

## China Macro View

### Government Debt: Manageable Level; Worrisome Expansion; and Risk Control Measures May Lead to Slower Investment

- **Debt ratios are approaching warning lines, prompting government to act** – According to the results of the debt auditing that covers central and four levels of local governments, general government debt reached Rmb27.8tn at end-2012 and Rmb30.3tn in mid-2013, about 53% of GDP, slightly higher than our estimate of 45-52% of GDP; local government debt rose to Rmb17.9tn in mid-2013, at the lower end of the market estimate. If local government debt continues to grow at roughly 20% annually, overall debt/GDP ratio may exceed 60% in 2015-16. The government has already made debt control one of the priorities for 2014. We expect measures to contain local government debt to slow down infrastructure investment in the next couple years, and GDP growth may fall to around 7% by 2015.
- **Debt auditing reveals risks in selected regions and areas** – At the current level, the government debt still appears manageable, especially considering that a large part of the financing has been used to invest in infrastructure, land and social housing, with corresponding assets covering liabilities. However, direct liabilities at the provincial, municipal and county levels have been growing at nearly 20% per year since 2010; at end-2012, direct liabilities of three provinces, 99 cities, 195 counties, and 3,465 villages/towns already exceeded their comprehensive fiscal revenues in 2012; local governments relied heavily on land sale revenues to repay debt; debt payment pressure was especially high for road projects. In addition, bank loans accounted for 57% of local government debt in mid-2013, posing risks to the banking system.
- **We expect strict govt control of new debt, with introduction of transparent debt-raising mechanism** – The central government has implied that it will not bail out the local government debt, and local officials will be held accountable for excessive debt accumulation. The government may propose legislative changes to allow municipal debt issuance, incorporate debt issuance in the budgeting process, and introduce a local government credit rating system. Securitization and asset sales may be used to address the stock of local government debt.

**Shuang Ding**

+852-2501-2769  
shuang.ding@citi.com

**Serena Wang**

+852-2501-2794  
serena.wang@citi.com

**Minggao Shen**

+852-2501-2485  
minggao.shen@citi.com

**Figure 1. Overview of general government debt**

Time	Government level	Direct gov liabilities	Contingent gov liabilities		Total	Debt/GDP (percent) 1/
			Gov guaranteed debt	Debt that may receive gov relief		
End-2012	Central gov	9,438	284	2,162	11,883	22.9
	Local gov	9,628	2,487	3,771	15,886	30.6
	Total	19,066	2,771	5,933	27,769	53.5
End-Jun 2013	Central gov	9,813	260	2,311	12,384	21.7
	Local gov	10,886	2,666	4,339	17,891	31.4
	Total	20,699	2,926	6,650	30,275	53.1

Sources: National Auditing Office and Citi Research. Note: 1/ The debt ratios for 2013 is based on forecasted GDP (roughly Rmb57tn).

**See Appendix A-1 for Analyst Certification, Important Disclosures and non-US research analyst disclosures.**

Citi Research is a division of Citigroup Global Markets Inc. (the "Firm"), which 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.

## Government Debt: Manageable Level; Worrisome Expansion; and Risk Control Measures May Lead to Slower Investment

The National Auditing Office (NAO) released the results of the government debt audit on Dec 30, 2013. This audit is broader in coverage than the last auditing conducted in 2011: it covered five levels of governments (central, provincial, municipal, county and village/town), while the last one covered three levels of governments (provincial, municipal, county); it also covered debt issued by new entities (such as SOEs and self-financed official institutions) and through new channels (such as build-and-transfer (BT), deferred payment, financial leasing and public fund-raising). As in the last audit, the government debt is classified into three categories: (i) debt the government is liable to repay using fiscal resources; (ii) government guaranteed debt, for which the government is liable to repay if the beneficiary of the guarantee is unable to pay; (iii) debt for which the government is not liable, but is likely to provide relief if the debtor encounters difficulties. The NAO considers the last two as contingent liabilities and argues against adding direct liabilities and contingent liabilities since in normal circumstances the government is not expected to make payments for contingent debt.

### Overall debt manageable

Debt indicators point to controllable risks in general – According to the audit results, general government debt reached Rmb27.8tn at end-2012 and Rmb30.3tn in mid-2013,<sup>1</sup> about 53% of GDP, slightly higher than our estimate of 45-52% of GDP.

- As of end-Jun 2013, central government debt totaled Rmb12.4tn, including debt issued to finance the China Investment Corporation (Rmb1.55tn) and recapitalize the state banks (Rmb0.27tn), as well as contingent liabilities related to China Railways Corporation (Rmb2.29tn).<sup>2</sup>
- Local government debt rose to Rmb17.9tn in mid-2013, at the lower end of the market estimate, with direct liabilities accounting for 61% of the total.
- Foreign debt only made up 0.9% of GDP at end-2012, making China less vulnerable to volatilities in the international financial market.
- The ratio of general government debt to comprehensive fiscal revenue was a bit high at 153.9%, and debt overdue ratio was 4.3% at end-2012.<sup>3</sup>
- The NAO estimated debt/GDP ratio at 39.4% and debt/comprehensive fiscal revenue ratio at 113.4%, respectively, for end-2012, with contingent liabilities weighted by the probability (19.13% for guaranteed debt and 14.64% for debt that may receive government relief) at which fiscal funds are likely to be called to repay the principal.

---

<sup>1</sup> We choose to add up the direct and contingent liabilities, while recognizing the probability at which the government is likely to be called to repay the contingent debt is uncertain. Incidentally, the NAO added up the three components and estimated local government debt at Rmb10.7tn at end-2010 during the last government debt auditing.

<sup>2</sup> As of end-Jun 2013, total assets and liabilities of the China Railways Corporation was Rmb4.66tn and Rmb2.92tn, respectively.

<sup>3</sup> Comprehensive fiscal revenue includes public finance fiscal revenue, land sales revenue and extra-budgetary revenue. For local governments, the comprehensive fiscal revenue includes public finance local fiscal revenue, transfers from the central government, land sales revenue, and extra-budgetary revenue.

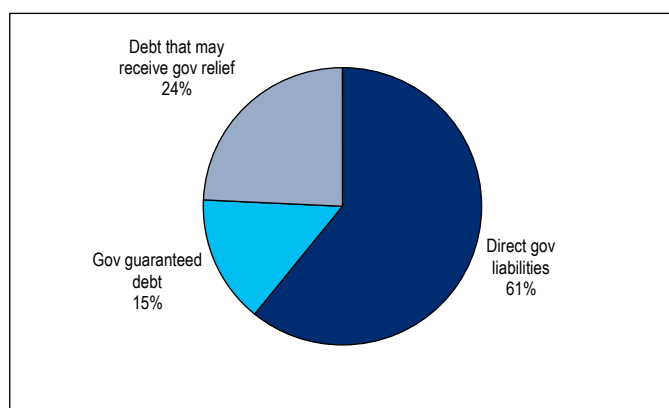
However, the rate of local government debt expansion is dangerous – Direct liabilities at the provincial, municipal and county levels surged from Rmb6.7tn at end-2010 to Rmb10.6tn at end-Jun 2013, implying an annual growth of 20.0%. In particular, direct liabilities at the county level grew at an annual rate of 26.6%.

The current pace of debt increase may bring debt/GDP ratio above 60% in 2015-16 – Assuming local government debt continues to grow at an annual rate of 20%, and central government debt grows at about 10% per year, the general government debt to GDP ratio would exceed 60% during 2015-16 by our estimate. While there is no explicit fiscal rule in China, the government has frequently cited the deficit and debt ratio ceiling (3% and 60% of GDP, respectively) in the Maastricht Treaty as the warning line. It is no wonder that the government starts to worry about the debt problem and put debt control as one of the priorities of the government economic work in 2014.

Figure 2. Overview of general government debt

Time	Government level	Direct gov liabilities	Contingent gov liabilities		Total 2/
			Gov guaranteed debt	Debt that may receive gov relief	
End-2012	Central gov	9,438	284	2,162	11,883
	Local gov	9,628	2,487	3,771	15,886
	Total	19,066	2,771	5,933	27,769
End-Jun 2013	Central gov	9,813	260	2,311	12,384
	Local gov	10,886	2,666	4,339	17,891
	Total	20,699	2,926	6,650	30,275

Figure 3. Local government debt by type, end-Jun 2013



Sources: National Auditing Office and Citi Research.

Note: 2/ Simple addition, but the National Auditing Office argues against adding direct liabilities and contingent liabilities since in normal circumstances the government is not expected to make payments for contingent debt.

Sources: National Auditing Office and Citi Research.

Figure 4. General government debt ratios, end-2012

	Official calculation (weighted) 3/	Simplified calculation (un-weighted)	Reference ratio
Debt/GDP	39.4	53.5	60.0
o/w: foreign debt/GDP	0.9	0.9	20.0
Debt/comprehensive fiscal revenue	113.4	153.9	90-150
Debt overdue	4.3	4.3	-

Source: Citi Research

Note: 3/ the National Auditing Office argues against adding direct liabilities and contingent liabilities since in normal circumstances the government is not expected to make payments for contingent debt. Instead, contingent liabilities are weighted by the probability (19.13% for guaranteed debt and 14.64% for debt that may receive government relief) at which fiscal funds are likely to be called to repay the principal.

## Focus on local government debt

Debt burden was uneven – The audit results show debt at the provincial, municipal and county levels comprised 98% of total local government debt in mid-2013. For provincial governments, contingent liabilities were twice as large as direct liabilities, while direct liabilities dominated municipal and county government debt. At end-2012, the direct liabilities of three provinces, 99 cities, 195 counties, and 3,465 villages/towns already exceeded their comprehensive fiscal revenues in 2012.

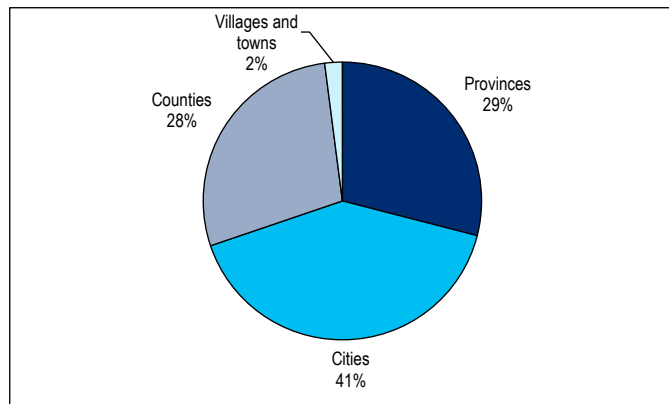
LGFVs remained the main borrower – In mid-2013, borrowing by LGFVs reached Rmb6.97tn, or 39% of total local government debt. While not completely comparable, LGFV borrowing made up 46.4% of local government debt at end-2010 according to the last audit, suggesting local governments have turned to other entities to raise funds due to tighter regulations on LGFVs since 2011. Despite the budget law that forbids local governments to borrow, debt of local government bodies and institutions amounted to Rmb6.46tn, or 36% of total local government debt. Borrowing through SOEs made up 18% of total local government debt.

Figure 5. Local government debt by government level, end-Jun 2013

Government level	Direct gov liabilities	Contingent gov liabilities		Total
		Gov guaranteed debt	Debt that may receive gov relief	
Provinces	1,778	1,563	1,853	5,194
Cities	4,843	742	1,704	7,290
Counties	3,957	349	736	5,042
Villages and towns	307	12	46	365
Total	10,886	2,666	4,339	17,891

Sources: National Auditing Office and Citi Research.

Figure 6. Local government debt by government level, end-Jun 2013



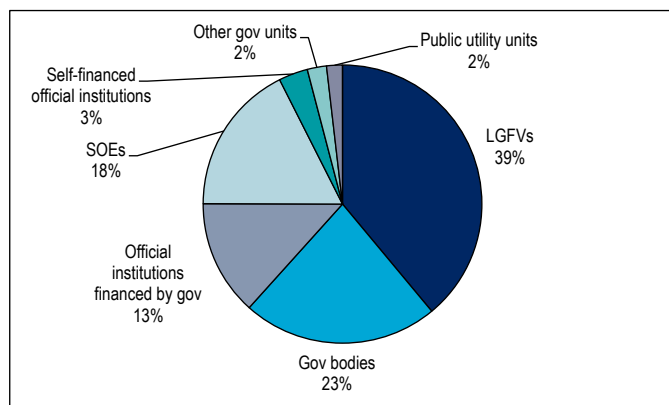
Sources: National Auditing Office and Citi Research.

Figure 7. Local government debt by borrower, end-Jun 2013

Borrower	Direct gov liabilities	Contingent gov liabilities		Total
		Gov guaranteed debt	Debt that may receive gov relief	
LGFVs	4,076	883	2,012	6,970
Gov bodies	3,091	968	-	4,060
Official institutions financed by gov	1,776	103	516	2,395
SOEs	1,156	575	1,404	3,136
Self-financed official institutions	346	38	218	603
Other gov units	316	83	-	399
Public utility units	124	14	190	328
Total	10,886	2,666	4,339	17,891

Sources: National Auditing Office and Citi Research.

Figure 8. Local government debt by borrower, end-Jun 2013



Sources: National Auditing Office and Citi Research.

Banks' exposure remained high – In mid-2013, banks provided Rmb10.1tn to the local governments, or 57% of total local government debt. While not completely comparable, bank loans made up 79.0% of local government debt at end-2010 according to the last audit, suggesting other forms of financing has gained importance due to CBRC's tighter control of new lending to LGFVs in the past few years. For example, bond, BT and trust financing accounted for 10%, 8% and 8% of local government debt, respectively in mid-2013.

The proceeds of local debt financing were mainly used to build physical assets – In mid-2013, investment in city construction, land reserves, transportation facilities and social housing made up 35%, 11%, 24% and 7% of the total spending, respectively.

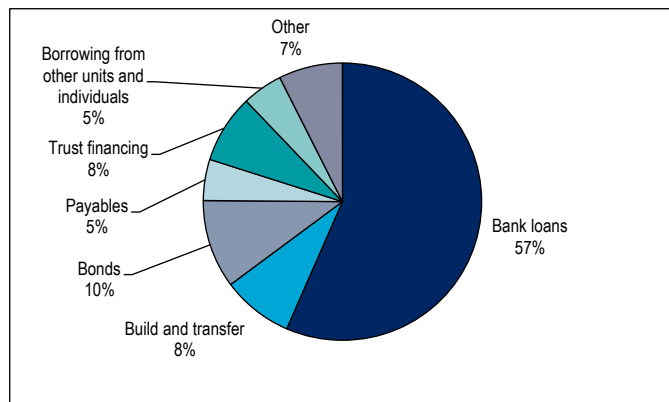
In other words, the debt was mainly used for investment not consumption, and the corresponding assets can hopefully be drawn on to repay the debt.

Figure 9. Local government debt by source of funding, end-Jun 2013

In billions of RMB				
Funding source	Direct gov liabilities	Contingent gov liabilities		Total
		Gov guaranteed debt	Debt that may receive gov relief	
Bank loans	5,525	1,909	2,685	10,119
Build and transfer	1,215	47	215	1,476
Bonds	1,166	167	512	1,846
o/w: local gov bonds	615	49	-	664
Enterprise bonds	459	81	343	883
Mid-term bills	58	34	102	194
short-term bills	12	1	22	36
Payables	778	9	70	857
Trust financing	762	253	410	1,425
Borrowing from other units and individuals	668	55	116	839
Deferred payments	327	1	48	376
Financing from brokerages, insurance firms and other financial institutions	200	31	106	337
Fiscal loans financed by central gov bond and foreign debt issuances	133	171	-	303
Financial leasing	75	19	137	232
Fund-raising	37	4	39	80
Total	10,886	2,666	4,339	17,891

Sources: National Auditing Office and Citi Research.

Figure 10. Local government debt by source of funding, end-Jun 2013



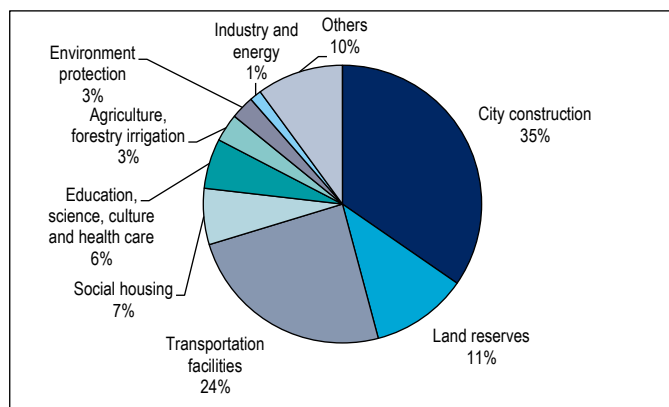
Sources: National Auditing Office and Citi Research.

Figure 11. Local government debt by use (expenditure already made), end-Jun 2013

In billions of RMB				
Use	Direct gov liabilities	Contingent gov liabilities		Total
		Gov guaranteed debt	Debt that may receive gov relief	
City construction	3,794	527	1,483	5,803
Land reserves	1,689	108	82	1,879
Transportation facilities	1,394	1,319	1,380	4,093
Social housing	685	142	268	1,095
Education, science, culture and health care	488	75	409	973
Agriculture, forestry irrigation	409	58	77	543
Environment protection	322	43	89	454
Industry and energy	123	81	26	229
Others	1,216	211	255	1,682
Total	10,119	2,564	4,068	16,751

Sources: National Auditing Office and Citi Research.

Figure 12. Local government debt by use (expenditure already made), end-Jun 2013



Sources: National Auditing Office and Citi Research.

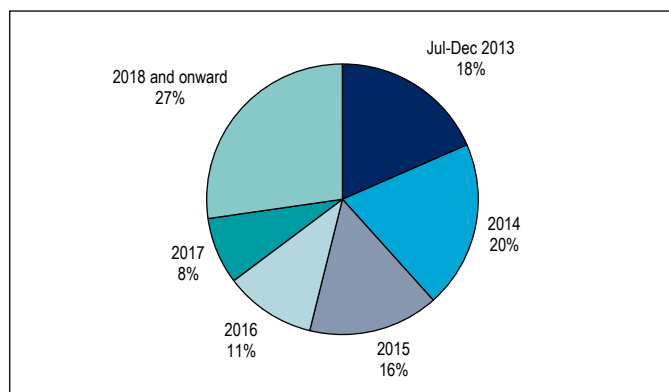
About 10% of the debt was overdue and 45% of the debt will become due by end-2014 – For direct liabilities of the local governments (Rmb10.9tn), Rmb1.15tn was overdue as of end-Jun 2013. Also for direct liabilities of the local governments, 22.9% has become due during Jul-Dec 2013, and 21.9% will become due in 2014. As investment by local governments is mostly of a long-term nature and cash flow in the near term may not be sufficient to repay the debt, most of the debt will likely be rolled over.

Figure 13. Local government debt by payment schedule, end-Jun 2013

In billions of RMB					
Payment schedule	Direct gov liabilities		Contingent gov liabilities		Total
	Amount	Share	Gov guaranteed debt	Debt that may receive gov relief	
Jul-Dec 2013	2,495	22.9%	247	552	3,294
2014	2,383	21.9%	437	748	3,568
2015	1,858	17.1%	320	599	2,777
2016	1,261	11.6%	261	421	1,942
2017	848	7.8%	230	352	1,430
2018 and onward	2,042	18.8%	1,171	1,667	4,880
Total	10,886	100.0%	2,666	4,339	17,891

Sources: National Auditing Office and Citi Research.

Figure 14. Local government debt by payment schedule, end-Jun 2013



Sources: National Auditing Office and Citi Research.

## Debt control to slow down investment

Containing local government debt risk is one of the main tasks in 2014 – The central economic work conference convened in mid-Dec emphasized that the local governments are to be held accountable for government-related debt in their jurisdictions, implying the central government is not ready to bail out the local governments. The government is likely to take the following measures to keep the debt/GDP ratio from rising above 60%:

- Making government debt one of the criteria in evaluating local officials;
- Legalizing local government debt by revising the budget law;
- Compiling local government balance sheets, and setting total debt ceiling according to acceptable leverage ratio;
- Incorporating debt financing in the budgeting process, with annual debt ceiling being approved by the local people's congress;
- Introducing local government credit rating system to help price local government debt;
- Addressing existing debt by securitization or sales of assets corresponding to the debt.

Measures to contain government debt may lead to short-term slowdown – As mentioned above, the bulk of the proceeds from the local government debt have been used for investment. Limiting debt financing by local governments would inevitably slow down FAI growth. In particular, we forecast infrastructure investment growth to fall from around 19% in 2013 to around 16% in 2014 and 13% in 2015, and partly as a result, GDP growth may decelerate to 7.3% in 2014 and 7.0% in 2015. On a positive note, reducing government claim on scarce financial resources would help release those resources to the private sector over time, supporting more efficient and sustainable investment.

## Appendix A-1

### Analyst Certification

The research analyst(s) primarily responsible for the preparation and content of this research report are named in bold text in the author block at the front of the product except for those sections where an analyst's name appears in bold alongside content which is attributable to that analyst. Each of these analyst(s) certify, with respect to the section(s) of the report for which they are responsible, that the views expressed therein accurately reflect their personal views about each issuer and security referenced and were prepared in an independent manner, including with respect to Citigroup Global Markets Inc and its affiliates. No part of the research analyst's compensation was, is, or will be, directly or indirectly, related to the specific recommendation(s) or view(s) expressed by that research analyst in this report.

### IMPORTANT DISCLOSURES

---

Within the past 12 months, Citigroup Global Markets Inc. or its affiliates has acted as manager or co-manager of an offering of securities of China.

---

Citigroup Global Markets Inc. or its affiliates has received compensation for investment banking services provided within the past 12 months from China.

---

Citigroup Global Markets Inc. or its affiliates expects to receive or intends to seek, within the next three months, compensation for investment banking services from China.

---

Citigroup Global Markets Inc. or an affiliate received compensation for products and services other than investment banking services from China in the past 12 months.

---

Citigroup Global Markets Inc. currently has, or had within the past 12 months, the following as investment banking client(s): China.

---

Citigroup Global Markets Inc. currently has, or had within the past 12 months, the following as clients, and the services provided were non-investment-banking, securities-related: China.

---

Citigroup Global Markets Inc. currently has, or had within the past 12 months, the following as clients, and the services provided were non-investment-banking, non-securities-related: China.

---

Analysts' compensation is determined based upon activities and services intended to benefit the investor clients of Citigroup Global Markets Inc. and its affiliates ("the Firm"). Like all Firm employees, analysts receive compensation that is impacted by overall firm profitability which includes investment banking revenues.

---

For important disclosures (including copies of historical disclosures) regarding the companies that are the subject of this Citi Research product ("the Product"), please contact Citi Research, 388 Greenwich Street, 28th Floor, New York, NY, 10013, Attention: Legal/Compliance [E6WYB6412478]. In addition, the same important disclosures, with the exception of the Valuation and Risk assessments and historical disclosures, are contained on the Firm's disclosure website at [https://www.citivelocity.com/cvr/eppublic/citi\\_research\\_disclosures](https://www.citivelocity.com/cvr/eppublic/citi_research_disclosures). Valuation and Risk assessments can be found in the text of the most recent research note/report regarding the subject company. Historical disclosures (for up to the past three years) will be provided upon request.

### NON-US RESEARCH ANALYST DISCLOSURES

Non-US research analysts who have prepared this report (i.e., all research analysts listed below other than those identified as employed by Citigroup Global Markets Inc.) are not registered/qualified as research analysts with FINRA. Such research analysts may not be associated persons of the member organization and therefore may not be subject to the NYSE Rule 472 and NASD Rule 2711 restrictions on communications with a subject company, public appearances and trading securities held by a research analyst account. The legal entities employing the authors of this report are listed below:

Citigroup Global Markets Asia

Shuang Ding; Serena Wang; Minggao Shen

### OTHER DISCLOSURES

---

For securities recommended in the Product in which the Firm is not a market maker, the Firm is a liquidity provider in the issuers' financial instruments and may act as principal in connection with such transactions. The Firm is a regular issuer of traded financial instruments linked to securities that may have been recommended in the Product. The Firm regularly trades in the securities of the issuer(s) discussed in the Product. The Firm may engage in securities transactions in a manner inconsistent with the Product and, with respect to securities covered by the Product, will buy or sell from customers on a principal basis.

---

Securities recommended, offered, or sold by the Firm: (i) are not insured by the Federal Deposit Insurance Corporation; (ii) are not deposits or other obligations of any insured depository institution (including Citibank); and (iii) are subject to investment risks, including the possible loss of the principal amount invested. Although information has been obtained from and is based upon sources that the Firm believes to be reliable, we do not guarantee its accuracy and it may be incomplete and condensed. Note, however, that the Firm has taken all reasonable steps to determine the accuracy and completeness of the disclosures made in the Important Disclosures section of the Product. The Firm's research department has received assistance from the subject company(ies) referred to in this Product including, but not limited to, discussions with management of the subject company(ies). Firm policy prohibits research analysts from sending draft research to subject companies. However, it should be presumed that the author of the Product has had discussions with the subject company to ensure factual accuracy prior to publication. All opinions, projections and estimates constitute the judgment of the author as of the date of the Product and these, plus any other information contained in the Product, are subject to change without notice. Prices and availability of financial instruments also are subject to change without notice. Notwithstanding other departments within the Firm advising the companies discussed in this Product, information obtained in such role is not used in the preparation of the Product. Although Citi Research does not set a predetermined frequency for publication, if the Product is a fundamental research report, it is the intention of Citi Research to provide research coverage of the/those issuer(s) mentioned therein, including in response to news affecting this issuer, subject to applicable quiet periods and capacity constraints. The Product is for informational purposes only and is not intended as an offer or solicitation for the purchase or sale of a security. Any decision to purchase securities mentioned in the Product must take into account existing public information on such security or any registered prospectus.

---



Investing in non-U.S. securities, including ADRs, may entail certain risks. The securities of non-U.S. issuers may not be registered with, nor be subject to the reporting requirements of the U.S. Securities and Exchange Commission. There may be limited information available on foreign securities. Foreign companies are generally not subject to uniform audit and reporting standards, practices and requirements comparable to those in the U.S. Securities of some foreign companies may be less liquid and their prices more volatile than securities of comparable U.S. companies. In addition, exchange rate movements may have an adverse effect on the value of an investment in a foreign stock and its corresponding dividend payment for U.S. investors. Net dividends to ADR investors are estimated, using withholding tax rates conventions, deemed accurate, but investors are urged to consult their tax advisor for exact dividend computations. Investors who have received the Product from the Firm may be prohibited in certain states or other jurisdictions from purchasing securities mentioned in the Product from the Firm. Please ask your Financial Consultant for additional details. Citigroup Global Markets Inc. takes responsibility for the Product in the United States. Any orders by US investors resulting from the information contained in the Product may be placed only through Citigroup Global Markets Inc.

**The Citigroup legal entity that takes responsibility for the production of the Product is the legal entity which the first named author is employed by.** The Product is made available in **Australia** through Citi Global Markets Australia Pty Ltd. (ABN 64 003 114 832 and AFSL No. 240992), participant of the ASX Group and regulated by the Australian Securities & Investments Commission. Citigroup Centre, 2 Park Street, Sydney, NSW 2000. The Product is made available in Australia to Private Banking wholesale clients through Citigroup Pty Limited (ABN 88 004 325 080 and AFSL 238098). Citigroup Pty Limited provides all financial product advice to Australian Private Banking wholesale clients through bankers and relationship managers. If there is any doubt about the suitability of investments held in Citigroup Private Bank accounts, investors should contact the Citigroup Private Bank in Australia. Citigroup companies may compensate affiliates and their representatives for providing products and services to clients. The Product is made available in **Brazil** by Citigroup Global Markets Brasil - CCTVM SA, which is regulated by CVM - Comissão de Valores Mobiliários, BACEN - Brazilian Central Bank, APIMEC - Associação dos Analistas e Profissionais de Investimento do Mercado de Capitais and ANBID - Associação Nacional dos Bancos de Investimento. Av. Paulista, 1111 - 11º andar - CEP. 01311920 - São Paulo - SP. If the Product 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. This product is available in **Chile** through Banchile Corredores de Bolsa S.A., an indirect subsidiary of Citigroup Inc., which is regulated by the Superintendencia de Valores y Seguros. Agustinas 975, piso 2, Santiago, Chile. The Product is made available in **France** by Citigroup Global Markets Limited, which is authorised and regulated by Financial Services Authority. 1-5 Rue Paul Cézanne, 8ème, Paris, France. The Product is distributed in **Germany** by Citigroup Global Markets Deutschland AG ("CGMD"), which is regulated by Bundesanstalt fuer Finanzdienstleistungsaufsicht (BaFin). CGMD, Reuterweg 16, 60323 Frankfurt am Main. Research which relates to "securities" (as defined in the Securities and Futures Ordinance (Cap. 571 of the Laws of Hong Kong)) is issued in **Hong Kong** by, or on behalf of, Citigroup Global Markets Asia Limited which takes full responsibility for its content. Citigroup Global Markets Asia Ltd. is regulated by Hong Kong Securities and Futures Commission. If the Research is made available through Citibank, N.A., Hong Kong Branch, for its clients in Citi Private Bank, it is made available by Citibank N.A., Citibank Tower, Citibank Plaza, 3 Garden Road, Hong Kong. Citibank N.A. is regulated by the Hong Kong Monetary Authority. Please contact your Private Banker in Citibank N.A., Hong Kong, Branch if you have any queries on or any matters arising from or in connection with this document. 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. The Product is made available in **Indonesia** through PT Citigroup Securities Indonesia. 5/F, Citibank Tower, Bapindo Plaza, Jl. Jend. Sudirman Kav. 54-55, Jakarta 12190. Neither this Product nor any copy hereof may be distributed in Indonesia or to any Indonesian citizens wherever they are domiciled or to Indonesian residents except in compliance with applicable capital market laws and regulations. This Product is not an offer of securities in Indonesia. The securities referred to in this Product have not been registered with the Capital Market and Financial Institutions Supervisory Agency (BAPEPAM-LK) pursuant to relevant capital market laws and regulations, and may not be offered or sold within the territory of the Republic of Indonesia or to Indonesian citizens through a public offering or in circumstances which constitute an offer within the meaning of the Indonesian capital market laws and regulations. The Product is made available in **Israel** through Citibank N.A., regulated by the Bank of Israel and the Israeli Securities Authority. Citibank, N.A., Platinum Building, 21 Ha'arba'ah St, Tel Aviv, Israel. The Product is made available in **Italy** by Citigroup Global Markets Limited, which is authorised and regulated by Financial Services Authority. Via dei Mercanti, 12, Milan, 20121, Italy. The Product is made available in **Japan** by Citigroup Global Markets Japan Inc. ("CGMJ"), which is regulated by Financial Services Agency, Securities and Exchange Surveillance Commission, Japan Securities Dealers Association, Tokyo Stock Exchange and Osaka Securities Exchange. Shin-Marunouchi Building, 1-5-1 Marunouchi, Chiyoda-ku, Tokyo 100-6520 Japan. If the Product was distributed by SMBC Nikko Securities Inc. it is being so distributed under license. In the event that an error is found in an CGMJ research report, a revised version will be posted on the Firm's Citi Velocity website. If you have questions regarding Citi Velocity, please call (81 3) 6270-3019 for help. The Product is made available in **Korea** by Citigroup Global Markets Korea Securities Ltd., which is regulated by the Financial Services Commission, the Financial Supervisory Service and the Korea Financial Investment Association (KOFIA). Citibank Building, 39 Da-dong, Jung-gu, Seoul 100-180, Korea. KOFIA makes available registration information of research analysts on its website. Please visit the following website if you wish to find KOFIA registration information on research analysts of Citigroup Global Markets Korea Securities Ltd. <http://dis.kofia.or.kr/fs/fundMgr/DISFundMgrAnalystPop.jsp?companyCd2=A03030&pageDiv=02>. The Product is made available in Korea by Citibank Korea Inc., which is regulated by the Financial Services Commission and the Financial Supervisory Service. Address is Citibank Building, 39 Da-dong, Jung-gu, Seoul 100-180, Korea. The Product is made available in **Malaysia** by Citigroup Global Markets Malaysia Sdn Bhd (Company No. 460819-D) ("CGMM") to its clients and CGMM takes responsibility for its contents. CGMM is regulated by the Securities Commission of Malaysia. Please contact CGMM at Level 43 Menara Citibank, 165 Jalan Ampang, 50450 Kuala Lumpur, Malaysia in respect of any matters arising from, or in connection with, the Product. The Product is made available in **Mexico** by Acciones y Valores Banamex, S.A. De C. V., Casa de Bolsa, Integrante del Grupo Financiero Banamex ("Accival") which is a wholly owned subsidiary of Citigroup Inc. and is regulated by Comision Nacional Bancaria y de Valores. Reforma 398, Col. Juarez, 06600 Mexico, D.F. In **New Zealand** the Product is made available to 'wholesale clients' only as defined by s5C(1) of the Financial Advisers Act 2008 ('FAA') through Citigroup Global Markets Australia Pty Ltd (ABN 64 003 114 832 and AFSL No. 240992), an overseas financial adviser as defined by the FAA, participant of the ASX Group and regulated by the Australian Securities & Investments Commission. Citigroup Centre, 2 Park Street, Sydney, NSW 2000. The Product is made available in **Pakistan** by Citibank N.A. Pakistan branch, which is regulated by the State Bank of Pakistan and Securities Exchange Commission, Pakistan. AWT Plaza, 1.1. Chundrigar Road, P.O. Box 4889, Karachi-74200. The Product is made available in the **Philippines** through Citicorp Financial Services and Insurance Brokerage Philippines, Inc., which is regulated by the Philippines Securities and Exchange Commission. 20th Floor Citibank Square Bldg. The Product is made available in the Philippines through Citibank NA Philippines branch, Citibank Tower, 8741 Paseo De Roxas, Makati City, Manila. Citibank NA Philippines NA is regulated by The Bangko Sentral ng Pilipinas. The Product is made available in **Poland** by Dom Maklerski Banku Handlowego SA an indirect subsidiary of Citigroup Inc., which is regulated by Komisja Nadzoru Finansowego. Dom Maklerski Banku



Handlowego S.A. ul.Senatorska 16, 00-923 Warszawa. 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. The Product is made available in **Singapore** through Citigroup Global Markets Singapore Pte. Ltd. ("CGMSPL"), a capital markets services license holder, and regulated by Monetary Authority of Singapore. Please contact CGMSPL at 8 Marina View, 21st Floor Asia Square Tower 1, Singapore 018960, in respect of any matters arising from, or in connection with, the analysis of this document. This report is intended for recipients who are accredited, expert and institutional investors as defined under the Securities and Futures Act (Cap. 289). The Product is made available by The Citigroup Private Bank in Singapore through Citibank, N.A., Singapore Branch, a licensed bank in Singapore that is regulated by Monetary Authority of Singapore. Please contact your Private Banker in Citibank N.A., Singapore Branch if you have any queries on or any matters arising from or in connection with this document. This report is intended for recipients who are accredited, expert and institutional investors as defined under the Securities and Futures Act (Cap. 289). This report is distributed in Singapore by Citibank Singapore Ltd ("CSL") to selected Citigold/Citigold Private Clients. CSL provides no independent research or analysis of the substance or in preparation of this report. Please contact your Citigold/Citigold Private Client Relationship Manager in CSL if you have any queries on or any matters arising from or in connection with this report. This report is intended for recipients who are accredited investors as defined under the Securities and Futures Act (Cap. 289). 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 JSE Securities Exchange South Africa, South African Reserve Bank and the Financial Services Board. The investments and services contained herein are not available to private customers in South Africa. The Product is made available in **Spain** by Citigroup Global Markets Limited, which is authorised and regulated by Financial Services Authority. 29 Jose Ortega Y Gasset, 4th Floor, Madrid, 28006, Spain. The Product is made available in the **Republic of China** through Citigroup Global Markets Taiwan Securities Company Ltd. ("CGMTS"), 14 and 15F, No. 1, Songzhi Road, Taipei 110, Taiwan and/or through Citibank Securities (Taiwan) Company Limited ("CSTL"), 14 and 15F, No. 1, Songzhi Road, Taipei 110, Taiwan, subject to the respective license scope of each entity and the applicable laws and regulations in the Republic of China. CGMTS and CSTL are both regulated by the Securities and Futures Bureau of the Financial Supervisory Commission of Taiwan, the Republic of China. No portion of the Product may be reproduced or quoted in the Republic of China by the press or any third parties [without the written authorization of CGMTS and CSTL]. If the Product covers securities which are not allowed to be offered or traded in the Republic of China, neither the Product nor any information contained in the Product shall be considered as advertising the securities or making recommendation of the securities in the Republic of China. The Product is for informational purposes only and is not intended as an offer or solicitation for the purchase or sale of a security or financial products. Any decision to purchase securities or financial products mentioned in the Product must take into account existing public information on such security or the financial products or any registered prospectus. The Product is made available in **Thailand** through Citicorp Securities (Thailand) Ltd., which is regulated by the Securities and Exchange Commission of Thailand. 18/F, 22/F and 29/F, 82 North Sathorn Road, Silom, Bangkok, Bangkok 10500, Thailand. The Product is made available in **Turkey** through Citibank AS which is regulated by Capital Markets Board. Tekfen Tower, Eski Büyükdere Caddesi # 209 Kat 2B, 23294 Levent, Istanbul, Turkey. In the **U.A.E.**, these materials (the "Materials") are communicated by Citigroup Global Markets Limited, DIFC branch ("CGML"), an entity registered in the Dubai International Financial Center ("DIFC") and licensed and regulated by the Dubai Financial Services Authority ("DFSA") to Professional Clients and Market Counterparties only and should not be relied upon or distributed to Retail Clients. A distribution of the different Citi Research ratings distribution, in percentage terms for Investments in each sector covered is made available on request. Financial products and/or services to which the Materials relate will only be made available to Professional Clients and Market Counterparties. The Product is made available in **United Kingdom** by Citigroup Global Markets Limited, which is authorised and regulated by Financial Services Authority. This material may relate to investments or services of a person outside of the UK or to other matters which are not regulated by the FSA and further details as to where this may be the case are available upon request in respect of this material. Citigroup Centre, Canada Square, Canary Wharf, London, E14 5LB. The Product is made available in **United States** by Citigroup Global Markets Inc, which is a member of FINRA and registered with the US Securities and Exchange Commission. 388 Greenwich Street, New York, NY 10013. Unless specified to the contrary, within EU Member States, the Product is made available by Citigroup Global Markets Limited, which is regulated by Financial Services Authority. Pursuant to Comissão de Valores Mobiliários Rule 483, Citi is required to disclose whether a Citi related company or business has a commercial relationship with the subject company. Considering that Citi operates multiple businesses in more than 100 countries around the world, it is likely that Citi has a commercial relationship with the subject company. Many European regulators require that a firm must establish, implement and make available a policy for managing conflicts of interest arising as a result of publication or distribution of investment research. The policy applicable to Citi Research's Products can be found at [https://www.citivelocity.com/cvr/eppublic/citi\\_research\\_disclosures](https://www.citivelocity.com/cvr/eppublic/citi_research_disclosures). Compensation of equity research analysts is determined by equity research management and Citigroup's senior management and is not linked to specific transactions or recommendations. The Product is not to be construed as providing investment services in any jurisdiction where the provision of such services would not be permitted. Subject to the nature and contents of the Product, the investments described therein are subject to fluctuations in price and/or value and investors may get back less than originally invested. Certain high-volatility investments can be subject to sudden and large falls in value that could equal or exceed the amount invested. Certain investments contained in the Product may have tax implications for private customers whereby levels and basis of taxation may be subject to change. If in doubt, investors should seek advice from a tax adviser. The Product does not purport to identify the nature of the specific market or other risks associated with a particular transaction. Advice in the Product is general and should not be construed as personal advice given it has been prepared without taking account of the objectives, financial situation or needs of any particular investor. Accordingly, investors should, before acting on the advice, consider the appropriateness of the advice, having regard to their objectives, financial situation and needs. Prior to acquiring any financial product, it is the client's responsibility to obtain the relevant offer document for the product and consider it before making a decision as to whether to purchase the product. Citi Research generally disseminates its research to the Firm's global institutional and retail clients via both proprietary (e.g., Citi Velocity and Citi Personal Wealth Management) and non-proprietary electronic distribution platforms. Certain research may be disseminated only via Citi's proprietary distribution platforms; however such research will not contain changes to earnings forecasts, target price, investment or risk rating or investment thesis or be otherwise inconsistent with the author's previously published research. Certain research is made available only to institutional investors to satisfy regulatory

requirements. Individual Citi Research analysts may also opt to circulate published research to one or more clients by email; such email distribution is discretionary and is done only after the research has been disseminated.

The level and types of services provided by Citi Research analysts to clients may vary depending on various factors such as the client's individual preferences as to the frequency and manner of receiving communications from analysts, the client's risk profile and investment focus and perspective (e.g. market-wide, sector specific, long term, short-term etc.), the size and scope of the overall client relationship with Citi and legal and regulatory constraints. Citi Research product may source data from dataCentral. dataCentral is a Citi Research proprietary database, which includes Citi estimates, data from company reports and feeds from Thomson Reuters.

---

© 2013 Citigroup Global Markets Inc. Citi Research is a division of Citigroup Global Markets Inc. Citi and Citi with Arc Design are trademarks and service marks of Citigroup Inc. and its affiliates and are used and registered throughout the world. All rights reserved. Any unauthorized use, duplication, redistribution or disclosure of this report (the "Product"), including, but not limited to, redistribution of the Product by electronic mail, posting of the Product on a website or page, and/or providing to a third party a link to the Product, is prohibited by law and will result in prosecution. The information contained in the Product is intended solely for the recipient and may not be further distributed by the recipient to any third party. Where included in this report, MSCI sourced information is the exclusive property of Morgan Stanley Capital International Inc. (MSCI). Without prior written permission of MSCI, this information and any other MSCI intellectual property may not be reproduced, disseminated or used to create any financial products, including any indices. This information is provided on an "as is" basis. The user assumes the entire risk of any use made of this information. MSCI, its affiliates and any third party involved in, or related to, computing or compiling the information hereby expressly disclaim all warranties of originality, accuracy, completeness, merchantability or fitness for a particular purpose with respect to any of this information. Without limiting any of the foregoing, in no event shall MSCI, any of its affiliates or any third party involved in, or related to, computing or compiling the information have any liability for any damages of any kind. MSCI, Morgan Stanley Capital International and the MSCI indexes are services marks of MSCI and its affiliates. The Firm accepts no liability whatsoever for the actions of third parties. The Product may provide the addresses of, or contain hyperlinks to, websites. Except to the extent to which the Product refers to website material of the Firm, the Firm has not reviewed the linked site. Equally, except to the extent to which the Product refers to website material of the Firm, the Firm takes no responsibility for, and makes no representations or warranties whatsoever as to, the data and information contained therein. Such address or hyperlink (including addresses or hyperlinks to website material of the Firm) is provided solely for your convenience and information and the content of the linked site does not in anyway form part of this document. Accessing such website or following such link through the Product or the website of the Firm shall be at your own risk and the Firm shall have no liability arising out of, or in connection with, any such referenced website.

---

ADDITIONAL INFORMATION IS AVAILABLE UPON REQUEST

---