected the total annual supply of private office space to fall sharply from 181,000 sq m in 2000, to 163,000 sq m in 2001 and 82,000 sq m in 2002. The supply of office space within the downtown core area is particularly tight with the only major source of supply ("white site" at Marina South) expected to be ready in 2004 at the earliest.

The continued tight supply should maintain upward pressure on rentals and prices in the commercial space market.

(b) Office Space

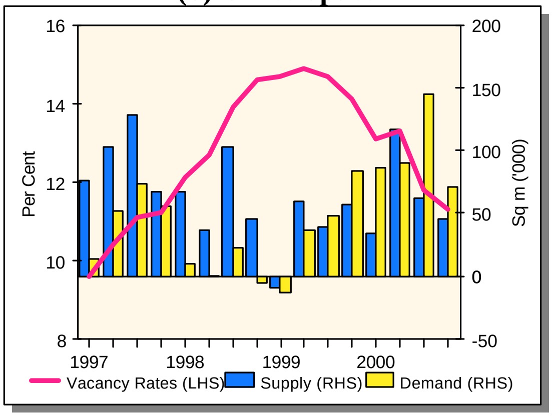
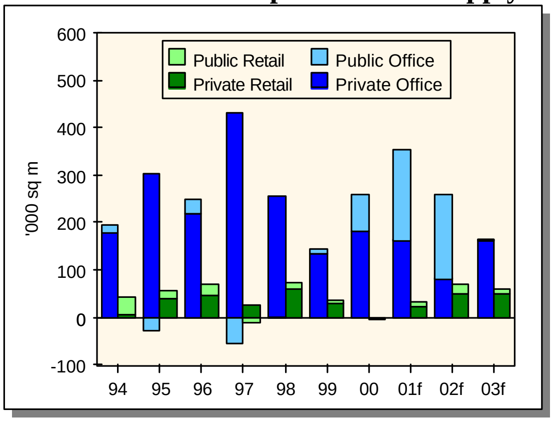


Chart 5.10
Office and Retail Space Annual Supply



5.4 Industrial Space Market

SOME RECOVERY IN THE INDUSTRIAL SPACE MARKET

Price movements in the industrial space property market have generally tracked the strength of investment commitments and the performance of the manufacturing sector (in particular the electronics industry). (Chart 5.11)

Recovery in the industrial space market has been prompted by rising demand for high-tech industrial space from "new economy" businesses.

The recent recovery in the industrial space market has largely reflected increased demand for high-tech industrial space, while there exists an excess supply of

---

[33] Source: The Knowledge - City Comparison (February 2001), Colliers Jardine

conventional industrial space. According to research by property consultancy Colliers Jardine, 65% of the 450 hectares of leasehold industrial sites awarded since 1993 remained unsold and undeveloped. In Tuas, where the excess supply was more pronounced, 75% of the total gross floor area remained unsold and undeveloped. With bids received at a recent government land sale nearly 80% lower than their peak in 1995, the government has decided to defer the sale of two industrial sites in Tuas originally scheduled in March and undertake a comprehensive review of the industrial land sale programme for this year.

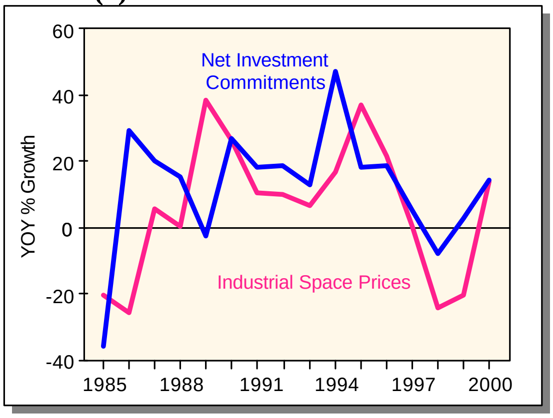
In contrast, the demand for space at high-tech parks have risen significantly since "new economy" businesses such as dot-coms and e-business companies were allowed to locate within industrial parks. Underpinned by the strength of demand for high-tech space in Chai Chee, Kaki Bukit, Ayer Rajah and Admiralty Road West, the overall occupancy rates for industrial space improved by 1% over the year to 90% as at Q4 2000. (Chart 5.12)

New launches of high-tech space have also been well-received, with more than 50% of the rentable space offered under Phase 1 of The Strategy – targeted at start-up companies and Incubation Management Companies (IMCs) – taken up on the first day of its launch. According to estimates from various property consultants, rentals for high-tech space in Q4 2000 increased by 7% over the previous quarter on the back of strong demand from larger and more established information technology, dot-com, and telecommunications companies, while rentals of conventional factory space remained flat in Q4 2000. For the whole year, analysts estimate that rentals of high-tech industrial space jumped by 27%[34]. Data published by the URA shows that overall rentals for industrial space rose by 2.4% in the first half of the year, while prices increased by 17% for the whole year.

Data centre providers also helped strengthen overall demand for industrial space.

In the last quarter of the year, there was a noticeable increase in demand for industrial space by data centre providers, following the Economic Development Board's (EDB) push to nurture the data hosting and co-locations business in Singapore. Analysts expect space devoted to this growing co-locations industry to expand more than

Chart 5.11
Industrial Space Prices vis-à-vis
(a) Investment Commitments



(b) Electronics Output

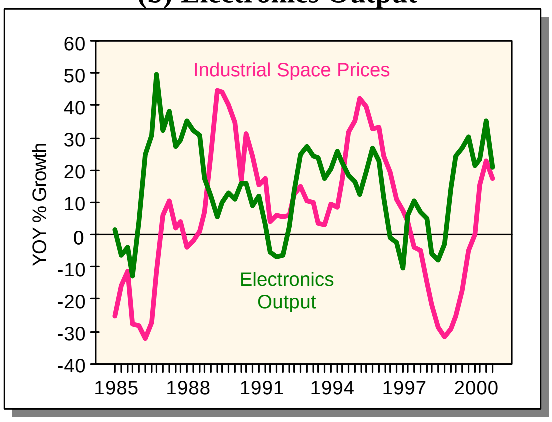
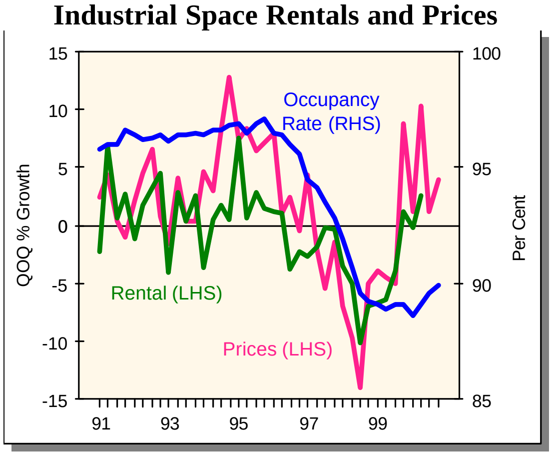


Chart 5.12
Industrial Space Rentals and Prices



[34] Source: Singapore Market Index Brief (Q1-Q3 and Market Review 2000), CB Richard Ellis

six times from 18,500 sq m as at end-1999 to 140,000 sq m by end-2001. With the number of call centres forecast by the government to increase by 25% within the next five years, demand for high-tech industrial space will continue to increase. In view of the shortage of suitable high-tech industrial space, several new projects are in the pipeline and traditional industrial parks are being refurbished into technology parks, fitted with broadband access. Along with the demand for modern and high-tech industrial space, and the transformation of older industrial parks to take on a more business/office profile, has come a blurring of the distinction between the traditional office and high-tech industrial space.

Statistical Appendices

TABLE 1: REAL GDP GROWTH by sector

Period	Total	Manu-facturing	Financial & Business Services: Total	Financial & Business Services: Financial Services	Financial & Business Services: Business Services	Con-struction	Commerce: Total	Commerce: Wholesale & Retail	Commerce: Hotels & Rest.	Transport & Comm.	Total	Manu-facturing	Financial & Business Services: Total	Financial & Business Services: Financial Services	Financial & Business Services: Business Services	Con-struction	Commerce: Total	Commerce: Wholesale & Retail	Commerce: Hotels & Rest.	Transport & Comm.
	Year-on-Year % Change										Seasonally-adjusted Quarter-on-Quarter % Change									
1992	6.5	2.3	8.5	8.2	8.8	22.3	3.8	2.4	9.5	5.8	6.5	2.3	8.5	8.2	8.8	22.3	3.8	2.4	9.5	5.8
1993	12.7	9.6	15.2	25.0	6.6	9.0	19.7	23.2	6.0	10.7	12.7	9.6	15.2	25.0	6.6	9.0	19.7	23.2	6.0	10.7
1994	11.4	12.8	11.6	11.7	11.5	15.5	12.1	13.7	5.0	10.2	11.4	12.8	11.6	11.7	11.5	15.5	12.1	13.7	5.0	10.2
1995	8.0	10.0	5.3	2.8	7.9	9.6	8.8	9.6	4.9	10.6	8.0	10.0	5.3	2.8	7.9	9.6	8.8	9.6	4.9	10.6
1996	7.6	2.9	8.4	7.3	9.4	23.1	6.1	6.1	6.0	8.2	7.6	2.9	8.4	7.3	9.4	23.1	6.1	6.1	6.0	8.2
1997	8.5	4.5	13.4	18.6	8.3	16.1	6.4	6.4	6.5	8.8	8.5	4.5	13.4	18.6	8.3	16.1	6.4	6.4	6.5	8.8
1998	0.1	-0.6	-3.9	-8.6	1.1	3.0	-4.7	-4.1	-7.5	6.4	0.1	-0.6	-3.9	-8.6	1.1	3.0	-4.7	-4.1	-7.5	6.4
1999	5.9	13.6	1.2	0.8	1.5	-8.8	6.6	7.1	4.0	7.1	5.9	13.6	1.2	0.8	1.5	-8.8	6.6	7.1	4.0	7.1
2000	9.9	15.2	5.4	4.1	6.6	-4.6	14.1	15.2	8.2	9.0	9.9	15.2	5.4	4.1	6.6	-4.6	14.1	15.2	8.2	9.0
1997 Q1	5.3	-5.2	14.3	21.5	7.3	11.5	3.4	2.7	6.8	8.2	6.9	-1.6	27.8	50.3	7.9	7.5	0.9	-1.0	11.5	9.4
Q2	9.4	4.4	15.0	23.4	7.0	13.8	8.4	8.5	8.3	9.3	14.4	18.5	11.5	14.7	8.1	28.9	14.6	16.7	4.6	10.1
Q3	11.5	9.8	14.8	19.9	9.8	20.7	10.6	11.1	8.4	9.9	8.5	15.3	4.0	-3.6	12.9	29.1	3.0	2.9	3.7	6.4
Q4	7.9	8.6	9.5	9.8	9.2	17.8	3.7	3.9	2.6	7.8	2.5	3.7	-3.1	-12.9	8.0	8.8	-2.3	-1.1	-8.5	6.0
1998 Q1	4.5	6.4	-2.0	-8.4	4.9	16.0	0.8	1.9	-4.6	7.6	-6.0	-9.4	-17.6	-26.1	-8.3	0.1	-9.9	-8.6	-16.5	7.8
Q2	0.0	-0.3	-5.9	-13.8	2.7	8.7	-5.2	-4.9	-6.9	6.9	-5.0	-10.0	-6.0	-11.8	-0.3	-1.2	-12.2	-13.3	-6.3	6.7
Q3	-2.5	-4.3	-7.2	-13.1	-0.8	-0.7	-6.9	-6.1	-11.0	5.2	-0.7	-0.4	-0.2	1.7	-1.9	-10.0	-2.7	-1.0	-11.5	1.1
Q4	-1.4	-2.9	-0.2	1.9	-2.2	-9.0	-7.1	-7.1	-7.4	6.1	7.2	10.4	28.2	61.1	2.4	-21.9	-2.5	-4.1	6.3	9.6
1999 Q1	1.3	6.5	-3.6	-7.6	0.3	-4.0	-2.3	-2.3	-2.2	5.8	4.4	29.6	-27.9	-49.5	1.1	21.9	9.7	10.8	4.0	5.8
Q2	6.9	14.6	6.6	12.7	0.9	-11.8	6.3	6.6	4.7	6.3	16.9	20.0	39.8	94.7	2.1	-29.4	22.0	22.1	21.9	8.2
Q3	7.4	16.7	3.6	5.2	2.2	-11.9	8.8	9.4	5.5	7.8	1.9	7.9	-10.3	-22.0	3.1	-11.1	7.2	10.1	-7.4	8.2
Q4	7.7	16.2	-2.0	-6.5	2.5	-7.6	13.6	14.7	8.0	8.2	8.0	9.6	0.9	-2.0	3.9	-4.0	16.7	16.8	15.8	11.0
2000 Q1	9.8	13.2	8.2	11.6	5.2	-10.9	16.3	17.3	10.7	9.9	13.0	15.4	8.5	5.0	11.9	4.4	20.1	20.9	15.2	12.2
Q2	8.4	13.2	1.1	-4.0	6.5	-3.9	14.0	15.3	6.8	9.7	10.8	19.8	6.6	5.9	7.3	-4.4	11.8	13.1	4.9	7.4
Q3	10.3	15.2	5.3	3.1	7.4	-1.1	14.6	15.4	9.9	9.5	9.8	16.0	5.2	3.7	6.7	-0.7	10.1	11.1	4.5	7.8
Q4	11.0	18.8	7.3	7.5	7.1	-1.9	12.0	13.1	5.6	6.8	10.3	24.9	8.6	15.0	3.0	-5.9	6.8	8.2	-1.6	0.0

Source: Singapore Department of Statistics

TABLE 2: REAL GDP GROWTH by expenditure

Year-on-Year % Change

Period	Total Demand	Domestic Demand							External Demand
			Consumption			Gross Fixed Capital Formation			
		Total	Total	Private	Public	Total	Private	Public	
1992	7.0	6.8	4.8	5.8	0.4	11.8	14.5	1.9	7.1
1993	16.3	14.4	12.4	11.9	14.7	10.3	10.9	7.6	17.2
1994	15.3	4.0	5.8	7.5	-1.7	9.6	6.5	22.8	20.5
1995	12.5	8.6	4.4	3.0	11.7	11.8	14.6	1.7	14.0
1996	9.1	12.8	9.7	7.6	19.3	23.1	27.3	5.7	7.7
1997	7.9	9.5	6.2	6.0	7.1	9.6	7.0	22.3	7.3
1998	-5.4	-7.8	-0.8	-2.9	8.0	-6.4	-9.9	8.4	-4.4
1999	6.5	5.3	5.2	5.3	5.0	-3.9	-6.1	4.1	6.9
2000	14.0	10.7	10.3	9.4	13.7	5.9	8.6	-2.9	15.2
1997 Q1	2.2	4.1	5.8	6.1	5.0	4.0	3.0	8.5	1.4
Q2	9.0	6.7	8.6	6.9	18.2	2.2	-3.0	32.9	10.0
Q3	12.7	18.6	5.0	8.2	-7.3	26.7	25.5	31.7	10.5
Q4	7.7	9.2	5.6	2.9	19.2	6.9	4.7	18.0	7.1
1998 Q1	3.9	5.5	3.0	1.0	9.2	13.9	13.2	17.2	3.2
Q2	-5.8	-5.4	0.2	-1.7	10.1	-3.5	-6.4	9.1	-6.0
Q3	-8.4	-13.9	-5.2	-6.7	1.9	-11.7	-14.2	-1.5	-6.2
Q4	-10.2	-16.6	-1.4	-4.1	10.4	-20.5	-27.3	10.5	-7.6
1999 Q1	-4.8	-7.7	3.6	-1.6	18.2	-16.5	-26.4	24.3	-3.5
Q2	6.8	6.8	4.4	5.9	-2.7	-1.0	-0.8	-1.9	6.8
Q3	8.7	12.6	7.4	9.1	0.4	1.8	2.3	0.0	7.3
Q4	15.5	11.5	5.6	7.9	-2.9	1.9	4.3	-5.1	16.9
2000 Q1	15.5	12.4	9.0	9.9	6.8	4.6	11.2	-11.6	16.9
Q2	12.4	11.9	9.3	9.8	6.4	5.0	7.0	-2.3	12.6
Q3	15.8	5.9	9.0	9.6	6.2	8.3	10.5	-0.1	19.5
Q4	12.3	12.7	13.9	8.2	38.0	5.5	5.9	4.2	12.2

Source: Singapore Department of Statistics

TABLE 3: CONSUMER PRICE INDEX

Period	All Items	Food	Housing	Clothing	Transport & Comms.	Education & Stationery	Health	Misc-ellaneous	All Items	Food	Housing	Clothing	Transport & Comms.	Education & Stationery	Health	Misc-ellaneous
	Nov 1997- Oct 1998 = 100								Year-on-Year % Change							
1992	90.1	89.6	90.5	95.2	90.8	84.1	83.4	90.8	2.3	1.3	2.0	2.2	2.9	4.7	2.9	3.2
1993	92.2	90.4	93.5	96.3	93.2	86.9	86.5	94.6	2.3	0.8	3.2	1.2	2.6	3.3	3.7	4.1
1994	95.1	93.6	94.7	98.5	99.5	89.1	89.2	96.2	3.1	3.6	1.3	2.2	6.7	2.5	3.1	1.7
1995	96.7	95.7	95.4	99.9	100.1	92.8	90.7	98.6	1.7	2.3	0.7	1.5	0.6	4.2	1.6	2.5
1996	98.0	97.7	95.9	100.4	100.4	95.6	92.7	100.4	1.4	2.1	0.5	0.5	0.4	3.0	2.3	1.8
1997	100.0	99.7	98.1	101.1	104.3	97.1	96.1	100.6	2.0	2.0	2.3	0.7	3.9	1.5	3.7	0.2
1998	99.7	99.9	99.9	99.8	99.2	100.1	100.2	99.5	-0.3	0.2	1.9	-1.3	-4.9	3.1	4.3	-1.1
1999	99.8	100.8	98.6	97.9	98.7	101.6	100.8	100.3	0.0	0.9	-1.4	-1.9	-0.6	1.5	0.6	0.8
2000	101.1	101.4	100.6	97.1	100.7	102.9	102.3	101.9	1.3	0.6	2.0	-0.8	2.1	1.3	1.5	1.5
1997 Q1	99.1	99.5	96.6	101.5	101.6	96.5	93.8	100.8	1.7	2.8	1.0	0.7	1.7	1.6	2.1	0.8
Q2	99.6	99.4	97.2	100.9	103.9	96.5	95.5	100.9	1.8	2.0	1.5	-0.3	3.6	1.6	3.3	0.5
Q3	100.5	100.0	98.7	100.7	106.4	97.6	96.6	100.0	2.3	1.7	2.9	1.0	5.8	1.4	3.9	-0.5
Q4	100.8	100.0	99.8	101.4	105.5	97.7	98.6	100.7	2.3	1.5	3.7	1.3	4.4	1.5	5.3	-0.2
1998 Q1	100.2	100.3	100.4	100.3	100.1	99.5	100.0	100.5	1.1	0.8	3.9	-1.2	-1.5	3.2	6.6	-0.2
Q2	99.7	100.0	99.7	99.9	99.8	99.7	100.1	99.2	0.1	0.6	2.6	-1.0	-3.9	3.3	4.8	-1.6
Q3	99.6	99.8	100.0	99.4	99.2	100.9	100.4	98.6	-0.9	-0.2	1.3	-1.3	-6.8	3.4	3.9	-1.4
Q4	99.4	99.7	99.7	99.5	97.9	100.2	100.6	99.6	-1.4	-0.3	-0.1	-1.8	-7.2	2.5	2.0	-1.1
1999 Q1	99.5	100.3	99.1	99.4	97.2	101.7	100.9	100.1	-0.7	0.0	-1.3	-0.8	-2.9	2.2	1.0	-0.4
Q2	99.7	101.0	98.4	98.2	98.2	101.6	100.6	100.6	0.0	1.0	-1.3	-1.7	-1.6	1.9	0.5	1.4
Q3	99.9	101.1	98.5	97.6	99.3	101.7	100.8	100.2	0.3	1.3	-1.4	-1.7	0.1	0.8	0.5	1.6
Q4	99.9	101.0	98.2	96.3	100.0	101.4	101.0	100.5	0.5	1.3	-1.4	-3.3	2.2	1.2	0.4	0.8
2000 Q1	100.6	102.1	99.2	96.7	100.4	101.7	101.1	101.0	1.1	1.8	0.1	-2.7	3.4	0.0	0.2	0.9
Q2	100.5	101.3	99.5	95.8	100.1	102.4	101.7	101.4	0.8	0.3	1.1	-2.4	1.9	0.8	1.2	0.9
Q3	101.4	101.1	101.4	97.5	101.3	103.8	102.6	101.7	1.5	0.0	2.9	-0.2	2.0	2.0	1.8	1.5
Q4	101.9	101.1	102.2	98.4	101.2	103.6	103.7	103.3	2.0	0.1	4.0	2.2	1.2	2.2	2.7	2.8

Source: Singapore Department of Statistics

TABLE 4: EXTERNAL TRADE

Year-on-Year % Change

Period	Total Trade	Exports	Domestic Exports					Re-exports	Imports	Exports	Domestic Exports			Re-exports	Imports
			Total	Oil	Non-oil						Total	Oil	Non-oil		
					Total	Electronics	Non-electronics								
	At Current Prices									At 1995 Prices					
1992	2.2	1.4	0.5	-22.1	8.4	11.9	3.3	3.3	2.9	7.6	8.9	-11.0	14.6	5.5	6.5
1993	16.4	15.6	13.7	8.6	14.9	21.4	4.9	19.1	17.1	17.2	16.1	15.6	16.3	18.9	18.9
1994	18.1	23.3	17.4	-3.9	22.5	30.3	8.4	33.4	13.7	27.6	24.0	11.0	26.8	33.5	14.7
1995	13.2	13.7	11.2	-1.9	13.7	16.3	8.1	17.4	12.7	16.5	14.9	-0.1	17.7	18.8	14.0
1996	5.1	5.2	5.2	20.6	2.7	4.3	-1.0	5.3	5.0	10.1	9.3	3.6	10.3	11.1	9.5
1997	5.7	5.3	3.8	-3.9	5.3	3.4	9.8	7.4	6.2	11.6	11.2	0.1	12.9	12.2	10.2
1998	-7.5	-1.0	-1.5	-15.3	0.9	-0.5	4.2	-0.3	-13.6	-0.3	0.7	8.5	-0.4	-1.6	-12.9
1999	8.1	5.7	9.8	12.4	9.5	6.1	16.8	0.2	10.8	5.4	8.1	-9.3	10.6	1.6	9.5
2000	22.9	22.4	16.9	51.0	11.8	10.1	15.0	30.7	23.4	16.8	10.2	-6.0	12.2	26.7	14.8
1997 Q1	-2.5	-2.8	-4.1	-4.3	-4.1	-6.7	2.7	-0.8	-2.2	4.5	3.6	-8.3	5.6	5.9	2.6
Q2	5.3	5.9	3.8	1.0	4.4	4.2	4.9	9.1	4.6	14.3	13.3	3.7	14.9	15.8	10.1
Q3	11.7	8.7	7.5	-2.5	9.3	8.0	12.5	10.3	14.6	15.6	16.1	3.7	17.9	15.1	19.4
Q4	8.4	9.1	7.9	-9.6	11.2	8.2	18.5	10.8	7.7	11.7	11.6	1.5	12.9	11.8	9.1
1998 Q1	4.1	9.7	6.7	-14.1	10.7	8.5	15.9	14.0	-1.1	9.3	7.7	11.5	7.2	11.4	-0.7
Q2	-7.7	-1.3	-3.3	-19.5	-0.2	-2.1	4.3	1.4	-13.8	-0.9	-1.2	-2.2	-1.0	-0.5	-13.8
Q3	-9.3	-1.1	-0.9	-15.4	1.4	-0.6	6.0	-1.3	-16.9	-2.3	-1.4	4.2	-2.1	-3.5	-17.4
Q4	-15.5	-9.7	-7.4	-11.8	-6.7	-6.6	-7.0	-12.8	-21.0	-5.8	-1.5	22.9	-4.3	-11.8	-18.0
1999 Q1	-9.4	-9.0	-3.8	-7.9	-3.2	-4.8	0.2	-15.7	-9.9	-5.5	0.6	3.5	0.2	-13.7	-7.2
Q2	8.0	5.2	9.8	6.9	10.3	5.4	21.1	-1.0	11.1	4.6	8.2	-2.0	9.7	-0.4	9.8
Q3	10.3	5.2	9.6	13.7	9.0	5.1	17.3	-0.6	16.0	5.1	7.4	-20.0	11.2	1.9	15.0
Q4	24.6	21.9	23.6	37.8	21.5	18.4	28.5	19.6	27.4	17.2	15.6	-18.5	20.7	19.8	21.2
2000 Q1	23.7	22.8	19.4	53.5	14.5	13.4	16.8	27.9	24.6	17.4	10.7	-21.0	15.6	27.9	16.8
Q2	20.7	18.7	13.4	42.6	9.1	6.5	14.1	26.5	22.9	13.1	6.9	-14.8	9.7	22.7	13.2
Q3	26.8	28.4	22.9	59.6	17.8	19.9	13.9	36.6	25.1	22.3	16.8	4.9	18.0	30.3	15.9
Q4	20.6	19.9	12.4	49.3	6.3	2.0	15.6	31.1	21.4	14.5	6.8	12.1	6.3	26.0	13.5

Source: Singapore Trade Development Board

TABLE 5: NON-OIL DOMESTIC EXPORTS by selected countries

Period	All Countries	ASEAN Total	ASEAN of which: Malaysia	Thailand	Philippines	NIEs Total	Hong Kong	S. Korea	Taiwan	USA	Japan	EU 15	Others
	Year-on-Year % Change												
1996	2.7	-0.2	-3.4	-0.4	21.0	-1.2	-4.8	16.6	-5.8	5.8	5.2	2.3	3.1
1997	5.3	7.1	4.9	1.3	40.3	9.2	9.7	-1.7	16.6	4.6	-15.4	12.0	6.1
1998	0.9	-9.6	-9.7	-9.1	-10.2	-10.4	-9.3	-22.2	-4.6	3.1	-8.7	11.1	16.3
1999	9.5	11.7	12.4	18.5	11.4	20.2	2.2	50.3	32.3	2.2	27.7	7.0	7.6
2000	11.8	17.1	19.6	13.3	13.7	35.4	17.0	44.2	52.1	1.7	26.8	-5.3	21.0
1998 Q1	10.7	-1.3	-6.1	4.6	22.1	7.1	11.8	-26.9	24.9	18.0	3.8	12.7	21.2
Q2	-0.2	-14.7	-17.0	-8.3	-17.9	-10.9	-3.0	-25.0	-15.4	6.2	-13.0	10.8	15.3
Q3	1.4	-7.8	-3.2	-17.5	-14.4	-13.7	-14.2	-25.4	-5.5	-0.8	-12.5	19.9	21.4
Q4	-6.7	-13.9	-12.1	-14.4	-22.0	-20.8	-27.3	-11.9	-16.0	-7.3	-12.4	3.1	8.5
1999 Q1	-3.2	-8.6	-7.1	-5.7	-14.3	-7.6	-21.3	43.3	-10.0	-6.8	-0.9	6.4	0.1
Q2	10.3	9.9	12.5	11.4	15.3	12.2	-14.8	50.2	44.6	2.3	38.9	10.2	13.0
Q3	9.0	10.4	6.0	31.0	14.8	25.7	12.0	44.8	37.5	3.2	27.3	6.3	1.9
Q4	21.5	35.8	38.3	43.0	32.1	52.8	41.7	60.3	62.7	9.9	48.4	5.6	15.4
2000 Q1	14.5	26.6	29.0	17.0	41.5	54.6	44.7	60.5	62.8	4.5	33.6	-9.3	14.7
Q2	9.1	17.5	15.6	21.5	20.5	46.4	27.7	53.2	64.3	-4.7	14.2	-11.6	21.3
Q3	17.8	25.6	34.4	12.1	6.7	44.6	16.1	53.1	76.6	6.9	40.1	-3.4	25.9
Q4	6.3	2.8	4.0	4.2	-4.4	6.3	-9.3	19.3	16.3	0.1	22.5	2.2	20.9
	% Share of All Countries												
1996	100.0	19.8	12.9	4.0	1.6	12.5	6.2	2.7	3.6	29.2	9.5	18.2	10.9
1997	100.0	20.1	12.8	3.9	2.1	13.0	6.5	2.5	4.0	29.0	7.6	19.3	10.9
1998	100.0	18.0	11.5	3.5	1.9	11.5	5.8	2.0	3.7	29.7	6.9	21.3	12.6
1999	100.0	18.4	11.8	3.8	1.9	12.7	5.4	2.7	4.5	27.7	8.0	20.8	12.4
2000	100.0	19.3	12.6	3.8	1.9	15.3	5.7	3.5	6.2	25.2	9.1	17.6	13.4

Source: Singapore Trade Development Board

TABLE 6: LABOUR MARKET

Period	Average Monthly Earnings	Labour Productivity								Unit Labour Cost		Changes in Employment							
		All Sectors	Manu-facturing	Con-struction	Wholesale & Retail Trade	Hotels & Rest-aurants	Transport & Comms.	Financial Services	Business Services	Overall Economy	Manu-facturing	All Sectors	Manu-facturing	Con-struction	Wholesale & Retail Trade	Hotels & Rest-aurants	Transport & Comms.	Financial Services	Business Services
	Year-on-Year % Change											Thousand							
1992	7.5	3.2	2.8	14.5	-0.8	6.0	1.7	4.8	3.2	3.4	6.5	40.3	-7.9	11.3	8.1	1.0	6.2	1.8	6.5
1993	6.3	9.2	11.6	-4.9	18.6	6.4	6.1	18.7	1.6	-0.9	-2.5	70.8	-3.1	26.4	12.3	2.6	4.8	4.8	7.3
1994	8.8	6.6	11.3	4.0	10.0	0.8	8.1	3.2	4.3	2.3	-3.1	72.1	11.6	13.1	8.6	4.8	2.6	5.1	10.9
1995	6.4	2.9	6.5	-2.9	6.2	3.5	6.1	-4.0	-0.9	2.5	-1.4	109.0	12.5	40.6	11.4	2.7	9.3	4.8	13.2
1996	5.8	1.3	2.9	-2.0	3.2	2.9	3.4	1.2	0.2	2.6	2.3	102.6	-7.7	52.8	5.7	3.2	6.2	5.4	13.0
1997	5.7	2.3	5.5	-3.3	3.9	1.9	4.6	9.3	-0.4	0.7	0.7	120.3	3.7	45.8	7.5	5.2	6.2	8.1	18.0
1998	2.8	-2.7	1.4	-4.2	-3.3	-9.0	4.7	-10.9	-6.4	3.9	-1.1	-23.4	-27.6	-4.7	-11.9	-1.6	-0.5	-2.0	8.5
1999	2.7	6.3	17.6	-2.3	8.8	3.9	6.2	-0.3	-4.5	-9.1	-17.3	39.9	4.4	-18.0	3.4	1.4	4.5	4.7	17.4
2000	8.9	5.6	11.6	-3.3	10.9	5.7	4.0	-3.9	-3.3	-0.9	-7.1	108.5	25.8	1.1	15.2	3.5	10.4	8.1	23.0
1997 Q1	5.1	-0.2	-3.2	-8.4	0.5	3.3	4.1	13.9	-0.3	3.3	9.3	16.2	-0.9	10.7	0.5	-2.1	0.5	1.2	1.6
Q2	6.0	3.2	6.1	-5.7	5.9	3.4	5.1	14.0	-1.3	-0.1	0.2	37.2	-1.2	12.5	2.8	2.3	2.1	3.0	8.2
Q3	5.2	4.8	10.5	0.2	8.3	3.4	5.7	9.7	0.7	-2.0	-4.4	31.1	2.4	16.2	-0.1	-1.3	2.2	1.4	3.3
Q4	6.2	1.3	7.9	0.0	1.4	-2.3	3.7	0.0	-0.6	1.3	-2.7	35.8	3.4	6.4	4.3	6.4	1.4	2.4	4.8
1998 Q1	4.8	-1.3	5.4	1.6	0.0	-8.2	3.9	-15.2	-5.9	4.9	-3.5	9.1	-1.0	7.1	-1.7	-3.7	-0.6	-1.0	3.3
Q2	4.3	-4.0	0.0	-2.3	-4.7	-8.3	4.5	-17.8	-5.0	7.1	1.7	-5.9	-8.0	0.9	-5.0	-0.4	0.3	0.4	0.7
Q3	2.9	-4.2	-1.5	-6.0	-4.6	-12.5	4.1	-12.9	-7.5	5.4	1.1	-20.3	-10.6	-4.1	-3.8	-0.5	-0.4	-3.8	5.3
Q4	-0.3	-0.9	2.9	-9.0	-3.9	-7.1	6.3	4.1	-7.4	-0.9	-3.2	-6.3	-7.9	-8.6	-1.3	3.0	0.2	2.3	-0.8
1999 Q1	-0.3	3.2	14.1	0.3	1.4	-0.7	6.3	-5.2	-3.4	-7.6	-14.4	-9.6	-3.3	-10.5	-0.2	-2.9	-0.2	-0.6	2.7
Q2	1.0	8.3	20.5	-4.6	8.9	4.5	6.0	14.3	-5.5	-13.5	-22.6	15.5	4.1	-3.3	0.0	0.7	1.0	1.1	7.0
Q3	3.5	7.5	19.1	-3.9	11.0	5.1	6.5	1.8	-4.0	-11.3	-19.8	7.7	2.4	-5.1	-0.8	-0.1	1.8	2.0	2.8
Q4	5.9	6.2	15.7	-1.0	13.9	6.7	5.9	-11.0	-5.2	-4.6	-13.0	26.3	1.2	0.9	4.4	3.8	2.0	2.1	4.9
2000 Q1	8.1	6.7	11.4	-7.2	15.0	8.3	6.2	4.0	-4.6	-1.7	-6.4	13.7	-0.5	-2.2	3.9	-1.8	2.0	1.7	5.9
Q2	7.2	4.6	11.0	-2.1	11.4	4.4	4.9	-11.6	-2.9	-0.5	-6.5	29.7	6.5	2.3	4.5	0.4	2.7	2.0	6.8
Q3	8.7	5.5	11.1	-1.3	9.9	8.0	4.3	-5.1	-2.7	-0.4	-5.8	30.0	11.1	1.7	2.5	-0.2	2.6	1.9	4.4
Q4	11.1	5.5	12.4	-2.4	7.7	2.6	0.6	-1.3	-3.2	-1.1	-9.5	35.1	8.7	-0.6	4.3	5.1	3.1	2.6	6.0

Source: Singapore Department of Statistics / Ministry of Manpower

TABLE 7: MONETARY

End of Period	Money Supply								Interest Rates				
												Banks	
	Narrow Money M1	Broad Money M2	Broad Money M3	Reserve Money	Narrow Money M1	Broad Money M2	Broad Money M3	Reserve Money	Prime Lending Rate	3-month Interbank Rate	3-month SIBOR (US$)	Savings Rate	12-month Fixed Deposit Rate
	S$ Billion				Year-on-Year % Change				Rate % Per Annum				
1992	18.5	75.7	101.5	13.5	12.7	8.9	9.5	10.6	5.55	2.31	3.50	1.79	2.97
1993	22.9	82.1	111.4	14.7	23.6	8.5	9.7	8.4	5.34	3.31	3.38	1.59	2.79
1994	23.4	94.0	125.8	15.6	2.3	14.4	13.0	6.2	6.49	4.38	6.50	2.93	4.23
1995	25.3	102.0	136.7	17.0	8.3	8.5	8.7	9.4	6.26	2.56	5.56	2.72	4.01
1996	27.0	112.0	148.5	18.2	6.7	9.8	8.6	6.7	6.26	3.13	5.56	2.72	3.99
1997	27.5	123.4	160.8	19.2	1.7	10.3	8.3	5.6	6.96	6.75	5.81	3.08	4.41
1998	27.2	160.8	173.6	16.6	-1.0	30.2	8.0	-13.3	5.90	1.88	5.13	1.43	2.51
1999	31.1	174.5	186.2	21.4	14.2	8.5	7.3	28.6	5.80	2.75	6.06	1.36	2.46
2000	33.3	170.9	182.9	18.5	6.9	-2.0	-1.8	-13.7	5.80	2.81	6.39	1.30	2.42
1997 Q1	28.5	117.0	153.8	19.4	9.8	11.8	10.9	14.2	6.26	3.50	5.75	2.72	3.99
Q2	28.2	119.1	156.3	18.3	6.9	10.6	10.0	3.7	6.26	3.63	5.81	2.72	3.98
Q3	28.0	120.5	157.8	18.6	5.5	10.2	9.5	4.8	6.26	3.94	5.75	2.72	3.98
Q4	27.5	123.4	160.8	19.2	1.7	10.3	8.3	5.6	6.96	6.75	5.81	3.08	4.41
1998 Q1	26.6	128.0	164.8	19.1	-6.5	9.4	7.1	-1.3	7.74	5.00	5.69	3.46	5.32
Q2	24.9	128.7	165.5	18.8	-11.8	8.1	5.9	2.5	7.79	6.25	5.69	3.49	5.38
Q3	24.9	132.6	169.5	15.2	-11.0	10.0	7.4	-18.3	7.54	4.13	5.31	3.24	4.94
Q4	27.2	160.8	173.6	16.6	-1.0	30.2	8.0	-13.3	5.90	1.88	5.13	1.43	2.51
1999 Q1	29.0	163.6	176.0	17.3	8.9	27.8	6.8	-9.5	5.80	1.75	5.00	1.36	2.46
Q2	29.6	167.9	179.6	16.7	18.9	30.4	8.5	-10.9	5.80	1.88	5.34	1.36	2.46
Q3	28.8	170.3	181.8	17.0	15.4	28.4	7.3	11.5	5.80	2.50	6.05	1.36	2.46
Q4	31.1	174.5	186.2	21.4	14.2	8.5	7.3	28.6	5.80	2.75	6.06	1.36	2.46
2000 Q1	32.1	172.7	184.5	17.7	10.6	5.6	4.9	2.2	5.85	2.38	6.28	1.33	2.46
Q2	33.1	171.7	183.3	17.7	11.6	2.3	2.1	5.8	5.85	2.50	6.78	1.33	2.46
Q3	31.7	166.6	178.4	17.4	10.3	-2.2	-1.9	2.5	5.85	2.56	6.81	1.33	2.46
Q4	33.3	170.9	182.9	18.5	6.9	-2.0	-1.8	-13.7	5.80	2.81	6.39	1.30	2.42

Source: Monetary Authority of Singapore

TABLE 8: FISCAL

Period	Operating Revenue							Expenditure			Surplus (+)/ Deficit (-)	
	Total	Tax Revenue					Non-tax Revenue	Total	Operating	Development		
		Total	Income Tax	Asset Tax	Stamp Duty	GST						
	S$ Million											% of GDP
FY1992	17772	14237	7147	1498	673	0	3535	12161	8512	3649	5611	6.8
FY1993	20656	16224	7735	1645	1107	0	4432	12896	9001	3895	7759	8.0
FY1994	23713	19000	8296	1844	1394	1523	4714	14043	10072	3971	9670	8.9
FY1995	25255	19896	8773	1757	1271	1626	5359	17410	11449	5962	7844	6.4
FY1996	28930	23205	10951	1823	1878	1746	5725	23288	14159	9129	5642	4.3
FY1997	29181	23011	10195	2335	1688	1927	6170	23042	14080	8962	6139	4.3
FY1998	27911	21551	11331	1529	953	1657	6360	26933	14651	12282	978	0.7
FY1999	30645	22624	11748	1314	1413	1995	8021	25079	14867	10212	5566	3.8
FY 2000 (Revised)	33323	25959	11261	1783	1600	1900	7364	27943	18514	9429	5381	3.4
FY 2001 (Estimated)	34271	28332	13592	1609	1370	2200	5939	28055	18656	9399	6217	3.7
1997 Q1	7737	6455	2885	727	386	349	1282	10199	5626	4573	-2462	-7.6
Q2	6444	5692	2678	395	524	738	752	4386	2330	2056	2058	6.0
Q3	8044	6684	3140	762	453	509	1360	5167	3158	2009	2877	8.0
Q4	8388	5610	2761	519	332	393	2778	6113	4045	2068	2275	6.2
1998 Q1	6305	5025	1616	659	380	287	1280	7376	4547	2829	-1071	-3.1
Q2	7141	5363	2861	389	255	523	1778	4841	2834	2007	2300	6.7
Q3	7140	5957	3200	488	224	527	1183	5268	2893	2375	1872	5.4
Q4	7626	5809	3289	313	222	352	1817	7308	3962	3346	318	0.9
1999 Q1	6004	4422	1981	339	252	256	1582	9516	4962	4554	-3512	-10.7
Q2	6522	4909	2537	241	262	622	1613	4390	2454	1936	2132	6.0
Q3	9072	7182	4377	389	387	539	1890	4942	2874	2068	4130	11.3
Q4	7021	5065	2729	212	379	360	1956	6098	3617	2481	923	2.5
2000 Q1	8030	5468	2105	472	384	474	2562	9649	5922	3727	-1619	-4.4
Q2	7492	5952	3298	285	352	724	1540	3968	2646	1322	3524	9.1
Q3	10005	7937	4956	462	354	470	2068	4692	3245	1447	5313	13.0
Q4	8000	5921	3064	266	290	576	2079	9706	7084	2622	-1706	-4.0

Source: Ministry of Finance

TABLE 9: BALANCE OF PAYMENTS – Current Account

Period	Current Account Balance		Goods Account			Services Account						Income	Current
			Exports	Imports	Balance	Total	Transportation	Travel	Insurance	Govt. Servs	Other	Balance	Transfers
	S$ Million	% of GNP	S$ Million										
1992	9635	11.7	108432	111400	-2967	10854	-1330	5239	-596	-14	7556	2522	-774
1993	6804	7.3	125802	130204	-4401	11757	-1359	5253	-599	-8	8469	315	-866
1994	17413	16.0	149566	147497	2069	13970	-1153	4450	-674	10	11337	2384	-1010
1995	21119	17.4	167897	166512	1384	17407	-1376	4413	-878	-36	15284	3583	-1255
1996	18080	13.9	177680	174543	3136	14417	-1538	2436	-855	1	14374	2031	-1505
1997	26618	17.8	186708	185048	1660	17093	-1721	1709	-823	-28	17957	9600	-1736
1998	34031	23.3	185035	160301	24735	2555	-2273	414	-328	-27	4767	8579	-1837
1999	36866	24.0	195798	176888	18911	8569	-2903	1015	-490	-50	10997	11358	-1972
2000	37576	22.2	239512	219859	19653	9710	-4602	1352	-321	-47	13329	10555	-2342
1997 Q1	5510	n.a.	42369	42621	-251	3992	-390	782	-183	-15	3798	2178	-409
Q2	7835	n.a.	46253	45117	1136	4701	-429	538	-202	2	4792	2423	-424
Q3	6565	n.a.	48097	48459	-362	5120	-431	498	-220	-6	5279	2253	-445
Q4	6708	n.a.	49989	48851	1138	3281	-472	-109	-218	-9	4089	2746	-458
1998 Q1	6208	n.a.	46651	42109	4542	-215	-528	230	-166	-12	260	2330	-449
Q2	8487	n.a.	45590	39118	6473	101	-554	-47	-50	-5	757	2368	-454
Q3	9740	n.a.	47546	40374	7172	991	-744	303	-81	-8	1523	2048	-470
Q4	9596	n.a.	45248	38700	6548	1678	-447	-71	-30	-2	2228	1834	-464
1999 Q1	8013	n.a.	42320	37766	4554	1110	-547	460	-68	-18	1283	2839	-490
Q2	9468	n.a.	48087	43255	4831	2339	-1020	173	-150	-6	3342	2777	-480
Q3	8897	n.a.	50265	46683	3582	2987	-657	433	-113	-12	3337	2821	-494
Q4	10488	n.a.	55127	49183	5943	2133	-679	-51	-159	-13	3035	2921	-509
2000 Q1	8975	n.a.	52092	47309	4784	2040	-1025	546	8	-22	2533	2664	-512
Q2	8771	n.a.	57195	53465	3730	2693	-1063	196	-105	-9	3673	2886	-537
Q3	10421	n.a.	64211	58851	5360	3092	-1173	492	-95	-9	3875	2542	-572
Q4	9408	n.a.	66014	60234	5779	1886	-1341	118	-130	-9	3248	2464	-721

Source: Singapore Department of Statistics

TABLE 10: BALANCE OF PAYMENTS – Capital & Financial Accounts

S$ Million

Period	Capital & Financial Account Balance	Capital Account	Financial Account						Errors & Omissions	Overall Balance	Official Foreign Reserves (End-of-Period)
			Total	Direct Investment	Portfolio Investment	Other Investment					
						Total	Banks	Others			
1992	2859	-62	2921	1446	4056	-2580	-1173	-1408	-2535	9959	65788
1993	-2074	-115	-1958	4095	-8024	1971	4391	-2421	7423	12154	77867
1994	-13633	-129	-13504	6069	-11801	-7772	1707	-9479	3522	7302	85166
1995	-1345	-101	-1244	7577	-10430	1609	7904	-6295	-7600	12174	97337
1996	-6999	-196	-6803	4998	-16480	4678	6344	-1665	-674	10407	107751
1997	-16555	-257	-16298	5356	-19310	-2344	9362	-11705	1793	11856	119617
1998	-36884	-378	-36507	9642	-11728	-34420	-17689	-16731	7834	4981	124584
1999	-31308	-324	-30984	5400	-12009	-24375	-12636	-11739	1764	7321	128457
2000	-19932	-281	-19651	3645	-23889	593	15083	-14490	-5809	11835	139260
1997 Q1	-6576	-54	-6522	1198	-3994	-3726	1246	-4973	7151	6086	113848
Q2	-1632	-71	-1560	-420	-4654	3513	2282	1232	-4524	1679	115528
Q3	4592	-59	4651	3017	-4477	6111	4363	1747	-8254	2903	118436
Q4	-12940	-73	-12866	1561	-6186	-8242	1470	-9712	7419	1188	119617
1998 Q1	-11434	-84	-11351	2317	-1642	-12025	-7877	-4149	5567	340	119956
Q2	-15603	-108	-15496	2001	-3171	-14326	-979	-13347	8326	1210	121196
Q3	-5767	-101	-5666	2205	-3568	-4303	-7985	3682	-3108	866	122062
Q4	-4080	-86	-3994	3119	-3348	-3766	-849	-2917	-2951	2566	124584
1999 Q1	-19983	-83	-19900	4194	-2224	-21871	-5965	-15906	11556	-415	124327
Q2	-8665	-93	-8572	73	-4093	-4553	-358	-4196	3997	4799	125856
Q3	-406	-82	-324	171	-2294	1799	-9026	10825	-8496	-6	129593
Q4	-2253	-66	-2187	962	-3398	250	2713	-2463	-5293	2943	128457
2000 Q1	-9140	-71	-9069	1569	-6796	-3842	-1645	-2196	-2006	-2171	128159
Q2	279	-79	358	575	-6196	5979	6245	-265	-3191	5860	134431
Q3	49	-71	120	583	-5262	4799	7489	-2691	-6076	4394	135953
Q4	-11120	-59	-11061	918	-5635	-6344	2995	-9338	5465	3753	139260

Source: Singapore Department of Statistics / Monetary Authority of Singapore

TABLE 11: EXCHANGE RATES

End of Period	Singapore Dollar Per US Dollar	Pound Sterling	EURO	100 Swiss Franc	100 Japanese Yen	Malaysian Ringgit	Hong Kong Dollar	100 New Taiwan Dollar	100 Korean Won	Australian Dollar
1992	1.6449	2.4867		112.39	1.3198	0.6306	0.2125	6.4758	0.2086	1.1312
1993	1.6080	2.3802		108.61	1.4364	0.5953	0.2082	6.0338	0.1989	1.0885
1994	1.4607	2.2782		111.18	1.4628	0.5707	0.1888	5.5370	0.1850	1.1341
1995	1.4143	2.1884		122.61	1.3744	0.5567	0.1829	5.1821	0.1827	1.0540
1996	1.3998	2.3670		103.80	1.2046	0.5538	0.1809	5.0919	0.1657	1.1150
1997	1.6755	2.7771		115.23	1.2893	0.4313	0.2162	5.1433	0.0993	1.0935
1998	1.6605	2.7666		120.15	1.4484	0.4370	0.2143	5.1552	0.1394	1.0190
1999	1.6660	2.6914	1.6810	104.50	1.6272	0.4384	0.2143	5.3142	0.1471	1.0896
2000	1.7315	2.5818	1.6095	105.86	1.5091	0.4557	0.2220	5.2224	0.1377	0.9605
1997 Q1	1.4451	2.3609		99.49	1.1654	0.5829	0.1865	5.2468	0.1635	1.1330
Q2	1.4300	2.3793		98.41	1.2513	0.5665	0.1845	5.1417	0.1610	1.0660
Q3	1.5295	2.4626		105.05	1.2641	0.4783	0.1976	5.3476	0.1672	1.1030
Q4	1.6755	2.7771		115.23	1.2893	0.4313	0.2162	5.1433	0.0993	1.0935
1998 Q1	1.6060	2.6926		105.54	1.2200	0.4412	0.2073	4.8951	0.1155	1.0673
Q2	1.7068	2.8461		112.16	1.2141	0.4098	0.2203	4.9509	0.1237	1.0462
Q3	1.6850	2.8783		121.59	1.2456	0.4434	0.2175	4.8954	0.1216	1.0070
Q4	1.6605	2.7666		120.15	1.4484	0.4370	0.2143	5.1552	0.1394	1.0190
1999 Q1	1.7322	2.7914	1.8548	116.21	1.4385	0.4558	0.2235	5.2253	0.1413	1.0886
Q2	1.7013	2.6787	1.7562	109.76	1.4105	0.4477	0.2193	5.2736	0.1468	1.1255
Q3	1.7026	2.8002	1.8129	113.28	1.5941	0.4480	0.2192	5.3556	0.1399	1.1124
Q4	1.6660	2.6914	1.6810	104.50	1.6272	0.4384	0.2143	5.3142	0.1471	1.0896
2000 Q1	1.7189	2.7406	1.6488	103.48	1.6279	0.4523	0.2208	5.6394	0.1554	1.0431
Q2	1.7294	2.6252	1.6468	105.76	1.6393	0.4551	0.2218	5.6139	0.1551	1.0348
Q3	1.7410	2.5479	1.5336	100.62	1.6122	0.4582	0.2233	5.5587	0.1561	0.9472
Q4	1.7315	2.5818	1.6095	105.86	1.5091	0.4557	0.2220	5.2224	0.1377	0.9605

Source: Monetary Authority of Singapore