

Regional Banks: Normalizing Earnings from the Securities Portfolios

ZION and CMA Underearning, NYCB Overearning

- **Normalizing Earnings from the Securities Portfolios** — Although investors in bank stocks typically lump together into one consolidated earnings number the net interest income (NII) a bank generates from lending with the NII it generates from its securities portfolio, we believe this is a mistake. As such, in this note we normalize earnings from securities portfolios across our regional banks and then consider the implications in order to identify latent sources of over or under valuation.
- **Why It Makes Sense to Normalize Earnings from Securities Portfolios** — Lending, fee generation and deposit aggregation constitute a bank's core activities. These activities are interrelated (i.e. lending often facilitates fee business and deposit aggregation and vice versa), and these are the activities which can create shareholder value. In contrast, while investing in the securities portfolio generates earnings, it doesn't by itself generate much in the way of shareholder value. The core activities listed above can be difficult to replicate whereas replicating a securities portfolio isn't particularly difficult. The primary differences in how banks manage their securities portfolios are the size and how much duration and/or credit risk a particular bank opts to take. The question then arises: should an investor pay more (less) for a bank which has higher (lower) earnings just because the bank (a) has a larger (smaller) securities portfolio on a relative basis or (b) is taking more (less) duration and/or credit risk in its securities portfolio than its peers are?
- **Two Methods to Normalize** — First, we normalize the size of each bank's securities portfolio such that the securities portfolios as a percentage of earnings assets are the same across the banks (~20%). Second, we normalize the size of each bank's securities portfolio such that the securities portfolios as a percentage of total deposits are the same across the banks (~27%). In both methods we also normalize the yield on the securities portfolios such that all banks earn the same yield (~240 bps). We then capitalize the over- and underearning to size up the valuation implications. All the assumptions and calculations are laid out in the note.
- **Three Key Takeaways** — (1) Relative to other banks, ZION is underearning the most in its securities portfolio as both the relative size of and yield on ZION's portfolio are well below the regional bank average. (2) After ZION, and for similar reasons, CMA is underearning the most in its securities portfolio. (3) NYCB is overearning the most from its securities portfolio. The yield on NYCB's securities portfolio is ~90 bps above the regional bank average, suggesting that NYCB is taking considerably more duration and/or credit risk than its peers. Also, NYCB securities portfolio as a share of its deposits stands at ~31% which is the highest in this analysis and well above average. Our analysis suggests that, all else equal, normalized securities portfolios would add ~15% and ~7%, respectively, to ZION's and CMA's valuations whereas it would detract ~7% from NYCB's valuation.

Josh Levin, CFA

+1-212-816-6060

josh.levin@citi.com

Arjun Sharma

arjun.sharma@citi.com

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. Certain products (not inconsistent with the author's published research) are available only on Citi's portals.

Why It Makes Sense to Normalize Earnings from Banks' Securities Portfolios

On average regional banks derive ~60% of their revenues from NII and ~40% from fee income. Of the portion that is derived from NII, ~85% is derived from lending activities with the remaining ~15% derived from investments in the securities portfolio. Although securities portfolios contribute a comparatively small share of revenue, it is important to note that the incremental margin on this revenue is much higher than the incremental margin on revenue from lending.

Although investors typically lump together the NII from lending and the securities portfolio into a consolidated earnings or PTPP number, we believe this is misleading for the following reasons:

- Lending is one of a bank's core activities. In contrast, investing in a securities portfolio is arguably not a core activity. To some extent, the securities portfolio can be viewed as both a placeholder for capital that a bank has not yet deployed through lending as well as a tool to manage interest rate exposure and liquidity.
- From the shareholder's perspective, lending can be thought of as an activity that generates shareholder value. Lending is often based on the relationships a bank has with its clients, and those relationships also often generate fee income and deposit growth. Lending, fee income generation and deposit collection are the three primary activities by which a bank creates shareholder value.
- In contrast, while investing in the securities portfolio generates earnings, it does not by itself generate much in the way of shareholder value. The core activities listed above (lending, fee generation and deposit collection) can be difficult to replicate whereas replicating a securities portfolio is not particularly difficult. The securities are often liquid and available for almost anybody to purchase.
- Although banks often structure their securities portfolios differently from one another, the primary differences are related to how much duration and credit risk a bank takes in its securities portfolio. However, investors can take duration and credit risk on their own without a bank doing so on their behalf.

Put more plainly, should an investor pay the same multiple for earnings generated by lending or fee income as he or she does for earnings generated by the securities portfolio? We think not.

How We Normalize Earnings from the Securities Portfolios

We use two methods to normalize earnings from the securities portfolios. First, we normalize the size of each bank's security portfolio such that the securities portfolios as a percentage of earning assets are the same across the banks. Second, we normalize the size of the banks' security portfolios such that the securities portfolios as a percentage of deposits are the same across the banks. In both of these methods we also normalize the yield earned on the securities portfolios such that all banks earn the same yield.

Before we can conclude if a bank is over- or underearning in its securities portfolio, we need to know what is driving that over- or underearning (i.e., more risk taking by management or a flood of deposits by customers). For this reason we use the two methods listed above and described in more detail below.

Method 1: Securities as a Percentage of Earning Assets

We take the following steps in order to normalize the earnings from each bank's securities portfolio:

- We assume that the securities portfolio for each bank should equal ~20% of its earnings assets. ~20% represents the industry average across regional banks with ~\$25 billion to ~\$150 billion in total assets.
- For banks with a securities portfolio greater or lower than ~20% of earning assets, we adjust the securities portfolio's size such that it equals ~20% of earning assets. If a bank currently has a securities portfolio that is larger (smaller) than ~20% of earning assets, we assume the difference between the current size and the normalized size earns (gives up) the overnight Fed rate of ~25 bps.
- We assume each bank earns ~240 bps per year on its securities portfolio. ~240 bps represents the industry average across regional banks with ~\$25 billion to ~\$150 billion in assets. Importantly, by assuming that all banks earn the same yield on their securities portfolios, we are implicitly assuming that they are all taking the same duration and credit risk in their securities portfolios. As such, this assumption effectively normalizes for duration and credit risk.
- We tax effect the incremental or decremental earnings at ~36%. Although banks' average tax rates vary, we assume that marginal NII earns the same marginal tax rate across banks.

All of the assumptions and calculations for Method 1 are laid out in the chart below.

Figure 1. Normalizing Earnings from Securities Portfolios by Normalizing Securities as a % of Earning Assets (\$ in million)

Operation	Method 1: Securities as % of Earning Assets	CMA	FHN	HBAN	KEY	NYCB	RF	STI	ZION
a	Bank's Average Assets	64,682	23,825	57,681	91,141	46,104	116,801	173,654	56,039
b	Bank's Earning Assets (\$)	60,153	21,351	53,143	82,733	41,067	103,307	159,139	52,789
c	Bank's Securities Portfolio (\$)	9,373	3,015	9,121	17,203	7,716	23,157	21,510	4,567
d = c / b	Bank's Sec. Portfolio as % of Earning Assets	16%	14%	17%	21%	19%	22%	14%	9%
e	Industry Average Sec. Portfolio as % of Earning Assets	20%	20%	20%	20%	20%	20%	20%	20%
f = e - d	Differential	4%	6%	3%	(1%)	1%	(2%)	7%	11%
g = e x b	Normalized securities portfolio	12,076	4,287	10,669	16,610	8,245	20,740	31,949	10,598
h	Bank's Average Yield on Securities Portfolio	2.37%	2.53%	2.35%	2.24%	3.31%	2.48%	2.78%	2.20%
i	Industry's Average Yield on Securities Portfolio	2.40%	2.40%	2.40%	2.40%	2.40%	2.40%	2.40%	2.40%
j = i - h	Differential	0.03%	(0.13%)	0.05%	0.16%	(0.91%)	(0.08%)	(0.38%)	0.20%
k	Interest Earned on Cash	0.25%	0.25%	0.25%	0.25%	0.25%	0.25%	0.25%	0.25%
l = c x h	Current interest income from securities portfolio	222	76	214	385	255	574	598	100
m = (g x i) + ((c - g) x k)	Normalized interest income from securities portfolio	283	100	252	400	197	504	741	239
n = m - l	Difference in interest income from securities portfolio	61	23	38	15	(59)	(70)	143	139
o	Tax rate	36%	36%	36%	36%	36%	36%	36%	36%
p = n x (1 - o)	Net income impact	39	15	24	9	(38)	(45)	91	89
q	Shares	186	237	842	891	439	1,395	538	184
r = p / q	EPS Impact	\$0.21	\$0.06	\$0.03	\$0.01	(\$0.09)	(\$0.03)	\$0.17	\$0.48
	% of Current '14 Estimate	7%	9%	4%	1%	(9%)	(4%)	6%	27%

Source: Citi Research, SNL

Method 2: Securities as a Percentage of Deposits

We take the following steps in order to normalize the earnings from each bank's securities portfolio:

- We assume that the securities portfolio for each bank should equal ~27% of its total deposits. ~27% represents the industry average across regional banks with ~\$25 billion to ~\$150 billion in total assets.
- For banks with a securities portfolio greater or lower than ~27% of total deposits, we adjust the securities portfolio's size such that it equals ~27% of total deposits. If a bank currently has a securities portfolio that is larger (smaller) than ~20% of total deposits, we assume the difference between the current size and the normalized size earns (gives up) the overnight Fed rate of ~25 bps.
- We assume each bank earns ~240 bps per year on its securities portfolio. ~240 bps represents the industry average across regional banks with ~\$25 billion to ~\$150 billion in assets. Importantly, by assuming that all banks earn the same yield on their securities portfolios, we are implicitly assuming that they are all taking the same duration and credit risk in their securities portfolios. As such, this assumption effectively normalizes for duration and credit risk.
- We tax effect the incremental or decremental earnings at ~36%. Although banks' average tax rates vary, we assume that marginal NII earns the same marginal tax rate across banks.

All of the assumptions and calculations for Method 2 are laid out in the chart below.

Figure 2. Normalizing Earnings from Securities Portfolio by Normalizing Securities as a % of Total Deposits (\$ in million)

Operation	Method 2: Securities as % of Deposits	CMA	FHN	HBAN	KEY	NYCB	RF	STI	ZION
a	Bank's Average Assets	64,682	23,825	57,681	91,141	46,104	116,801	173,654	56,039
b	Bank's EOP Deposits (\$)	53,389	16,736	47,580	69,273	25,661	92,645	129,792	46,362
c	Bank's EOP Securities Portfolio (\$)	9,307	3,195	10,824	17,102	7,951	23,299	21,804	4,291
d = c / b	Bank's Sec. Portfolio as % of Deposits	17%	19%	23%	25%	31%	25%	17%	9%
e	Industry Average Sec. Portfolio as % of Deposits	27%	27%	27%	27%	27%	27%	27%	27%
f = e - d	Differential	10%	8%	5%	3%	(4%)	2%	10%	18%
g = e x b	Normalized securities portfolio	14,573	4,568	12,987	18,909	7,004	25,288	35,428	12,655
h	Bank's Average Yield on Securities Portfolio	2.37%	2.53%	2.35%	2.24%	3.31%	2.48%	2.78%	2.20%
i	Industry's Average Yield on Securities Portfolio	2.40%	2.40%	2.40%	2.40%	2.40%	2.40%	2.40%	2.40%
j = i - h	Differential	0.03%	(0.13%)	0.05%	0.16%	(0.91%)	(0.08%)	(0.38%)	0.20%
k	Interest Earned on Cash	0.25%	0.25%	0.25%	0.25%	0.25%	0.25%	0.25%	0.25%
l = c x h	Current interest income from securities portfolio	221	81	254	383	263	578	606	94
m = (g x i) + ((c - g) x k)	Normalized interest income from securities portfolio	337	106	306	449	170	602	816	283
n = m - l	Difference in interest income from securities portfolio	116	25	52	66	(93)	24	210	188
o	Tax rate	36%	36%	36%	36%	36%	36%	36%	36%
p = n x (1 - o)	Net income impact	74	16	33	42	(59)	15	134	121
q	Shares	186	237	842	891	439	1,395	538	184
r = p / q	EPS Impact	\$0.40	\$0.07	\$0.04	\$0.05	(\$0.14)	\$0.01	\$0.25	\$0.65
	% of Current '14 Estimate	13%	10%	6%	5%	(13%)	1%	8%	36%

Source: Citi Research, SNL

Sizing Up the Valuation Implications

In order to size up the valuation implications, we capitalize the amount by which our analyses above suggest each bank is over- or underearning in its securities portfolio. We then divide the capitalized value by the current share price.

For our base case we assign a ~8.0x multiple to the amount of over- or underearning. We use ~8.0x as a base case for two reasons:

- We did an informal survey of a handful of clients as to what multiple they would assign to the earnings from a bank's security portfolio and the average response was ~8.0x
- Agency REITs are currently trading at ~9.0x consensus estimates, and agency REITs are the closest (albeit imperfect) publicly traded proxy we can think of for a bank's securities portfolio

In the chart below we show the valuation implications assuming our base case P/E multiple of ~8.0x and a range of ~7.0x to ~9.0x:

Figure 3. Sizing Up Valuation Implications by Capitalizing Over- or Underearning in Securities Portfolios

Method 1		CMA	FHN	HBAN	KEY	NYCB	RF	STI	ZION
@	7.0x	3.1%	3.8%	2.1%	0.6%	(3.8%)	(2.1%)	3.2%	10.9%
@	8.0x	3.5%	4.3%	2.4%	0.7%	(4.3%)	(2.5%)	3.6%	12.5%
@	9.0x	4.0%	4.8%	2.7%	0.7%	(4.9%)	(2.8%)	4.1%	14.0%
Method 2		CMA	FHN	HBAN	KEY	NYCB	RF	STI	ZION
@	7.0x	5.9%	4.1%	2.9%	2.6%	(6.0%)	0.7%	4.7%	14.8%
@	8.0x	6.7%	4.7%	3.3%	2.9%	(6.8%)	0.8%	5.4%	16.9%
@	9.0x	7.6%	5.2%	3.7%	3.3%	(7.7%)	0.9%	6.0%	19.1%
Average		CMA	FHN	HBAN	KEY	NYCB	RF	STI	ZION
@	7.0x	4.5%	3.9%	2.5%	1.6%	(4.9%)	(0.7%)	3.9%	12.9%
@	8.0x	5.1%	4.5%	2.9%	1.8%	(5.6%)	(0.8%)	4.5%	14.7%
@	9.0x	5.8%	5.0%	3.2%	2.0%	(6.3%)	(0.9%)	5.1%	16.5%

Source: Citi Research

Key Stock Takeaways

We believe the key stock takeaways from this analysis are:

- Relative to other regional banks, ZION is underearning the most in its securities portfolio. If ZION's valuation reflected a normalized securities portfolio, we think it would be materially accretive. Based on comments made by management, we believe ZION is unlikely to materially alter its securities portfolio as it does not want to take added duration risk in the current environment.
- After ZION, CMA is underearning the most in its securities portfolio. Similar to ZION, but not to the same extent, CMA's securities portfolio as a share of its deposits is well below the industry average. Said alternatively, while CMA has been flooded with customer deposits, it has chosen to remain more conservative than its peers in how it invests those deposits.
- Relative to other regional banks, NYCB is overearning the most from its securities portfolio. The yield on NYCB's securities portfolio is ~90 bps above the industry average, suggesting that NYCB is taking materially more duration and/or credit risk than its peers. Also, NYCB's securities portfolio as a share of its total deposits stands at ~31% which is above the peer group average and the highest in this analysis. The combination of these data points suggests that NYCB will experience above average pressure on the funding cost side when shorts rates ultimately rise.

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

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. 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.

Citi Research Equity Ratings Distribution

<i>Data current as of 31 Dec 2013</i>	12 Month Rating			Relative Rating		
	Buy	Hold	Sell	Buy	Hold	Sell
Citi Research Global Fundamental Coverage	49%	40%	12%	6%	88%	6%
<i>% of companies in each rating category that are investment banking clients</i>	55%	52%	44%	62%	52%	49%

Guide to Citi Research Fundamental Research Investment Ratings:

Citi Research stock recommendations include an investment rating and an optional risk rating to highlight high risk stocks.

Risk rating takes into account both price volatility and fundamental criteria. Stocks will either have no risk rating or a High risk rating assigned.

Investment Ratings: Citi Research investment ratings are Buy, Neutral and Sell. Our ratings are a function of analyst expectations of expected total return ("ETR") and risk. ETR is the sum of the forecast price appreciation (or depreciation) plus the dividend yield for a stock within the next 12 months. The Investment rating definitions are: Buy (1) ETR of 15% or more or 25% or more for High risk stocks; and Sell (3) for negative ETR. Any covered stock not assigned a Buy or a Sell is a Neutral (2). For stocks rated Neutral (2), if an analyst believes that there are insufficient valuation drivers and/or investment catalysts to derive a positive or negative investment view, they may elect with the approval of Citi Research management not to assign a target price and, thus, not derive an ETR. Analysts may place covered stocks "Under Review" in response to exceptional circumstances (e.g. lack of information critical to the analyst's thesis) affecting the company and / or trading in the company's securities (e.g. trading suspension). As soon as practically possible, the analyst will publish a note re-establishing a rating and investment thesis. To satisfy regulatory requirements, we correspond Under Review and Neutral to Hold in our ratings distribution table for our 12-month fundamental rating system. However, we reiterate that we do not consider Under Review to be a recommendation.

Relative three-month ratings: Citi Research may also assign a three-month relative call (or rating) to a stock to highlight expected out-performance (most preferred) or under-performance (least preferred) versus the geographic and industry sector over a 3 month period. The relative call may highlight a specific near-term catalyst or event impacting the company or the market that is anticipated to have a short-term price impact on the equity securities of the company. Absent any specific catalyst the analyst(s) will indicate the most and least preferred stocks in the universe of stocks under consideration, explaining the basis for this short-term view. This three-month view may be different from and does not affect a stock's fundamental equity rating, which reflects a longer-term total absolute return expectation. For purposes of NASD/NYSE ratings-distribution-disclosure rules, most preferred calls correspond to a buy recommendation and least preferred calls correspond to a sell recommendation. Any stock not assigned to a most preferred or least preferred call is considered non-relative-rated (NRR). For purposes of NASD/NYSE ratings-distribution-disclosure rules we correspond NRR to Hold in our ratings distribution table for our 3-month relative rating system. However, we reiterate that we do not consider NRR to be a recommendation.

Prior to October 8, 2011, the firm's stock recommendation system included a risk rating and an investment rating. **Risk ratings**, which took into account both price volatility and fundamental criteria, were: Low (L), Medium (M), High (H), and Speculative (S). **Investment Ratings** of Buy, Hold and Sell were a function of the Citi Research expectation of total return (forecast price appreciation and dividend yield within the next 12 months) and risk rating. Additionally, analysts could have placed covered stocks "Under Review" in response to exceptional circumstances (e.g. lack of information critical to the analyst's thesis) affecting the company and/or trading in the company's securities (e.g. trading suspension). Stocks placed "Under Review" were monitored daily by management and as practically possible, the analyst published a note re-establishing a rating and investment thesis. For securities in developed markets (US, UK, Europe, Japan, and Australia/New Zealand), investment ratings were: Buy (1) (expected total return of 10% or more for Low-Risk stocks, 15% or more for Medium-Risk stocks, 20% or more for High-Risk stocks, and 35% or more for Speculative stocks); Hold (2) (0%-10% for Low-Risk stocks, 0%-15% for Medium-Risk stocks, 0%-20% for High-Risk stocks, and 0%-35% for Speculative stocks); and Sell (3) (negative total return). For securities in emerging markets (Asia Pacific, Emerging Europe/Middle East/Africa, and Latin America), investment ratings were: Buy (1) (expected total return of 15% or more for Low-Risk stocks, 20% or more for Medium-Risk stocks, 30% or more for High-Risk stocks, and 40% or more for Speculative stocks); Hold (2) (5%-15% for Low-Risk stocks, 10%-20% for Medium-Risk stocks, 15%-30% for High-Risk stocks, and 20%-40% for Speculative stocks); and Sell (3) (5% or less for Low-Risk stocks, 10% or less for Medium-Risk stocks, 15% or less for High-Risk stocks, and 20% or less for Speculative stocks).

Investment ratings are determined by the ranges described above at the time of initiation of coverage, a change in investment and/or risk rating, or a change in target price (subject to limited management discretion). At other times, the expected total returns may fall outside of these ranges because of market price movements and/or other short-term volatility or trading patterns. Such interim deviations from specified ranges will be permitted but will become subject to

review by Research Management. Your decision to buy or sell a security should be based upon your personal investment objectives and should be made only after evaluating the stock's expected performance and risk.

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 Inc

Josh Levin, CFA; Arjun Sharma

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.

Important Disclosures for Bell Potter Customers: Bell Potter is making this Product available to its clients pursuant to an agreement with Citi Global Markets Australia Pty Ltd. Neither Citi Global Markets Australia Pty Ltd. nor any of its affiliates has made any determination as to the suitability of the information provided herein and clients should consult with their Bell Potter financial advisor before making any investment decision.

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 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 NA, 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 by the PRA and regulated by the FCA and the PRA. 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/dis2/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 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, Bangrak, 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 by the Prudential Regulation Authority ("PRA") and regulated by the Financial Conduct Authority ("FCA") and the PRA. This material may relate to investments or services of a person outside of the UK or to other matters which are not authorised by the PRA nor regulated by the FCA and the PRA 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 authorised by the PRA and regulated by the FCA and the PRA.

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.

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.

© 2014 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, redisseminated 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