

Monday Morning Musings

Credit, Capex and Constraint

- **The Fed's senior loan officers' survey showed some impact from the government shutdown and rising bond yields as easing trends slid.** With the survey having gone out to banks in the first two weeks of October, there appeared to be some effects from the standoff between President Obama and the House of Representatives as well as the spike in 10-year Treasury rates not to mention the short-lived widening in corporate and EMBI+ spreads. In particular, large banks remained in an easing mode but at a reduced pace from the July data.
- **Credit conditions historically have led capital investment by nine months and commercial & industrial lending activity by six quarters.** Corporate capital spending seems poised for a pick up given typical lags and there is little reason to think otherwise as the survey already has shown its ability to lead the ISM and employment as it has done in the past. But, investors are relatively skeptical that a turn is at hand, often citing political battles and regulatory uncertainty as hampering business activity though such an argument also could have been made in 2010 and an increase was seen anyway. Thus, there is a credible case to be made now.
- **An updated review of 700 nonfinancial publicly traded companies covered by Citi's equity research analysts show a very limited increase in planned 2014 spending but data distortion is apparent.** The clear decline in planned Energy sector investment looks to be influencing the numbers in a major way. Indeed, excluding the energy industry, it is fascinating to note a better than 4% pickup being planned for next year with some areas such as technology looking to lift capex by 13%. Furthermore, a domestic bias should be noted given a fairly weak European recovery, mining industry cuts (which has a large overseas presence) and a shift in China towards consumers from investment.
- **The focus on excess capacity utilization restraining incremental expenditures misses the point of technological and production obsolescence, thereby confusing investors.** It is fascinating to listen to investors complain about the lack of need to build new facilities when returns on investment could come from efficiency driven investment rather than incremental sales' profits which would be otherwise limited by existing production capacity. The more crucial issue is the cost of capital which is still available from banks at attractive levels.
- **Given clean balance sheets and strong cash flow, companies have the ability to spend money on buybacks, dividends and capital.** At the present time, there is no pressure for business leaders to make difficult decisions as to how to allocate their cash resources or leverage capability. In the past few years, the S&P 500 constituents have been able to fund their various uses of cash and very probably can maintain their ability to continue investing across a broad spectrum that can reward shareholders and allow for economic expansion and top-line improvement. Thus, concerns amongst fund managers regarding growth and capital spending appear misplaced.

Tobias M Levkovich

+1-212-816-1623

tobias.levkovich@citi.com

Lorraine M Schmitt

lorraine.m.schmitt@citi.com

Christina Wood

christina.wood@citi.com

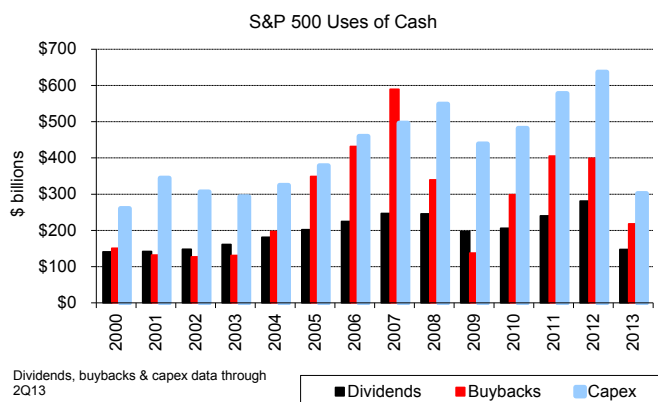
See Appendix A-1 for Analyst Certification, Important Disclosures and non-US research analyst disclosures.

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.

The Still Supportive Financing Tailwind

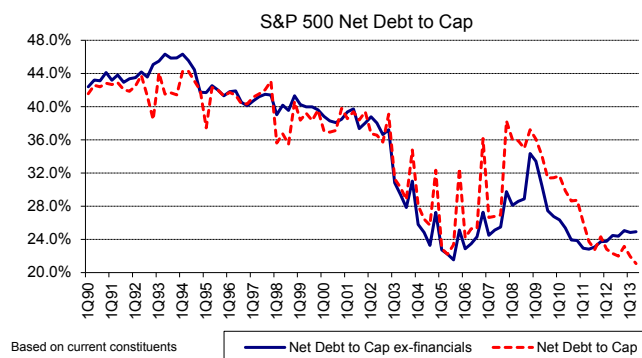
It is always instructive to meet with members of the investment community and to listen to their worries, with one of the constant refrains being the lack of capital investment even as the data is less than supportive of such claims. Asian investors are no different and the last few days in Japan and China has reflected that such anxiety crosses oceans. Yet, Figure 1 argues a slightly different view with capex climbing alongside dividend growth and a strong pickup in stock buyback activity, implying that corporates have the wherewithal to do all three. Furthermore, with clean balance sheets (see Figure 2), there is always the debt leverage lever to pull if needed.

Figure 1.



Source: Haver Analytics, FactSet, and Citi Research – US Equity Research

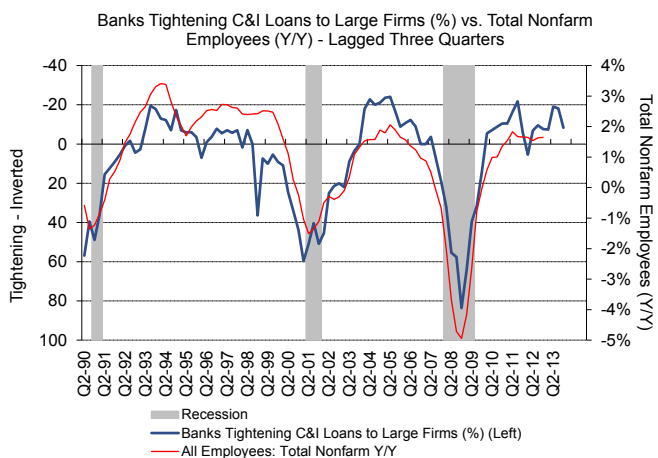
Figure 2.



Source: FactSet and Citi Research – US Equity Research

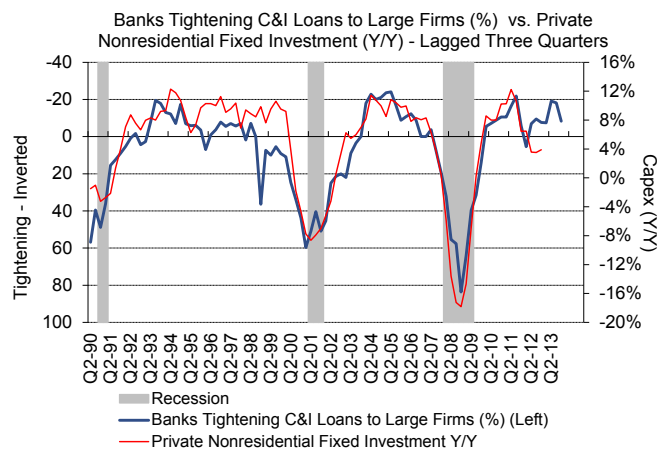
But the crucial element of debt is its cost and the latest Federal Reserve Board's survey of loan officers shows that while they are still easing credit conditions, the pace has softened possibly due to the concerns around the debt ceiling fight in Washington and some backing up of Treasury yields through the spring and summer. Yet, the environment should still be supportive of hiring and capital spending trends given the typical nine-month lag (see Figures 3 and 4). Indeed, it already has been seen to have an effect on the ISM (see Figure 5) and looks ready to positively affect S&P 500 revenue trends (see Figure 6) with 3Q13 sales (ex-Financials) accelerating to roughly 3% year-over-year gains based on the 80% of constituents that have reported thus far (according to Bloomberg data).

Figure 3.



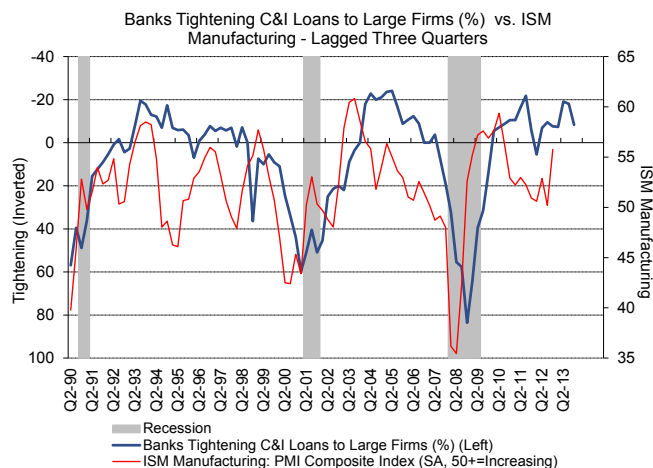
Source: Haver Analytics and Citi Research – US Equity Research

Figure 4.



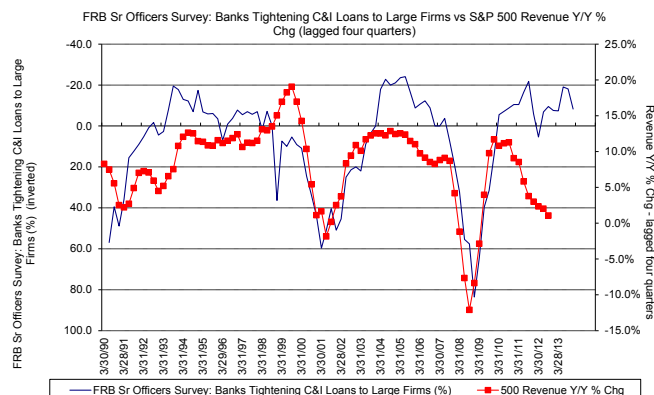
Source: Haver Analytics and Citi Research – US Equity Research

Figure 5.



Source: Haver Analytics and Citi Research – US Equity Research

Figure 6.



Source: Haver Analytics, FactSet, and Citi Research – US Equity Research

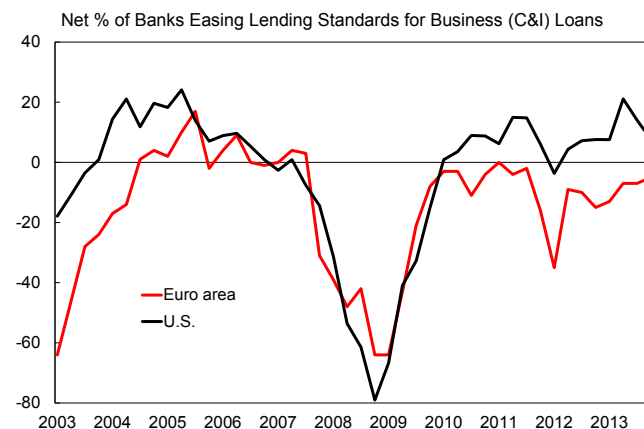
Intriguingly, the trend for less easing of financing also can be found with credit conditions for smaller companies (see Figure 7) and this is supported by NFIB survey data on bank lending availability. But the trend is not altogether uniform with European lending standards still being restrictive relative to the US (see Figure 8) which may very well explain the latest reduced Euro area GDP forecasts from the EC. Indeed, we continue to hear that small and medium size enterprise in Europe (which may account for more than 70% of local economic activity) remains shut out of the bank lending market thereby holding back growth potential. Interestingly, the lag from credit standards and capex is only six months in the Euro area versus nine months in the US possibly highlighting the smaller company nature and the flexibility to move more quickly than larger more bureaucratic corporations.

Figure 7.



Source: Haver Analytics and Citi Research – US Equity Research

Figure 8.

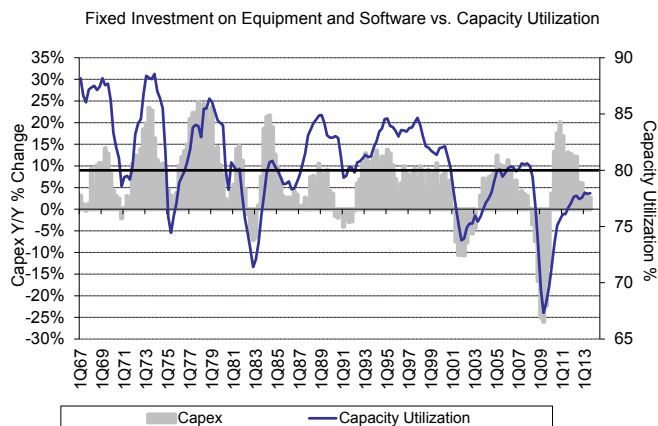


Source: ECB, Haver Analytics and Citi Research – US Equity Research

One of the constant rejoinders as to why there will not be a US pickup besides the dysfunctional government concern is the arguable slack in capacity with utilization still not at levels that traditionally have garnered a more impressive increase in spending (see Figure 9). However, that view does not address the faster pace of obsolescence that comes with rapid changes in technology. Economies of scale can be accomplished by adopting new processes that are far more efficient than existing manufacturing or service protocols with internet based businesses for instance

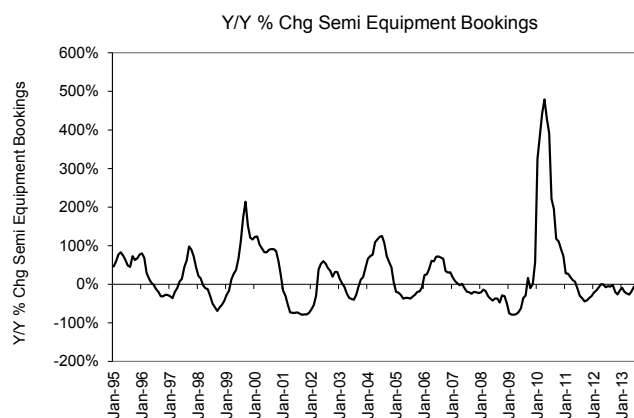
having enormous flexibility and powerful incremental margins. As a result, we would debate the excess capacity argument quite vociferously especially if that capacity is expensive and in all the wrong places. Even, semi equipment orders have started to turn up (see Figure 10) as new chip geometries and wafer sizes force expensive upgrades every few years.

Figure 9.



Source: Haver Analytics and Citi Research – US Equity Research

Figure 10.



Source: Semiconductor Equipment and Materials International, Citi Research - U.S. Equity Strategy

As can be seen in Figure 11, one of the biggest influences in the data is the Energy sector which will account for 37% of overall capex in 2013, up from 32% in 2010 and is the primary reason for the recent slowdown in the capital spending percentage trend as well as an international deceleration in mining expenditures. If we exclude Energy from the data, the growth rate for planned 2014 capital investment (based on company guidance) accelerates to 4.5% from 2.7% in 2013. Yet, so many investors believe that the pace is weakening. Note that IT sector capex is leading the way, helped along by the semi industry, software firms and personal computers. Some consumer oriented areas such as Staples retailing and Personal Products have strong capital spending growth intentions for 2014 as well (see Figure 12). Plus, the Health Care Equipment & Services story is also planning a double-digit pickup next year. In contrast, Auto Components and Telecommunication Services companies are planning to cut back their dollars. But, the trend broadly speaking is improving once the Energy sector dynamic is exposed. Notably, Citi's economists are projecting a 4.4% increase in nonresidential fixed investment for 2014; about twice the rate of 2013 and the supportive data from the Fed looks promising.

Figure 11. Citi Research US Coverage Universe Capex by Sector

	Aggregate Capex						
	2008	2009	2010	2011	2012	2013E	2014E
Consumer Discretionary	76,870	58,659	55,153	62,937	72,957	76,618	80,429
Consumer Staples	19,349	18,457	20,034	21,751	21,820	23,330	24,448
Energy	152,895	125,803	137,984	187,805	227,508	230,736	222,191
Financials	NA	NA	NA	NA	NA	NA	NA
Health Care	21,300	18,593	19,490	23,133	25,519	25,277	26,608
Industrials	37,072	27,606	31,714	42,194	46,816	46,613	49,100
IT	39,272	30,770	39,732	53,291	56,832	59,316	67,242
Materials	25,024	17,736	18,058	24,816	30,558	31,291	34,368
Telecom Services	51,940	45,696	48,658	52,547	54,510	58,875	57,319
Utilities	48,350	57,157	56,543	66,959	76,154	74,134	73,641
Total	472,071	400,478	427,368	535,434	612,674	626,188	635,347

	Aggregate Capex Y/Y Change						
	2008	2009	2010	2011	2012	2013E	2014E
Consumer Discretionary	0.8%	-23.7%	-6.0%	14.1%	15.9%	5.0%	5.0%
Consumer Staples	5.2%	-4.6%	8.5%	8.6%	0.3%	6.9%	4.8%
Energy	75.4%	-17.7%	9.7%	36.1%	21.1%	1.4%	-3.7%
Financials							
Health Care	10.0%	-12.7%	4.8%	18.7%	10.3%	-0.9%	5.3%
Industrials	11.4%	-25.5%	14.9%	33.0%	11.0%	-0.4%	5.3%
IT	13.1%	-21.6%	29.1%	34.1%	6.6%	4.4%	13.4%
Materials	13.9%	-29.1%	1.8%	37.4%	23.1%	2.4%	9.8%
Telecom Services	4.5%	-12.0%	6.5%	8.0%	3.7%	8.0%	-2.6%
Utilities	74.6%	18.2%	-1.1%	18.4%	13.7%	-2.7%	-0.7%
Total	28.1%	-15.2%	6.7%	25.3%	14.4%	2.2%	1.5%

Source: Citi Research

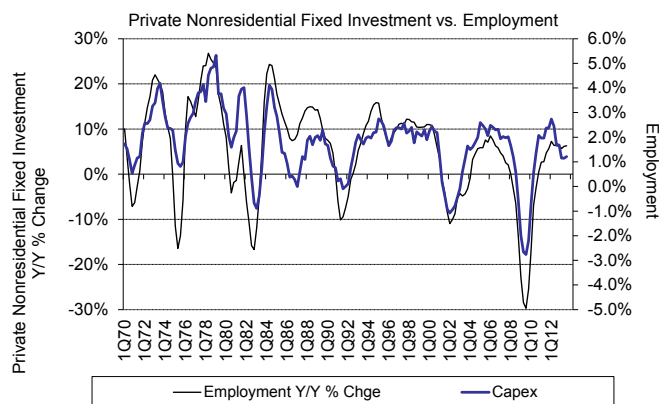
Figure 12. Citi Research US Coverage Universe Capex by Industry

	Aggregate Capex			Aggregate Capex Y/Y Change		
	2012	2013E	2014E	2012	2013E	2014E
Consumer Discretionary	72,957	76,618	80,429	15.9%	5.0%	5.0%
Autos & Components	18,420	18,722	19,376	26.2%	1.6%	3.5%
Auto Components	4,660	4,033	3,768	21.6%	-13.5%	-6.6%
Automobiles	13,760	14,689	15,608	27.8%	6.7%	6.3%
Consumer Durables & Apparel	2,977	3,519	3,705	14.4%	18.2%	5.3%
Household Durables	444	489	490	-7.0%	10.0%	0.2%
Leisure Equipment & Products	549	737	759	18.2%	34.1%	3.0%
Textiles Apparel & Luxury Goods	1,983	2,294	2,456	19.5%	15.7%	7.1%
Consumer Services	13,259	14,204	15,533	7.8%	7.1%	9.4%
Diversified Consumer Services	289	295	296	2.3%	2.3%	0.4%
Hotels Restaurants & Leisure	12,970	13,909	15,236	8.0%	7.2%	9.5%
Media	24,385	25,365	26,137	4.7%	4.0%	3.0%
Media	24,385	25,365	26,137	4.7%	4.0%	3.0%
Retailing	13,917	14,808	15,679	37.2%	6.4%	5.9%
Internet & Catalog Retail	4,221	4,231	5,012	89.8%	0.2%	18.5%
Multiline Retail	0	0	0	N/A	N/A	N/A
Specialty Retail	9,696	10,577	10,667	22.4%	9.1%	0.9%
Consumer Staples	21,820	23,330	24,448	0.3%	6.9%	4.8%
Food & Staples Retailing	1,078	1,000	1,201	22.4%	-7.2%	20.0%
Food & Staples Retailing	1,078	1,000	1,201	22.4%	-7.2%	20.0%
Food Beverage & Tobacco	13,906	15,420	16,261	-6.9%	10.9%	5.5%
Beverages	6,619	6,768	7,062	-11.0%	2.2%	4.4%
Food Products	5,945	7,034	7,493	-4.9%	18.3%	6.5%
Tobacco	1,342	1,619	1,706	7.5%	20.6%	5.4%
Household & Personal Products	6,836	6,909	6,986	15.2%	1.1%	1.1%
Household Products	6,000	6,043	6,006	15.1%	0.7%	-0.6%
Personal Products	836	866	980	16.1%	3.5%	13.2%
Energy	227,508	230,736	222,191	21.1%	1.4%	-3.7%
Energy	227,508	230,736	222,191	21.1%	1.4%	-3.7%
Energy Equipment & Services	18,954	17,799	18,370	15.4%	-6.1%	3.2%
Oil Gas & Consumable Fuels	208,555	212,937	203,821	21.7%	2.1%	-4.3%
Financials	NA	NA	NA			
Health Care	25,519	25,277	26,608	10.3%	-0.9%	5.3%
Health Care Equipment & Services	13,924	13,973	15,499	10.7%	0.3%	10.9%
Health Care Equipment & Supplies	4,920	5,487	6,012	10.6%	11.5%	9.6%
Health Care Providers & Services	9,004	8,486	9,488	10.8%	-5.8%	11.8%
Health Care Technology	0	0	0	N/A	N/A	N/A
Pharma & Biotech	11,594	11,305	11,109	9.8%	-2.5%	-1.7%
Biotechnology	1,555	1,416	1,470	21.0%	-8.9%	3.8%
Life Sciences Tools & Services	842	877	884	11.7%	4.2%	0.8%
Pharmaceuticals	9,198	9,011	8,755	8.0%	-2.0%	-2.8%
Industrials	46,816	46,613	49,100	11.0%	-0.4%	5.3%
Capital Goods	28,935	29,696	30,702	12.3%	2.6%	3.4%
Aerospace & Defense	7,290	8,290	8,173	4.9%	13.7%	-1.4%
Building Products	650	665	620	-12.6%	2.3%	-6.8%
Construction & Engineering	0	0	0	N/A	N/A	N/A
Electrical Equipment	761	785	859	3.0%	3.2%	9.4%
Industrial Conglomerates	6,020	6,165	6,537	26.7%	2.4%	6.0%
Machinery	9,349	8,264	8,714	22.7%	-11.6%	5.5%
Trading Companies & Distributors	4,866	5,526	5,800	-1.9%	13.6%	4.9%
Commercial Services & Supplies	668	629	715	12.7%	-5.9%	13.7%
Commercial Services & Supplies	186	188	186	25.2%	0.8%	-1.1%
Professional Services	482	441	529	8.5%	-8.4%	20.0%
Transportation	17,213	16,288	17,683	8.7%	-5.4%	8.6%
Air Freight & Logistics	6,196	5,677	6,443	13.2%	-8.4%	13.5%
Airlines	36	55	55	-46.0%	51.9%	0.0%
Marine	2	2	4	-99.5%	62.6%	79.3%
Road & Rail	10,979	10,553	11,180	9.9%	-3.9%	5.9%
Transportation Infrastructure	0	0	0	N/A	N/A	N/A
IT	56,832	59,316	67,242	6.6%	4.4%	13.4%
Semiconductors & Semiconductor Equipme	17,345	16,633	18,526	-9.5%	-4.1%	11.4%
Semiconductors & Semiconductor Eq	17,345	16,633	18,526	-9.5%	-4.1%	11.4%
Software & Services	19,479	24,169	25,488	10.1%	24.1%	5.5%
Internet Software & Services	6,823	10,143	9,243	12.6%	48.7%	-8.9%
IT Services	8,125	7,444	8,278	7.7%	-8.4%	11.2%
Software	4,531	6,583	7,966	10.7%	45.3%	21.0%
Technology Hardware & Equipment	20,008	18,513	23,228	21.8%	-7.5%	25.5%
Communications Equipment	1,999	1,680	1,460	71.4%	-15.9%	-13.1%
Computers & Peripherals	14,116	13,532	18,944	31.1%	-4.1%	40.0%
Electronic Equipment Instruments & C	3,506	2,963	2,489	-15.4%	-15.5%	-16.0%
Office Electronics	388	337	336	14.8%	-13.1%	-0.3%
Materials	30,558	31,291	34,368	23.1%	2.4%	9.8%
Materials	30,558	31,291	34,368	23.1%	2.4%	9.8%
Chemicals	14,291	14,013	16,311	28.3%	-1.9%	16.4%
Containers & Packaging	2,143	2,393	2,408	2.4%	11.6%	0.6%
Metals & Mining	12,741	13,586	14,249	22.2%	6.6%	4.9%
Paper & Forest Products	1,383	1,300	1,400	19.3%	-6.0%	7.7%
Telecom Services	54,510	58,875	57,319	3.7%	8.0%	-2.6%
Telecommunication Services	54,510	58,875	57,319	3.7%	8.0%	-2.6%
Diversified Telecommunication Serv	42,021	43,808	42,793	1.3%	4.3%	-2.3%
Wireless Telecommunication Service	12,489	15,067	14,526	13.0%	20.6%	-3.6%
Utilities	76,154	74,134	73,641	13.7%	-2.7%	-0.7%
Utilities	76,154	74,134	73,641	13.7%	-2.7%	-0.7%
Electric Utilities	47,132	43,658	43,959	12.4%	-7.4%	0.7%
Gas Utilities	5,579	5,234	4,464	29.9%	-6.2%	-14.7%
Multi-Utilities	22,514	24,324	24,319	13.7%	8.0%	0.0%
Water Utilities	929	917	900	0.4%	-1.2%	-1.9%

Source: Citi Research

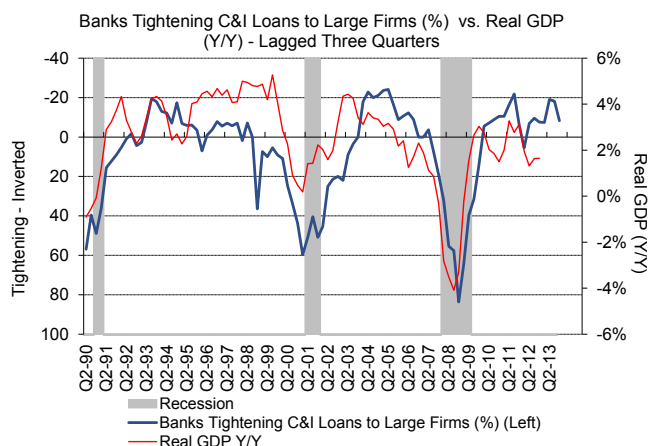
As a reminder, credit conditions define the cost of capital and is integral to decision making when it comes to investment in human, physical or working capital. Thus, it should not surprise anyone that capex and employment tends to move in tandem (see Figure 13). Furthermore, the relationship holds up with GDP (see Figure 14). Note that the tech sector is focused on lifting their spending next year given that both the Manpower and NFIB surveys shows the best hiring intentions in at least five years despite fears about regulatory influences such as Obamacare and Dodd-Frank.

Figure 13.



Source: Haver Analytics and Citi Research – US Equity Research

Figure 14.



Source: Haver Analytics and Citi Research – US Equity Research

In many respects, we remain encouraged about US economic and earnings prospects given the lending standards data which allows us to maintain a generally bullish aggregate view for 2014. However, the short term seems to carry a fair amount of risk in view of sentiment factors we highlighted in our [Equity Strategy - November 2013 Chart of the Month](#) report and some other divergences including slippage in the Citi Economic Surprise Index, weaker earnings guidance and soft readings in our Cyclical Expectations Model. Thus, we would wait for weakness to buy into markets and would not chase at current prices. The arguable shift to cyclicals that investors want seems a bit too optimistic to us as economies globally may not have as much oomph as has been hoped for and there could be some upcoming investment community disappointment.

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

Data current as of 30 Sep 2013

	12 Month Rating			Relative Rating		
	Buy	Hold	Sell	Buy	Hold	Sell
Citi Research Global Fundamental Coverage	48%	40%	12%	6%	87%	6%
% of companies in each rating category that are investment banking clients	55%	50%	43%	64%	51%	48%

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

Tobias M Levkovich; Lorraine M Schmitt; Christina Wood

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 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 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/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 **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

Buyukdere 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.

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 may have been distributed simultaneously, in multiple formats, to the Firm's worldwide institutional and retail customers. 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 Reuters and Datastream.

© 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, 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