

ECONOMICS

RESEARCH:

ASIA PACIFIC

# **Economics & Market Analysis**

21 May 2007

#### Chua Hak Bin

+65-6432 2057 hak.bin.chua@citigroup.com Singapore

#### **Hiew Leon**

+65-6432 1166 leon.hiew@citigroup.com Singapore

# **Singapore Market Weekly**

## Formula 1: The Next Monaco?

- ➤ Staging the Formula 1 race could generate earnings of S\$150-200m based on the track record of other hosts, higher than the official estimate of S\$100m. The event could bring in about 40K tourists, about 4.1% of current annual tourist numbers.
- ➤ There would be spin-offs to the broader economy, including the less tangible halo benefits from branding. F1 is the third most watched sporting event in the world, beamed on average 58 million times a season to over 200 countries.
- ➤ Hotels, retail, private banking and media should be beneficiaries. Hotels typically charge 3 times the usual rates during F1. Budgets for advertising, promotions and hospitality are generous.
- Monaco thrives on pleasant weather, casinos, low taxes and location (southern France). Residential property prices are the second highest globally after London. But Monaco is far smaller than Singapore in terms of population and GDP size. F1's economic impact is therefore more limited for Singapore, in the order of 0.1% of GDP or less.
- Markets: Short-term interest rates will likely remain under downward pressure near-term on the back of flush liquidity.

# Contents

Key Economic Data and Forecasts	9
Market Snapshot	8
Week in review	6
Fixed-Income Market	6
Formula 1: The Next Monaco?	3
Economics	3



## **Economics**

### Formula 1: The Next Monaco?

Chua Hak Bin +65-6432 2057 hak.bin.chua@citigroup.com Singapore signed a 5-year deal to stage the Formula 1 race, with an option for another 5 years extension. The first race will take place in 2008, probably during September or October. Singapore will be the third street race, after Monaco and Melbourne. But it could be the first ever to host a night race.

Costs for staging a Singapore F1 is about S\$150m a year Estimated organizational costs for Singapore amounts to S\$150m a year. About 60% will be co-founded by the Singapore Tourism Board. The government estimated that the F1 would generate tourism earnings of about S\$100m a year. The 3-day event is expected to bring in an additional 40,000 tourists, about 4.1% more compared to the annual tourist numbers of about 9.7 million.

Tourism earnings could be higher, closer to \$150-\$200m, based on track record of other hosts We think tourism earnings could be higher, closer to S\$150 - S\$200m, with the right promotion. That would be about 1.2% to 1.6% of the S\$12.4bn in tourism receipts in 2006. The government forecast looks conservative when compared to the earnings of other F1 hosts (see Figure 1). Valencia is hosting the race early 2008 and is estimating about S\$190m in earnings, based on Barcelona's experience. Bahrain made earnings of S\$600m in 2006 and Shanghai \$653m in 2004. Malaysia, right next door, generated S\$175m in earnings.

Figure 1: Formula 1 Grand Prix - Startup Costs & Estimated Earnings

Start up Costs	Estimated Earnings
<b>.</b>	Estillated Earlings
Singapore, 2008	
S\$150m. Consists of sanctioning fees and	S\$100m (government estimate). Additional
logistical costs (street circuit)	40,000 tourists for 3-day event.
Valencia, 2008	
S\$53m. Hosting rights.	S\$190m (estimate based on Barcelona Grand
	Prix)
Bahrain, started 2005	
<b>\$\$230m.</b> Purpose built stadium circuit.	<b>\$\$600m</b> in 2006, about 3% of GDP.
Turkey, started 2005	
S\$106m. New Istanbul Speedpark. Another	S\$151m.
S\$365m in surrounding infrastructure.	
Shanghai, started 2004	
S\$456m. New circuit	<b>\$\$653m</b> in 2004.
Malaysia, started 1999	
S\$84m spending + \$130m (Sepang track)	S\$175m
· · · · · · · · · · · · · · · · · · ·	

Source: New Straits Times, Citigroup estimates.

F1 is the third most watched sporting event in the world, after Olympics and World Cup There will be larger spinoffs to the economy, including the less tangible 'halo' benefits from branding. Formula 1 is the third most watched sporting event in the world after the Olympics and World Cup. It is watched on average 58 billion times a season through television broadcast to over 200 countries. Singapore will suddenly be on the map for these millions. The immediate costs to the government's coffers will likely be defrayed over time by the branding and advertising gains.

Hotels, retail, private banking and the media should be beneficiaries Hotels, retail, private banking and the media may be some of the beneficiaries. The integrated resorts should also gain when they are ready. The F1 crowd is primarily the rich and middle class.

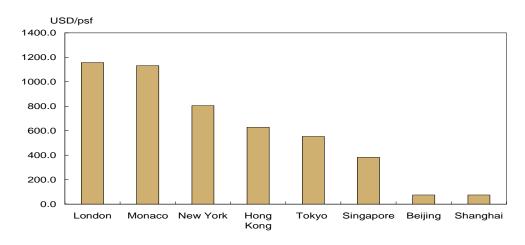


Hotel rates typically rise by as much as 3 times the usual rates during F1 Hotel rates typically rise by as much as three times the usual rates during the F1 season based on Monaco and Melbourne. Even with the higher planned Cess tax on hotels during the F1 season, hotels should still come out substantially better off, with room rates net of tax likely to be more than double the usual rates. Hotel occupancy rates moreover in Singapore are already tight, with occupancy rates in March at 91%, the highest since April 1994. Pressure on room rates could be even more substantial. The Cess tax on hotels is expected to help cover staging costs by S\$15 - \$20 million.

Australian Grand Prix generates some US\$10.5m in advertising and promotions during the 4 days Media, retail and private banking will also benefit. The Australian Grand Prix, for example, generates about US\$10.5 million in advertising and promotions during the 4-day event. Annual budgets for the auto participants are huge, totalling some US\$1.5bn. Toyota ranks highest, with a budget of US\$290m, followed by Ferrari (US\$250m) and Renault (US\$155m), based on 2005 figures.

Racecar participants spend a smart sum on hospitality Some of the car manufacturers spend a smart sum on hospitality. Toyota reportedly spent nearly US\$7 million on hospitality last season. The new team Red Bull Racing spent just US\$6 million, including setting up a floating Energy Station in the harbour for Monaco GP and a US\$1.2m Chinese Village at the Shanghai GP.

Figure 1: Monaco - Prime Property Prices Second Highest After London



Source: Frank Night, Citigroup estimates.

Monaco and Singapore are of completely different scales Some have made drawn parallels between Monaco and Singapore. To the extent that Singapore will soon be having its own casinos, targets the wealthy (private banking, high-end property) and offers low taxes for businesses, there are parallels. But Singapore is completely of a different scale in terms of size (136x larger in terms of population, and probably 100x larger in terms of GDP).

Monaco's pleasant climate, casinos and low taxes are major draws for the wealthy Monaco's pleasant climate (12 – 28 degrees celsius), location (bordering France), and casinos are major draws for the wealthy. The state has no income tax and low business taxes, thriving as a tax haven both for individuals who have established residence and for foreign companies that have set up businesses and offices. Living standards are high, with GDP per capita at about US\$30K in 2006 based on purchasing power parity. Monaco's Grand Prix is 77 laps around the narrow, winding streets of Monte Carlo, making it the most exciting in the world, with little room for driver error.



Monaco's prime property is the second highest after London Monaco's prime residential property prices are the second highest in the world after London (see Figure 2) and almost triple that of Singapore. But its population size is only 32,671, made up of over 125 different nationalities. Its population density is high, at 16,620 per km.

Figure 3: Monaco and Singapore - A Quick Comparison

	Monaco	Singapore
Population	32,671	4,553,009
<b>Population Density</b>	16,620/sq km	6,669/sq km
<b>Tourist Arrivals</b>	0.6 million	9.7 million
Tourist Spending	S\$810 million	S\$12.4 billion
Nationalities	125 different nationalities make up population. Main ethnic groups include French, Italian and Monegasque with 21% of other populations	A quarter of Singapore's population is foreigners. Main ethnic groups include Chinese, Indians and Malays with less than 2% of other ethnic groups.
GDP (PPP)	US\$976.3 million (estimated: Monaco do not publish GDP data)	US\$138.6 billion
GDP per capita	US\$30,000 (PPP). However, tourists/capita is high. Hence real purchasing power maybe much higher.	US\$30,900
Economic Activity	Industry: 4.9%, Services: 95.1%	Industry: 33.8%, Services: 66.2%. Heavily dependent on exports.
Taxes	No income tax; low business tax	20% highest personal income tax; lower corporate tax rate for headquarters status; low business tax.

Source: CIA, Citigroup estimates

Economic impact expected only in the order of magnitude of 0.1% of GDP or less Hosting Formula 1 would therefore have a much more material economic impact in Monaco as compared to Singapore (see Figure 3), given the difference in economic size and reliance on tourism. Economic impact in Singapore should only be in the order of magnitude of 0.1% of GDP or less, although certain sectors will see strong gains. But spin-offs and gains from branding are hard to pin down, which could potentially be quite large.



# **Fixed-Income Market**

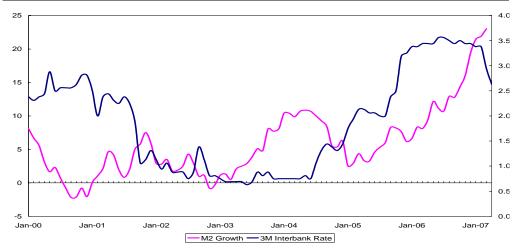
- Short-end interest rates continued to slide on the back of capital inflows and flush liquidity. Lower interest rates are making holding the SGD a less attractive proposition, contributing to the SGD weakness.
- We expect short-term rates to remain under downward pressure near-term.

### **Week in review**

Singapore short-term interest rates fell further on capital inflows and flush liquidity. The 3M interbank rates fell to 2.34% at the end of the week from 2.53% at the start. We expect short-term rates to remain under downward pressure near-term. Latest March figures show M2 growth running at 23%, picking up from February (see Figure). This is the highest rate in two decades and probably the highest in Asia.

There was some market talk that SGD may be used as a funding currency given falling rates. MAS may not be uncomfortable with such an option or lower short-term rates, as this could help curb money growth and capital inflows. Lower rates will likely make holding the SGD a less attractive proposition, limiting SGD currency strength medium-term.





Source: CEIC Data Company Limited.



Figure 2: 10-Year Benchmark SGS and UST Yield (Percent) 3.80 5.40 5.20 3.60 5.00 3.40 4.80 3.20 4.60 3.00 4.40 2.80 4.20 2.60 4.00 2.40 3.80 1/3/2005 11/6/2006 12/5/2005 5/22/2006 6/20/2005 4/23/2007 — 10 yr SGS — 10 yr UST

Source: MAS, Bloomberg



# Market Snapshot

	CURRENT	WEEK AGO	3 MONTHS Ago	6 MONTHS Ago	CHA	ANGE VERSUS		2-	YEAR PERIOD	
					WEEK AGO 3	MONTHS AGO	6 MONTHS AGO	AVERAGE	HIGH	LOW
SGD/USD	1.528	1.518	1.531	1.557	0.010	-0.004	-0.029	1.604	1.702	1.510
STI Index	3,512.4	3,446.9	3,236.9	2,813.2	65.5	275.5	699.2	2,600.8	3,512.4	2,154.7
Interbank Rates										
Overnight	1.78	2.28	2.88	3.25	-0.50	-1.09	-1.47	2.69	3.50	1.59
3-Month	2.34	2.53	3.31	3.41	-0.19	-0.97	-1.06	2.96	3.50	1.88
6-Month	2.38	2.53	3.34	3.41	-0.16	-0.97	-1.03	2.96	3.56	0.00
SGD Swap Offer Rate										
1-Day	1.83	2.48	3.27	3.52	-0.65	-1.43	-1.69	3.10	4.76	1.78
3-Month	2.34	2.53	3.31	3.41	-0.19	-0.97	-1.06	2.96	3.50	1.88
6-Month	2.38	2.53	3.34	3.41	-0.16	-0.97	-1.03	2.96	3.56	0.00
Interest Rate Swap										
1-Year	2.57	2.67	3.50	3.54	-0.10	-0.93	-0.97	3.13	3.79	2.04
2-Year	2.61	2.70	3.48	3.48	-0.09	-0.88	-0.88	3.13	3.78	2.10
3-Year	2.65	2.74	3.49	3.45	-0.09	-0.84	-0.80	3.16	3.79	2.17
5-Year	2.76	2.85	3.49	3.42	-0.08	-0.73	-0.65	3.25	3.84	2.36
7-Year	2.88	2.97	3.53	3.43	-0.09	-0.65	-0.55	3.34	3.89	2.54
10-Year	3.00	3.09	3.58	3.45	-0.09	-0.58	-0.45	3.45	3.97	2.73
Government Bond Yield	ls									
3-Month T-Bill	2.07	2.24	3.11	3.24	-0.17	-1.04	-1.17	2.65	3.33	1.85
1-Year T-Bill	2.15	2.29	2.97	3.15	-0.14	-0.82	-1.00	2.69	3.25	1.90
2-Year SGS	2.21	2.35	2.93	3.05	-0.14	-0.72	-0.84	2.69	3.22	1.91
5-Year SGS	2.35	2.48	3.06	3.06	-0.13	-0.71	-0.71	2.93	3.43	2.20
7-Year SGS	2.50	2.64	3.11	3.05	-0.14	-0.61	-0.55	2.69	3.52	2.35
10-Year SGS	2.59	2.72	3.19	3.08	-0.13	-0.60	-0.49	3.14	3.65	2.56
15-Year SGS	2.73	2.88	3.28	3.17	-0.15	-0.55	-0.44	3.18	3.55	2.73
Swap Spreads (IRS-SG	S, Unmatched I	Maturity)								
2-Year	39.5	34.8	55.0	43.0	4.8	-15.5	-3.5	44.3	79.3	11.3
5-Year	41.3	36.5	42.8	35.5	4.8	-1.5	5.8	32.0	51.0	10.5
7-Year	37.8	32.5	41.8	37.5	5.3	-4.0	0.2	32.1	48.0	10.0
10-Year	40.8	36.8	39.0	36.5	4.0	1.8	4.3	31.3	47.5	12.5
Swap Curve Spread										
2Y - 3M	15.5	4.1	-8.5	-10.4	11.4	24.0	25.8	-1.9	23.3	-21.3
5Y - 2Y	15.8	14.8	0.7	-6.5	1.0	15.0	22.3	11.6	36.3	-6.5
7Y - 5Y	11.5	12.0	4.0	1.0	-0.5	7.5		9.4	23.3	0.2
10Y - 7Y	12.0	12.3	5.3	2.0	-0.2	6.7	10.0	10.8	24.0	0.2

Source: Reuters, Citigroup.



# **Key Economic Data and Forecasts**

Singapore — Key Economic Data and Forecasts	<b>i</b>								
	2000	2001	2002	2003	2004	2005	2006E	2007E	2008E
Real Sector									
Real GDP (% yoy)	10.1	-2.4	4.2	3.1	8.8	6.4	7.9	6.2	5.6
Domestic demand ex Inventory (% yoy)	13.4	0.9	-0.5	-0.1	6.2	2.7	6.4	5.8	5.1
Real Consumption: Private (% yoy)	14.9	4.0	5.1	1.2	5.6	3.1	2.5	3.8	4.1
Real Gross Fixed Capital Formation (% yoy)	9.8	-3.8	-11.4	-3.3	10.2	0.1	11.5	8.5	6.7
Consumer Prices (period average, % yoy)	1.3	1.0	-0.4	0.5	1.7	0.5	1.0	1.5	1.7
Nominal GDP (US\$ bn)	93	85	88	92	107	117	132	149	169
GDP per capita (USD)	23,077	20,693	21,113	22,066	25,329	26,876	29,475	33,365	36,635
Unemployment Rate (%)	2.7	2.7	3.6	4.0	3.4	3.1	2.6	2.5	2.5
External Sector									
Exports (% yoy, US\$)	20.2	-11.7	2.8	16.9	25.0	25.5	18.4	12.1	15.4
Imports (% yoy, US\$)	21.1	-13.8	0.4	12.0	26.9	20.8	19.3	14.7	18.1
Trade balance (US\$ bn)	3.3	5.8	8.7	15.9	17.4	29.6	33.1	30.9	28.3
Current account (% of GDP)	11.6	14.0	13.7	24.2	20.1	24.5	27.5	24.6	22.5
International Reserves ex. Gold (US\$ bn)	80	75	82	96	112	116	137	145	160
Local Currency/USD (period average)	1.72	1.79	1.79	1.74	1.69	1.66	1.59	1.51	1.44
Other									
3M Interbank Rate (period average, %)	2.6	2.0	0.9	0.7	1.0	2.2	3.5	2.5	2.5
10 Year SGS Yield (period average, %)	4.4	3.6	3.5	2.9	3.2	2.9	3.4	2.6	2.8
Fiscal balance (% of GDP)	11.3	-0.3	-1.6	6.5	5.6	6.9	10.0	7.0	6.0
Population (persons million)	4.0	4.1	4.2	4.2	4.2	4.3	4.5	4.5	4.6

Source: CEIC Data Company Limited, Citigroup estimates.

Inte	rest and Exchange Rate Foreca	sts								
		17-May	2007	3007	4Q07	1008	In 1M	In 3M	In 6M	In 12M
SG	3-Month Interbank Rate	2.63	2.35	2.40	2.50	2.50	2.35	2.40	2.50	2.50
	10-Year SGS	2.75	2.55	2.60	2.65	2.60	2.55	2.60	2.65	2.60
	SG\$/US\$	1.5197	1.5150	1.5000	1.4850	1.4700	1.5250	1.5158	1.5150	1.5085
US	Fed Fund Rate	5.25	5.25	5.00	5.00	5.00	5.25	5.25	5.00	5.00
	10-Year Treasuries	4.67	4.65	4.70	4.75	4.80	NA	NA	NA	NA

 $Sources: \, MAS, \, Citigroup \, \, estimates, \, Reuters.$ 

Week Ahead	d Calendar						
Date	Country	Period	Topic	Forecast	Market Median	Prev 1	Prev 2
17-25 May	Singapore	1Q	Real GDP (% YoY)	5.8%	5.7%	6.0%	6.6%
17-25 May	Singapore	1Q	Real GDP (% QoQ saar)	5.8%	5.7%	6.7%	5.6%
24-May	US	Apr	Durable Goods Orders	-0.8%	0.8%	3.7%	1.7
24-May	US	May 20	Initial Jobless Claims	-	300K	293K	339K
24-May	US	Apr	New Home Sales	-	860K	858K	848K
25-May	US	Apr	Existing Home Sales	-	6.10M	6.12M	6.69M
29-May	US	May	Consumer Confidence	-	-	104.0	107.2

Source: Citigroup estimates, Bloomberg, IDEAGlobal.



### **Disclosure Appendix**

### **Analyst Certification**

We, Hak Bin Chua and Leon Hiew, economist and the author of this report, hereby certify that all of the views expressed in this research report accurately reflect our personal views about any and all of the subject issuer(s) or securities. We also certify that no part of our compensation was, is, or will be directly or indirectly related to the specific recommendation(s) or views in this report

### **Other Disclosures**

### ADDITIONAL INFORMATION REGARDING THIS REPORT IS AVAILABLE ON REQUEST.

Citigroup research analysts receive compensation based on a variety of factors. Like all Citigroup employees, analysts receive compensation that is impacted by Citigroup's overall profitability, which includes revenues from, among other things, investment banking activities. Analyst compensation is determined by Citigroup research management and other senior management (not including investment banking personnel).

#### ISSUER-SPECIFIC DISCLOSURES

Citigroup, its officers, directors and/or employees, may from time to time have long or short positions in, act as principal in connection with, and buy or sell securities or derivatives (including options and warrants) discussed in this report. For purposes of your review of this report, you should assume that this is the case with respect to the securities covered herein.

Citigroup does and/or seeks to do business with many issuers, including through the provision of investment banking or other services. For purposes of your review of this report, you should assume that Citigroup has acted as a manager or co-manager of an offering of securities discussed in this report within the prior 12 months or has provided other services to the issuer within the prior 12 months for which it has received or expects to receive compensation.

Citigroup is an active market maker or liquidity provider for many fixed-income securities and from time to time takes principal positions in such securities or related derivatives. For purposes of your review of this report, you should assume that this is the case with respect to the securities covered herein.

#### **OTHER GENERAL DISCLOSURES**

This research report was prepared by Citigroup Global Markets Inc. ("CGMI") and/or one or more of its affiliates (collectively, "Citigroup"), as further detailed in the report, and is provided for information and discussion purposes only. It does not constitute an offer or solicitation to purchase or sell any securities or other financial products.

This report does not take into account the investment objectives, financial situation or particular needs of any particular person. Investing in securities and other financial products entails certain risks, including the possible loss of the entire principal amount invested. Certain investments in particular, including those involving structured products, futures, options and other derivatives, are complex, may entail substantial risk and are not suitable for all investors. The price and value of, and income produced by, securities and other financial products may fluctuate and may be adversely impacted by exchange rates, interest rates or other factors. Prior to effecting any transaction in options or options-related products, investors should read and understand the current Options Clearing Corporation Disclosure Document, a copy of which may be obtained on request from your Citigroup representative. Certain securities may not be registered with, or subject to the reporting requirements of, the US Securities and Exchange Commission or any comparable regulatory authority. Information available on such securities may be limited. Investors should resources

The information contained in this report is based on generally available information and, although obtained from sources believed to be reliable, its accuracy and completeness is not guaranteed. The analysis contained in this report is based on a number of assumptions. Changes in such assumptions could produce materially different results. This communication is not intended to forecast or predict future events. Past performance is not a quarantee or indication of future results.

Citigroup research analysts may communicate with sales and trading personnel and other Citigroup personnel for the purposes of gathering and analyzing market information and may discuss with such personnel information regarding, among other things, market trends, economic trends, the market for bonds of a specific issuer and other market information (such as current prices, spreads and liquidity), so long as such communications do not impair the analyst's independent ability to express accurately his or her personal views about any and all of the subject securities or issuers. Other Citigroup personnel who do not function as research analysts, including sales and trading personnel, may provide oral or written market commentary or trade ideas to Citigroup's customers or proprietary trading desks that differ from the views expressed in this report. Citigroup's proprietary trading and asset management businesses may make investment decisions that are different from the recommendations contained in this report.

Citigroup has no duty to update this report and the opinions, estimates and other views expressed in this report may change without notice. No liability whatsoever is accepted for any loss (whether direct, indirect or consequential) that may arise from any use of the information contained in or derived from this report.

Securities recommended, offered or sold by Citigroup (unless expressly stated otherwise): (i) are not insured by the Federal Deposit Insurance Corporation or any other body; and (ii) are not deposits or other obligations of Citibank, N.A. or any other insured depository institution.

Citigroup does not provide tax advice and nothing contained herein is intended to be, or should be construed as, tax advice. Any discussion of US tax matters contained in this report was written to support the promotion or marketing of the transactions or other matters addressed herein and is not intended to be used, and must not be used by any recipient, for the purpose of avoiding US federal tax penalties. Recipients of this report should seek tax advice based on the recipient's own particular circumstances from an independent tax adviser.

This report is intended for distribution solely to customers of Citigroup in those jurisdictions where such distribution is permitted. No part of this report may be copied or redistributed by any recipient for any purpose without Citigroup's prior written consent.

Local law requirements may prohibit certain investors from effecting a transaction in the security or securities covered in this report. US persons wishing further information or to effect a transaction should contact a registered representative of CGMI in the United States. Non-US persons wishing further information or to effect a transaction should contact a Citigroup entity located in their own jurisdiction unless applicable governing law permits otherwise.

AUSTRALIA: This report is made available in Australia to wholesale clients through Citigroup Global Markets Australia Pty Ltd. (ABN 64 003 114 832 and AFSL No. 240992) and to retail clients through Citigroup Wealth Advisors Pty Ltd. (ABN 19 009 145 555 and AFSL No. 240813), participants of the ASX Group, and regulated by the Australian Securities & Investments Commission. Citigroup Centre, 2 Park Street, Sydney, NSW 2000. CANADA: If this report is being made available in certain provinces of Canada by Citigroup Global Markets (Canada) Inc. ("CGM Canada"), CGM Canada has approved the Product. Citigroup Place, 123 Front Street West, Suite

1100, Toronto, Ontario M5J 2M3. CHINA: This report is made available in China through Citibank, N.A. Beijing Branch, 16F Tower 1 Bright China Chang-an Bldg., 7 Jianguomen Nei Avenue, Beijing, 100005 P.R. China. Citibank, N.A. Beijing Branch is regulated by the China Banking Regulatory Commission. CZECH REPUBLIC: This report is being distributed within the territory of the Czech Republic by Citibank a.s. Citibank a.s. is a bank and securities broker/dealer regulated by the Czech National Bank, Na Príkope 28, Prague 1, Czech Republic. Unless expressly stated otherwise, Citibank a.s. is only distributing this report and, upon its distribution, it has not changed or amended the actual content of this report in any way (as such was prepared by respective entities and/or individuals as further detailed in the report). HONG KONG: If this report is made available in Hong Kong by, or on behalf of, Citigroup Global Markets Asia Ltd., it is attributable to Citigroup Global Markets Asia Ltd., Citibank Tower, Citibank Plaza, 3 Garden Road, Hong Kong. Citigroup Global Markets Asia Ltd., is regulated by the Hong Kong Securities and Futures Commission. If this report is made available in Hong Kong by Citibank, N.A., it is attributable to Citibank, N.A., Citibank Tower, Citibank Plaza, 3 Garden Road, Hong Kong. Citibank, N.A. is regulated by the Hong Kong Monetary Authority. INDIA: The Product is made available in India by Citigroup Global Markets India Private Limited, which is regulated by Securities and Exchange Board of India. Bakhtawar, Nariman Point, Mumbai 400-021. INDONESIA: This report is made available in Indonesia through Citibank, N.A. Indonesia Branch, Citibank Tower Lt 7, Jend, Sudirman Kay 54-55, Jakarta, Citibank, N.A. Indonesia Branch is regulated by the Bank of Indonesia, JAPAN: This report is being distributed in Japan by Nikko Citigroup Limited. If this report was prepared by a Citigroup affiliate of Nikko Citigroup Limited, it is being distributed by Nikko Citigroup Limited under license. If this report was prepared by Nikko Citigroup Limited, it may be based in part on a report produced by one of its affiliates used under license. If this report was prepared by Nikko Citigroup Limited and is being distributed in other jurisdictions by other Citigroup affiliates, or by Nikko Cordial Securities Inc., it is being distributed by them under license. Nikko Citigroup Limited is regulated by Financial Services Agency, Securities and Exchange Surveillance Commission, Japan Securities Dealers Association, Tokyo Stock Exchange and Osaka Securities Exchange. Akasaka Park Building, 2-20, Akasaka 5-chome, Minato-ku, Tokyo 107-6122. **KOREA:** The Product is made available in Korea by Citibank Korea Inc., which is regulated by the Financial Supervisory Commission and the Financial Supervisory Service. Address is Dadong 39, Jung Gu, Seoul, Korea, 100-180. **MEXICO:** This report is made available in Mexico by Acciones y Valores Banamex, S.A. De C. V., Casa de Bolsa, and Banco Nacional de México S.A. Acciones y Valores Banamex is regulated by Comision Nacional Bancaria y de Valores. Its address is Reforma 398, Col. Juarez, 06600 Mexico, D.F. Banco Nacional de México S.A. is regulated by the Comisión Nacional Bancaria y de Valores. Its address is Actuario Roberto Medellín 800, Col. Santa Fé, (01210) Mexico City, Mexico. **NEW ZEALAND:** This report is made available in New Zealand through Citigroup Global Markets New Zealand Limited (Company No. 604457), a Participant of the New Zealand Exchange Limited and regulated by the New Zealand Securities Commission. Level 11, 23 Customs Street East, Auckland, New Zealand. **PHILIPPINES:** This report is made available in the Philippines through Citibank, N.A. Philippine Branch, 8741 Paseo de Roxas, Makati City, Philippines. Citibank, N.A. Philippine Branch is regulated by the Bangko Sentral ng Pilpinas. POLAND: The Product is made available in Poland by Dom Maklerski Banku Handlowego SA, an indirect subsidiary of Citigroup Inc., which is regulated by Komisja Papierów Wartosciowych i Gield Bank Handlowy w Warszawie S.A. ul. Senatorska 16, 00-923 Warszawa. **RUSSIA:** The Product is made available in the Russian Federation through ZAO Citibank, which is licensed to carry out banking activities in the Russian Federation in accordance with the general banking license issued by the Central Bank of the Russian Federation and brokerage activities in accordance with the license issued by the Federal Service for Financial Markets. Neither the Product nor any information contained in the Product shall be considered as advertising the securities mentioned in this report within the territory of the Russian Federation or outside the Russian Federation. The Product does not constitute an appraisal within the meaning of the Federal Law of the Russian Federation of 29 July 1998 No. 135-FZ (as amended) On Appraisal Activities in the Russian Federation. 8-10 Gasheka Street, 125047 Moscow. SINGAPORE: The Product is made available in Singapore through Citigroup Global Markets Singapore Pte. Ltd. and Citicorp Investment Bank Singapore Ltd. Citigroup Global Markets Singapore Pte. Ltd. is a Capital Markets Services License holder and regulated by the Monetary Authority of Singapore. 1 Temasek Avenue, #39-02 Millenia Tower, Singapore 039192. Citicorp Investment Bank Singapore Ltd. is a Merchant Banking License holder and regulated by the Monetary Authority of Singapore. 3 Temasek Avenue, #17-00 Centennial Tower, Singapore 039190. **SOUTH AFRICA:** Citigroup Global Markets (Pty) Ltd. is incorporated in the Republic of South Africa (company registration number 2000/025866/07) and its registered office is at 145 West Street, Sandton, 2196, Saxonwold. Citigroup Global Markets (Pty) Ltd. is regulated by the JSE Securities Exchange South Africa, the South African Reserve Bank and the Financial Services Board. The investments and services contained herein are not available to private customers in South Africa. TAIWAN: The Product is made available in Taiwan through Citibank, N.A., Taipei Branch, which is regulated by the Financial Supervisory Commission. No portion of the report may be reproduced or quoted in Taiwan by the press or any other person. F.8 No. 169, Section 4, Jen Ai Road, Taipei, Taiwan. **UNITED KINGDOM:** This report is being distributed in the United Kingdom by Citibank, N.A., London Branch, or Citigroup Global Markets Limited, Citigroup Centre, Canada Square, Canary Wharf, London E14 5LB, UK. This material is directed exclusively at market professional and institutional investor customers in the United Kingdom and is not for distribution to private customers in the United Kingdom as defined by the Financial Services Authority. Any investment or service to which this material may relate will not be made available to such private customers. This material may relate to investments or services of a person outside the United Kingdom or to other matters which are not regulated by the Financial Services Authority and further details as to where this may be the case are available on request in respect of this material. UNITED STATES: This report is being distributed in the United States by CGMI. If this report was prepared in whole or in part by a non-U.S. affiliate of CGMI, CGMI accepts responsibility for its contents (subject to the notices above). If this report covers non-U.S. securities, U.S. investors should be aware that non-U.S. companies may not be subject to uniform audit and reporting standards, practices and requirements comparable to those in the United States. Securities of some non-U.S. companies may be less liquid and their prices may be more volatile than securities of comparable U.S. companies. Exchange rate movements may have an adverse effect on the value of an investment in non-U.S. securities and its corresponding dividend payment for U.S. investors. CGMI is a member of the Securities Investor Protection Corporation. **EUROPEAN** UNION: Unless specified to the contrary, within EU Member States, the Product is made available by Citigroup Global Markets Limited, which is regulated by the Financial Services Authority. Many European regulators require that the firm must establish, implement and make available a policy for managing conflicts of interest arising as a result of publishing or distribution of investment research. The policy applicable to research analysts within Citigroup's Fixed Income Strategy and Analysis and Economic & Market Analysis divisions, as well as the investment research they produce, can be obtained by contacting Citigroup Global Markets Inc., 388 Greenwich Street 11th floor, NY NY 10013, Attention: Fixed Income Publishing.

© Citigroup Global Markets Inc., 2007. All rights reserved. Smith Barney is a division and service mark of Citigroup Global Markets Inc. and its affiliates and is used and registered throughout the world. Citi and Citi and Citi and Arc Design are trademarks and service marks of Citigroup Inc. or its affiliates and are used and registered throughout the world. CitiFx® is a service mark of Citicorp Inc.. Nikko is a service mark of Nikko Cordial Corporation. Any unauthorized use, duplication or disclosure is prohibited by law and may result in prosecution.