

Asia Pacific Economics

Daniel Lian *Southeast Asia Economist*
+65 6834 6745
Daniel.Lian@morganstanley.com

Economic Trends

May 6, 2005

*Singapore Lessons for China***RELATED REPORTS**

Living Space	
<i>Daniel Lian</i>	April 28, 2005
Which Pacific Century?	
<i>Daniel Lian</i>	February 2, 2005
Currency Revaluation and Asia's Economic Sovereignty	
<i>Daniel Lian</i>	December 10, 2004

- **High-wage Singapore refuses to be hollowed out by low-wage China**

Contrary to conventional wisdom, we do not believe that the rise of China and India has crowded out the manufacturing space. Although Singapore has experienced a small loss in its global manufactured export share, its manufacturing output has increased substantially. In our view, the former may be merely a reflection of how its ASEAN neighbours are relying less on Singapore's entrepot trade. In fact, Singapore's manufacturing has remained resilient and its share of GDP has expanded from 24.1% to 27.1%. Nominal manufactured output per capita has grown to almost 12 times that of China and nominal manufactured export per capita is now 87 times that of China. Moreover, FDI into Singapore is allowing the economy to be more capital-intensive, to move towards higher value-added and to diversify away from dependence on electronics.

- **The Singapore manufacturing rationale**

Singapore's strategy to preserve manufacturing is wise and has been effective, in our view. Manufacturing is a large part of the economy, with a significant impact on employment and output, and should not be hollowed away. By diversifying into pharmaceuticals and petrochemicals, the government has made the manufacturing sector less tied to the electronic capex cycle. Although it has been criticized for using excessive incentives, we do not see this as a problem as long as the environment is competitive, incentive-based and does not create resource misallocation. Besides, Singapore's manufacturing preservation has been pursued alongside aggressive economic integration and ownership with China, allowing it to ride China's growth as well.

- **Singapore lessons for China**

We think China could learn a few lessons from the Singapore experience. 1) Lower costs in China do not necessarily lead to manufacturing hollowing out in its higher-wage neighbors. 2) Currency manipulation is not a pre-requisite for manufacturing competitiveness. 3) Keeping the currency cheap could impede the move up the value-chain. 4) Excess unproductive asset formation is likely to lead to painful macro adjustment.

Morgan Stanley does and seeks to do business with companies covered in its research reports. As a result, investors should be aware that the firm may have a conflict of interest that could affect the objectivity of this report. Investors should consider this report as only a single factor in making their investment decision.

Singapore Lessons for China

Asian Tigers' Different Experiences Coping with China

Recently we challenged the conventional wisdom that the rapid rise of China and the recent ascent of the Indian economy have squeezed and will continue to pressure the living space of Southeast Asia (see *Living Space*, April 28, 2005). In this note, we focus on the intense effort by Singapore to preserve its manufacturing, and the potential lessons and economic implications from this for China's economic development.

As we pointed out in *Living Space*, Southeast Asia has managed to preserve its global manufacturing share despite the immense challenge presented by China. After 11 years (1994 to 2004) of rapid inroads into manufacturing by China, Southeast Asia's global manufactured export share remains at 4.4%, while its manufactured final output has grown by cumulative 61.4% – from US\$133.8 billion to US\$216 billion (Exhibit 1).

Exhibit 1

Global Share and Manufactured Output

	Global % Share of Manufactured Exports (Goods) *		Manufactured Final Output (US\$ bn)	
	1994	2004	1994	2004
ASEAN 5	4.4	4.4	133.8	216.0
Singapore	1.9	1.7	17.1	29.0
Greater China	8.1	10.7	306.9	843.3
Taiwan	2.5	1.9	70.8	78.0
Hong Kong	3.3	2.8	11.4	6.3
China	2.2	5.9	224.6	759.0
S. Korea	2.1	2.6	117.0	173.5
India	0.5	0.6 **	N/AV	97.0
Mexico	1.2	1.8	290.4	444.3
Brazil	0.8	0.7	N/AV	N/AV

* % share of manufactured exports for each country in the global merchandise exports. ** FY 2003/04 values are used.

Note: 2004 manufacturing final output data for Hong Kong are Morgan Stanley Research estimates.

N/AV = Not available

Source: CEIC, Morgan Stanley Research

As China aggressively started its second-wave ascent via a manufacturing and trade development model in 1994, most people expected the high-wage Asia Tiger economies – Singapore, Hong Kong, Taiwan and S. Korea – to quickly hollow out their manufacturing sectors and surrender their manufactured export shares to China. The economic

rationale was simple – i.e. that indigenous S. Korean and Taiwanese and MNC industrialists based in Hong Kong and Singapore would not be able to resist the competitive manufacturing outsourcing platform offered by China, and would move manufacturing aggressively to China.

However, the story did not quite turn out that way. China has hollowed out manufacturing, but mainly in the developed economies. The Asian Tigers' manufacturing sectors have coped very differently with the rise of China over the past 11 years. S. Korea has managed to increase its domestic manufacturing production substantially and concomitantly raise its global share of manufactured exports (S. Korea handles its own trade and does not rely on others to export for it), whereas Singapore, Taiwan and Hong Kong have experienced varying degrees of small manufactured export shares losses (of the three, Singapore experienced the smallest loss in global share). However, these global manufactured export share losses do not accurately portray their domestic manufacturing strength/weakness. In the case of Singapore, the fact that its ASEAN neighbors are handling more of their own cross-border trade may have contributed to its moderate loss of global share.

In reality, Singapore's manufacturing output has risen quite substantially (US\$17.1 billion to US\$29 billion), whereas Taiwan's has remained stagnant (US\$70.8 billion to US\$78 billion) and Hong Kong's has declined substantially (US\$11.4 billion to US\$6.3 billion) (Exhibit 1).

Why hasn't the competitive China manufacturing platform forced Singapore manufacturing into retreat?

Sino-Singapore Manufacturing-Economic Comparatives

A more detailed comparison of China's and Singapore's manufacturing and economic development of over the past 11 years is warranted to explain how the high-wage Singapore has withstood the onslaught of China. China's vast economic competitiveness appears to have crowded out some economic space for Singapore. Singapore's growth has averaged a much slower 6.2% relative to China's hectic 9.9% over 1994 to 2004 (see Exhibit 2). However, as we explained in *Living Space*, Southeast Asia's relatively sub-par growth in recent years is due mainly to its sluggish domestic investment rate rather than its export growth. Singapore's domestic investment to GDP ratio has fallen from 33.1% in 1994 to a mere 18.3% in 2004. We believe

Singapore's inferior growth rate over this period can be entirely explained by its lacklustre domestic capital formation rate (see Exhibit 3). On the other hand, China is enjoying vast growth in its domestic investment engine on top of its export success.

Exhibit 2

Asia Statistics: GDP and Population

	Singapore		China	
	1994	2004	1994	2004
Nominal GDP (US\$ bn)	70.6	106.8	542.5	1,649.4
Nominal Population (Person mn)	3.4	4.2	1,198.5	1,299.8
Nominal GDP per Capita (US\$ per Person)	20,640	25,191	453	1,269.9
Average (94-04)				
Real GDP growth	6.2		9.9	

Source: CEIC, Morgan Stanley Research

Exhibit 3

ASEAN Savings and Investment

Gross Savings (% of GDP)	94-04 Average	1994	2004
Indonesia	28.2	32.2	25.3
Malaysia	43.6	39.6	43.8
Philippines	16.2	14.9	20.9
Singapore	48.0	47.9	47.1
Thailand	34.0	36.3	33.4
Gross Investment (% of GDP)	94-04 Average	1994	2004
Indonesia	23.6	31.1	22.8
Malaysia	30.7	41.2	22.5
Philippines	20.5	24.1	17.0
Singapore	29.2	33.1	18.3
Thailand	29.2	40.3	27.1

Savings & Investment as % of GDP refer to nominal share in local currencies

Source: CEIC, Morgan Stanley Research

However, the Singapore manufacturing sector has remained extremely resilient, expanding its share of GDP from 24.3% to 27.1% – implying no Sino hollowing of manufacturing. The increase in the value of Singapore's manufactured output, for instance, has been more than US\$1,800 per capita (from around US\$5,000 to US\$6,800), significantly more than the increase in the value of manufactured output per capita in China (from US\$187 to US\$584).

Singapore's nominal manufactured output per capita is almost 12 times that of China. Most significantly, Singapore continues to leverage its excellent logistics and transport infrastructure, as well as its ability to maintain multinationals' presence in the island republic. In consequence, its nominal manufactured export has grown quite substantially, from 113.7% of GDP in 1994 to 141.8%

in 2004. **Singapore's nominal manufactured export per capita is a massive 87 times that of China.**

Exhibit 4

Asia Statistics: Manufacturing Output and Export

	Singapore		China	
	1994	2004	1994	2004
Nominal Manufacturing Output (US\$ bn)	17.1	29.0	224.6	759.0
% of GDP	24.3	27.1	41.4	46.0
Per Capita	5,007.4	6,831.0	187.4	583.9
Nominal Manufacturing Export (US\$ bn)	80.3	151.5	95.5	531.5
% of GDP	113.7	141.8	17.6	32.2
Per Capita	23,473.4	35,733.4	79.6	408.9

Source: CEIC, Morgan Stanley Research

Exhibit 5

Asia Statistics: Net FDI Flows

	Singapore	China
	Accumulated (94-04)	
Net FDI (US\$ bn)	50.4	445.5
Per Capita	13,135.7	354
Accumulated (96-04)		
Proxy for Manufacturing FDI (US\$ bn)*	45.5	472.6

* For Singapore: Net Investment Commitments (Manufacturing) is used. For China: Contract Value for FDI in Manufacturing is used.

Source: CEIC, Morgan Stanley Research

The fact that Singapore's efforts to attract and retain foreign direct investment (and, specifically, manufacturing FDI) go hand-in-hand with its relative manufacturing success should not go unnoticed. The ASEAN 5 attracted cumulative US\$121.3 billion of net FDI over the period 1994 to 2004, with Singapore accounting for 42% (US\$50.4 billion). **Singapore's cumulative net FDI per capita is 37 times that of China.** The island state also accumulated some US\$45.5 billion of net investment commitments in manufacturing over the period 1996 to 2004, almost 10% of what China has captured over the same period (Exhibit 5).

It is important to note that the vast FDI and foreign manufacturing investment over the past decade is rendering the Singapore economy significantly more capital-intensive, helping it to upgrade its manufacturing to higher value-add and to diversify away from its dependence on electronics. In contrast, China is focused on volume expansion in low value-added mass-manufactured products.

Criticism of Singapore's Approach Unjustified

Many economic commentators and analysts have questioned the Singapore government's rationale and ability to preserve a large manufacturing sector. After all, both Hong Kong and Taiwan chose manufacturing hollowing in favor of economic integration (with China) and ownership (of Chinese assets through investment).

In the past, we have also been sceptical over Singapore's intensive effort to preserve manufacturing, as well as some of its other economic strategies. However, we have undergone a change of heart, for the following reasons.

First, the importance of manufacturing to Singapore's employment and output is such that the island state simply cannot afford to let it hollow away. By the mid-1990s manufacturing had already grown to around 25% of Singapore's GDP following almost three decades of industrialization. Global service trade is less than a quarter of global merchandise trade, so relying on growth in services as the sole economic strategy would be risky. In our view, Hong Kong and Taiwan are now paying the economic price of not preserving enough manufacturing.

Second, Singapore has been criticized for using 'excessive' government incentives in luring in 'low employment creation' and 'low multiplier' chemicals investment to balance its excessive dependence on electronics manufacturing. In fact, the share of electronics exports in Singapore's non-oil domestic exports (NODX) has declined from 69.8% in 1997, to around 51.8% in 2004. While the chemicals sector does not generate as many jobs as the electronics sector, it diversifies Singapore's manufacturing sector as pharmaceuticals and petrochemicals (sub-sectors of the chemicals sector) operate on their own production cycles and are not tied to the same volatile electronic capex cycle. The cushion has been immensely valuable to the Singaporean economy. On the subject of 'excessive' incentives, we think that, as long as the broad macro policy environment is competitive and incentive-based, it does not create resource misallocation. Almost every developing country in the world, including China, is using incentives to encourage investment. If Singapore has a deep pocket, Singapore should leverage it, in our opinion.

Third, while aggressively preserving its manufacturing, Singapore, has not rejected the strategy of economic integration (with China) and ownership (of Chinese assets through investment). In fact, Singapore has been one of the leading players in terms of fostering economic ties with

China – it is a major investor in China and trades heavily with China. Singapore's 'enhanced' economic relationship with China means that it should be able to ride China's growth, while its maintenance of a sizeable domestic manufacturing sector ensures that its economy remains well diversified with an aim to create high-value-add domestic manufactured output and employment.

Singapore Lessons for China

We think the Singapore experience has provided several lessons for China:

(1) The assumption that higher-wage or similar-wage manufacturing-based export-oriented economies 'will' as a matter of course hollow out their manufacturing in favor of China must be challenged, given the experience of Southeast Asia (see detailed discussion in *Living Space*) and Singapore.

(2) Singapore does not rely on a cheap Singapore dollar policy to maintain its manufacturing or economic competitiveness. Even during the most challenging period, (i.e. post the 1997-98 Asia Crisis), the country maintained a relatively firm currency regime. The steady currency regime has provided a steady macro policy anchor as Singapore policy-makers have displayed discipline in making real domestic economic adjustments and restructuring (business costs, wages, labor, regulations, investment policies and rules, etc) to stay competitive rather than taking the easy route via a cheap currency.

(3) The above Singapore policy creates the right environment for Singapore to move up the value chain. This is a powerful lesson for China as the present Chinese currency policy risks creating misallocation of resources, in our view. As observed by the Fed Chairman Alan Greenspan on April 21 in his testimony to the US Congress:

"...by holding their exchange rate down, creating misallocation of resources in China, in the sense that they are subsidizing a capital stock associated with very large numbers of workers. Meaning, because their concern is very clearly the stability that they are worried about if there are large levels of unemployment, they are emphasizing a capital stock which is of lower technological state and therefore employs larger numbers of workers on average because that keeps employment at a maximum. But it also prevents standards of living from rising because their intellectual technical capabilities are rising. And if the exchange rate began to rise, they would start to move

capital into more efficient types of uses, which essentially would mean that output per hour would rise, which is what you would expect when you get an increase in the amount of capital stock per worker. And holding their exchange rate where they are is preventing growth in the terms that will be most valuable for China in the decades ahead.”

Essentially the Fed Chairman is saying that China must choose between revaluation and moving up the value chain so as to augment its standard of living, or keeping a cheap currency regime and remaining stuck in low-value-add production.

(4) All domestic investment booms must come to an end and countries that indulge in asset bubbles and investment excesses will have to pay in macro pain. In its frantic growth phase from mid-1980s to mid-1990s, Southeast Asia (including Singapore) utilized the twin growth engines of export and domestic investment, and overly indulged on the latter. Post the Asia Crisis, Singapore has resisted the creation of reckless asset bubbles and an easy domestic investment boom as shortcuts to reignite growth. Such prudent and well-thought-out strategy appears to be paying off. While China's appetite for domestic investment is well justified by the need to raise its capital stock, the massive asset formation involves a great deal of unproductive investment and is enlarging systemic risk in the Chinese financial system, in our view. At some point, we expect a painful macro adjustment to set in, as occurred in Southeast Asia during the 1997-98 Crisis.

Bottom Line: Mighty China Can Learn Some Lessons from the Singapore Experience

Contrary to conventional wisdom, we do not believe that the rise of China and India has crowded out the manufacturing space. Although Singapore has experienced a small loss in

its global manufactured export share, its manufacturing output has increased substantially. In our view, the former may be merely a reflection of how its ASEAN neighbours are relying less on Singapore's entrepot trade.

In fact, Singapore's manufacturing has remained resilient and its share of GDP has expanded from 24.1% to 27.1%. Nominal manufactured output per capita has grown to almost 12 times that of China and nominal manufactured export per capita is now 87 times that of China. Moreover, FDI into Singapore is allowing the economy to be more capital-intensive, to move towards higher value-added and to diversify away from dependence on electronics.

Singapore's strategy to preserve manufacturing is wise and has been effective, in our view. Manufacturing is a large part of the economy, with a significant impact on employment and output, and should not be hollowed away. By diversifying into pharmaceuticals and petrochemicals, the government has made the manufacturing sector less tied to the electronic capex cycle. Although it has been criticized for using excessive incentives, we do not see this as a problem as long as the environment is competitive, incentive-based and does not create resource misallocation. Besides, Singapore's manufacturing preservation has been pursued alongside aggressive economic integration and ownership with China, allowing it to ride China's growth as well.

To conclude, we think China could learn a few lessons from the Singapore experience. 1) Lower costs in China do not necessarily lead to manufacturing hollowing out in its higher-wage neighbors. 2) Currency manipulation is not a pre-requisite for manufacturing competitiveness. 3) Keeping the currency cheap could impede the move up the value-chain. 4) Excess unproductive asset formation is likely to lead to painful macro adjustment.

Important US Regulatory Disclosures on Subject Companies

The information and opinions in this report were prepared or are disseminated by Morgan Stanley Dean Witter Asia Limited and/or Morgan Stanley Dean Witter Asia (Singapore) Pte. and/or Morgan Stanley Asia (Singapore) Securities Pte Ltd and/or Morgan Stanley & Co. International Limited, Taipei Branch and/or Morgan Stanley & Co International Limited, Seoul Branch, and/or Morgan Stanley Dean Witter Australia Limited (A.B.N. 67 003 734 576, holder of Australian financial services licence No. 233742, which accepts responsibility for its contents), and/or JM Morgan Stanley Securities Private Limited (collectively and with their affiliates, "Morgan Stanley").

The research analysts, strategists, or research associates principally responsible for the preparation of this research report have received compensation based upon various factors, including quality of research, investor client feedback, stock picking, competitive factors, firm revenues and overall investment banking revenues.

Stock Ratings

Different securities firms use a variety of rating terms as well as different rating systems to describe their recommendations. For example, Morgan Stanley uses a relative rating system including terms such as Overweight, Equal-weight or Underweight (see definitions below). A rating system using terms such as buy, hold and sell is not equivalent to our rating system. Investors should carefully read the definitions of all ratings used in each research report. In addition, since the research report contains more complete information concerning the analyst's views, investors should carefully read the entire research report and not infer its contents from the rating alone. In any case, ratings (or research) should not be used or relied upon as investment advice. An investor's decision to buy or sell a stock should depend on individual circumstances (such as the investor's existing holdings) and other considerations.

Global Stock Ratings Distribution

(as of April 30, 2005)

Stock Rating Category	Coverage Universe		Investment Banking Clients (IBC)		
	Count	% of Total	Count	% of Total IBC	% of Rating Category
Overweight/Buy	686	36%	275	41%	40%
Equal-weight/Hold	852	45%	294	44%	35%
Underweight/Sell	367	19%	98	15%	27%
Total	1,905		667		

Data include common stock and ADRs currently assigned ratings. For disclosure purposes (in accordance with NASD and NYSE requirements), we note that Overweight, our most positive stock rating, most closely corresponds to a buy recommendation; Equal-weight and Underweight most closely correspond to neutral and sell recommendations, respectively. However, Overweight, Equal-weight, and Underweight are not the equivalent of buy, neutral, and sell but represent recommended relative weightings (see definitions below). An investor's decision to buy or sell a stock should depend on individual circumstances (such as the investor's existing holdings) and other considerations. Investment Banking Clients are companies from whom Morgan Stanley or an affiliate received investment banking compensation in the last 12 months.

ANALYST STOCK RATINGS

Overweight (O). The stock's total return is expected to exceed the total return of the relevant country MSCI index, on a risk-adjusted basis, over the next 12-18 months.

Equal-weight (E). The stock's total return is expected to be in line with the total return of the relevant country MSCI index, on a risk-adjusted basis, over the next 12-18 months.

Underweight (U). The stock's total return is expected to be below the total return of the relevant country MSCI index, on a risk-adjusted basis, over the next 12-18 months.

More volatile (V). We estimate that this stock has more than a 25% chance of a price move (up or down) of more than 25% in a month, based on a quantitative assessment of historical data, or in the analyst's view, it is likely to become materially more volatile over the next 1-12 months compared with the past three years. Stocks with less than one year of trading history are automatically rated as more volatile (unless otherwise noted). We note that securities that we do not currently consider "more volatile" can still perform in that manner.

Unless otherwise specified, the time frame for price targets included in this report is 12 to 18 months. Ratings prior to March 18, 2002: SB=Strong Buy; OP=Outperform; N=Neutral; UP=Underperform. For definitions, please go to www.morganstanley.com/companycharts.

ANALYST INDUSTRY VIEWS

Attractive (A). The analyst expects the performance of his or her industry coverage universe over the next 12-18 months to be attractive vs. the relevant broad market benchmark named on the cover of this report.

In-Line (I). The analyst expects the performance of his or her industry coverage universe over the next 12-18 months to be in line with the relevant broad market benchmark named on the cover of this report.

Cautious (C). The analyst views the performance of his or her industry coverage universe over the next 12-18 months with caution vs. the relevant broad market benchmark named on the cover of this report.

Stock price charts and rating histories for companies discussed in this report are also available at www.morganstanley.com/companycharts. You may also request this information by writing to Morgan Stanley at 1585 Broadway, 14th Floor (Attention: Research Disclosures), New York, NY, 10036 USA.

Other Important Disclosures

This research report has been published in accordance with our conflict management policy, which is available at www.morganstanley.com/institutional/research/conflict/policies.

For a discussion, if applicable, of the valuation methods used to determine the price targets included in this summary and the risks related to achieving these targets, please refer to the latest relevant published research on these stocks. Research is available through your sales representative or on Client Link at www.morganstanley.com and other electronic systems.

This report does not provide individually tailored investment advice. It has been prepared without regard to the individual financial circumstances and objectives of persons who receive it. The securities discussed in this report may not be suitable for all investors. Morgan Stanley recommends that investors independently evaluate particular investments and strategies, and encourages investors to seek the advice of a financial adviser. The appropriateness of a particular investment or strategy will depend on an investor's individual circumstances and objectives.

This report is not an offer to buy or sell any security or to participate in any trading strategy. In addition to any holdings disclosed in the section entitled "Important US Regulatory Disclosures on Subject Companies", Morgan Stanley and/or its employees not involved in the preparation of this report may have investments in securities or derivatives of securities of companies mentioned in this report, and may trade them in ways different from those discussed in this report. Derivatives may be issued by Morgan Stanley or associated persons.

Morgan Stanley & Co. Incorporated and its affiliate companies do business that relates to companies covered in its research reports, including market making and specialized trading, risk arbitrage and other proprietary trading, fund management, investment services and investment banking. Morgan Stanley sells to and buys from customers the equity securities of companies covered in its research reports on a principal basis.

Morgan Stanley makes every effort to use reliable, comprehensive information, but we make no representation that it is accurate or complete. We have no obligation to tell you when opinions or information in this report change apart from when we intend to discontinue research coverage of a subject company.

With the exception of information regarding Morgan Stanley, reports prepared by Morgan Stanley research personnel are based on public information. Facts and views presented in this report have not been reviewed by, and may not reflect information known to, professionals in other Morgan Stanley business areas, including investment banking personnel.

Morgan Stanley research personnel conduct site visits from time to time but are prohibited from accepting payment or reimbursement by the company of travel expenses for such visits.

The value of and income from your investments may vary because of changes in interest rates or foreign exchange rates, securities prices or market indexes, operational or financial conditions of companies or other factors. There may be time limitations on the exercise of options or other rights in your securities transactions. Past performance is not necessarily a guide to future performance. Estimates of future performance are based on assumptions that may not be realized.

To our readers in Taiwan: Information on securities that trade in Taiwan is distributed by Morgan Stanley & Co. International Limited, Taipei Branch (the "Branch"). Such information is for your reference only. The reader should independently evaluate the investment risks and is solely responsible for their investment decisions. **This publication may not be distributed to the public media or quoted or used by the public media without the express written consent of Morgan Stanley.** Information on securities that do not trade in Taiwan is for informational purposes only and is not to be construed as a recommendation or a solicitation to trade in such securities. The Branch may not execute transactions for clients in these securities.

Certain information in this report was sourced by employees of the Shanghai Representative Office of Morgan Stanley Dean Witter Asia Limited for the use of Morgan Stanley Dean Witter Asia Limited.

This publication is disseminated in Japan by Morgan Stanley Japan Limited; in Hong Kong by Morgan Stanley Dean Witter Asia Limited; in Singapore by Morgan Stanley Dean Witter Asia (Singapore) Pte. (Registration number 199206298Z) and/or Morgan Stanley Asia (Singapore) Securities Pte Ltd (Registration number 200008434H), regulated by the Monetary Authority of Singapore, which accepts responsibility for its contents; in Australia by Morgan Stanley Dean Witter Australia Limited A.B.N. 67 003 734 576, holder of Australian financial services licence No. 233742, which accepts responsibility for its contents; in Taiwan by Morgan Stanley & Co. International Limited, Taipei Branch; in Korea by Morgan Stanley & Co International Limited, Seoul Branch; in India by JM Morgan Stanley Securities Private Limited; in Canada by Morgan Stanley Canada Limited, which has approved of, and has agreed to take responsibility for, the contents of this publication in Canada; in Spain by Morgan Stanley, S.V., S.A., a Morgan Stanley group company, which is supervised by the Spanish Securities Markets Commission (CNMV) and states that this document has been written and distributed in accordance with the rules of conduct applicable to financial research as established under Spanish regulations; in the United States by Morgan Stanley & Co. Incorporated and Morgan Stanley DW Inc., which accept responsibility for its contents. Morgan Stanley & Co. International Limited, authorized and regulated by Financial Services Authority, disseminates in the UK research that it has prepared, and approves solely for the purposes of section 21 of the Financial Services and Markets Act 2000, research which has been prepared by any of its affiliates. Private U.K. investors should obtain the advice of their Morgan Stanley & Co. International Limited representative about the investments concerned. In Australia, this report, and any access to it, is intended only for "wholesale clients" within the meaning of the Australian Corporations Act.

The trademarks and service marks contained herein are the property of their respective owners. Third-party data providers make no warranties or representations of any kind relating to the accuracy, completeness, or timeliness of the data they provide and shall not have liability for any damages of any kind relating to such data. The Global Industry Classification Standard ("GICS") was developed by and is the exclusive property of MSCI and S&P.

Morgan Stanley has based its projections, opinions, forecasts and trading strategies regarding the MSCI Country Index Series solely on publicly available information. MSCI has not reviewed, approved or endorsed the projections, opinions, forecasts and trading strategies contained herein. Morgan Stanley has no influence on or control over MSCI's index compilation decisions.

This report or any portion hereof may not be reprinted, sold or redistributed without the written consent of Morgan Stanley.

Morgan Stanley research is disseminated and available primarily electronically, and, in some cases, in printed form.

Additional information on recommended securities is available on request.

The Americas

1585 Broadway
New York, NY 10036-8293
United States
Tel: +1 (1)212 761 4000

Europe

25 Cabot Square, Canary Wharf
London E14 4QA
United Kingdom
Tel: +44 (0)20 7425 8000

Japan

20-3, Ebisu 4-chome
Shibuya-ku,
Tokyo 150-6008, Japan
Tel: +81 (0)3 5424 5000

Asia/Pacific

Three Exchange Square
Central
Hong Kong
Tel: +852 2848 5200