Economics

14 January 2011 | 12 pages

Sterling Weekly

Inflation Scare Worsens

- Inflation worries continue to build, with surveys showing further rapid price hikes among firms plus the ongoing rise in front end breakevens. The upcoming December inflation data may well add to these worries: we expect CPI inflation of 3.2% YoY — well above target — and risks probably lie to the upside. CPI inflation is likely to hit 4% YoY by midyear and rise above 4% during 2011.
- We expect that the MPC will soon start “open mouth” policies to cap inflation expectations, stressing their willingness to do whatever it takes to hit the inflation target over time. In addition, it would be useful in our view for the MPC to acknowledge the need to act if data and surveys of prices and capacity use continue to signal worsening inflation prospects. We expect the MPC to begin to hike in Q2 or Q3.

Michael Saunders
+44-20-7986-3299
michael.saunders@citi.com

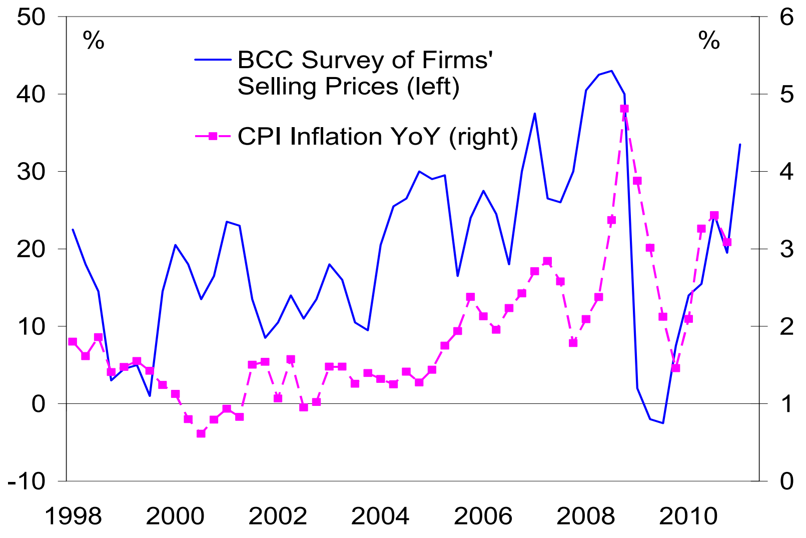
Ann O'Kelly
+44-20-7986-3297
ann.okelly@citi.com

Figure 1. Citigroup Market Forecast

	$/£	£/€	Base Rate	10 Year Yield	Spread vs Bunds
Mid-2011	1.60	0.86	0.50	3.50	80bp
End-2011	1.62	0.87	1.00	3.75	80bp

Source: Citi Investment Research and Analysis

Figure 2. UK — BCC Survey of Firms’ Selling Prices, and CPI Inflation, 1998-2010



Sources: BCC, ONS and Citi Investment Research and Analysis

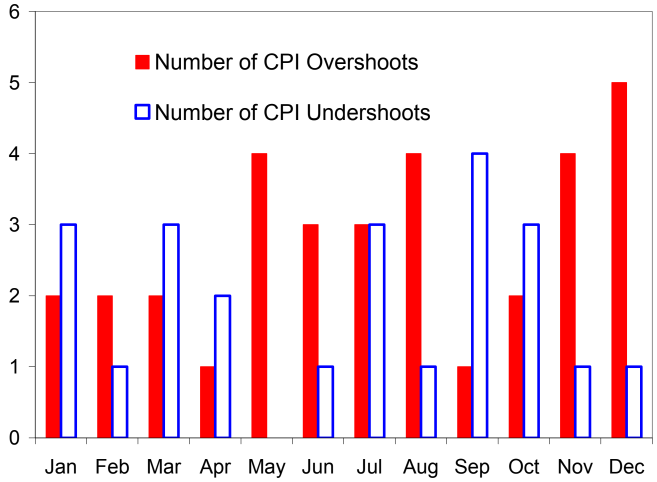
See Appendix A-1 for Analyst Certification, Important Disclosures and non-US research analyst disclosures.

Inflation Scare Worsens

The new year has started with a growing inflation scare as the consensus continues to revise 2011 CPI forecasts higher, while the BRC and BCC surveys show further rises in the shares of manufacturing, retail and service sector firms hiking prices.

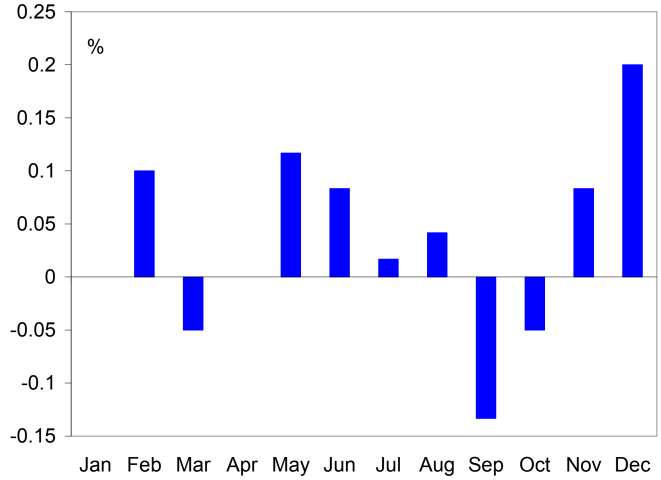
The upcoming price data (18 January) will probably also fuel inflation worries, with CPI inflation again well above target and markedly higher than the MPC forecast a year ago. Our base case is for CPI inflation to edge down from 3.3% YoY in November to 3.2% in December, but there are unusually large uncertainties — mostly to the upside. First, the unusually heavy snow may have disrupted transport and created localized supply shortages, adding to upward pressure on prices for some items. Second, there may be some advance pass-through of the VAT hike, with firms lifting prices in December in order to be able to claim that they are not raising prices when VAT actually goes up in January. Third, food price inflation will probably continue to surge, reflecting the sharp rise in global agricultural commodity prices. And finally, the December CPI data have shown a nasty habit of overshooting the pre-release consensus. In the last six years (since the MPC adopted the CPI target at end-03), CPI inflation has overshot the pre-release consensus five times, more than any other month, with an average overshoot of 0.2% —- also the biggest for any month. This may reflect a growing tendency in recent years for the price cuts in the January sales to be preceded by December price hikes.

Figure 3. UK — Number of CPI Inflation Undershoots/Overshoots Versus Pre-Release Consensus, Split By Month, 2004-09



Sources: Bloomberg, ONS and Citi Investment Research and Analysis

Figure 4. UK — Average Outturn for CPI Inflation Versus Pre-Release Consensus, Split By Month, 2004-09



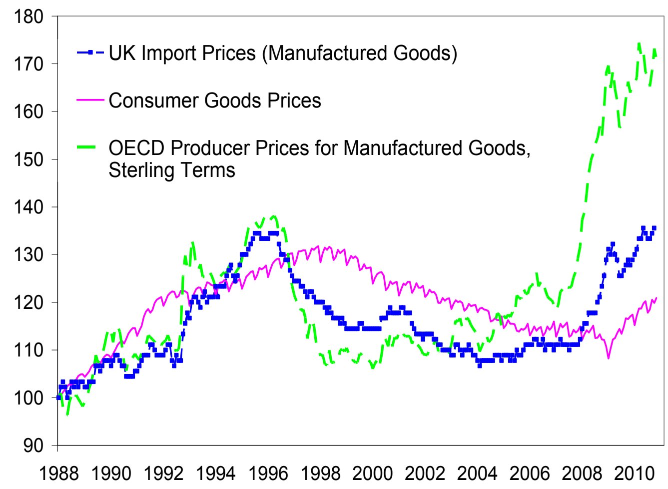
Sources: Bloomberg, ONS and Citi Investment Research and Analysis

Regardless of how the uncertainties in the December data play out, we expect CPI inflation to average around 4% YoY this year, rising above 4% YoY around midyear (assuming little further change in commodity price and sterling). The rise in inflation to 4% YoY could come quite quickly if retailers pass the VAT hike on immediately and use the opportunity of this price hike to also pass on some of the widespread backlog of cost pressures.

The upturn in inflation in 2010 and 2011 owes quite a lot to powerful cost pressures from the weak pound and strong global cost increases. UK import prices have risen sharply, by about 20%, since mid-07, with an even greater rise in OECD producer prices converted into sterling terms — a guide to costs

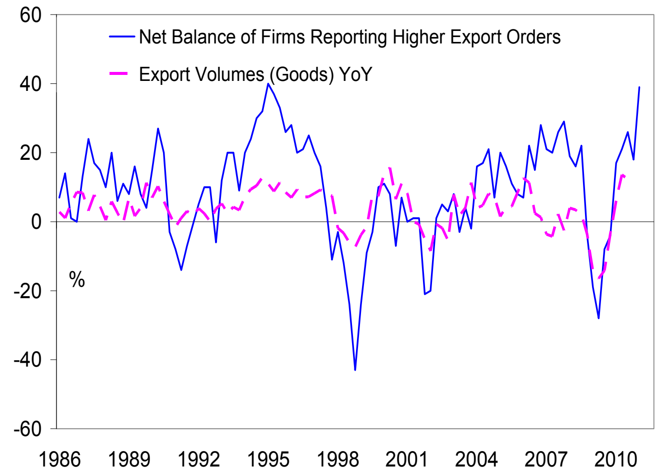
of imports from developed markets (which still account for the bulk of UK imports). By contrast, UK import prices and global producer prices in sterling terms fell on balance between the mid-90s and 2007, dragged lower by the strong pound and global disinflation. The resultant sharp drops in UK consumer goods prices ensured that UK CPI inflation stayed low in 97-07 despite relatively rapid growth in UK unit labour costs. Now, the low pound is boosting imported costs and fuelling an extended inflation overshoot —- while also leading to a strong acceleration in export orders and export volumes.

Figure 5. UK — Consumer Prices, Producer Prices and Import Prices, Indexed to Jan 1988 = 100, 1988-2010



Sources: ONS, OECD and Citi Investment Research and Analysis

Figure 6. UK — BCC Survey of Export Orders (Manufacturing Firms) and Export Volumes YoY, 1986-2011

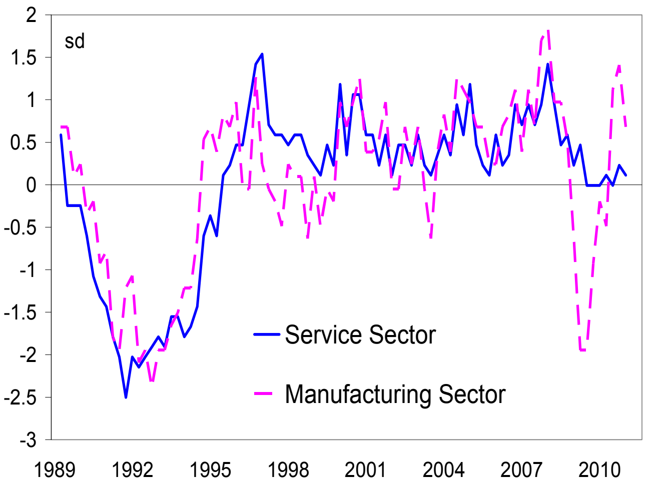


Note: Exports measured excluding MTIC-related fraud.
Sources: BCC, ONS and Citi Investment Research and Analysis

In addition to external costs, firms seem to have managed their capital stock quite aggressively in the recent recession, slashing investment unusually sharply, with the result that the usual post-recession hangover of low capacity use, low return on capital and poor corporate liquidity does not seem to be present. The BCC survey suggests that, despite the severe recession, capacity use is around average in the service sector and above average among manufacturing firms. The BCC survey also shows that the share of firms citing competition as a major problem is not unusually high among either manufacturing or service sector firms, whereas normally one would expect intense competitive pressures in the aftermath of the recession because of the overhang of spare capacity. In this environment, firms have been better able to protect margins and pass on cost increases, whereas the early 90s recession left a disinflationary shadow of low capacity use and intense competitive pressures.

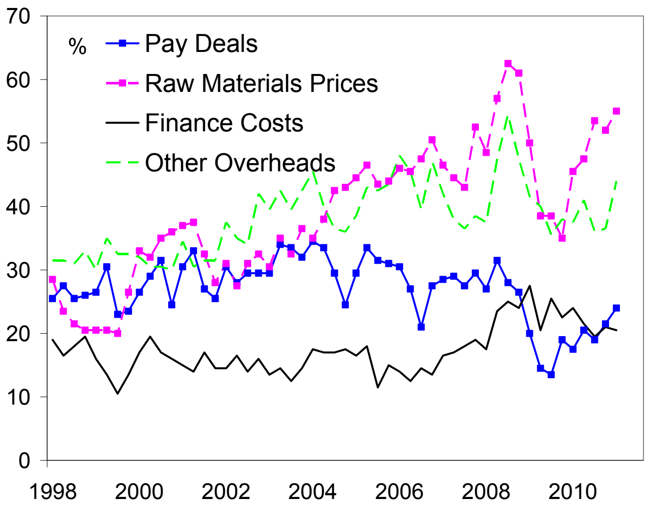
We suspect that the long period of imported disinflation from 1997 to 2007 or so has led to some complacency among investors and MPC members over the UK's ability to keep inflation low without having to squeeze costs and margins and seek greater efficiency gains. It was relatively easy for the UK to achieve the 2% CPI target (and the pre-04 target of 2.5% RPIX inflation) when (as from 97-07) consumer goods prices were falling 2%-3% per year. It is far harder to achieve the inflation target now that the UK faces massive and persistent cost pressures from the weak pound plus global commodity price gains.

Figure 7. UK — Capacity Use in Manufacturing and Service Sectors (standard deviations from average), 1989-2011



Sources: BCC and Citi Investment Research and Analysis

Figure 8. UK — Factors Leading Firms To Raise Selling Prices (Pct of Firms Citing Each Factor), 1998-2011



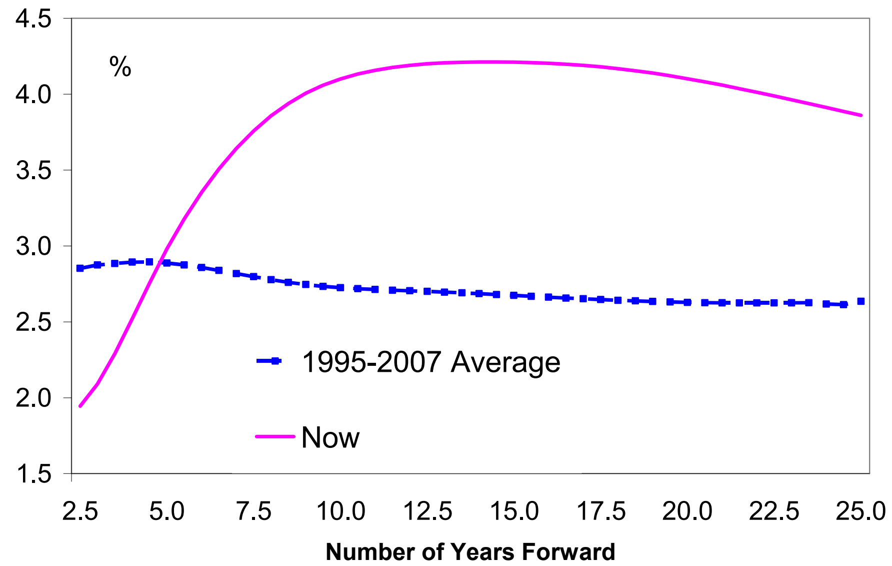
Source: Citi Investment Research and Analysis

The repeated inflation overshoots are now eroding the credibility of the inflation target and pushing longterm inflation expectations higher among the general public, businesses and investors. Indeed, since markets still probably do not price in enough nearterm upside inflation risk, adverse price outcomes may well push longterm inflation expectations even higher in coming months.

The challenge for the MPC is to ensure that their aim of trying to keep policy loose to support growth and close the output gap amidst fiscal consolidation does not have a major longrun cost in terms of lost inflation credibility and surging inflation expectations. As a first step, we expect the MPC to soon stress strongly their commitment to do whatever it takes to ensure that inflation will get back to target 2-3 years ahead, and to acknowledge that their policy approach will be flexible enough to hit the inflation target over time even if the output gap really is much smaller (or less disinflationary) than their estimates imply and external costs remain relatively strong. In our view, the MPC need to show that they have learnt lessons from the recent upside surprises in prices, costs, capacity use and surveys of firms' selling price, rather than simply make the same forecast (inflation will fall below target 3-4 quarters ahead) again and again. In other words, the MPC need to acknowledge that the world they face may be rather different to that implied by their models.

The Governor usually gives a major speech in late-January. If he does the same again this year, this would provide a platform to stress the MPC's commitment to hit the inflation target (as well as for the Governor to repeat his desire for greater bank reform in the UK). Such "open mouth" operations would be a useful start but — if inflation expectations continue to rise — words probably will need to be subsequently backed up by action as well in the form of higher policy rates. As discussed last week, we expect the MPC to begin to hike rates in Q2 or Q3 this year.

Figure 9. UK — Breakeven Inflation Forward Curve, 1995-2011



Sources: BoE and Citi Investment Research and Analysis

Economic Indicators

Tue 18 Jan	***Consumer Prices (Dec)***	**Forecast: 0.5% MoM, 3.2% YoY**	**Prior: 0.3% MoM, 3.3% YoY**
	CPI Ex Food, Drink, Tobacco, Energy (Dec)	**Forecast: 0.5% MoM, 2.6% YoY**	**Prior: 0.2% MoM, 2.7% YoY**
	Retail Prices (Dec)	**Forecast: 0.7% MoM, 4.7% YoY**	**Prior: 0.4% MoM, 4.7% YoY**
	RPIX – Excludes Mortgages (Dec)	**Forecast: 0.7% MoM, 4.7% YoY**	**Prior: 0.4% MoM, 4.7% YoY**

There is considerable uncertainty over these data, but the one thing that we are confident of is that CPI inflation will stay far above the 2.0% target. The uncertainties stem from the possibility that retailers raised prices ahead of the early-January VAT hike, and also whether the unusually heavy snow seen in December will have pushed up prices because of disruptions to transport. Either way, inflation is likely to head up to 4% YoY in the first half of 2011.

Wed 19 Jan	***Claimant Count Unemployment (Dec)***	**Forecast: Unchanged MoM, 4.5% Rate**	**Prior: -1,200 MoM, 4.5% Rate**
	LFS Unemployment (Sep-Nov)	**Forecast: +52K QoQ, 7.9% Rate**	**Prior: +35K QoQ, 7.9% Rate**

The jobless figures have bounced around a bit in recent months, with some small increases and some small declines, and we expect little overall trend in the year ahead as well. The claimant count in coming months may be lifted by the adverse effect of the unusually heavy snow on activity, especially construction.

Thu 20 Jan	***CBI Industrial Trends Survey (Jan)***		
	Quarterly Business Confidence (Jan)	**Forecast: +10%**	**Prior (Oct): +2%**
	Monthly Output Expectations Net Balance (Jan)	**Forecast: +15%**	**Prior (Dec): +13%**
	Monthly Order Books Net Balance (Jan)	**Forecast: 0%**	**Prior (Dec): -3%**
	Monthly Selling Prices Net Balance (Jan)	**Forecast: +20%**	**Prior (Dec): +16%**

The January CBI surveys often show an improvement in both output expectations and price expectations from the December survey and, with the BCC survey showing marked strength in manufacturing, we expect this CBI survey also to show improving activity. The low pound and strong recovery in global investment spending are boosting exports, while aggressive management of the capital stock has prevented the usual post-recession hangover of low capacity use and hence allowed firms to pass on the widespread surge in cost pressures.

Fri 21 Jan	***Retail Sales Volumes (Dec)***	**Forecast: -0.4% MoM, 0.4% YoY**	**Prior: 0.3% MoM, 1.1% YoY**

There are mixed signals on December retail sales: the CBI reported that sales were quite good, whereas the BRC reported that sales were weak. The heavy snow in early December may have hit sales while the dash to buy ahead of the early-January VAT hike appears to have given a big boost to sales between Christmas and early January. On balance we expect a small drop in sales but attach a big margin of error that forecast.

Economic Calendar, 10 January — 28 January 2011

10 January	11 January	12 January	13 January	14 January
Halifax House Prices (Dec, 09:00) Nov -0.2% MoM, -1.4% YoY Dec -1.3% MoM, -3.4% YoY	**British Chambers of Commerce Quarterly Economic Survey (Q1)**	**Trade Balance – Goods & Services (Nov)** Oct £-4.0bn Nov £-4.1bn **MPC Meeting Starts**	**Industrial Production (Nov)** Oct -0.2% MoM, 3.5% YoY Nov 0.4% MoM, 3.3% YoY **Manufacturing Output (Nov)** Oct 0.6% MoM, 5.8% YoY Nov 0.6% MoM, 5.6% YoY **MPC Meeting Ends: Rates Unchanged at 0.5% No Change to QE of £200bn** **ECB Meeting: Rates Unchanged at 1.0%** **By Election: Oldham East & Saddleworth: Labour Win**	**Producer Input Prices (Dec)** Nov 0.9% MoM, 9.2% YoY Dec 3.4% MoM, 12.5% YoY **Producer Output Prices (Dec)** Nov 0.4% MoM, 4.1% YoY Dec 0.5% MoM, 4.2% YoY **Excluding Tax (Dec)** Nov 0.4% MoM, 3.9% YoY Dec 0.6% MoM, 4.0% YoY **Excluding Food, Drink, Tobacco, Energy (Dec)** Nov 0.2% MoM, 3.3% YoY Dec 0.2% MoM, 2.9% YoY

17 January	18 January	19 January	20 January	21 January
	RICS House Price Survey (Dec, 00:01) **Consumer Prices (Dec)** Nov 0.3% MoM, 3.3% YoY DecE 0.5% MoM, 3.2% YoY **CPI Ex Food, Drink, Tobacco, Energy (Dec)** Nov 0.2% MoM, 2.7% YoY DecE 0.5% MoM, 2.6% YoY **Retail Prices (Dec)** Nov 0.4% MoM, 4.7% YoY DecE 0.7% MoM, 4.7% YoY **RPIX – Ex Mortgages (Dex)** Nov 0.4% MoM, 4.7% YoY DecE 0.7% MoM, 4.7% YoY	**Claimant Count Unemployment (Dec)** Nov -1,200 MoM, 4.5% Rate DecE Unch MoM, 4.5% Rate **LFS Unemployment (Sep-Nov)** Aug-Oct 35K QoQ, 7.9% Rate Sep-NovE 52K QoQ, 7.9% Rate	**CBI Industrial Trends (Jan)** (11:00) **Qrtly Business Conf. (Jan)** Oct +2% JanE +10% **Mthly Output Expect'ns (Jan)** Dec +13% JanE +15% **Monthly Order Books (Jan)** Dec -3% JanE 0% **Monthly Selling Prices (Jan)** Dec +16% JanE +20%	**Retail Sales Volumes (Dec)** Nov 0.3% MoM, 1.1% YoY DecE -0.4% MoM, 0.4% YoY

24 January	25 January	26 January	27 January	28 January
	GDP (4Q, Preliminary) **Service Sector Output (Nov)** **Public Sector Net Borrowing (Dec)** **FOMC Two-Day Meeting**	**BBA No. of Mortgage Approvals for House Purchase (Dec)** **MPC Minutes (Jan 13)** **BoE Agents' Summary of Business Conditions (Jan)** **Norges Bank Outcome (13:00)** **FOMC Outcome**	**CBI Retail Survey (Jan, 11:00)**	

E Citi estimate. B Billion. P Provisional. R Revised. Note: All data are released at 9.30 a.m., except those marked otherwise.

Sources: BoE, CBI, CML, ONS, national sources and Citi Investment Research and Analysis.

Notes

Notes

Notes

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 Investment Research & Analysis product ("the Product"), please contact Citi Investment Research & Analysis, 388 Greenwich Street, 28th Floor, New York, NY, 10013, Attention: Legal/Compliance. 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 www.citigroupgeo.com. Valuation and Risk assessments can be found in the text of the most recent research note/report regarding the subject company. Historical disclosures (for up to the past three years) will be provided upon request.

NON-US RESEARCH ANALYST DISCLOSURES

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

Citigroup Global Markets Ltd	Michael Saunders; Ann O'Kelly

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 Investment Research & Analysis (CIRA) does not set a predetermined frequency for publication, if the Product is a fundamental research report, it is the intention of CIRA 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 Morgan Stanley Smith Barney LLC Customers: Morgan Stanley & Co. Incorporated (Morgan Stanley) research reports may be available about the companies that are the subject of this Citi Investment Research & Analysis (CIRA) research report. Ask your Financial Advisor or use smithbarney.com to view any available Morgan Stanley research reports in addition to CIRA research reports.
Important disclosure regarding the relationship between the companies that are the subject of this CIRA research report and Morgan Stanley Smith Barney LLC and its affiliates are available at the Morgan Stanley Smith Barney disclosure website at www.morganstanleysmithbarney.com/researchdisclosures.
The required disclosures provided by Morgan Stanley and Citigroup Global Markets, Inc. on Morgan Stanley and CIRA research relate in part to the separate businesses of Citigroup Global Markets, Inc. and Morgan Stanley that now form Morgan Stanley Smith Barney LLC, rather than to Morgan Stanley Smith Barney LLC in its entirety. For Morgan Stanley and Citigroup Global Markets, Inc. specific disclosures, you may refer to www.morganstanley.com/researchdisclosures and https://www.citigroupgeo.com/geopublic/Disclosures/index_a.html.
This CIRA research report has been reviewed and approved on behalf of Morgan Stanley Smith Barney LLC. This review and approval was conducted by the same person who reviewed this research report on behalf of CIRA. This could create a conflict of interest.

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 Citigroup 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. If the Product is made available in Hong Kong by, or on behalf of, Citigroup Global Markets Asia Ltd., it is attributable to Citigroup Global Markets Asia Ltd., Citibank Tower, Citibank Plaza, 3 Garden Road, Hong Kong. Citigroup Global Markets Asia Ltd. is regulated by Hong Kong Securities and Futures Commission. If the Product is made available in Hong Kong by The Citigroup Private Bank to its clients, it is attributable to Citibank N.A., Citibank Tower, Citibank Plaza, 3 Garden Road, Hong Kong. The Citigroup Private Bank and Citibank N.A. is regulated by the Hong Kong Monetary Authority. 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. Foro Buonaparte 16, 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 Nikko Cordial 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 Global Equities Online (GEO) website. If you have questions regarding GEO, 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 110-180, 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 Malaysia by Citigroup Global Markets Malaysia Sdn Bhd, which is regulated by Malaysia Securities Commission. Menara Citibank, 165 Jalan Ampang, Kuala Lumpur, 50450. 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 through Citigroup Global Markets New Zealand Ltd. (Company Number 604457), a Participant of the New Zealand Exchange Limited and regulated by the New Zealand Securities Commission. Level 19, Mobile on the Park, 157 Lambton Quay, Wellington. 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 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., a Capital Markets Services Licence holder, and regulated by Monetary Authority of Singapore. 1 Temasek Avenue, #39-02 Millenia Tower, Singapore 039192. 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. 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 Gassef, 4th Floor, Madrid, 28006, Spain. The Product is made available in Taiwan through Citigroup Global Markets Taiwan Securities Company Ltd., which is regulated by Securities & Futures Bureau. No portion of the report may be reproduced or quoted in Taiwan by the press or any other person. 14 and 15F, No. 1, Songzhi Road, Taipei 110, Taiwan. If the Product is related to non-Taiwan listed securities, neither the Product nor any information contained in the Product shall be considered as advertising the securities or making recommendation of the securities. 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 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 CIRA 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 regulated by FINRA and 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 CIRA's Products can be found at www.citigroupgeo.com.

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.

CIRA concurrently disseminates its research via proprietary and non-proprietary electronic distribution platforms. Periodically, individual analysts may also opt to circulate research to one or more clients by email. Such email distribution is discretionary and is done only after the research has been disseminated via the aforementioned distribution channels.

ADDITIONAL INFORMATION IS AVAILABLE UPON REQUEST EU10114B