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PREFACE

The Monetary Authority of Singapore (MAS) conducts a regular assessment of Singapore's financial system by identifying potential sources of risks and vulnerabilities, and assesses the ability of the financial system to withstand these potential shocks. The results of the assessment are contained in the *Financial Stability Review* (FSR), which is published on a semi-annual basis. The FSR aims to contribute to a better understanding and exchange of views among market participants, analysts and the public on issues affecting Singapore's financial system.

Section 1 of the FSR provides a discussion of the macroeconomic environment and financial markets both globally and in Singapore. Against this backdrop, Section 2 analyses the non-financial sector, which includes both the corporate and household sectors while Section 3 focuses on the banking sector given its dominant role in Singapore's financial landscape. A review of the insurance sector is also provided. Section 4 highlights the major developments in the financial infrastructure.

The FSR is coordinated by the Macroeconomic Surveillance Department (MSD) and incorporates contributions from the following departments: Banking Supervision Department, Complex Institutions Supervision Department, Economic Policy Department, Insurance Supervision Department, Prudential Policy Department, Reserve and Monetary Management Department, Securities and Futures Supervision Department and Specialist Risk Supervision Department. The FSR reflects the views of the staff of the Macroeconomic Surveillance Department and the contributing departments.

The FSR may be accessed in PDF format on the MAS website:
http://www.mas.gov.sg/masmcm/bin/pt1MAS_FSR.htm

HIGHLIGHTS

Since the December 2005 Financial Stability Review (FSR), the macroeconomic backdrop has generally been favourable. Reflecting the strong and broad-based momentum in economic activity, both the official and private sectors have forecasted further expansion in the global economy, which is into its third consecutive year of over 4% growth. There has also been increasing evidence of the broadening of growth to Japan and the euro zone. Headline inflation has however risen somewhat with oil prices sustained at high levels.

Global financial market conditions have largely remained benign since the end of 2005, amid the gradual withdrawal of monetary accommodation. The sell-off in equity markets around the world in May 2006 suggests some nervousness in financial markets following a strong run-up in asset prices across a number of markets. Nonetheless, the underlying conditions supporting macroeconomic growth and stability remain intact.

The baseline conjuncture in this FSR is that short-term interest rates will continue to rise at a pace commensurate with continued economic expansion. However, in light of incoming evidence pointing to stronger core inflationary pressures, we highlight the possibility of a higher than expected rise in interest rates. This could lead to a shift in market expectations, causing a sudden re-pricing of risk and disorderly market conditions, with adverse effects on real economic activity. An avian flu pandemic remains in the background as a possible low risk but high impact event.

The FSR proceeds to review the financial stability conditions across East Asia and in Singapore against these developments and potential risks. The East Asian economies have performed strongly. Economic growth is becoming more balanced, supported by strong export growth and increasingly, domestic demand. As a result, the balance sheets of firms and banks have strengthened further, after the initial phase of consolidation following the Asian Financial Crisis.

The Singapore financial system has remained sound, supported by healthy financial positions of the corporate and household sectors. Firms' profitability and other financial indicators have continued to improve, while household wealth has strengthened. Sensitivity tests on interest rate hikes applied to both the corporate and household sectors revealed that the increase in borrowing costs is not likely to impact on debt servicing ability significantly. Firms have built up sufficient cash buffers while the debt servicing burden of households is mitigated by their use of Central Provident Fund (CPF) savings for mortgage payments.

Commercial bank lending in Singapore grew strongly in 2005 as robust demand in the Asian Dollar Market (ADM) more than offset the softer domestic loan growth. Going forward, overall credit growth may be curtailed by higher interest rates. The impact of a sharper than anticipated rise in interest rates is buffered by the local banks' strong profits and improved asset quality.

Macroeconomic Surveillance Department
Monetary Authority of Singapore
2 June 2006

1 MACRO ENVIRONMENT

1.1 Global Financial Markets

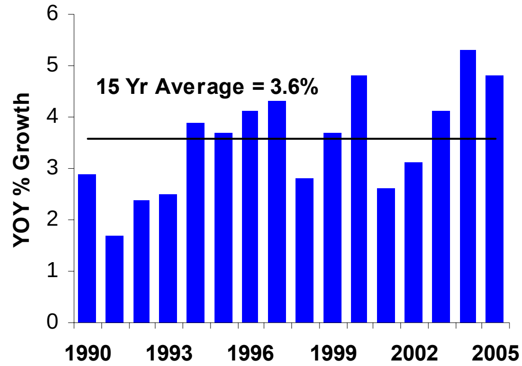
Since the last Financial Stability Review (FSR) in December 2005, the global economy has continued to grow at a robust pace. While the near-term outlook has remained favourable, monetary policy is becoming more challenging as short-term rates have risen closer to "neutral" levels, against the backdrop of rising oil and other commodity prices. The increase in short-term interest rates thus far has been measured and taken place against continued global GDP growth. However, risks to the global environment could stem from the feeding of higher oil prices into core inflation, a sharp reversal of favourable conditions in global financial markets if investors reassess the current benign risk-return conditions, or a disorderly adjustment of global imbalances. In addition, an avian flu epidemic remains in the background as a possible low risk but high impact event.

Global economy has remained resilient amidst the broadening of growth

Since the last review, the global economy has remained resilient despite higher oil prices and rising interest rates. World GDP grew at a robust pace of 4.8% in 2005 despite the slowdown in Q4 2005 in both the US and euro zone. (Chart 1.1 and Table 1.1) In addition, preliminary data suggests that growth momentum has picked up in the first quarter of this year, aided in part by the continued strengthening of the labour market in many countries.

Global growth has averaged 4.7% since 2003, which is well above its historical trend. Significantly, growth has broadened to Japan and to a lesser extent, the euro zone. Japan's growth has been impressive, exceeding 5% on a quarter-on-quarter seasonally adjusted annualised rate (q-o-q SAAR) in two of the four quarters last year. While Japan's growth moderated somewhat in Q1 2006 following its robust performance last year, the Japan's Tankan survey has indicated that consumer and business sentiment will likely remain positive.

Chart 1.1
World GDP Growth



Source: IMF WEO Database

Table 1.1
Real GDP Growth of Major Economies
(q-o-q SAAR % Change)

	2005	2006f	Q1 2005	Q2 2005	Q3 2005	Q4 2005	Q1 2006
Industrialised Countries							
US	3.5	3.4	3.8	3.3	4.1	1.7	5.3
Japan	2.6	3.0	5.9	5.3	0.6	4.3	1.9
Euro zone	1.4	2.1	1.3	1.7	2.8	1.3	2.4

Source: CEIC, Datastream and Consensus Forecast

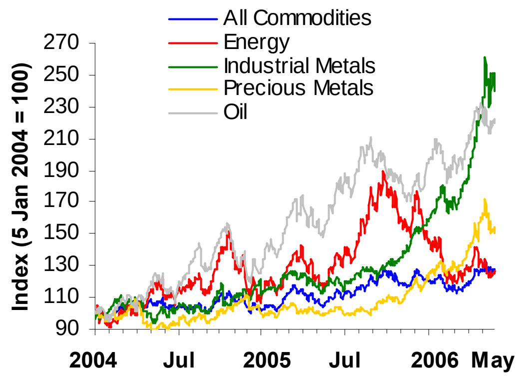
Similarly, EU surveys have indicated that sentiment will remain firm going forward. The revival of the major economies is important as it will reduce the world's dependence on the US market and will help redress the global imbalances and lower the risk of a sharp and disorderly adjustment in the US$.

Upside inflation surprises from higher oil and other commodity prices could prompt tighter than expected monetary policies

With the broadening of global economic growth and the increases in oil and other commodity prices (Chart 1.2), headline inflation in the major economies has shown signs of an upward trend. (Chart 1.3) The major central banks have been on a tightening bias. The US Federal Reserve (Fed) and the European Central Bank (ECB) have been gradually normalising short-term interest rates following a prolonged period of highly accommodative monetary policies. (Chart 1.4) In the US, the Fed raised the Fed funds rate from 4.25% at the start of the year to 5% in three 25 basis points (bps) steps, while the ECB lifted its refinancing rate in December last year and in March 2006. The Bank of Japan (BOJ) recently ended its quantitative easing stance while leaving its short-term policy rate unchanged, reflecting greater confidence in the current economic recovery.

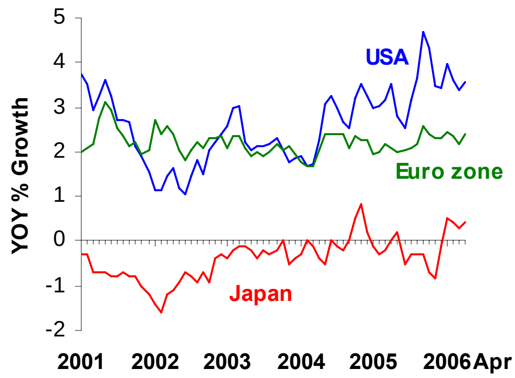
Although core inflation has remained relatively muted, there is a heightened risk that oil and other commodity prices may start to feed into core inflation and exert some upward pressure on prices, especially if capacity utilisation and labour markets were to tighten going forward. As higher commodity prices feed into bigger inflation surprises, markets would expect a further tightening of monetary conditions which could adversely impact economic growth as well as financial stability. Global markets have, in May 2006, already shown heightened sensitivity to inflationary data. Markets across the US, euro zone and Asia fell sharply when US April core CPI figures came in at 0.3% month-on-month (m-o-m), just 0.1% above expectations.

Chart 1.2
Commodity Price Indices (in US$)*



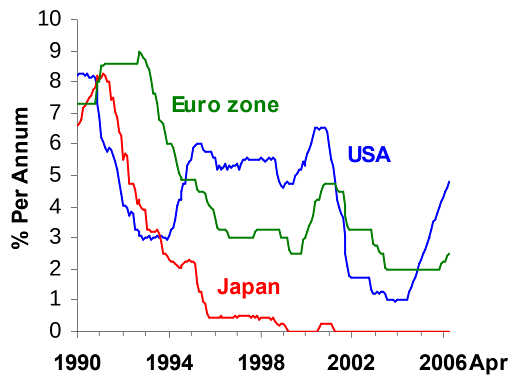
*Oil refers to the average prices of Dubai, WTI Cushing and European Brent crudes. The rest of the commodities refer to the Dow Jones Commodity Price Indices
Source: Bloomberg

Chart 1.3
Major Economies: Headline Inflation



Source: CEIC and Datastream

Chart 1.4
Major Economies: Policy Interest Rates



Source: CEIC

With the balance of risks shifting in the direction of an upside inflationary surprise, the possibility of policy-makers ending up behind the curve has also increased. Correspondingly, heightened vigilance in relation to incoming data is required.

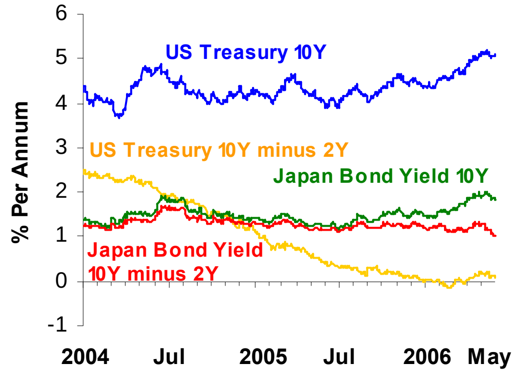
Significant changes in market expectations could result in disorderly market conditions

Despite the ongoing normalisation of short-term rates and the gradual rise in long-term rates in 2006, global financial market conditions have remained benign. There is a risk, however, that a re-evaluation of the current favourable conjuncture of unusually low yields (by historical standards), easy global liquidity conditions (Chart 1.5), and low credit spreads and volatilities (Chart 1.6), may trigger a rebalancing of portfolios. The likelihood that this risk will materialise depends on the degree to which the recent favourable conditions in financial markets have reflected improvements in fundamentals or have been a result of accommodative monetary policies pursued in recent years. A significant change in expectations could lead to disorderly market conditions, sharp corrections in asset prices and impact the value of mark-to-market positions in balance sheets. In particular, there could be significant distress should investors choose to exit the market at the same time.

Unwinding of global financial imbalances remains a risk as interest rate differentials narrow

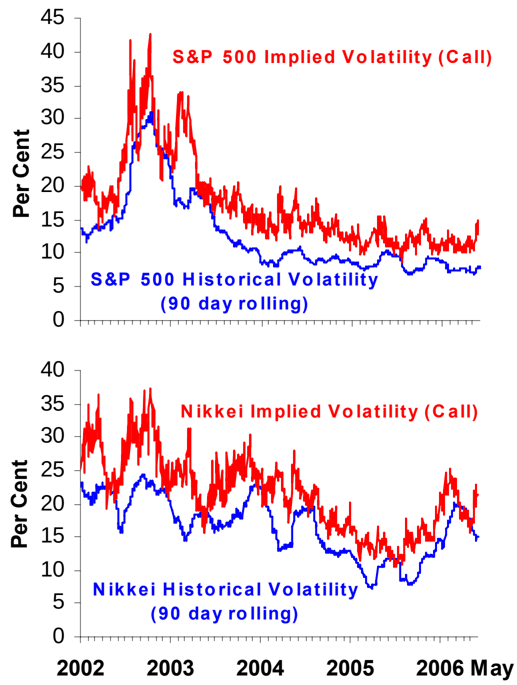
In addition, the risk of a disorderly adjustment of global financial imbalances remains as the narrowing of growth and interest rate differentials could trigger a rebalancing of portfolios against US$ assets. In particular, markets are concerned over the potential for disorderly unwinding of large carry trade positions. In April 2006, the US$ fell against the euro and yen on growing expectation that the Fed is near to the end of its rate hikes in contrast with the ECB and the BOJ. (Chart 1.7) While the correction in the US$ has thus far been orderly and markets have been resilient, the risk of a more abrupt adjustment cannot be ruled out.

Chart 1.5
US & Japan Bond Yields



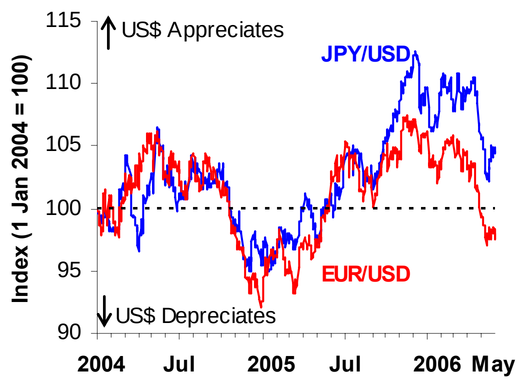
Source: Bloomberg

Chart 1.6
US & Japan Equity Implied & Historical Volatilities



Source: Bloomberg

Chart 1.7
US$ against Euro & JPY



Source: Bloomberg

1.2 East Asian Financial System

The macroeconomic and financial conditions in most East Asian economies have generally remained strong. GDP growth has been sustained since about H2 2003, providing the basis for corporates, households and banks to improve their balance sheet positions after the initial phase of consolidation, following the Asian Financial Crisis. Economic growth is also becoming more balanced, supported by strong export performance and increasingly, domestic demand. The balance sheets of the banking sector have remained robust while those of the non-financial corporate sector have improved somewhat. Nevertheless, there remain some risks to the favourable situation and outlook. Apart from the potential of global risks spilling over to the region, as seen by the recent sell-offs in East Asian equity and currency markets, other developments that are being closely monitored include overheating in some sectors of China's economy, and the possibility of a strong pass-through of increasing oil prices into core inflation.

Strong growth in China and more balanced expansion in the rest of Asia

In Asia, excluding Japan, China has remained the principal engine of growth, with strong exports, personal consumption and investment enabling it to expand by about 10% in the last two quarters. (Table 1.2) The emergence of China has led to significant growth in regional exports, resulting in greater economic and financial integration. (Box A) However, the very rapid pace of growth, particularly of investment in China, has led to a renewal of concerns of overheating in some sectors. While the rest of Asia has experienced sustained economic growth since about H2 2003, there is increasing evidence of a gradual increase in corporate and infrastructure investment. The tightening of capacity utilisation and the healthier financial position of corporates support further growth in corporate investments. In Southeast Asia, weak investment spending since the Asian Financial Crisis has resulted in infrastructure bottlenecks. Indonesia, Malaysia and Thailand have all recently announced plans to increase infrastructure investment.

Corporate sector coped well despite higher oil prices and rising interest rates

During the second half of 2005, corporate debt levels decreased in several Asian economies whilst corporate profitability [1] proved to be resilient despite higher oil prices. Return-on-asset ratios (ROA) have improved for several East Asian countries during the past year while profit margins have strengthened somewhat with corporate profits in Taiwan and the Philippines growing strongly compared to previous years. (Table 1.3) Therefore, firms were able to service their debt as evidenced by healthy interest rate coverage ratios. (Chart 1.8) Consequently, there has not been any significant pickup in corporate loan defaults.[2]

1 Data for publicly listed companies only.

2 According to Standard and Poor's Annual Asia Corporate Default study in 2005.

Table 1.2
Real GDP Growth (y-o-y % Change)

	2003	2004	2005	2006f	Q2 2005	Q3 2005	Q4 2005	Q1 2006
Southeast Asia								
Malaysia	5.5	7.2	5.2	5.4	4.1	5.3	5.2	5.3
Indonesia	4.8	5.1	5.6	5.3	5.6	5.6	4.9	4.6
Philippines	4.9	6.2	5.0	4.7	5.4	4.8	5.3	5.5
Singapore	2.9	8.7	6.4	6.2	5.7	7.6	8.7	10.6
Thailand	7.0	6.2	4.5	4.8	4.6	5.4	4.7	…
Northeast Asia								
China	10.0	10.1	9.9	9.6	10.1	9.8	9.9	10.3
Hong Kong	3.2	8.6	7.3	5.3	7.2	8.2	7.5	8.2
Korea	3.1	4.7	4.0	5.2	3.2	4.5	5.3	6.2
Taiwan	3.4	6.1	4.1	4.0	3.0	4.4	6.4	4.9

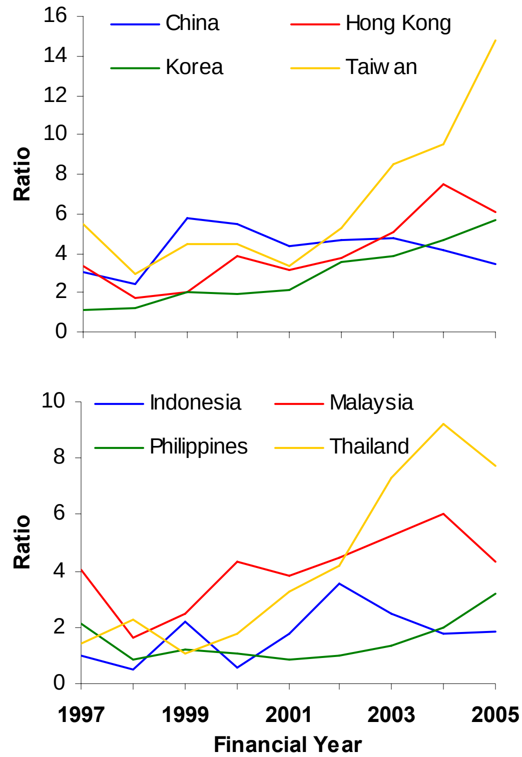
Source: CEIC and Consensus Forecast

Table 1.3
Non-Financial Corporate Ratios (Median)

Financial year	2001	2002	2003	2004	2005
Debt-to-Equity Ratio (%)					
Malaysia	29.7	28.9	30.4	30.4	29.4
Indonesia	25.3	34.3	43.9	44.0	49.3
Philippines	21.6	18.9	15.0	17.0	16.6
Singapore	31.1	29.8	32.0	30.0	27.8
Thailand	41.8	37.5	42.7	38.0	38.2
China	44.6	49.8	55.4	57.5	58.2
Hong Kong	21.0	20.2	21.8	20.6	21.3
Korea	56.2	53.9	44.2	40.0	27.3
Taiwan	38.3	37.6	40.5	45.2	33.2
Return-on-Assets (%)					
Malaysia	3.2	3.6	3.9	4.5	4.3
Indonesia	5.1	6.0	4.5	4.2	5.0
Philippines	0.7	0.3	1.3	3.7	5.7
Singapore	2.4	2.9	4.6	6.5	5.5
Thailand	6.3	6.8	8.3	9.0	7.4
China	5.0	4.2	4.7	4.3	3.5
Hong Kong	3.4	2.7	3.7	5.1	5.4
Korea	4.3	5.3	4.8	5.2	5.6
Taiwan	2.8	4.7	5.6	6.1	8.1
Net Profit Margins (Net profit as % of sales)					
Malaysia	4.4	5.1	5.3	6.0	4.6
Indonesia	2.4	4.6	2.5	1.1	1.5
Philippines	0.3	0.5	2.2	4.0	8.6
Singapore	3.1	3.9	5.0	5.7	5.2
Thailand	4.2	5.3	6.7	7.0	6.0
China	7.2	6.2	5.6	4.7	3.4
Hong Kong	3.4	3.3	3.5	4.8	4.7
Korea	2.6	3.7	3.5	3.7	4.3
Taiwan	3.7	4.3	5.1	5.2	7.6

Source: Thomson Financial

Chart 1.8
Interest Rate Coverage Ratios*
(Median)

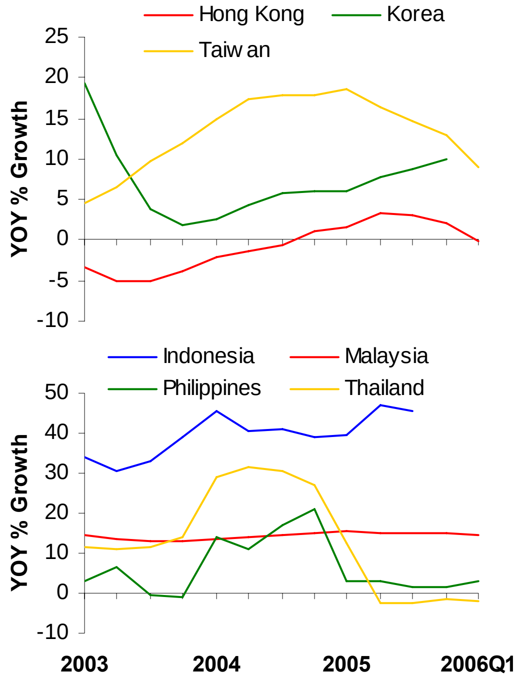


Source: Thomson Financial
*Earnings before interest expense & tax divided by interest paid

Several countries have taken measures to avoid excessive household indebtedness

While household credit growth has remained broadly stable over the past few quarters (Chart 1.9), mortgages as a share of GDP have declined even though property markets in the region continue to be relatively buoyant. (Table 1.4) This can be partly attributed to the effects of anti-speculative measures undertaken by regional authorities. For example, in Korea the government announced in March 2006 a package of policies aimed at curbing speculation in real estate. These include a plan to increase capital gain taxes by collecting up to half of the additional profits generated by redeveloping older apartments in the Kangnam district in southern Seoul. While non-mortgage loans have continued to rise in several countries, these still account for a relatively small proportion of total household debt.

Chart 1.9
Household Credit Growth



Source: CEIC and Official National Sources
Note: Q405 data is not available for Indonesia.

Table 1.4
Household Indebtedness[1]

	As % of GDP								
	Mortgages			Non-mortgages			Total		
	2004	2005	2006 Latest	2004	2005	2006 Latest	2004	2005	2006 Latest
Indonesia[2]	1.9	n.a.	n.a.	6.4	n.a.	n.a.	8.3	9.0	n.a.
Malaysia	29.6	30.2	28.4	25.5	27.4	26.0	55.1	57.6	54.4
Philippines[3]	0.7	0.7	n.a.	4.6	4.1	n.a.	5.2	4.8	4.2
Singapore[4]	65.4	61.3	n.a.	20.8	19.4	n.a.	86.2	80.7	n.a.
Thailand	16.1	17.1	16.2	20.4	15.8	15.4	36.5	32.9	31.6
China	10.0	10.1	n.a.	2.4	1.9	n.a.	12.4	12.0	11.0
Hong Kong	47.3	43.9	41.3	10.8	11.6	10.6	58.1	55.5	51.9
Korea	21.8	23.6	22.6	13.6	14.2	13.6	60.9	64.7	n.a.
Taiwan	32.3	35.7	34.9	22.1	23.8	22.0	54.4	59.4	56.8

Source: CEIC and National Official Sources
Note: Definitions vary across countries.
Total household credit includes loans to individuals for securities purchases.
[1]Data for China only on annual basis. Mortgages and non-mortgages figures for Korea include loans only from commercial banks. Total household credit for Korea includes loans from all financial institutions.
[2] 2005 data as at end September 2005
[3] Refers to commercial banks only
[4] MSD estimates

Table 1.5
NPLs and CAR[1]

	2003	2004	Q1 2005	Q2 2005	Q3 2005	Q4 2005	2006 latest
Non-Performing Loans (as % of commercial bank loans)							
Malaysia	8.3	6.8	6.6	6.5	5.9	5.6	5.6
Indonesia	8.2	5.8	5.6	7.9	8.8	8.3	9.3
Philippines	14.1	12.7	11.3	9.2	9.4	8.5	8.3
Singapore	5.4	4.0	3.6	3.5	3.2	3.0	2.9
Thailand	12.8	10.9	10.9	10.5	10.0	8.3	8.1
China[2]	16.9	15.6	15.0	10.1	10.1	10.5	9.8
Hong Kong	3.2	1.6	n.a.	n.a.	n.a.	n.a.	n.a.
Korea	2.2	1.7	1.7	1.5	1.3	1.1	n.a.
Taiwan	4.3	2.8	2.7	2.5	2.8	2.2	2.5
Capital Adequacy Ratio (%)							
Malaysia	14.0	14.3	13.7	13.4	13.4	13.5	12.8
Indonesia	19.4	19.4	21.7	19.5	19.4	19.5	21.2
Philippines	17.3	18.7	18.3	17.5	n.a.	n.a.	n.a.
Singapore	16.0	16.2	15.9	14.8	15.3	15.8	15.4
Thailand	14.0	12.7	13.2	13.5	14.2	14.2	14.0
Hong Kong	15.3	15.4	15.4	15.2	15.3	14.9	n.a.
Korea	11.2	12.1	12.1	12.5	12.8	13.0	n.a.
Taiwan	10.1	10.7	n.a.	10.8	n.a.	10.3	n.a.

Note: Annual figures are as at year-end.
Source: CEIC, and Official National Sources
[1]Definitions may vary across countries. Data from official sources may differ from private sources
[2] State-owned commercial banks

Banks' balance sheets remained strong

Banking sectors in the region have performed well in the past six months, with profitability indicators such as return-on-equity (ROE) ratios broadly improving. (Table 1.6) Regional banks' balance sheets have continued to strengthen, due to improved economic fundamentals and better risk management as financial reforms gathered pace after the Asian Financial Crisis. In terms of asset quality, officially reported non-performing loan (NPL) ratios in most Asian countries continued to hold steady (Table 1.5 on previous page), while capital adequacy ratios (CARs) have been maintained between 10-20%, well above the minimum Basel requirement of 8%.

Risks are on the horizon as East Asian monetary conditions continue to tighten

In Asia, excluding Japan, a number of central banks have raised interest rates and/or allowed their currencies to appreciate due to inflationary concerns. (Chart 1.10) Headline inflation was comparatively higher in Southeast than Northeast Asia (Chart 1.11), mainly reflecting the cutback in fuel subsidies in some Southeast Asian countries.

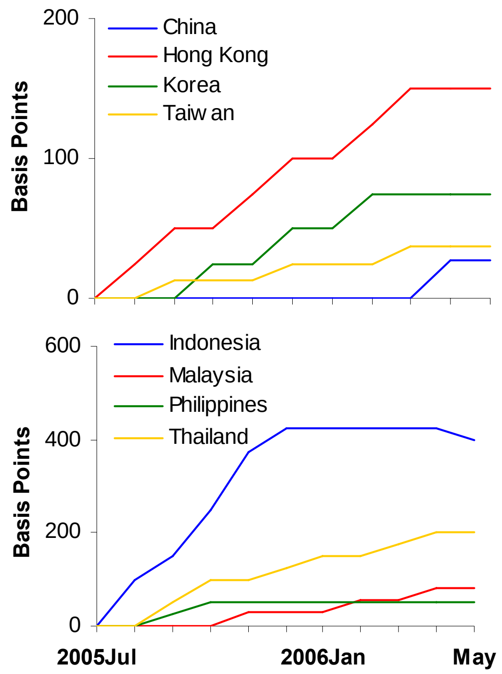
In Northeast Asia, interest rates in Hong Kong have risen in tandem with US interest rates under the linked exchange rate system. The Bank of Korea (BOK) raised its overnight call rate to 4% in February 2006 and the People's Bank of China (PBOC) also raised its benchmark 12-month lending rate to 5.85% in April 2006. Likewise, monetary policies across Southeast Asia have also remained on a tightening bias. On 10 Apr 2006, Bank of Thailand's Monetary Policy Committee (MPC) raised the 14-day repurchase rate by 25 bps to 4.75% per annum. Similarly, between October and December 2005, Bank Indonesia raised its benchmark policy interest rate by 175 bps, maintaining a tight monetary policy stance. However, following the easing of inflation, Bank Indonesia cut the benchmark policy rate by 25 bps in May 2006 to 12.5%.

Table 1.6
Return-on-Equity (Median)

%	2001	2002	2003	2004	2005
Southeast Asia					
Malaysia	6.8	9.7	12.5	9.3	10.4
Indonesia	17.1	11.0	15.7	24.2	13.7
Philippines	3.7	5.2	6.6	7.6	7.2
Singapore	9.6	7.6	9.4	11.0	10.5
Thailand	-1.4	12.7	14.3	15.6	18.0
Northeast Asia					
China	14.0	16.0	19.0	16.2	17.3
Hong Kong	11.0	10.2	10.8	12.0	12.6
Korea[1]	3.9	19.9	7.3	15.2	32.8
Taiwan	1.7	-11.4	7.8	6.7	8.9

Source: Thomson Financial
[1]Sample data for Korea is incomplete in 2005.

Chart 1.10
Changes in Policy Interest Rates



Source: Bloomberg

In view of East Asia's increasing integration with the global economy, the generally positive outlook is partly contingent upon continued global growth and stable macroeconomic conditions. An expected gradual increase in short-term policy rates will not affect regional growth significantly. However, sharper than anticipated rises in short-term policy rates, in the context of higher inflationary concerns, could pose some risks going forward by adversely impacting on the ability of corporates and households to service their debt.

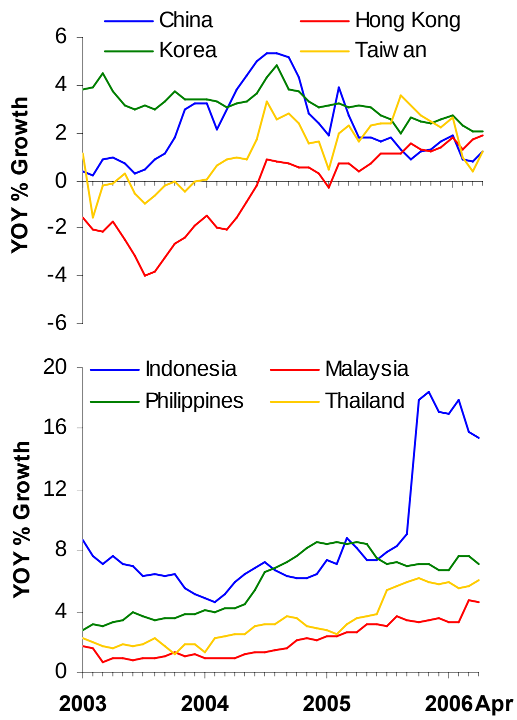
Net foreign inflows remain relatively volatile

Since the last FSR, net foreign inflows into the equity markets have been relatively volatile. In the period from November 2005 to January 2006, the continued rise in equity markets in Indonesia, Thailand and the Philippines (Chart 1.12) reflected the strong foreign purchase of equities in the East Asian region.[3] (Chart 1.13). However, various factors, among them political turmoil and uncertainty regarding the regional policy interest rate outlook, have dampened foreign investor sentiment in February and March 2006. With the sharp decline in foreign equity inflows in that period, the rise in regional equity markets is likely to be driven mainly by domestic buying interest. The recent data in April and May 2006 indicates the return of strong net portfolio inflows into the region.

Recent sell-offs in regional equity and currency markets despite strong fundamentals

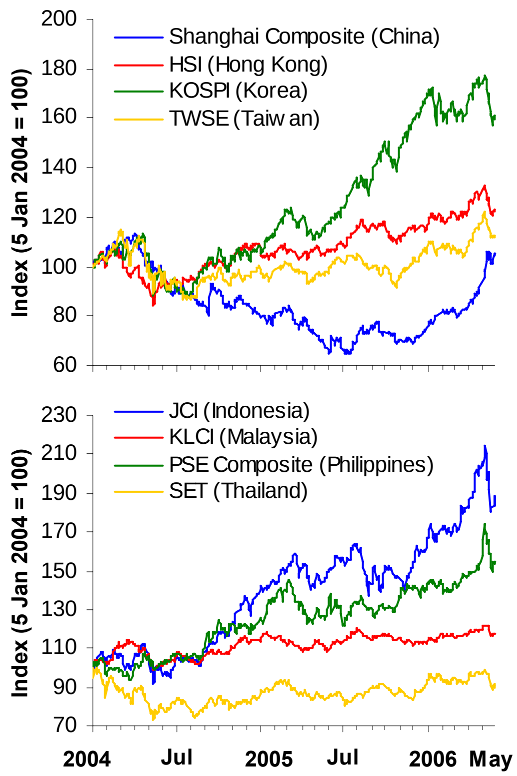
In May 2006, emerging markets in Asia and Latin America experienced sharp equity and currency market sell-offs. The equity declines in emerging markets, while by no means the most severe that the countries have experienced, was significant and reminiscent of May 2004. (Table 1.7) It appears the current episode is not tied to a shift in fundamental factors, but rather reflects a sporadic burst of volatility

Chart 1.11
Inflation



Source: CEIC

Chart 1.12
Equity Indices



Source: Bloomberg

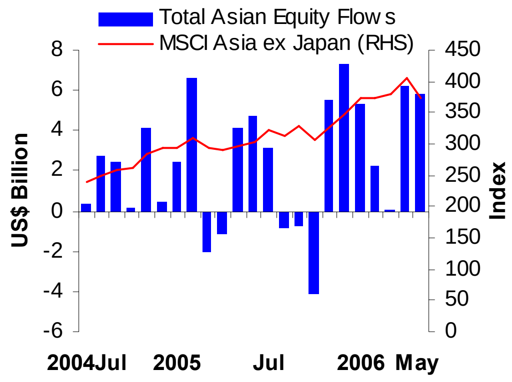
3 Taiwan, Korea, Thailand, Philippines and Indonesia.

in global financial markets, triggered by concerns over the possibility of higher than expected inflationary pressures in the US. In addition, with the exception of the Indonesian and, to a lesser extent, the Philippines equity markets, regional markets have seen a general decline in price-to-earnings (P/E) ratios over the past two years. (Chart 1.14) Thus, it is unlikely that the current sharp falls in the equity markets were prompted by significant overvaluation concerns. In Indonesia's case, the depreciation in the rupiah was associated with the sell-off in the Jakarta stock market and the outflow of funds.

Regional currencies are vulnerable to volatilities in short-term flows

Recent sell-offs in the equity markets have led to downward pressures on regional currencies. (Chart 1.15) This highlights the vulnerability of regional currencies to volatile short-term capital flows.[4] Prior to this episode, upward pressure on regional currencies appeared to have eased somewhat on the back of waning expectations of renminbi appreciation and a shift in the short-term interest rate differential in favour of the US$. In Indonesia, a succession of rate hikes, combined with a package of other monetary and fiscal measures, have drawn foreign inflows and lifted the rupiah against the US$. In Thailand, the effect of rising policy interest rates on the baht in recent months has been mitigated by negative sentiment brought on by continued political uncertainty. The Philippine peso has been on a recovery path since October 2005, with a stabilisation of the political situation following a reported attempted coup against the Arroyo administration.

Chart 1.13
Net Foreign Purchases of Asian Equities



Source: Bloomberg

Table 1.7
Change in Equity Prices From Previous Trading Day

	15 May 2006 %	17 May 2004 %	Historical Worst %	Historical Worst Date
Hong Kong	-2.4	-2.7	-33.3	26 Oct 87
Singapore	-3.3	-3.1	-25.3	20 Oct 87
Indonesia	-6.3	-7.5	-20.2	4 Aug 89
Thailand	-2.1	-4.6	-16.0	7 Aug 90
Philippines	-3.2	-2.3	-13.2	24 Jul 87
Korea	-2.2	-5.1	-12.0	12 Sep 01
India	-3.8	-11.1	-12.8	28 Apr 92
Argentina	-3.0	-6.7	-53.1	8 Jan 90
Turkey	-4.1	-3.7	-18.1	21 Feb 01
Russia	-5.4	3.2	-19.0	28 Oct 97

Source: Bloomberg

4 In the case of Indonesia, the move to cut the 1-month policy interest rate by 25 bps to 12.5% may also have added to weaker currency sentiment given that domestic inflation still remains high.

Sovereign spreads remain tight in line with continued confidence in East Asian economies

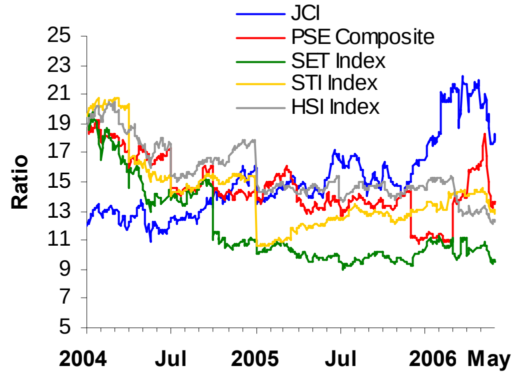
In line with the continued search for yield, sovereign spreads have remained tight in some East Asian countries (Chart 1.16) despite political concerns in the early part of 2006 and, more recently, the pressure on the regional equity and currency markets. This signals that investor risk perceptions do not appear to have changed significantly for the region as the sporadic bout of sell-offs do not seem to be tied to shifts in fundamentals.

In Indonesia, sovereign spreads continued to tighten, supported by renewed confidence in the economy. Following the peaceful resolution of political tension in the Philippines, sovereign spreads over comparable US Treasuries have fallen after an initial spike in late February 2006. In comparison, the Malaysian debt markets have seen a rise in spreads from about March 2006, possibly reflecting that yields in both ringgit-denominated and foreign currency-denominated issues rose more than corresponding US treasury issues. The increase in the yield of ringgit-denominated issues has been attributed to expectations of rising domestic interest rates, given the larger than expected uptick in headline inflation in March 2006.

External vulnerability indicators suggest resilience in the region to external financial shocks

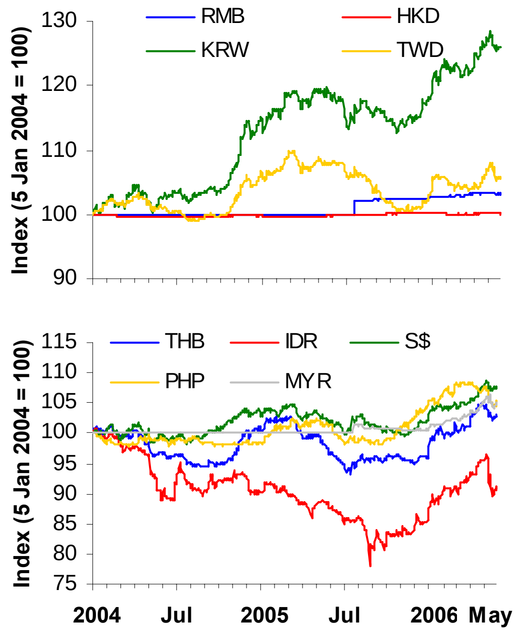
As a percentage of GDP, external debt for most East Asian countries has been on a downward trend. (Chart 1.17) Consequently, external vulnerability indicators suggest a reasonably strong level of resilience for the region, owing primarily to the rapid build-up of foreign exchange reserves in East Asia. (Chart 1.18) However, there has been some slowing in the build-up of reserves in 2005, apart from China, in the context of narrowing current account surpluses, and greater exchange rate flexibility.

Chart 1.14
Price-to-Earnings Ratios



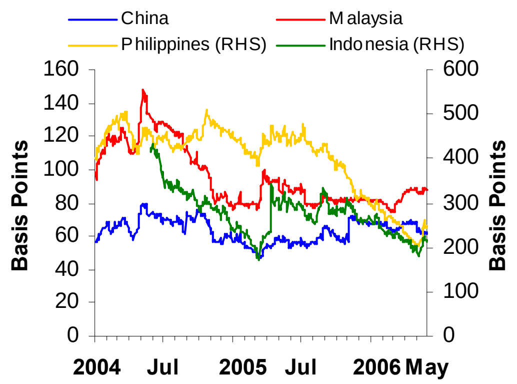
Source: Bloomberg

Chart 1.15
Currency Indices



Source: Bloomberg

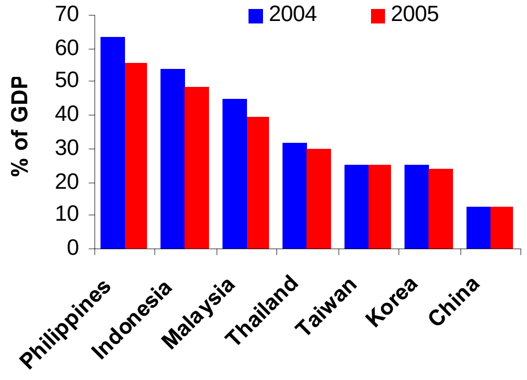
Chart 1.16
Sovereign Spreads



Source: JP Morgan

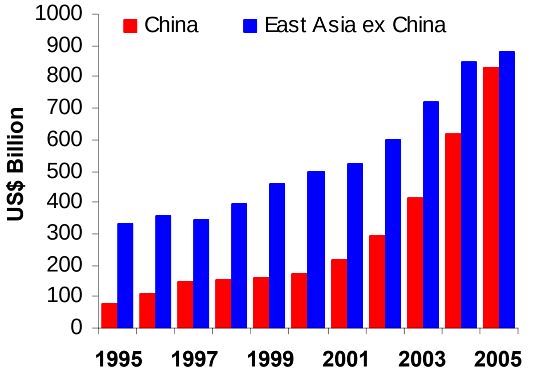
Riding on its strong export growth, China's reserve accumulation has shown no signs of abating. In addition, the reserve adequacy ratio, calculated as the amount of reserves over short-term external debt, has remained well above unity in the region. On average, this ratio ranges from 1.6 to 5.8 across the regional economies. (Chart 1.19)

Chart 1.17
External Debt



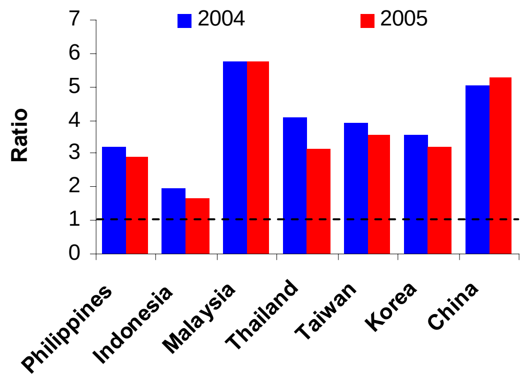
Source: CEIC & IMF WEO Database

Chart 1.18
Official Foreign Reserves



Source: CEIC, IMF
Note: East Asia comprises Hong Kong, Taiwan, Korea, Indonesia, Malaysia, Thailand, Philippines, and Singapore (ex China)

Chart 1.19
Reserves to Short-term External Debt Ratios



Source: CEIC, IMF

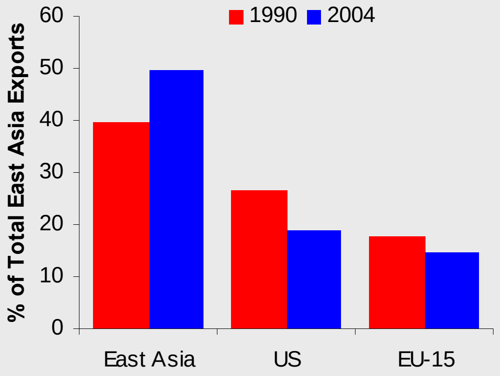
Box A
Economic and Financial Integration in East Asia

Greater Economic Integration in East Asia

Economic integration in East Asia[1/] has deepened in recent years as regional counterparts become more important trading partners. Between 1990 and 2004, the share of intra-East Asian[2/] exports increased from 39.6% to nearly 50% of total exports. (Chart A1) In 2004, intra-regional exports exceeded total exports to the US and Europe[3/] by US$383 billion.

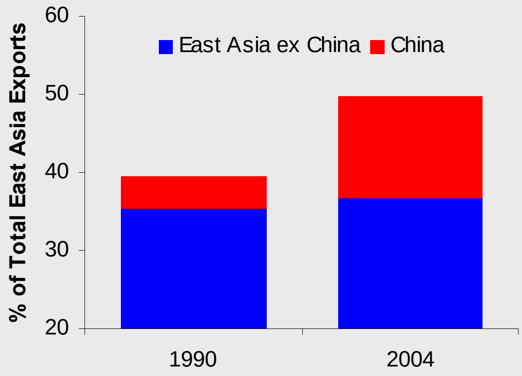
The growth in intra-East Asian trade has largely been driven by the rise of China, which has become a major export destination for other East Asian economies. (Chart A2) As a manufacturing powerhouse, China has become the key end node of regional production networks.[4/] Since 1990, the value of exports to China from regional counterparts has increased more than tenfold to US$236 billion.

Chart A1
Destinations of East Asian Exports



Source: IMF, Direction of Trade Statistics, CEIC Database, National data
Note: EU 15 comprises Austria, Belgium, Luxembourg, Denmark, Finland, France, Germany, Greece, Ireland, Italy, Netherlands, Portugal, Spain, Sweden and UK

Chart A2
Intra-East Asian Exports



Source: IMF, Direction of Trade Statistics, CEIC Database, National data

Financial Integration: A Mixed Picture

In comparison, financial integration in East Asia has lagged the recent increase in trade integration. For example, at the end of 2000, the extent of cross-border bank claims in East Asia as a ratio of regional GDP was 3.5 % compared to 33.9 % in the euro zone.

Nonetheless, other indicators show that financial integration in East Asia is not without progress. Intra-East Asian[5/] portfolio investments have seen modest growth. (Chart A3a) Between 2001 and 2004, the value of East Asian portfolio investments in debt securities issued in the region nearly doubled to US$63 billion. East Asian demand for regional debt securities almost matched total demand from the US and Europe in 2004.

1/ East Asia comprises China, Hong Kong SAR, Singapore, South Korea, Taiwan, Thailand, Malaysia, Indonesia, Philippines, and Japan.

2/ Intra-East Asian exports refer to exports from East Asian economies to other East Asian economies.

3/ Europe comprises Austria, Belgium, Luxembourg, Denmark, Finland, France, Germany, Greece, Ireland, Italy, Netherlands, Portugal, Spain, Sweden and UK.

4/ Kit, W. Z., Ong, J. W., Kwan K. (2005), "China's Rise as a Manufacturing Powerhouse: Implications for Asia", *MAS Staff Paper No. 42*.

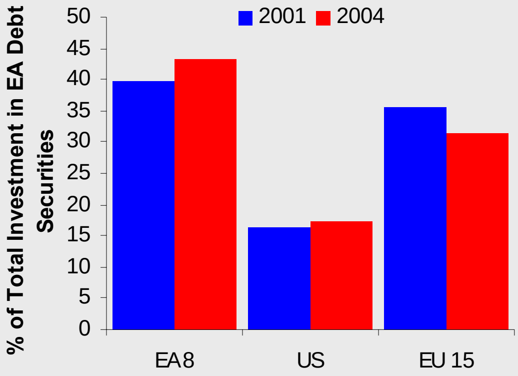
5/ IMF Coordinated Portfolio Investment Survey does not contain portfolio flows from China and Taiwan.

Intra-East Asian investments in equities have also picked up. (Chart A3b) Between 2001 and 2004, the value of intra-East Asian investments in equities more than doubled to US$73 billion, though the US and Europe continued to be the major investors in East Asian equities. The growing interest in cross-border mergers and acquisitions (M&A) also suggests that financial integration is deepening. Between 1998 and 2003, cross-border M&As reached US$23 billion – the annual average being 11 times larger than what it was during the first half of the 1990s.[6/]

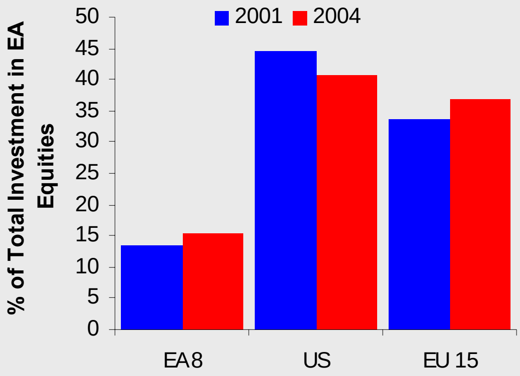
Co-movement among regional stock markets has also increased between 2000 and 2004 (compared to the period 1996-2000), though further study is needed to determine how much of the increased synchronicity is due to greater regional integration.[7/]

Chart A3
Intra-East Asian Portfolio Investments

(a) in Debt Securities



(b) in Equity Securities



Source: IMF Coordinated Portfolio Investment Surveys
Note: EA8 is East Asia ex China and Taiwan

Regional Initiatives to Promote Greater Integration

The case for deeper regional integration is compelling. Deeper integration can lead to more efficient cross-border flows, thereby deploying regional savings for regional investment more effectively. Financial market developments could potentially lower the cost of capital and stimulate more investment, provide better currency and maturity matches, and ease the reliance of corporate financing on banks – all of which would contribute to greater financial stability in the region. Stronger financial linkages are also likely to reinforce intra-regional trade.

To promote deeper integration, East Asia has launched several initiatives to develop regional financial markets and build financial infrastructures to facilitate cross-border flows. Many exchanges have entered into formal cooperative relationships. The Asian Bond Market Initiative (ABMI) was established in 2003 to promote the harmonisation of standards across the region and develop regional bond markets. Asian Bond Fund (ABF) 1 and ABF 2 were launched in 2003 and 2005 respectively to spur the development of regional index funds and enhance bond market infrastructures. In May 2006, the Monetary Authority of Singapore and the IMF jointly hosted a second high-level seminar on Asian regional financial integration. By drawing together such participants as finance ministers, central bank governors and senior officials from the region as well as from the IMF and the Asian Development Bank (ADB), the seminar facilitated frank discussions of regional realities, including present obstacles to and potential gains from deeper integration.

6/ Akhtar, S. (2004), "Economic Integration in East Asia: Trends, Challenges and Opportunities", Asian Development Bank.

7/ Chelley-Steeley, P. (2004), "Equity Market Integration in the Asia-Pacific Region", *International Review of Financial Analysis*, 13(5).

Singapore Economy

The economy grew by 6.4% in 2005, supported by the healthy external environment

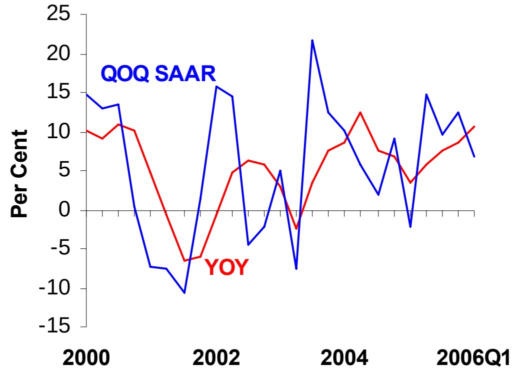
Against the backdrop of a supportive external environment, the Singapore economy grew by a robust 6.4% in 2005. Building on a strong rebound in Q2 last year, economic activity strengthened in H2 across all the key sectors of the economy. This broad-based expansion continued into early 2006, with GDP growth at 6.8% in Q1 on a q-o-q SAAR basis. (Chart 1.20) On a y-o-y basis, the 10.6% expansion in Q1 was the strongest since Q2 2004. Barring any shocks, GDP growth is expected to be between 5 and 7% for 2006 as a whole. Steady growth in the global economy and IT industry should provide the necessary impetus for growth, and activity in the manufacturing sector should be sustained at a high level.

Labour market and Inflationary pressures to remain contained

Alongside the broad-based economic expansion last year, the labour market saw significant improvement, with total job creation amounting to a record 113,300 – the strongest employment growth since the peak of 120,300 in 1997. (Chart 1.21) This continued into the first quarter of 2006, with an expansion of 33,400, nearly double the increase in the same quarter last year. The unemployment rate remained at a four-year low of 2.6%.

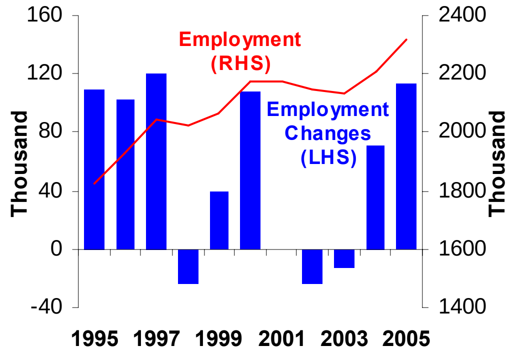
On the inflation front, the consumer price index (CPI) rose by a mild 0.5% for 2005, after averaging 1.7% in 2004. (Chart 1.22) Apart from the price weakness in the transport category, there were fairly widespread price increases across the major categories of the CPI basket. CPI inflation rose to 1.4% in Q1 2006, largely reflecting the direct pass-through effects of sustained high oil prices. Despite some lingering upside risks, such as global oil supply uncertainties and food supply disruptions due to avian flu outbreaks in the region, overall domestic inflationary pressures

Chart 1.20
Singapore's GDP Growth



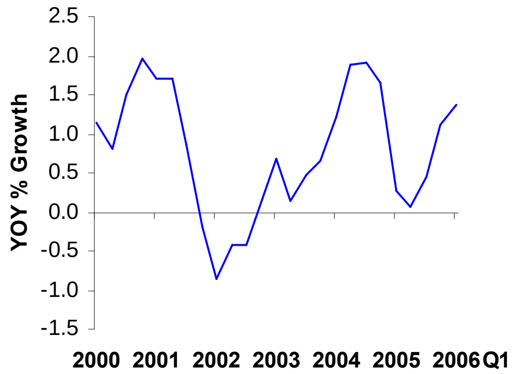
Source: Department of Statistics

Chart 1.21
Total Employment and Employment Changes



Source: Ministry of Manpower

Chart 1.22
CPI Inflation



Source: Department of Statistics

are likely to remain well-contained. Headline CPI inflation is projected to be 1-2% before moderating somewhat in 2007.

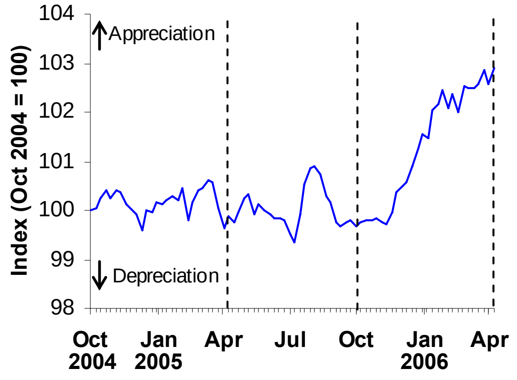
MAS maintained its policy of modest and gradual appreciation of the S$NEER

MAS announced in its latest Monetary Policy Statement (MPS) on 11 April 2006 that it would maintain the current policy of a modest and gradual appreciation of the S$ nominal effective exchange rate (S$NEER) policy band. It is assessed that overall domestic inflationary pressures will be contained under this policy stance, with liquidity conditions having tightened significantly since the last policy review.

Over the past six months since the MPS in October 2005, the S$NEER has appreciated from the lower half to the upper half of the policy band. (Chart 1.23) This resulted from strong investor interest in Asian markets, on the back of favourable economic prospects in the region. The S$NEER was also supported by strong domestic economic data, the favourable outlook for the economy, and the release of an expansionary fiscal budget early this year.

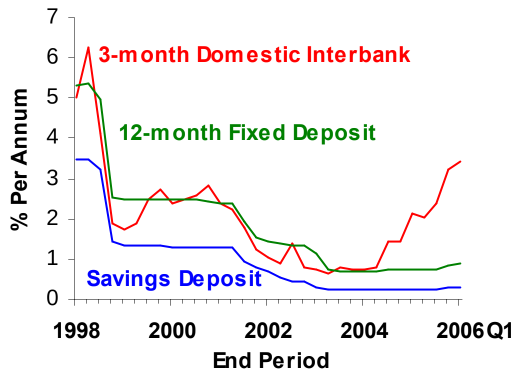
The 3-month domestic interbank rate rose by 113 bps between September and November 2005, and continued to increase at a measured pace over subsequent months to reach 3.44% by the end of March this year. (Chart 1.24) The rise in the benchmark interbank rate has prompted increases in deposit and lending rates. Following several years of weakness, both the savings deposit rate and 12-month fixed deposit rate edged up over the past six months to an average of 0.31% and 0.89% respectively by the end of Q1 this year.

Chart 1.23
Movements in S$NEER



Source: MAS
Note: - - - indicates release of Monetary Policy Statement

Chart 1.24
Domestic Interest Rates



Source: MAS

2 NON-FINANCIAL SECTOR

2.1 Non-financial Corporate Sector[5]

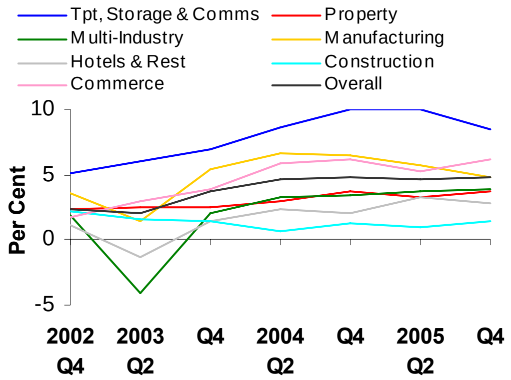
The Singapore banking sector's lending to non-financial corporates represents a significant component of the banks' balance sheet, accounting for about two-fifths of non-bank loans. With the strong uninterrupted expansion of the economy, corporates and households have been supported by robust revenue and wage growth. The recent hikes in interest rates have been measured and also in tandem with steadily rising levels of economic activity and income. Therefore, the tightening in liquidity conditions has not undermined the corporate sector's debt servicing ability. However, the risk of a sharper than anticipated increase in interest rates could have a stronger impact on specific industry and household segments.

Corporate profitability continues to improve with signs of recovery in construction

The profitability of the corporate sector strengthened further in the second half of 2005, with publicly listed non-financial firms reporting overall ROA of 4.8% compared to 4.6% in Q2 2005. The improvements in fourth quarter earnings were mainly attributed to firms in the commerce, construction, property and multi-industry[6] sectors (Chart 2.1), largely mirroring the performance of these sectors in the economy. Higher profitability in recent years has led to financial surpluses that have strengthened the corporate sector's financial resilience.

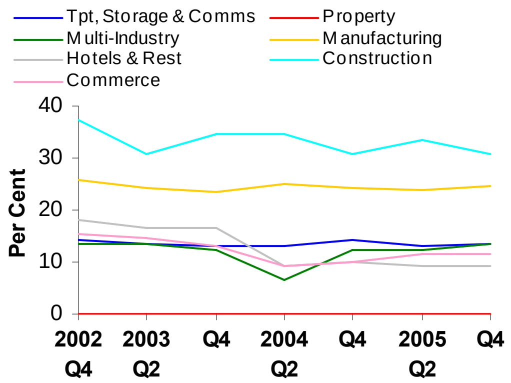
Although the percentage of construction firms which made losses was higher than for other sub-sectors, their financial performance picked up as the median ROA rose from 1% in Q2 to 1.5% in Q4 2005. (Charts 2.1 and 2.2) There is increasing evidence of a turnaround in this sector. For example, the value of contracts awarded for new private sector

Chart 2.1
Return-on-Assets (Median)



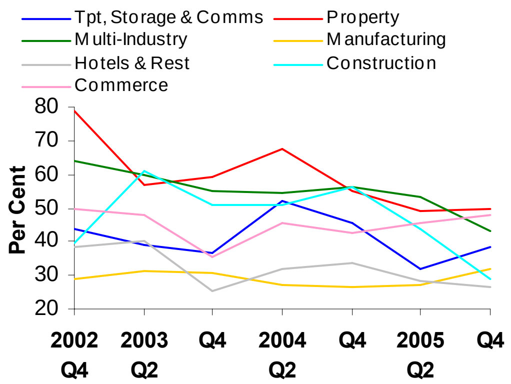
Source: Thomson Financial

Chart 2.2
Share of Companies Making a Loss*



Source: Thomson Financial
*Based on net income

Chart 2.3
Debt-to-Equity Ratio (Median)



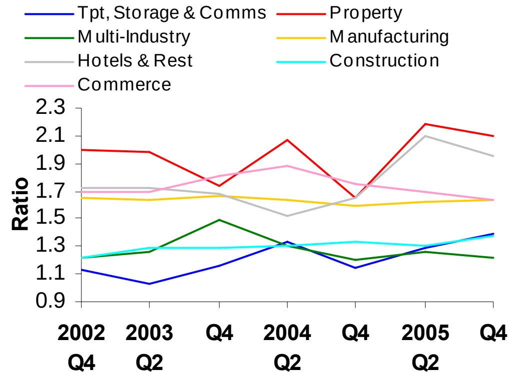
Source: Thomson Financial

5 All corporate data cover listed companies only. The latest data point provided is Q4 2005 as most of the companies that are not required to do quarterly reporting tend to report in Q2 and Q4 of each year only.

6 Multi-industry refers to companies with multiple lines of businesses.

construction works increased by 29.6% to S$6 billion in 2005 compared to a year ago, while the latter half of Q1 2006 confirmed this strengthening trend.[7] Further, construction firms displayed a stronger balance sheet position as the median leverage ratio, defined as debt-to-equity, fell significantly from 44% in Q2 2005 to 28.6% in Q4 2005. (Chart 2.3) The level of liquidity for all firms remained adequate in Q4 2005, as indicated by the healthy current ratio which averaged 1.6. The construction, transport, storage & communications (TS&C), and manufacturing sectors all saw healthy current ratios in Q4 2005. (Chart 2.4)

Chart 2.4
Current Ratio (Median)

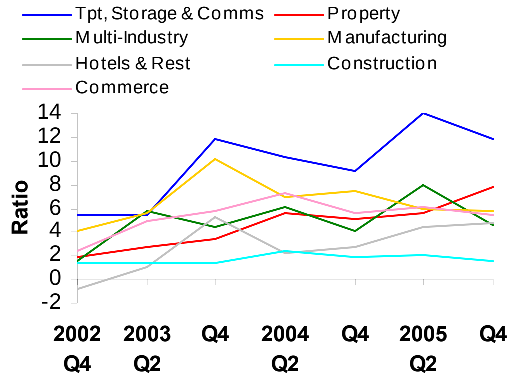


Source: Thomson Financial

Higher interest rates unlikely to undermine the corporate sector's ability to service debt

While a sharper than anticipated rise in interest rates will lead to a tightening of financial conditions faced by the corporate sector, publicly listed firms have a relatively strong financial buffer with a median interest coverage ratio of 5.7 as at Q4 2005. (Chart 2.5)

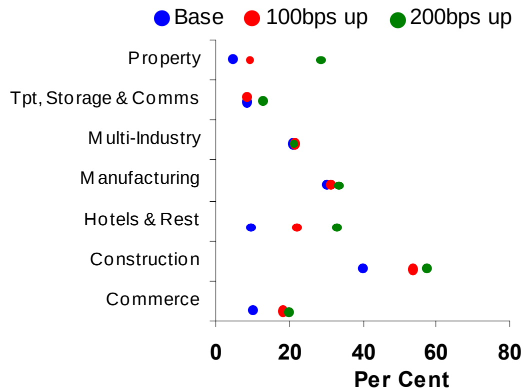
Chart 2.5
Interest Coverage Ratios* (Median)



Source: Thomson Financial
*Earnings before interest and tax divided by interest expense

Nevertheless, a sensitivity test shows that the construction sector would be the most impacted by sharp interest rate increases. Chart 2.6 shows the estimated proportion of listed companies across the sectors which have interest coverage ratios below unity under different interest rate assumptions. For example, a 200 bps increase in interest rates would cause the interest rate coverage ratio of 58% of publicly listed construction firms to fall below unity. Property firms are also relatively more sensitive to interest rate increases, especially if they are over 100 bps.

Chart 2.6
Percent of Firms with Interest Coverage Ratio <1 as at end-2005



Source: Thomson Financial, MSD estimates

The relatively greater impact on the construction and real estate sectors is also corroborated when the sensitivity test is applied to a broader set of listed and non-listed corporates, captured by the Department of Statistics (DOS) 2003 Survey of Financial Structure and Operations of Companies. (Chart 2.7)

[7] The data is from the Building and Construction Authority (BCA).

Nonetheless, the sensitivity tests reported above do not take into account the fairly small proportion of interest payments in cash holdings, even for the construction and real estate sectors. Chart 2.8 reveals the strong cash position among firms in Singapore, which provides an effective buffer to absorb increases in interest expense. For example, following a 100 bps increase in interest rates, the interest expense of companies still remains comfortably below 10% with the notable exception of the real estate sector. (Table 2.1)

A positive outlook for manufacturing and services despite rising interest rates

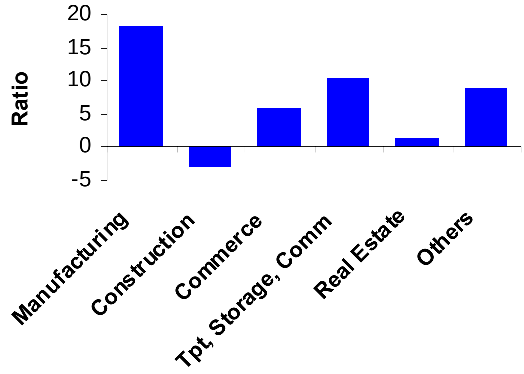
Recent business outlook surveys[8] of Singapore firms continue to show optimism about business conditions in the six months between March and September 2006, with a net balance of 26% of manufacturers expecting an improved business situation. Similarly, firms in the services sector projected an encouraging outlook, with a net balance of 25% of firms anticipating positive business conditions ahead. This is higher than the net balance of 19% recorded in the same period last year. (Chart 2.9)

Table 2.1
Interest Paid as % of Cash Holdings

As of December 2003	Base	100 bps up	200 bps up
	Percent		
Manufacturing	5.6	6.6	7.5
Construction	5.2	6.0	6.7
Commerce	5.5	6.4	7.4
Transport, Storage & Communication	7.8	9.5	11.2
Real Estate	13.1	15.7	18.4
Others	4.0	4.8	5.6

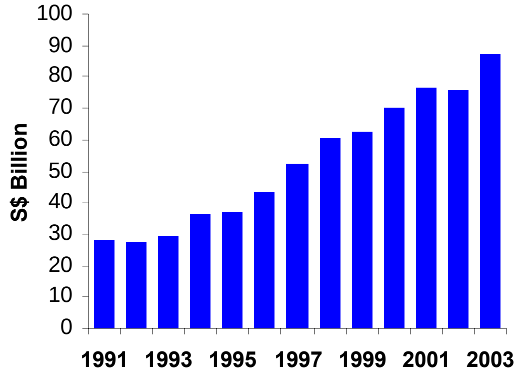
Source: Department of Statistics, MSD estimates

Chart 2.7
Aggregate Interest Coverage Ratio* at the end of 2003



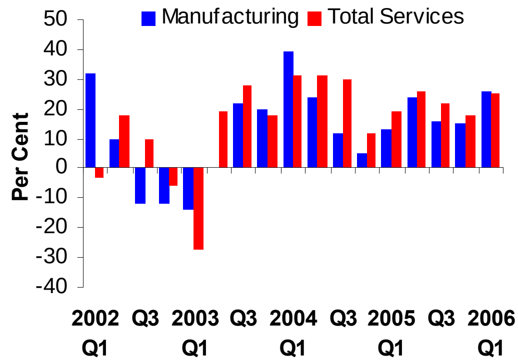
Source: Department of Statistics, MSD estimates
*Earnings before interest and & tax divided by interest expense

Chart 2.8
Cash Holdings*



Source: Department of Statistics
*Cash Holdings refers to cash and bank balances

Chart 2.9
General Business Outlook (net balance of firms)



Source: Department of Statistics, Business Expectations Survey; EDB, Survey of Business Expectations of the Manufacturing Sector

8 Survey of Business Expectations of the Manufacturing Sector by the Economic Development Board and Business Expectations Survey for the Services Sector by Singapore Department of Statistics.

2.2 Household Sector

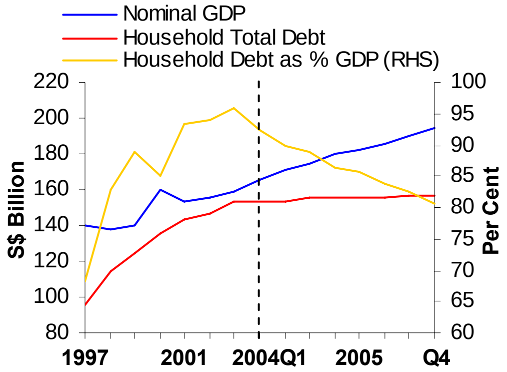
Lending to households is an important part of the Singapore banking sector loan portfolio as it accounts for more than half of non-bank loans. Thus, a risk assessment of the banking system would need to consider the financial health and pressures faced by households, given the current rising interest rate environment. The recent rise in mortgage rates appears to be at a gradual pace with a minor impact on households' mortgage servicing ability. However, the possibility of a sharper than anticipated increase in interest rates could impact on certain segments of the household sector.

Growth of household assets outpaced liabilities, largely due to gains in financial assets

Singapore household total debt is estimated to have remained largely unchanged, with growth at less than 1% per annum from 1996 to 2005, markedly lower than Singapore's nominal GDP expansion. As a result, household debt as a percentage of GDP fell from 96% in Q4 2003 to 81% in Q4 2005. (Chart 2.10) This is lower than that of other developed countries such as the US and UK.[9] Mortgage loans, which make up about three quarters of household debt, increased slightly in Q4 2005 as the growth in mortgage loans extended by banks outpaced the fall in mortgage loans by the Housing Development Board (HDB).

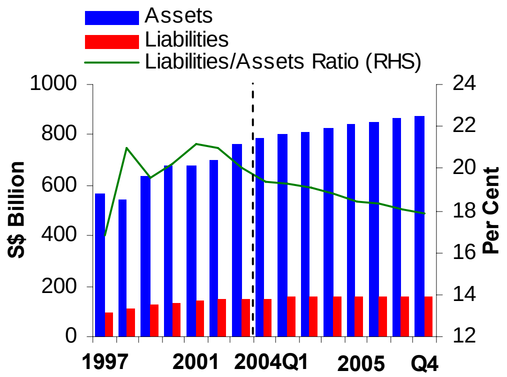
As the growth in household debt eased in the second half of 2005, household financial wealth, defined as household assets less household debt, strengthened by 3.4% to S$720 billion, about four times 2005 nominal GDP. (Charts 2.11 and 2.12) The rise in household financial wealth in the second half of 2005 was also boosted by the gains in equity markets as financial assets, which comprise stocks, unit trusts and investment-linked insurance, grew by 7%. As a whole, the growth of household total property assets remained relatively unchanged, with private property prices rising by 3.9% y-o-y even though the prices of HDB flats fell by 4.7% y-o-y. (Chart 2.13)

Chart 2.10
Household Debt and GDP



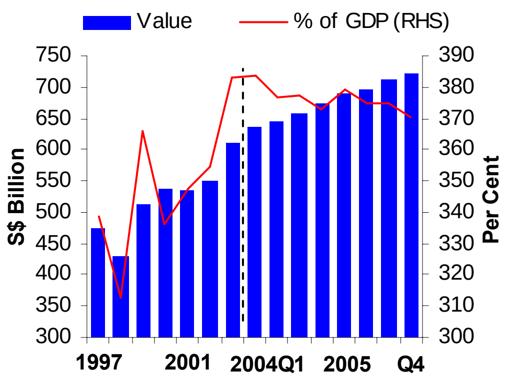
Source: MSD estimates

Chart 2.11
Household Assets and Liabilities



Source: MSD estimates

Chart 2.12
Household Wealth



Source: MSD estimates

9 Based on data from CEIC and Datastream, MAS estimates show that US and UK household liabilities as % of GDP are about 96%.

The steady increase in private housing prices has come largely on the back of the upturn in the high-end segment, attributable in part to strong demand from foreign investors.

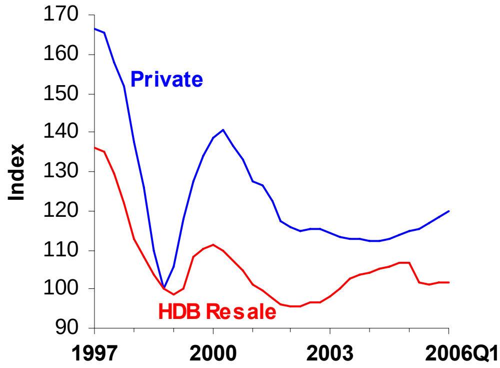
Take up of new mortgages with LTV ratio above 80% has slowed

A recent MAS survey of banks showed that new mortgages with loan-to-value (LTV) ratio above 80% fell from 19.6% of total new mortgages in October 2005 to 15.3% in December 2005. (Chart 2.14) The rate of take up of these mortgages could have been slowed by higher mortgage rates charged by banks.[10] The survey data suggest that of the new mortgages with LTV ratios of above 80%, more than four-fifths were taken up by owner-occupiers. Historically, the default rate on housing loans is low and even if defaults were to rise, banks would not necessarily face losses because mortgage lending continues to be highly collateralised.

Sensitivity tests suggest that the mortgage servicing burden is manageable

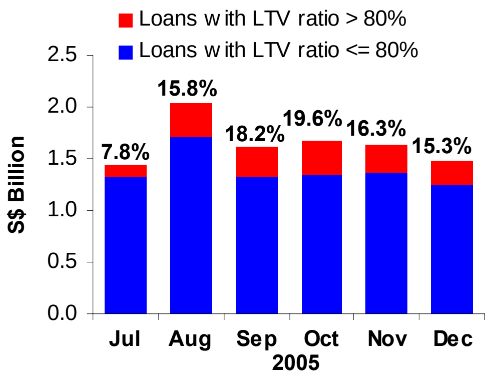
Since the last FSR in December 2005, mortgage rates have increased by an average of 70 bps for HDB bank originated mortgages and 120 bps for private house mortgages. (Chart 2.15) The recent increase in private house mortgage rates to about 3.75% in May 2006 appears to be at a measured pace. The recent levels are comparable to those between April 2001 and March 2002, and are still lower than those between April 1999 and September 2000. Mortgage servicing ratio, which provides an indication of the burden faced by the household sector as a whole in servicing its mortgages, was 16.1%[11] as of end-2005.

Chart 2.13
Residential Property Prices



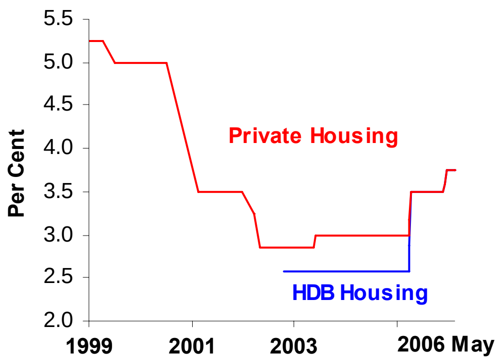
Source: URA and HDB

Chart 2.14
New Housing Loans



Source: MSD estimates
Note: Percentages above the bars represent new mortgages with an LTV ratio above 80%

Chart 2.15
Banks' Mortgage Rates



Source: Mortgage rates calculated as simple averages of banks' variable mortgage rates

[10] Banks are required to hold higher capital for mortgages with an LTV ratio of more 80% and are also expected to have more rigorous internal credit evaluation before extending these higher LTV loans.

[11] Mortgage Servicing Ratio is defined as mortgage payment as a % of total income. Total income includes employer's CPF contribution.

A sensitivity test[12], based on the 2003 Household Expenditure Survey data, was conducted to assess the impact of further mortgage rate increases on the different household income groups. Table 2.2 shows that currently, mortgage repayments for housing loans as a percentage of total income take up 33.6% of the earnings of households in the lowest 20% income group. This ratio is higher than the top 20% of income households, who spend 12% of monthly earnings on mortgage payments. From a base mortgage rate of 3.75%, the sensitivity test increases the mortgage rate by a further 100 bps and 200 bps to assess the impact on the mortgage servicing ratio assuming that households' incomes remain unchanged. For a 100 and 200 bps increase, the lowest 20% income households would be relatively more affected given that their base mortgage servicing burden is higher than the other household groups.

Next, Table 2.3 shows that if we assume households could use all their monthly CPF Ordinary Account (OA) contributions to service their mortgage payments, cash payments for the lowest 20% of income households would currently amount to 24% of disposable income. Households in the 3rd quintile income group would not need to come up with any cash, given that their OA contributions are more than sufficient to service their mortgage payments.

As for the impact of higher interest rates on cash mortgage payments, the results suggest that after drawing on OA contributions, the impact of higher mortgage rates would be significantly cushioned as the out of pocket cash repayments for mortgages remain manageable across income groups. (Table 2.3) The strengthening of the Singapore economy since 2003, with higher employment and wage income has therefore, had a positive effect on households' debt servicing ability.

Table 2.2
Total Mortgage Payment as Percent of Total Income

As at December 2005	Base	100 bps up	200 bps up
Mortgage Servicing Ratio	Percent		
Lowest 20% (by income)	33.6	35.4	37.3
Second Quintile	20.6	22.1	23.6
Third Quintile	16.0	17.1	18.2
Fourth Quintile	13.8	14.8	15.8
Highest 20% (by income)	12.0	12.8	13.7

Source: MSD estimates. Monthly income includes employers' and employees' CPF contributions

Table 2.3
Cash Mortgage Payment as Percent of Disposable Income

As at December 2005	Base	100 bps up	200 bps up
Mortgage Servicing Ratio	Percent		
Lowest 20% (by income)	24.0	26.6	29.2
Second Quintile	5.6	7.7	9.9
Third Quintile	0.0	0.7	2.3
Fourth Quintile	2.1	3.3	4.6
Highest 20% (by income)	6.7	7.7	8.6

Source: MSD estimates. Assumes all contributions to CPF OA used to service mortgage payment. Disposable Income excludes employers' and employees' CPF contributions

12 Estimation method uses fixed-mortgage payment formula to work back the 2003 average outstanding mortgage, given that the mortgage payment by income groups is available through the household expenditure survey. The 2005 average outstanding mortgage by income groups is projected to grow at the same rate as the aggregate household's indebtedness and the 2005 mortgage payment is estimated using the fixed mortgage payment formula.

3 FINANCIAL SECTOR

3.1 Banking Sector

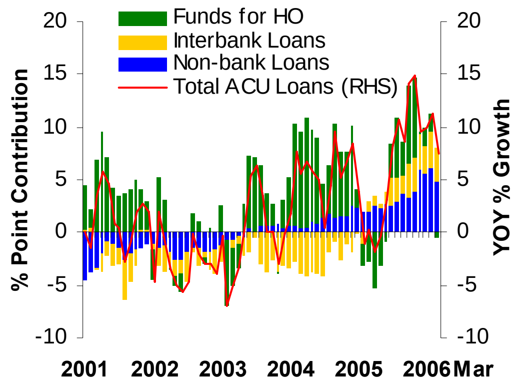
Growth in commercial banks' credit operations was particularly strong last year, driven by the Asian Currency Units (ACU). In contrast, demand for domestic credit remained subdued. Overall, the local banks continued to record strong profitability and maintain significant financial buffers. Changes in local banks' trading VaR and derivative exposure do not suggest significantly greater risk taking behaviour. Market-based indicators, such as the P/E ratio, credit ratings and share price volatility of local banks, imply that there has been no significant shift in investors' perception of risk.

Looking ahead, the overall credit cycle is likely to be weaker amid higher interest rates. A sharper than anticipated rise in interest rates could affect banks' profitability should non-performing assets increase.

Offshore lending remained strong and dominated by interbank activity

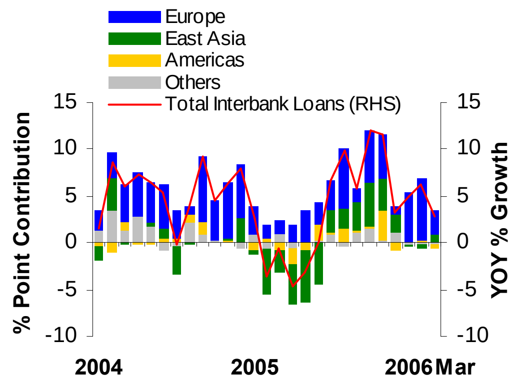
Growth in overall credit demand for commercial banks was robust last year, driven by the ACU. Credit to large borrowers shows a similar trend of credit growth being led by ACU and broad-based across all sectors. The robust pace of global economic and financial activity over 2005 supported stronger ACU lending which saw significant growth in loans to both related and unrelated bank entities. (Chart 3.1) Growth in ACU interbank loans remained dominated by loans to Europe. (Chart 3.2)

Chart 3.1
Growth in ACU Loan Demand



Source: MAS

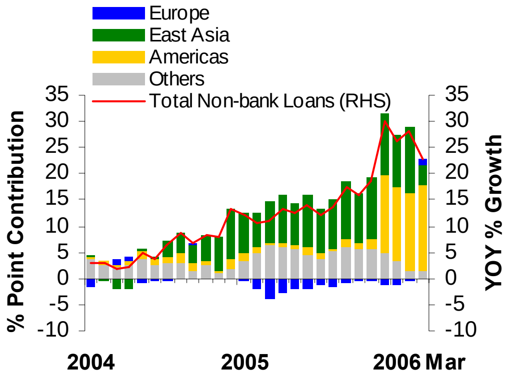
Chart 3.2
ACU Interbank Loans by Destination



Source: MAS

The growth of ACU non-bank lending picked up significantly in the second half of last year. While it stabilised in Q1 2006, the growth of ACU non-bank loans remained high, at 20-30% y-o-y. (Chart 3.3)

Chart 3.3
ACU Non-Bank Loans by Country of Destination



Source: MAS

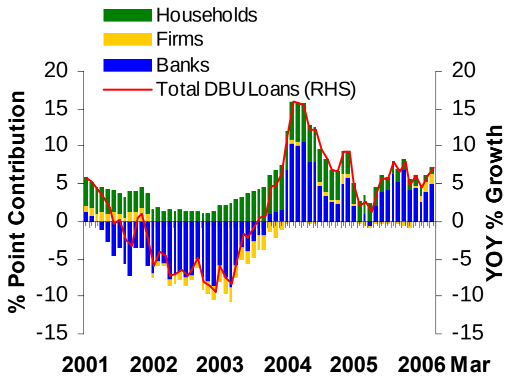
In comparison, domestic non-bank lending remained modest

Domestic demand for credit remained subdued, despite healthy GDP growth and low interest rates. Loan growth across industrial sectors has been patchy, with demand mainly derived from the general commerce sector. Going forward, domestic credit growth could benefit from the upcoming integrated resorts, which would provide a boost to the construction sector.

Relatively weak loan demand from firms could be due to continued balance sheet strengthening, made possible by firms' healthy profits in recent years. The growing popularity of capital market financing could also have contributed to some of the decline in the growth of bank credit.

Growth in domestic loans to households has continued to unwind slowly from the peak of 2003-04, when the bulk of public housing financing shifted from the HDB to the banking sector. (Chart 3.4) The recovery in the private residential property market suggests that the outlook for households' loan demand could improve going forward. However, this prospect could be dampened in a rising interest rate environment as interest servicing burden increases. In addition, some households may choose to repay their loans ahead of schedule using lower yielding CPF savings, before mortgage loan rates are revised up further.

Chart 3.4
Domestic Banking Unit (DBU) Loan Growth



Source: MAS

Local banks recorded strong operating performance and maintained significant financial buffers

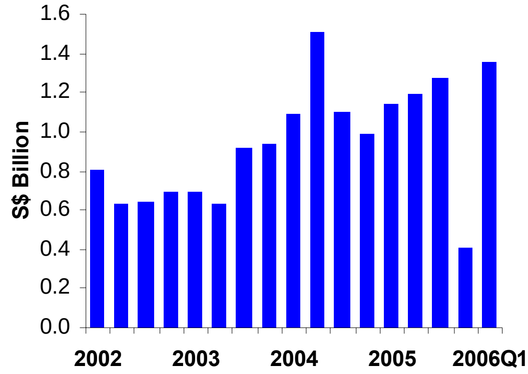
The reported financial results of the local banks for Q1 2006 showed continued strength in operating performance. In the March 2006 quarter, total net profit increased 19% y-o-y to $1.4 billion. The key driver of growth in the local banks' operating income remained net interest income. Contributions from fees, commissions, and trading income were steady, but smaller in comparison. Wealth and fund management activities grew significantly but remained small components of non-interest income at about 14% share. The local banks' low net profit in Q4 2005 was mainly due to the S$1.1 billion goodwill charge[13] for DBS Hong Kong. (Charts 3.5 and 3.6) Since the introduction of the banking liberalisation measures in 1998, the local banks have expanded their operations in the regional markets. (see Box B)

Financial Soundness Indicators (FSIs) can be used to assess the current health and stability of the commercial banks. (see Box C) For instance, CARs of the local banks were stable and in excess of MAS' requirements, non-performing asset ratios continued to be in single-digits, and provisioning coverage remained high. (see Appendix Table B.2)

Available indicators on market risk did not show substantial changes

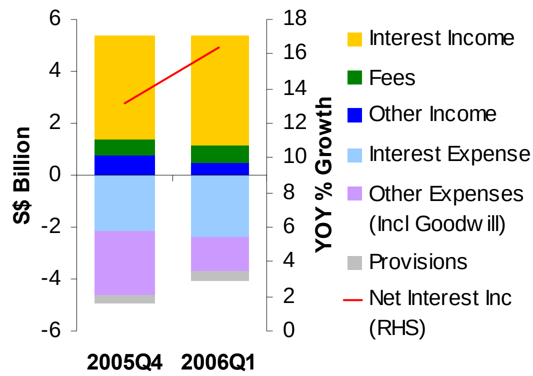
It is possible that large shifts in derivative positions can increase the potential risk exposure faced by a financial institution. However, values of derivative financial instruments held or issued for trading and hedging purposes appeared to be approximately matched in terms of banks' assets and liabilities. (Chart 3.7)

Chart 3.5
Local Banks' Net Profit



Source: Local banks' financial accounts (aggregated)

Chart 3.6
Local Banks' Breakdown of Income and Expenses



Source: Local banks' financial accounts

13 Goodwill charge is part of "Other Expenses" in Chart 3.6.

Liquidity risks remained low

Since September 2005, the profile of S$ cashflows of banks[14] has not changed significantly. (Chart 3.8) In comparison, the aggregate liquid asset ratio[15] fell quite sharply between July and November 2005. (Chart 3.9) This was largely due to reduced holdings of cash and Singapore Government Securities in banks' trading portfolios (above minimum liquid requirements), the latter having become less attractive as a result of rising interest rates.

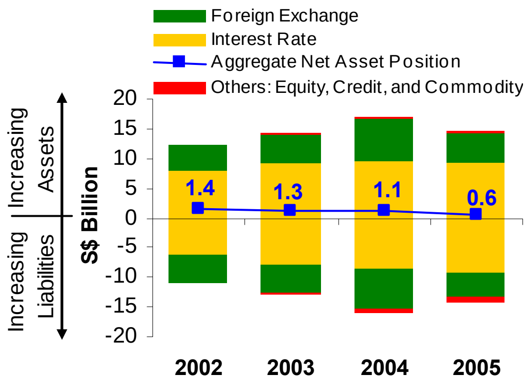
No evidence of significant change in investors' risk perception

Available market-based indicators have remained stable and indicated no significant change in investors' risk perception of the local banks. P/E ratios have remained steady and volatility in the local banks' share prices has trended downward since 2003 in line with market movements. (Chart 3.10) The three local banks have maintained a Fitch rating of AAA for both local and foreign long-term default risks since mid-2003.

Previous stress test results show the resilience of the banking sector to higher interest rates

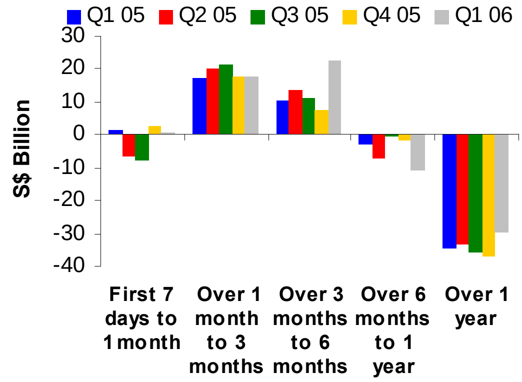
Even with the sharper than anticipated rise in interest rates, the tightening of financial conditions and a sharp contraction in economic growth and asset prices, the market risk stress test conducted on six

Chart 3.7
Local Banks' Fair-Value Derivatives



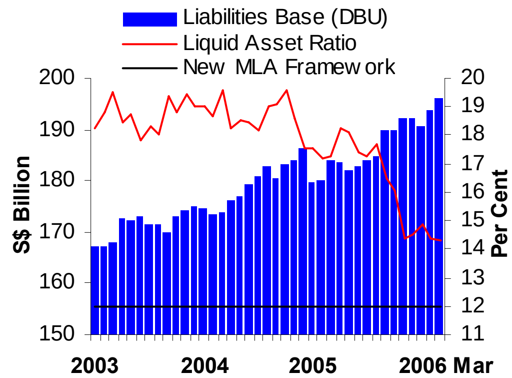
Source: Local banks' financial accounts

Chart 3.8
S$ Net Cashflows by Maturity



Source: MAS
Note: Data covers 11 banks on the new Minimum Liquid Assets (MLA) framework

Chart 3.9
Liquid Asset Ratio*



Source: MAS
*Defined as liquid assets in excess of required Minimum Cash Balance (MCB) relative to the liabilities base in the DBU

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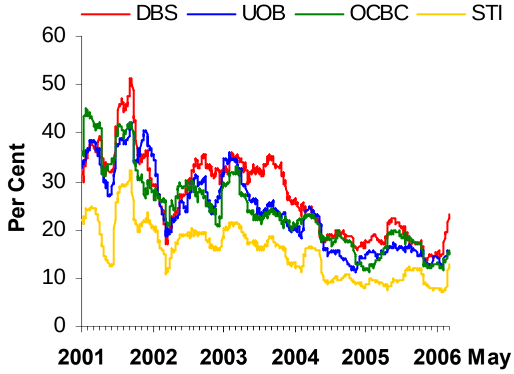
[14] Collectively, the 11 banks of the MLA framework account for nearly 90% of the liabilities base of the Singapore banking sector.

[15] Defined as liquid assets in excess of required Minimum Cash Balance (MCB) relative to the liabilities base in the Domestic Banking Unit. (Under MAS' regulation, all banks in Singapore are required to maintain with MAS an MCB of 3.0% of their DBU liabilities base.)

major banks, including the three local banking groups, in the last FSR, suggests that the banking sector would be resilient to these shocks. The test results showed that the potential losses on the bank's market portfolios would be about 58% of the average pre-tax profits of the six banks between 2000 and 2004 (Box Item B, December 2005 FSR). While losses would be incurred across most market categories, the bulk would come from sharp declines in equity prices, with the losses stemming directly from increases in interest rates accounting for only about 14%.

Chart 3.10
Share Price Volatility*



Source: Bloomberg
*Annualised standard deviation of daily stock price returns (90 day moving window)

Box B
The Impact of Banking Liberalisation on Singapore Banks

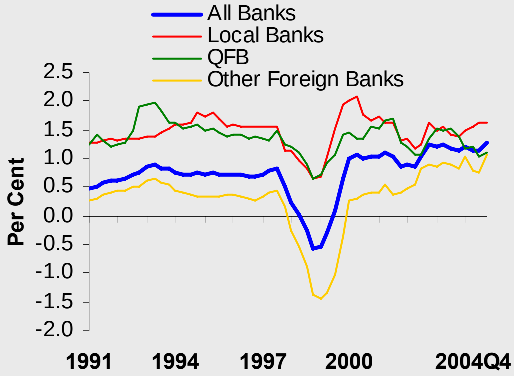
The introduction of the liberalisation programme in 1999 was a major development in Singapore's banking sector. The programme, gradually phased in through three comprehensive packages (Table B1), provided opportunities for foreign banks to gain greater access into the domestic market. A key objective was to add to the vibrancy of banking while maintaining confidence and stability in the financial system.

Table B1
Banking Liberalisation Measures

May 1999
• Removed the 40% foreign ownership limit for local banks • Permitted six Qualifying Full Banks (QFBs) to establish up to ten locations, of which five can be branches, and share an ATM network among QFBs • Increased the number of Restricted Banks from 13 to 18 • Raised the S$ lending limit for Qualifying Offshore Banks (QOBs) to S$1 billion, and permitted them to engage in S$ swaps without any restriction on the purpose of the swaps • Raised the S$ lending limit of other Offshore Banks to S$500 million, and permitted them to engage in S$ swaps in respect of proceeds arising from the issue of S$ bonds managed or arranged by them
June 2001
• Moved away from three-tier licensing regime of Full, Restricted and Offshore Banks to a two-tier regime comprising retail and wholesale banks. Renamed the Restricted Bank licence as the Wholesale Banking licence. Announced plan to upgrade all existing Qualifying Offshore Banks and Offshore Banks to Wholesale Bank status over time • Made available 20 new Wholesale Banking licences • Allowed QFBs to establish up to 15 locations, of which up to ten can be branches and the rest off-site ATMs • Allowed QFBs to provide debit services on an EFTPOS network from 1 July 2002 • Allowed QFBs to offer Supplementary Retirement Scheme accounts, accept Central Provident Fund (CPF) fixed deposits, and offer agent bank accounts under the CPF Investment and Minimum Sum Schemes
June 2004
• QFBs permitted to establish up to 25 service locations from the existing 15. The 25 locations can either be brick-and-mortar branches or offsite ATM locations • QFBs allowed to negotiate with the local banks on a commercial basis to let their credit card holders obtain cash advances through the local banks' ATM networks

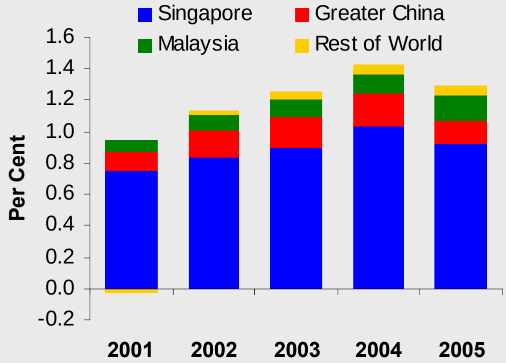
The measured pace of liberalisation was designed to allow the local banks to adapt. The local banks have been able to remain competitive. This can be seen from their financial performance, measured by the ROA in the Singapore market, which has largely kept pace with that of the rest of the industry. (Chart B1)

Chart B1
Bank Aggregate ROA (Excluding inter-related claims)



Source: MSD estimates

Chart B2
Return-on-Assets from Key Markets



Source: Local Banks' Annual Reports. MAS estimates

The maturing domestic banking market provided impetus for the local banks to expand their operations outside of Singapore, particularly into the regional markets. As at end-December 2005, the local banks owned and operated about S$155 billion of assets abroad, up from just S$37 billion in 1998. This represented about 34% of the local banks' total group assets. Geographically, the local banks are becoming increasingly diversified, with a presence in as many as 19 countries as of 2005.

Overall, the regionalisation experience has seen key subsidiaries in Malaysia and Greater China contribute increasingly to the groups' bottom lines. (Chart B2) Our analysis further indicates that the local banks have performed comparatively well against their peers in the key overseas markets they operate in.

In addition, there appears to be some diversification benefits arising from the local banks' cross-border acquisitions. Following Amihud, DeLong and Saunders (2002)[1/], we analysed changes in the volatility of the local banks' share price one year before and after their cross-border acquisition (Dao Heng Bank for DBS, Bank NISP for OCBC and Bank of Asia for UOB), relative to the volatility of a broader finance index in three domiciles, namely, the world, the home country and the host country (i.e. the country where the target is located). This is termed the total relative risk (TRR). A negative change in TRR would thus represent a reduction in the volatility of their relative share price returns after their respective acquisitions. Indeed as shown in Table B2, there is evidence of a reduction in the local banks' TRR relative to the world and host markets. In the case of DBS, its volatility has declined relative to the world. However, the results for UOB and OCBC were mixed, with a decline in volatility for the host market but an increase in the home market.

Table B2
Change in Total Relative Risk (TRR)

	ΔTRR_{world}	ΔTRR_{home}	ΔTRR_{host}
DBS (acquisition of Dao Heng Bank)	-1.25	-0.03	-0.37
OCBC (acquisition of Bank NISP)	0.00	0.69	-0.41
UOB (acquisition of Bank of Asia)	-0.30	0.68	-0.17

Source: MSD estimates

While the regionalisation of the local banks could potentially expose the domestic banking system to contagion from overseas, greater diversification and enhanced banks' profitability would contribute to the stability of Singapore's financial system.

1/ Amihud,Y., G. De Long and A. Saunders (2002), "The effects of cros-border bank mergers on bank risk and value", *Journal of International Money and Finance* 21, 6, pp. 857-877.

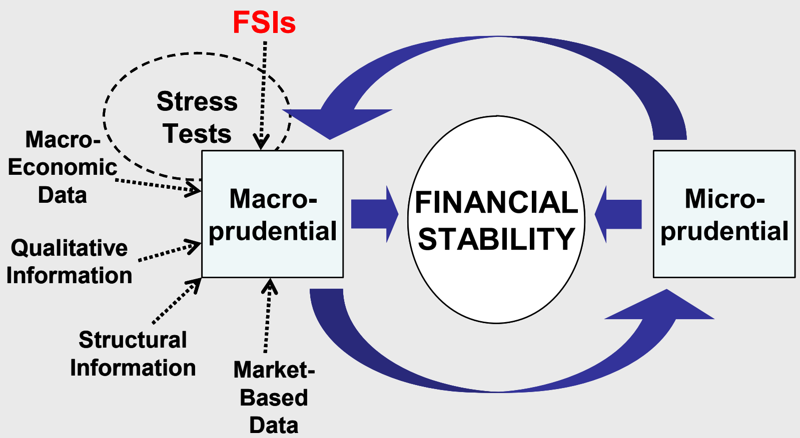
Box C
The Use of Financial Soundness Indicators (FSIs) for Financial Stability Assessment

Financial Soundness Indicators (FSIs) are indicators of the current financial health and soundness of the financial institutions in an economy, and of their corporate and household counterparts. The financial crises in the last decade have led to the growing recognition among regulators of the usefulness of FSIs in identifying potential sources of risks and vulnerabilities.

FSIs include aggregated individual institution data compiled for the purpose of supporting macro-prudential analysis. Macro-prudential analysis complements micro-prudential supervision which examines the financial condition and risk management of individual institutions by focusing on the strength and vulnerabilities of the financial system as a whole. Figure C1 illustrates the role of FSIs in financial stability assessment and the relationship between macro-prudential and micro-prudential analysis.

In addition, FSIs are used as explanatory variables in early warning systems which mostly focus on vulnerabilities in the external position of an economy. Moreover, FSIs complements other macro-prudential tools such as stress testing, which uses the sensitivity of changes in FSIs as a response to various shock scenarios. (Figure C1)

Figure C1
Financial Stability Framework and FSIs



Source: Adapted from IMF's Policy Paper on Financial Soundness Indicators[1/]

The use of FSIs, however, has its limitations. First, the compilation of FSIs uses data from a number of sources which include supervisory returns, financial statements, monetary or balance of payments data. This could lead to different interpretations of data. However, this can be mitigated by documenting differences in the definitions of the data through the dissemination of metadata. These are textual descriptions of data that enhances the interpretation of FSIs even when they are measured differently.

In addition, FSIs can also be largely backward looking. However, the analysis of FSIs can be enhanced by introducing more forward-looking elements. For instance, credit growth rates can be used in conjunction with exposures to help assess potential vulnerabilities. Forward-looking risk indicators such as P/E ratios and different confidence indicators for the non-financial corporate sector could also be used to enrich the analysis of FSIs.

Currently, MAS employs the platform of the semi-annual publication of the FSR to disseminate selected FSIs to the public. In line with efforts to strengthen our macro-prudential analytical work and to disseminate FSIs, MAS is participating in the International Monetary Fund (IMF) Coordinated Compilation Exercise (CCE) for FSIs, a key international initiative on global financial surveillance. The IMF's core set of FSIs includes aggregated prudential indicators of the banking sector that are considered central to the analysis of the financial system. (see Table C1) The recommended set of FSIs covers the credit quality of assets of the banking system through exposures to non-bank financial, corporate, household and the real estate sectors.

[1/] International Monetary Fund (2001), "Financial Soundness Indicators", Policy paper, Monetary and Exchange Affairs Department and the Statistics Department.

Table C1
Financial Soundness Indicators: The Core Set

Deposit Takers	
Capital Adequacy	Regulatory Capital to risk-weighted assets
	Regulatory Tier 1 capital to risk-weighted assets
	Non performing loans net of provisions to capital
Asset Quality	Nonperforming loans to total gross loans
	Sectoral distribution of loans to total loans
Earnings and Profitability	Return-on-Assets
	Return-on-Equity
	Interest margin to gross income
	Noninterest expenses to gross income
Liquidity	Liquid assets to total assets (liquid asset ratio)
	Liquid assets to short-term liabilities
Sensitivity to market risk	Net Open Position in foreign exchange to capital

The participation of the CCE is on a voluntary basis and to date, the CCE currently involves the participation of 62 member countries including developed countries such as the US, UK, Canada and France and several ASEAN countries such as Thailand, Malaysia, Indonesia and the Philippines. Each member country would have to finalise and supply the FSI data and metadata (textual descriptions of the data) to the IMF, which would subsequently be published in a single release by end-2006. The stated objective of the CCE is: (i) to coordinate efforts by national authorities to compile cross-country comparable FSIs in line with principles laid out by the IMF; and (ii) to disseminate the FSI data compiled along with metadata to increase transparency and strengthen market discipline.

3.2 Insurance Sector

Singapore-registered life insurers continued to see growth in new business premiums and maintain strong CARs. General insurers and reinsurers also sustained improvements in underwriting results, which in turn ensured their CARs remained strong and stable. The global outlook for reinsurance has become somewhat more positive with favourable implications for Singapore insurers.

Singapore Life Insurance

Singapore life insurance total weighted new business premiums grew

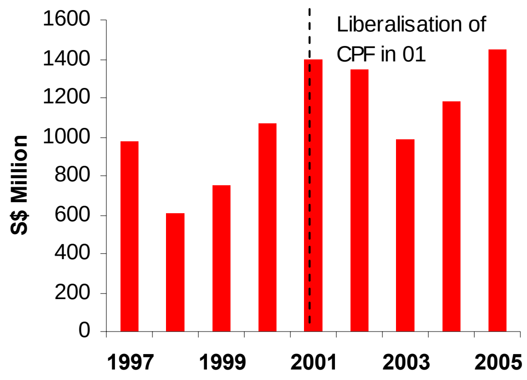
The life insurance industry's total new business premiums grew by 22% y-o-y on a weighted basis[16] to reach S$1.45 billion in 2005. (Chart 3.11) In particular, the Singapore Insurance Fund (SIF) weighted new business premiums rose by 31% y-o-y in Q4 2005, continuing from growth in Q3 2005. This was supported by the strong income expansion and rising consumer awareness of life insurance products. (Chart 3.12)

In Q1 2006, weighted premium growth continued to remain strong at 30% y-o-y. This reflected strong single-premium receipts which grew by 87% y-o-y to reach S$1.78 billion. (Chart 3.12) This could partly be attributed to the strength in economic activity and confidence in markets in early 2006. Conversely, annual-premium receipts for Q1 2006 stood at S$149 million, having experienced a marginal decline of about 6.6% y-o-y.

Concern about investment risks implies a shift to products with less risk and lower guarantees

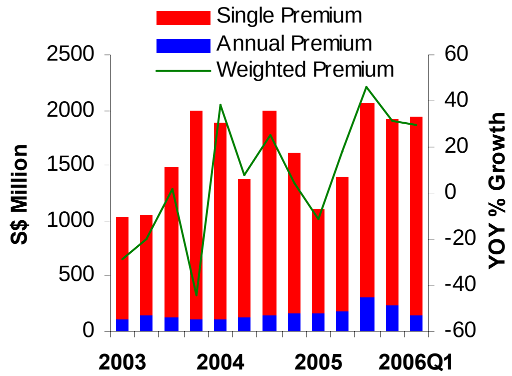
Given concern about heightened investment risks and interest-rate volatility, life insurers have been developing products which allow policyholders to bear more investment risks in return for possible higher

Chart 3.11
Life Direct Insurance: Annual Weighted Premium Receipts (SIF)



Source: MAS

Chart 3.12
Life Direct Insurance: Quarterly Weighted Premium Growth, Single and Annual Premium Receipts (SIF)

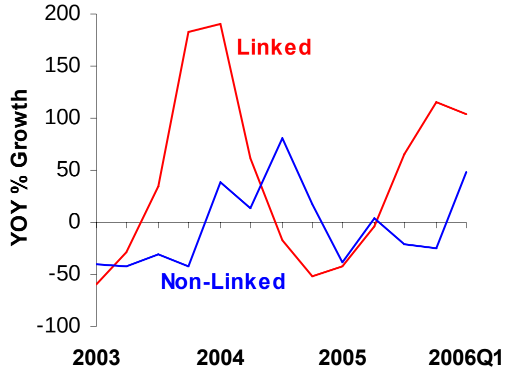


Source: MAS

[16] New business premiums on a weighted basis consist of 10% single premiums and 100% regular premiums (including limited-pay regular premiums) of both individual and group policies. Weighted premiums provide an approximate measure of weighted sales across companies to allow for differences in mix between regular and single premium business.

returns. This also reflects the implementation of the Risk Based Capital (RBC) framework in 2005 that requires insurers to hold more capital for products with higher guarantees. Indeed, the growth in annual premium products has been on an increasing trend confirming some shift towards Investment Linked Products (ILPs), as seen by the strong investment-linked premium growth at 104% y-o-y in Q1 2006. (Chart 3.13)

Chart 3.13
Life Direct Insurance: Quarterly Premium Growth -Non Linked vs Investment Linked (SIF)



Source: MAS

Asset-liability management remains a concern but healthy CAR suggests resilience

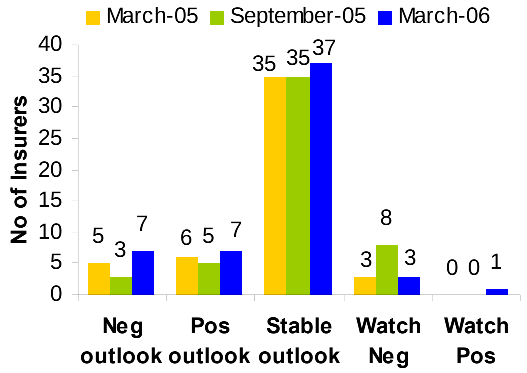
Asset-liability management remains a key concern for life insurers due to uncertainties in asset prices and the interest rate environment, especially given the long-term nature of their liabilities. On the regulatory front, the RBC framework imposes greater capital requirements for higher asset-liability mismatch risk. Nevertheless, the maintenance of life insurers' CAR at about twice the minimum regulatory requirement, as at end-Q1 2006 suggests that the life insurance industry as a whole has a significant buffer to accommodate any unexpected shocks. By and large, a measured rise in interest rates and the accompanying effect of a decrease in bond prices is likely to improve solvency as the reduction in policy liabilities is expected to more than offset the decline in the value of financial assets.

Singapore General Insurance

The global outlook for Singapore's general insurance has become more positive for general reinsurers and direct insurers

Since the last review, the global reinsurance outlook has become somewhat more positive with the ratings of various reinsurance groups affirmed and significantly fewer reinsurers placed on credit watch with negative implications. (Chart 3.14) In particular, several top reinsurers have maintained strong shareholders' funds or improved their returns on equity, even as underwriting results slipped. Since all but one of the Singapore-registered reinsurers are branches or subsidiaries of international reinsurers, such global developments have positive implications for the industry in Singapore.

Chart 3.14
Global Reinsurance Rating Outlook/Watch Distribution



Source: Standard and Poor's

General direct gross premiums grew in 2005, while underwriting results improved

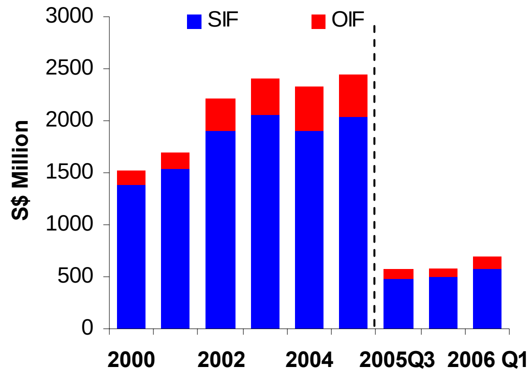
For the year-ended 2005, gross premium receipts of the domestic general insurance industry for both the SIF and the Offshore Insurance Fund (OIF) increased by 5.1% y-o-y, extending the growth trend since 2000. (Chart 3.15) According to industry feedback, this was achieved despite the softening of premium rates by 10-20% in motor, fire and marine cargo insurance in H2 2005, following earlier reductions in 2004 and H1 2005.

The decline in rates was more than offset by the industry's containment of claims costs, particularly for the key motor insurance line. Consequently, 2005 as a whole saw continued improvement in the overall loss ratio and underwriting results.[17] (Chart 3.16) Unprecedented investment income - itself the consequence of a benign economic environment - boosted operating profits to an 8-year high of S$581 million. (Chart 3.17) These trends suggest sound overall management of pricing, underwriting and reserving risk.

Underwriting results for the full year could dip for general direct insurers but capital strength to be maintained

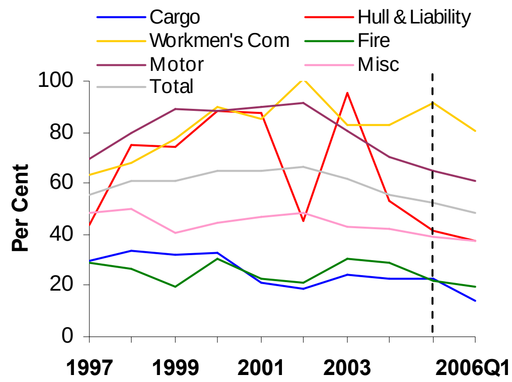
Anecdotal evidence suggests there have been further rate reductions across different lines in 2006 as competition intensified following improved operating results for a third consecutive year. These were reflected in the Q1 2006 figures for both the SIF and the OIF. (Chart 3.15) Rate softening could continue in Q2, underlined by three factors – the continued price-sensitivity of buyers of insurance, new entrants for profitable lines, and increased pressure on existing players to strike a balance between market shares and underwriting margins. Operating results could dip slightly but are unlikely to deteriorate to the levels of 2002, with many insurers placing renewed emphasis on underwriting discipline. These risks are mitigated by the industry's aggregate CAR which remained strong through 2005 to stand at 240% as at end-Q1 2006, above the regulatory requirement of 100%.

Chart 3.15
General Direct Insurance: Gross Premium Level (SIF & OIF)



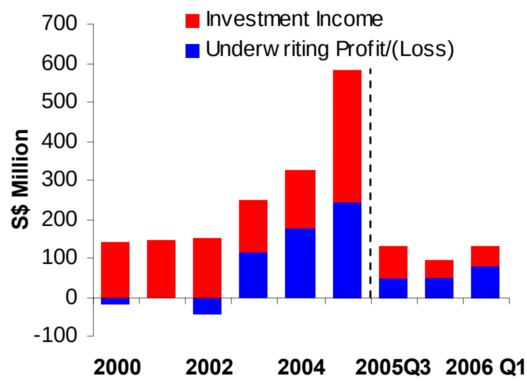
Source: MAS

Chart 3.16
General Direct Insurance: Incurred Loss Ratios by Lines of Business (SIF)



Source: MAS

Chart 3.17
General Direct Insurance: Underwriting Results & Investment Income (SIF & OIF)



Source: MAS

17 Underwriting results for insurers refers to the profits or losses arising from insurance underwriting activities. It does not take into account investment income.

General reinsurance gross premiums increased marginally while underwriting results and CAR remained strong

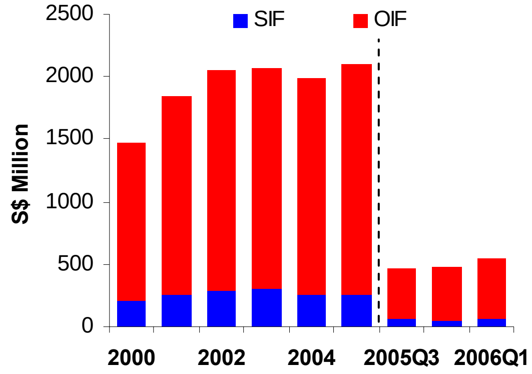
According to industry feedback, H2 2005 also saw rate reductions across lines in the reinsurance industry. As a result, the gross premium receipts of Singapore-registered reinsurers for the year ended December 2005 increased by a modest 6.3% y-o-y. (Chart 3.18) This modest growth was due mainly to rate reductions in the property line, which has consistently accounted for about two thirds of the dominant OIF.

Against this backdrop, Singapore-registered reinsurers maintained underwriting discipline and took advantage of gradually rising interest rates to boost investment income. These led to an unprecedented underwriting profit of S$296.7 million, supplemented by investment income of S$72.8 million for 2005. (Chart 3.19) As a further indication of the strong focus on risk management and prudent utilisation of capital, the industry as a whole maintained a strong CAR of 786% [18] by simultaneously preserving its financial resources and keeping in check the regulatory risk capital it is required to hold.

Premium growth for the year could remain flat but underwriting results will remain strong

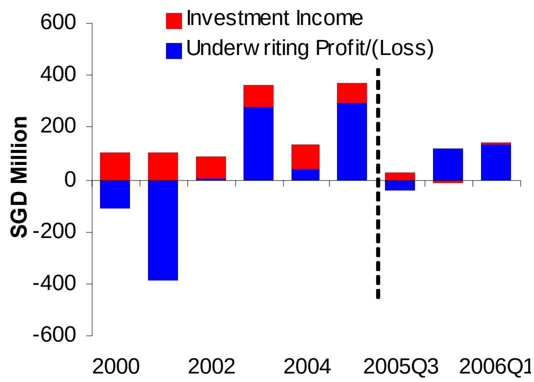
Q1 2006 figures suggest premium growth for the year could remain flat given continued pricing pressures. Singapore-registered reinsurers' Q1 underwriting results were positive and consistent with those released by major global reinsurers. However, subsequent quarters could see some losses arising from the coverage of risks in some catastrophe-prone territories. Nevertheless, the industry's management of insurance risks remains sound, reflecting in part the underwriting discipline instilled by leading reinsurers. The translation of this to robust profits would also enable the industry to maintain its strong capital position.

Chart 3.18
General Reinsurance: Gross Premium Level (SIF & OIF)



Source: MAS

Chart 3.19
General Reinsurance: Underwriting Result & Investment Income (SIF & OIF)



Source: MAS

[18] Reinsurers are exempted from RBC requirements for OIF business, i.e. there is no risk requirement (RR) for this fund. However the financial resources (FR) of the OIF are included in the computation of the overall CAR. This has the effect of boosting the CAR.

4 Financial Infrastructure

MAS Standing Facility

MAS introduced the MAS Standing Facility on 1 Jun 2006. The MAS Standing Facility allows Primary Dealers to initiate S$ deposit or borrowing transactions with MAS on an overnight and interest-paying basis.

The MAS Standing Facility complements MAS' money market operations, and facilitates the fine tuning of liquidity at both the macro banking system and micro individual bank levels. By providing Primary Dealers access to funds and a deposit opportunity, the MAS Standing Facility is also likely to reduce the volatility of overnight interest rates.

Operation of the MAS Standing Facility

The MAS Standing Facility operates on all business days and has two operating windows, 10.45 am to 10.55 am, and 6.15 pm to 6.25 pm. During these operating windows, Primary Dealers may borrow Singapore dollars via SGS repo transactions, or deposit Singapore dollars. Where Primary Dealers borrow through the MAS Standing Facility they will be charged interest. Similarly, they will receive interest when placing deposits.

In the morning of each working day, and as part of normal money market operations, MAS will withdraw S$500 million from the banking system through an auction process with the Primary Dealers. For example, if MAS determines that S$1 billion should be taken out from the banking system on a given day, S$500 million would be withdrawn via an overnight clean borrowing by MAS at the auction or clean deposit from the perspective of the Primary Dealers. The remaining S$500 million could be withdrawn through a different instrument.

The weighted average of successful bids for the S$500 million overnight clean borrowing forms the reference rate of the MAS Standing Facility for that day.[19] The rate at which Primary Dealers may borrow from the facility will be 50 bps above the day's reference rate, and the rate at which Primary Dealers may deposit with the facility will be 50 bps below the day's reference rate. Besides the method in which reference rates are determined, the spreads charged, as well as the functionality may also differ as compared to other countries.

Consistency with MAS' Monetary Policy

Since 1981, MAS' monetary policy has been centred on the management of the exchange rate. With an open capital account, MAS does not pursue an interest rate or money supply target. The introduction of the MAS Standing Facility does not represent a departure from MAS' exchange rate based monetary policy, and is not a mechanism for interest rate targeting.

Unlike the standing facilities of other central banks such as the Bank of England, European Central Bank and Reserve Bank of Australia, the MAS Standing Facility's reference rate is not a fixed policy rate set by the central bank. Instead the reference rate is market-determined through the price discovery mechanism of auctioning S$500 million of clean borrowing each day, and can vary from day to day. Hence the interest rates of the MAS Standing Facility will be congruent with market expectations of equilibrium interest rates, given MAS' exchange rate based monetary policy stance.

19 To pre-empt the possibility of any particular player dominating the S$500 million overnight clean borrowing auction, bids of Primary Dealers will be subject to a cap of S$100 million.

Benefits of the MAS Standing Facility

The MAS Standing Facility provides three key benefits:

(a) The utilisation of the private information of Primary Dealers to fine-tune the aggregate supply of Singapore dollars;

(b) The easing of potential frictional demand for liquidity; and

(c) The reduction of sharp intra-day interest rate volatility.

Utilisation of Private Information

Like other central banks, MAS' money market operations are conducted at MAS' discretion. MAS exercises this discretion based on the information that MAS has on government and statutory board flows, and MAS' estimate of banks' demand for Singapore dollars. However, estimation of banks' demand for Singapore dollars is not an exact science, and unexpected intra-day fluctuations can and do occur. The MAS Standing Facility harnesses the private information of Primary Dealers by allowing them to initiate borrowing and deposit transactions, after considering their liquidity needs. Importantly, the individual actions of borrowing (depositing) Singapore dollars via the MAS Standing Facility has the effect of increasing (decreasing) the aggregate amount of Singapore dollars in the banking system. Hence the MAS Standing Facility allows the usage of private information of Primary Dealers to fine-tune the supply of Singapore dollars in the domestic banking system.

Easing Potential Frictional Demand for Liquidity

Due to market imperfections, it is possible that while aggregate banking liquidity demand and supply remain in balance, imbalances could remain at the individual primary dealer level. The MAS Standing Facility would ease such frictions by providing Primary Dealers access to deposit and borrowing opportunities.

The 50 bps spread from the reference rate is set to prevent the standing facility from replacing the interbank market for overnight funds. Hence, the standing facility is likely to be used only in periods of higher intra-day interest rate volatility.

Reducing Sharp Intra-Day Volatility

The provision of deposit and borrowing opportunities is also likely to reduce sharp intra-day interest rate volatility. Should there be a substantial intra-day increase (decrease) in overnight interest rates, the attractiveness of borrowing (depositing) Singapore dollars via the MAS Standing Facility will increase, reducing the upward (downward) pressure on overnight interest rates. The MAS Standing Facility could also provide a psychologically calming effect to market participants, by assuring that sufficient liquidity and deposit opportunities will be provided to the market.

Statistical Appendix

SINGAPORE NON-FINANCIAL SECTOR

Table A.1: Corporate Sector: Return-on-Assets (Median)

Table A.2: Corporate Sector: Current Ratio (Median)

Table A.3: Corporate Sector: Total Debt/Equity (Median)

Table A.4: Corporate Sector: Interest Cover Ratio (Median)

Table A.5: Household Sector

SINGAPORE FINANCIAL INSTITUTIONS

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Table B.6: General Direct Insurers: Composition of Net Premiums of Singapore Insurance Fund

Table B.7: General Direct Insurers: Incurred Loss Ratio of Singapore Insurance Fund

SINGAPORE NON-FINANCIAL SECTOR

Table A.1: Corporate Sector: Return-on-Assets (Median)

	Q4 2002	Q2 2003	Q4 2003	Q2 2004	Q4 2004	Q2 2005	Q4 2005
	Per Cent						
Transport, Storage & Communications	5.1	6.0	6.9	8.6	10.0	10.0	8.5
Property	2.3	2.5	2.5	2.9	3.7	3.3	3.8
Multi-Industry	1.9	-4.1	2.0	3.3	3.5	3.8	3.9
Manufacturing	3.6	1.4	5.4	6.6	6.4	5.7	4.9
Hotels & Restaurants	1.1	-1.3	1.5	2.3	2.1	3.3	2.8
Construction	2.1	1.5	1.5	0.7	1.3	1.0	1.5
Commerce	1.7	2.9	3.9	5.8	6.2	5.2	6.1

Source: Thomson Financial

Table A.2: Corporate Sector: Current Ratio (Median)

	Q4 2002	Q2 2003	Q4 2003	Q2 2004	Q4 2004	Q2 2005	Q4 2005
	Ratio						
Transport, Storage & Communications	1.1	1.0	1.2	1.3	1.1	1.3	1.4
Property	2.0	2.0	1.7	2.1	1.7	2.2	2.1
Multi-Industry	1.2	1.3	1.5	1.3	1.2	1.3	1.2
Manufacturing	1.6	1.6	1.7	1.6	1.6	1.6	1.6
Hotels & Restaurants	1.7	1.7	1.7	1.5	1.7	2.1	2.0
Construction	1.2	1.3	1.3	1.3	1.3	1.3	1.4
Commerce	1.7	1.7	1.8	1.9	1.8	1.7	1.6

Source: Thomson Financial

Table A.3: Corporate Sector: Total Debt/Equity (Median)

	Q4 2002	Q2 2003	Q4 2003	Q2 2004	Q4 2004	Q2 2005	Q4 2005
	Per Cent						
Transport, Storage & Communications	43.5	38.9	36.8	51.9	45.8	31.8	38.6
Property	78.7	56.6	58.9	67.3	55.3	49.1	49.5
Multi-Industry	64.2	59.6	55.1	54.6	56.4	53.3	43.0
Manufacturing	29.1	31.4	30.5	27.2	26.2	27.3	31.6
Hotels & Restaurants	38.2	40.4	25.5	31.6	33.6	28.5	26.7
Construction	39.9	60.8	51.0	50.8	56.5	43.9	28.6
Commerce	49.9	47.8	35.6	45.4	42.7	45.3	47.8

Source: Thomson Financial

Table A.4: Corporate Sector: Interest Cover Ratio (Median)

	Q4 2002	Q2 2003	Q4 2003	Q2 2004	Q4 2004	Q2 2005	Q4 2005
	Ratio						
Transport, Storage & Communications	5.4	5.5	11.8	10.2	9.1	13.9	11.7
Property	1.9	2.7	3.3	5.6	5.1	5.5	7.8
Multi-Industry	1.5	5.8	4.3	6.1	4.1	7.9	4.6
Manufacturing	4.1	5.6	10.1	6.9	7.4	6.0	5.8
Hotels & Restaurants	-0.8	1.0	5.2	2.3	2.7	4.4	4.8
Construction	1.4	1.4	1.3	2.3	1.9	2.1	1.5
Commerce	2.4	4.9	5.8	7.3	5.6	6.1	5.4

Source: Thomson Financial

Table A.5: Household Sector

	Q4 2003	Q1 2004	Q2 2004	Q3 2004	Q4 2004	Q1 2005	Q2 2005	Q3 2005	Q4 2005
	Per Cent (unless otherwise stated)								
Household Assets (S$ billion)	762.1	788.9	799.4	814.4	829.1	846.4	852.6	867.0	877.1
Household Residential Property Assets as % of Total Assets	47.7	46.8	46.8	46.0	45.7	44.7	43.9	42.9	42.7
Household Liabilities (S$ billion)	152.8	152.9	153.9	155.2	155.7	155.8	156.0	156.5	156.8
Household Liabilities to Assets Ratio	20.0	19.4	19.2	19.1	18.8	18.4	18.3	18.1	17.9
Household Liabilities as % of GDP	96.0	92.2	89.8	88.8	86.2	85.6	84.0	82.6	80.7

Source: MSD estimates, Ministry of National Development, Urban Redevelopment Authority and Singapore Department of Statistics

SINGAPORE FINANCIAL INSTITUTIONS

Table B.1: Banking Sector Financial Soundness Indicators

	Q1 2004	Q2 2004	Q3 2004	Q4 2004	Q1 2005	Q2 2005	Q3 2005	Q4 2005	Q1 2006
Loan Concentrations (% of Total Commercial Bank Loans)									
Bank Loans	67.1	66.2	65.6	66.0	65.4	65.1	65.4	64.2	64.1
Non-Bank Loans	32.9	33.8	34.4	34.0	34.6	34.9	34.6	35.8	35.9
Loans through the Asian Dollar Market (% of Total Commercial Bank Loans)									
Total ADM Loans	71.9	72.3	72.7	72.6	71.5	71.7	73.1	73.3	71.5
Of which to (% of Total Asian Dollar Market Loans):									
United Kingdom	17.6	17.3	18.7	20.2	20.3	19.5	16.6	15.0	15.4
Japan	22.7	22.6	21.2	19.3	17.3	18.1	20.8	21.4	17.4
Hong Kong	6.7	7.5	8.2	9.0	8.6	8.5	7.8	8.4	7.8
USA	6.3	4.8	5.6	6.3	5.6	6.3	5.5	7.8	7.5
Switzerland	5.3	5.7	4.8	5.6	6.2	5.7	6.2	6.0	6.6
Banks	81.2	80.4	80.1	80.0	79.2	78.3	78.4	76.2	76.2
Non-Bank	18.8	19.6	19.9	20.0	20.8	21.7	21.6	23.8	23.8
Loans through Domestic Banking Units (% of Total Commercial Bank Loans)									
Total DBU Loans	28.1	27.7	27.3	27.4	28.5	28.3	26.9	26.7	28.5
Of which to (% of Total DBU Loans):									
Manufacturing	4.1	4.1	4.2	3.9	3.9	3.9	3.9	3.8	3.7
Building & Construction	9.5	9.6	9.6	9.4	8.9	8.8	8.9	8.6	8.3
Housing	21.6	22.5	23.9	23.4	23.4	23.2	23.7	23.2	22.5
Professionals & Private Individuals	12.9	13.1	13.3	13.0	12.6	12.4	12.7	12.2	11.6
Non-Bank Financial Institutions	8.8	8.5	8.7	8.8	8.4	7.9	8.0	8.2	8.2
Banks	30.8	29.3	26.9	28.8	30.9	31.4	30.1	31.3	33.7
Profitability (Per Cent)									
DBU Net Interest Income to Total DBU Loans	2.31	2.33	2.39	2.42	2.35	2.32	2.38	2.26	2.22
Liquidity (Per Cent)									
Liquid DBU Assets to Total DBU Assets	12.4	11.6	12.0	11.4	11.1	11.4	11.4	10.3	9.7
Liquid DBU Assets to Total DBU Liabilities	13.7	12.8	13.2	12.5	12.4	12.6	12.5	11.3	10.6
All DBU Loans to All DBU Deposits	85.8	85.7	88.2	86.9	84.3	83.4	82.1	81.8	78.9
DBU Non-bank Loans to DBU Non-Bank Deposits	101.8	100.6	98.3	100.8	98.8	98.8	95.9	96.3	95.3
DBU Non-Bank Loan Growth (y-o-y)	7.6	5.8	6.0	4.5	2.7	2.6	1.9	2.2	2.8
DBU Non-Bank Deposit Growth (y-o-y)	9.5	9.7	8.6	6.1	4.6	5.5	9.5	8.5	9.8

Source: MAS
Note: Data relates to all commercial banks, Singapore operations only.

Table B.2: Local Banks' Selected Financial Soundness Indicators

	Q1 2004	Q2 2004	Q3 2004	Q4 2004	Q1 2005	Q2 2005	Q3 2005	Q4 2005	Q1 2006
Capital Adequacy (Per Cent)									
Regulatory Capital to Risk-Weighted Assets	16.7	15.5	16.3	16.2	15.9	14.8	15.3	15.8	15.4
Regulatory Tier I Capital to Risk-Weighted Assets	11.9	12.3	11.8	11.5	11.5	10.4	10.9	11.4	11.2
Shareholders' Funds to Total Assets	10.4	10.2	10.4	10.3	10.4	9.8	10.3	10.5	10.5
Asset Quality (Per Cent)									
Non-bank NPLs to Non-bank Loans	6.2	5.5	5.4	5.0	4.6	4.2	4.0	3.8	3.8
NPLs to Total Loans	5.0	4.5	4.4	4.0	3.6	3.5	3.2	3.0	2.9
NPLs to Regulatory Capital	29.9	28.1	26.7	24.4	22.1	21.8	19.4	17.9	17.4
NPLs Net of Specific Provisions to Regulatory Capital	18.8	17.5	16.0	14.3	12.8	12.6	11.4	10.5	10.4
Total Provisions to NPLs	67.8	71.5	72.8	76.0	77.8	78.9	80.0	80.9	81.3
Specific Provisions to NPLs	37.1	37.6	40.0	41.6	42.0	41.9	41.2	41.1	40.5
Loan Concentrations (% of Total Loans)									
Bank Loans	24.0	22.1	23.3	24.2	25.6	22.1	22.6	24.3	25.6
Non-Bank loans	76.0	77.9	76.7	75.8	74.4	77.9	77.4	75.7	74.4
Of which to (% of Total Loans):									
Manufacturing	6.7	6.7	7.3	7.3	7.2	7.7	7.8	7.6	7.8
Building & Construction	9.4	9.4	8.6	8.4	8.9	9.1	8.9	8.8	9.0
Housing	22.5	23.2	22.7	22.5	22.3	22.6	22.4	21.7	21.4
Professionals & Private Individuals	10.5	10.4	10.2	10.1	9.8	9.9	9.7	9.4	9.1
Non-Bank Financial Institutions	9.6	10.1	9.8	9.8	9.2	10.0	9.8	10.0	9.6
Profitability (Per Cent)									
ROA (Simple Average)*	1.38	1.41	1.37	1.25	1.11	1.19	1.23	1.15	1.22
ROE (Simple Average)*	13.3	13.6	12.7	11.8	10.6	11.7	12.0	11.1	11.8
Net Interest Margin (Simple Average)	1.95	1.95	1.92	1.91	1.89	1.86	1.89	1.97	2.05
Non-Interest Income to Total Income	41.6	47.4	41.2	37.6	37.6	38.1	36.0	43.3	37.1
Operating Expenses to Income	42.1	37.6	40.1	45.2	40.5	41.8	42.6	44.0	42.0

Source: The local banks' published quarterly financial accounts. All data subject to revision.
* From Q1 2006 ROA and ROE are no longer available on a GAAP basis (i.e including intangible assets such as goodwill). As a result, ROA and ROE (on ordinary shareholders' funds) is now presented on a cash basis.

Table B.3: Life Direct Insurers: Total New Business Gross Premiums

	2003	2004	2005	Q2 2004	Q3 2004	Q4 2004	Q1 2005	Q2 2005	Q3 2005	Q4 2005	Q1 2006
Year-on-Year % Change											
Policies	-55.4	10.6	287.1	8.8	5.5	4.2	-5.7	-2.0	829.7	220.6	45.9
Annual Premiums	-27.2	10.0	60.7	-12.3	14.7	50.7	43.9	39.6	107.1	45.1	-6.6
Single Premiums	-26.0	30.3	-86.0	39.6	35.8	-22.6	-46.1	-3.2	-4.2	16.1	87.0
Sum Insured	-7.2	21.0	177.4	-2.4	41.1	32.3	30.1	62.2	533.2	-9.9	37.8

Source: MAS

Table B.4: Life Direct Insurers: Assets Distribution of Singapore Insurance Fund (Non-Linked Assets)

	2003	2004	2005	Q2 2004	Q3 2004	Q4 2004	Q1 2005	Q2 2005	Q3 2005	Q4 2005	Q1 2006
S$ Million (% of Total Assets)											
Debt Securities	29,309 (55.8)	35,439 (60.3)	41,936 (61.6)	32,750 (59.0)	34,618 (59.9)	35,460 (60.3)	38,612 (60.1)	40,478 (60.9)	41,787 (61.0)	41,703 (61.3)	40,268 (58.5)
Equity Shares	11,367 (21.7)	11,640 (19.8)	15,131 (22.2)	11,000 (19.8)	11,224 (19.4)	11,414 (19.4)	14,002 (21.8)	14,616 (22.0)	15,008 (21.9)	15,166 (22.3)	16,504 (24.0)
Cash & Deposits	4,161 (7.9)	4,625 (7.9)	3,883 (5.7)	4,477 (8.1)	4,564 (7.9)	4,611 (7.8)	4,114 (6.4)	3,861 (5.8)	3,998 (5.8)	3,902 (5.7)	4,555 (6.6)
Loans	4,024 (7.7)	3,685 (6.3)	3,380 (5.0)	3,874 (7.0)	3,783 (6.5)	3,686 (6.3)	3,559 (5.5)	3,480 (5.2)	3,487 (5.1)	3,377 (5.0)	3,355 (4.9)
Land & Buildings	2,344 (4.5)	2,188 (3.7)	1,997 (2.9)	2,198 (4.0)	2,211 (3.8)	2,172 (3.7)	2,057 (3.2)	2,023 (3.0)	1,997 (2.9)	1,970 (2.9)	1,988 (2.9)
Other Assets	1,292 (2.5)	1,241 (2.1)	1,750 (2.6)	1,218 (2.2)	1,393 (2.4)	1,437 (2.4)	1,886 (2.9)	2,012 (3.0)	2,248 (3.3)	1,938 (2.8)	2,178 (3.2)
Total Assets	52,498 (100.0)	58,818 (100.0)	68,078 (100.0)	55,518 (100.0)	57,795 (100.0)	58,780 (100.0)	64,230 (100.0)	66,470 (100.0)	68,525 (100.0)	68,056 (100.0)	68,848 (100.0)

Source: MAS

Table B.5: General Direct Insurers: Gross Premiums

	2003	2004	2005	Q2 2004	Q3 2004	Q4 2004	Q1 2005	Q2 2005	Q3 2005	Q4 2005	Q1 2006
S$ Million											
Total Operations	2,669.2	2,568.9	2,450.0	616.9	610.2	613.7	760.8	580.1	570.0	584.5	686.5
SIF	2,344.2	2,151.3	2,033.3	521.0	505.5	533.9	626.2	482.4	472.5	496.9	573.5
OIF	325.0	417.6	416.8	95.9	104.8	79.8	134.6	97.6	97.4	87.5	113.0

Source: MAS

Table B.6: General Direct Insurers: Composition of Net Premiums of Singapore Insurance Fund

	2003	2004	2005	Q2 2004	Q3 2004	Q4 2004	Q1 2005	Q2 2005	Q3 2005	Q4 2005	Q1 2006
S$ Million											
Marine & Aviation											
- Cargo	94.1	105.4	110.7	25.7	29.6	26.0	30.3	26.4	29.4	26.1	29.1
- Hull & Liability	42.5	47.6	51.2	5.4	13.3	14.7	17.3	6.9	12.1	14.9	9.8
Fire	100.5	99.4	110.1	25.4	24.7	21.8	41.6	30.9	25.9	22.1	31.5
Motor	646.0	627.5	644.2	162.8	148.2	149.5	189.1	161.4	155.0	145.2	186.7
Workmen's Compensation	133.0	129.2	136.5	32.3	28.2	24.2	56.5	34.9	26.8	27.1	44.8
Miscellaneous	530.3	422.1	496.2	94.3	111.9	110.9	157.6	126.2	117.9	111.8	152.2
Total	1,546.4	1,431.1	1,548.9	346.0	355.7	347.1	492.3	386.6	367.2	347.3	454.1

Source: MAS

Table B.7: General Direct Insurers: Incurred Loss Ratio of Singapore Insurance Fund

	2003	2004	2005	Q2 2004	Q3 2004	Q4 2004	Q1 2005	Q2 2005	Q3 2005	Q4 2005	Q1 2006
Marine & Aviation											
- Cargo	23.9	22.7	22.6	28.5	16.4	30.3	18.6	22.6	21.8	40.8	14.4
- Hull & Liability	95.0	53.0	41.0	44.6	67.6	57.5	22.8	48.5	48.4	64.3	37.7
Fire	30.5	28.7	22.2	23.5	13.4	17.9	25.7	14.6	23.9	25.1	19.4
Motor	80.5	70.3	64.5	74.2	70.6	65.9	65.5	60.6	67.9	65.6	61.8
Workmen's Compensation	83.0	82.5	91.7	85.1	87.0	77.8	78.4	80.3	99.1	72.7	80.8
Miscellaneous	42.9	42.4	40.1	42.5	47.9	40.3	35.8	40.1	39.9	44.5	36.8
Total	61.5	55.7	52.6	57.9	55.6	51.8	49.4	49.8	54.6	55.1	48.7

Source: MAS