Euro Economics Weekly

ECB to Cut Rates First, SME Support Later

- We expect the economic weakness in the euro area to continue for a prolonged period and inflation to decline. In our view, a further fall in sentiment indicators in April in combination with a drop in inflation probably will pave the way for a rate cut in May. In our view, the reduced fragmentation of financial markets and the difficulties in easing monetary policy conditions despite the currently available non-standard policy tools also makes a rate cut more likely than it was at the beginning of the year.

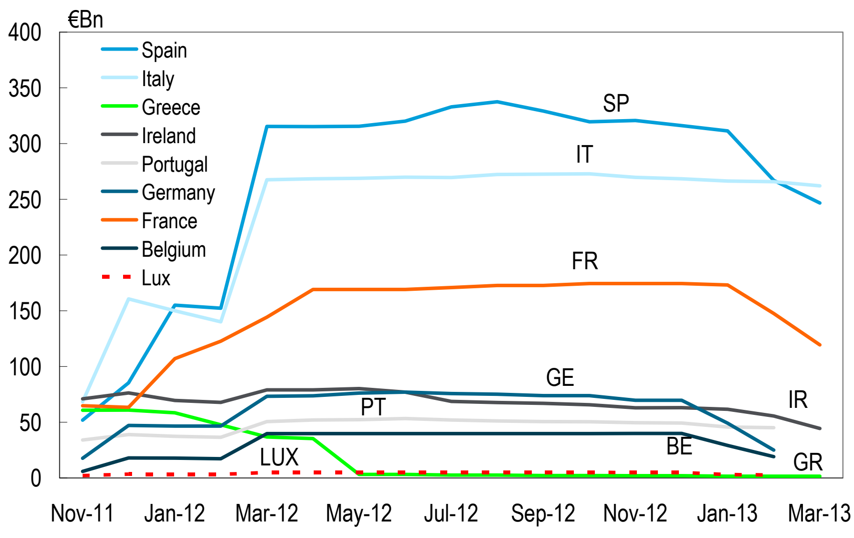
- In order to ease financing problems for SMEs, we expect only modest action from the ECB, probably concentrated on collateral rules. In our view, a reduction of the valuation haircuts for ABS backed by SME loans, aiming to increase securitization of SME loans, looks most likely (Jürgen Michels, see page 2).

Figure 1. Citi Market Forecasts

	$/€	Euro Repo	10-yr Bunds	£/€	U.K. Bank Rate	10-yr Gilt-Bund	SKr/€	SEK Policy Rate	NOK/€	NOK Policy Rate	SFr/€	CHF Policy Rate	CHF Spread vs Bunds
2Q 13	1.31	0.50	1.40	0.86	0.50	51	8.35	1.00	7.51	1.50	1.23	0.00	-76
2Q 14	1.23	0.25	1.40	0.87	0.50	91	8.38	0.75	7.31	1.75	1.26	0.00	-76

Source: Citi Research

Figure 2. Selected Countries — LTRO Lending to Banks, €Bn, Nov 2012–Mar 2013



Sources: Ecowin, Haver and Citi Research

Jürgen Michels
+44-20-7986-3294
juergen.michels@citi.com

Giada Giani
+44-20-7986-3281
giada.giani@citi.com

Guillaume Menuet
+44-20-7986-1314
guillaume.menuet@citi.com

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

Ebrahim Rahbari
+44-20-7986-6522
ebrahim.rahbari@citi.com

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

For all distribution enquiries regarding Citi Economics research, including access via Citi websites and via third party distribution channels, please contact michael.saunders@citi.com or jan.maguire@citi.com

Click to play
Jürgen Michels

ECB to Cut Rates First, SME Support Later

We expect the ECB to cut interest rates soon and to take some modest additional non standard measures

In our latest forecast update, we revised down our GDP forecast for 2013 slightly (by 0.1pp) to -0.6% and we maintained our forecast for 2014 of -0.3%.[1] We also revised down our inflation forecast for 2013 and 2014 to 1.6% and 1.3% respectively (from 1.7% and 1.5% last month). In this environment of economic weakness and falling inflation rates we expect the ECB to cut the main refinancing rate to 0.25% by the end of the year, with the next refi rate cut by 25bp in May. While the ECB is aware of the financing problems for SMEs, particularly in the periphery countries, we expect only modest action from the central bank, probably concentrated on collateral rules.

A rate cut seems to be the most likely next action of the ECB

High hurdles for the ECB to ease monetary conditions by activating the OMT programme…

As we have argued before, the ECB has difficulty in easing monetary policy conditions despite the currently available non-standard policy tools — the OMT programme and generous liquidity support to banks.[2] As we do not expect that the ECB will drop the conditionality of the OMT programme — which requires a country to be under an ESM/ EFSF programme — it is unlikely that the OMT programme will be activated any time soon. We maintain our view that Italy and Spain will only ask for ESM assistance if their funding costs increase substantially. In our view, the use of the OMT for the existing programme countries Ireland and Portugal — which in the view of the ECB only qualify for the programme if the sovereigns regain full market access — is also unlikely in the next few months.

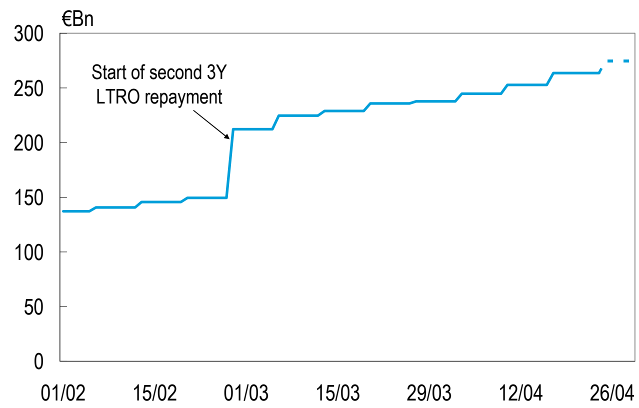
…or another round of multi year LTROs

We also do not expect that the ECB will take far-reaching measures on the liquidity side, e.g. another round of multi year LTROs. Even after the uncertainty created by the Cyprus rescue package, euro area banks continued to repay their 3Y LTROs. This week (on April 17) banks repaid €10.8bn of 3Y LTROs, raising the total repayments to €264bn (25.8%) out of the initial €1,019bn. And for next week banks announced that they will repay €10.9bn (see Figure 3). Even with a decline in the shorter-term ECB funding (1 week, 1 month and 3 months) by €20bn, because of a fall in the autonomous factors, excess liquidity has dropped by "only" €240bn since the start of the 3Y LTRO repayments in January to around €345bn in mid-April. However, this is far below the peak in excess liquidity of above €800bn in mid-May 2012. As the developments of short-term rates suggest, the available amount of excess liquidity is still large enough to keep money market rates (even up to 12 months) below the main refinancing rate (see Figure 4).

[1] See "Global Economic Outlook and Strategy - April 2013", Willem Buiter et al, 17 April 2013, Citi Research

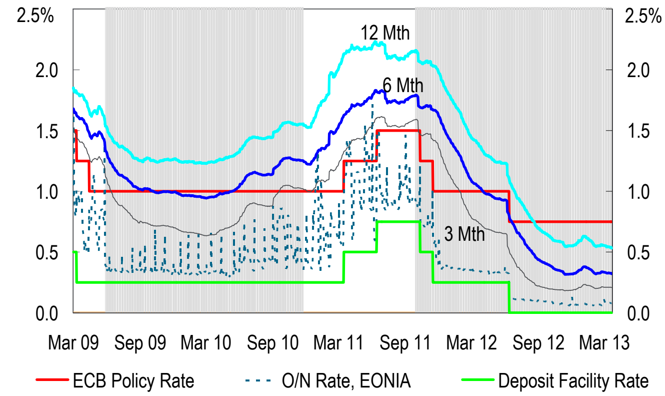
[2] See "Euro Economics Weekly - Italian Worries and ECB Challenges", Giada Giani, 1 March 2013, Citi Research

Figure 3. Eurosystem — 3Y LTRO Repayments, €Bn, Feb 2013–Apr 13



Sources: ECB and Citi Research

Figure 4. Euro Area — ECB Policy Rates and Money Market Rates, Pct. 2009–Apr 13



Sources: Ecowin and Citi Research

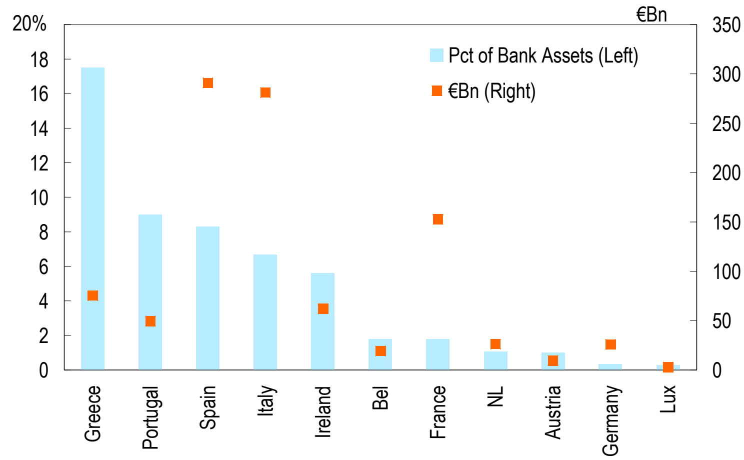
Excess liquidity should fall further in coming months

Looking forward, we expect that the weekly LTRO repayments will moderate, because core country banks, which hold most of the excess liquidity, have already repaid a large part of their LTRO holdings. Furthermore, we expect that the reduction of LTRO holdings by Spanish banks will slow down and that Italian banks, after keeping their LTRO holdings roughly unchanged so far, will not change that behavior given the continued uncertainties on the outlook for the country (see Figure 2 Front page). However, from now until the end of the year, we expect additional repayments in a range between €100bn and €150bn, which would bring excess liquidity down to around €200bn. In our view, this would probably still be enough liquidity to keep the EONIA rate close to zero, but term rates probably would increase somewhat. In order to prevent such an increase in short-term interest rates, which play an important role in the periphery countries, we expect the ECB to cut interest rates, probably at the May meeting

Rate cut more likely as fragmentation diminished

As the ECB has repeatedly argued in recent months that the financial fragmentation in the euro area has diminished, the Council probably regards a rate cut now as a more appropriate tool to ease financing conditions in a weaker-than expected economic environment (including in the in core and soft core countries) than was the case at the beginning of the year. As we do not expect a cut of the deposit rate, a 25bp refi rate cut probably has almost no impact on the EONIA rate, but it is likely to contribute to a reduction in the 3M EURIBOR rate by around 10bp. This is still a small move which is unlikely to have a major impact on the euro area economy in our view. However, with a larger share of ECB open market operations — which all (including the 3Y LTROs) are remunerated at the refi rate — used by periphery country banks, the ECB might argue that a rate cut helps a bit to reduce some of the imbalances in the euro area (see Figure 5).

Figure 5. Selected Euro Area Countries — Eurosystem Lending (exl. ELA) in €Bn and as a Share of Total Bank Assets, February 2013



Sources: Ecowin, ECB, Haver and Citi Research

A fall in Sentiment readings and inflation likely would pave the way for a rate cut in May

Regarding the timing, recent comments from hawkish ECB Council Members like Bundesbank President Jens Weidmann suggest that, depending on the data, an ECB rate cut in May is likely.[3] Backed by already available sentiment readings (like Sentix and ZEW) we expect a second consecutive fall in the PMIs and the EU Commission's sentiment index in April. Furthermore, although ECB President Draghi suggested that the ECB would not react to temporary bumps in the inflation rate[4], we expect that a further fall in the inflation rate in April increases the probability that the ECB will cut rates as early as May. We expect the April inflation rate to fall to 1.5% YY from 1.7% YY in March. In addition to the impact of a further fall in energy prices, we expect a correction of the upwards distortion of the March core inflation rate — which increased from 1.3% YY in February to 1.5% YY — probably caused by the unusually early timing of the Easter holidays.

Possible Measures the ECB Might Take to Improve Lending to SMEs

ECB discussing measures on how to improve financing conditions, particularly for SMEs, for some time

As we have discussed last week using Italy as an example, tight lending conditions to SMEs are a large problem in the euro area, particularly in the periphery countries.[5] The ECB is aware of the problems and has been discussing measures on how to improve lending conditions for SMEs within its mandate for some months. In a recent speech Executive Board Member Benoît Cœuré discussed the SMEs' funding difficulties, emphasising that they are rather complex, including demand and supply side issues.[6] We agree with Mr. Cœuré, that the large dependency of SMEs on bank funding is a major problem.

New bank capital rules create extra hurdles for bank lending to SMEs

We share Mr. Cœuré's concerns that the planned implementation of the Basle III rules — which will be enacted in the EU by the Capital Requirements Regulation and Directive, or CRD IV — will lead to a *"significant increase in the quality and quantity of capital…. likely to be reflected in the interest rates charged to all clients,*

[3] On April 17, Mr. Weidmann said asked about a rate cut: "*We might adjust in response to new information,*" but added "*I don't think that the monetary policy stance is the key issue*" (See SDCU April 18)

[4]See "Euro Area: Sovereign Debt Crisis Update - Draghi on Limitations of ECB Policy", 16 April 2013, Citi

[5] See also "Euro Economics Weekly - Italy's Credit Crunch", Giada Giani, 12 April 2013, Citi

[6] See http://www.ecb.europa.eu/press/key/date/2013/html/sp130411.en.html

including SMEs." Although the rules have only to be fully implemented by 2019, banks probably have already started to take these into account, which, when fully implemented, will particularly affect unrated loans exceeding €1 million. In order to ease the Basle III regulation burden, European legislators agreed to amend CRD IV by reducing capital requirements for loans up to €1.5 million. However, even with the amended version, which was approved on April 16 by the European Parliament, the new capital rules, in our view, will lead to further restrictions in bank lending to SMEs in all EU countries, including Germany with its large SME sector. [7]

Other measures governments can do to promote lending to SMEs

In addition to limiting the extra regulatory hurdles for bank lending to SMEs, governments might provide guarantees for SME loans to improve bank lending. One measure would be that governments make a quicker repayment of arrears, helping to improve the situation of cash-constrained SMEs. Another tool would be promoting venture capital. However, according to Mr. Cœuré, in the periphery countries existing programmes had only limited positive impact on the financing situation of SMEs because of the stressed situation of the sovereign. Therefore Mr. Cœuré sees more positive impact from support through supranational organizations, like the European Investment Bank (EIB). In our view, an alternative to improve lending conditions would be guarantees for SME loans provided from a centralized body, like the EU or the ESM. However, given the controversy in allowing direct recapitalization of banks through the ESM, which in our view will be postponed for years as Germany and other core countries insists on a Treaty change as a precondition, the likelihood for such a centralized guarantee system is rather low.

Cœuré wants to promote securitization of SME loans through ABS

In addition to the measures to improve bank lending conditions (with the ECB continuing to provide ample liquidity supply to banks) Mr. Cœuré stressed that governments, SMEs and markets participants have to increase their efforts to make SME funding less dependent on the banking system. One measure would be the creation of "*a market for asset-backed securities, where the underlying assets are loans to SMEs*". In order to increase the transparency of these assets he recommends that the "*Prime Collateralised Securities (PCS) initiative should be commanded. The PCS has defined common criteria on standardisation, quality, simplicity, and transparency with the aim to improve market depth and liquidity for the ABSs*." Furthermore, he advises that the European Investment Fund (EIF) should take action in the ABS market "*to revive investors' interest and confidence, by facilitating large and liquid transactions*".

Several ECB officials suggest that they are unwilling to take further far reaching measures to improve SME funding

We regard the range of policy options provided by Mr. Cœuré as useful proposals to improve lending to SMEs. But, apart from the provision of overall ample liquidity conditions to banks, he gave no indications of what the ECB, which according to him "*does not have a magic wand*", can do. ECB President Draghi also stressed, that the ECB is not the institution to provide tailor-made lending to specific non-financial sectors. Moreover, in an interview with Il Sole 24 Ore, Executive Board Member Yves Mersch said that he is skeptical that the ECB "*will find another silver bullet after the OMT*" to address the problem.[8] In contrast to those comments, Finnish Governor Erkki Liikanen said this week that in order to improve the transmission of monetary policy *"it's our task to operate through the financial markets. I won't comment on any individual measures, but we are prepared to look at all options"*. He added that *"central banks can buy corporate bonds"*.

[7] Note the approval by national parliaments is still outstanding.

[8] See (Bloomberg) -- European Central Bank Executive Board member Yves Mersch spoke in an interview with Il Sole 24 Ore newspaper.

ECB is likely to promote securitization by reducing the valuation haircuts on ABS backed by SME loans as collateral

Despite the promising remarks from Mr. Liikanen, we regard it as unlikely that the ECB would purchase directly ABS with underlying SME loans. However, in order to make those ABS more attractive, the ECB might accept them with reduced valuation haircuts. Such treatment would be consistent with comments from Mr. Mersch saying "*we can examine if there are bottlenecks in the use of financial assets in collateralization to get refinancing from us.*" Hence, if banks manage to transform the non-marketable credit claims to SMEs into marketable ABS, which can be assessed with common rules within the Eurosystem, the valuation haircuts on this collateral would be much smaller than the haircuts from using the credit claims directly as collateral. Therefore the costs of banks providing funding to SMEs would decline. In order to make ABS backed by SME loans more attractive, the ECB could reduce the valuation haircuts, which is currently 26%.[9]

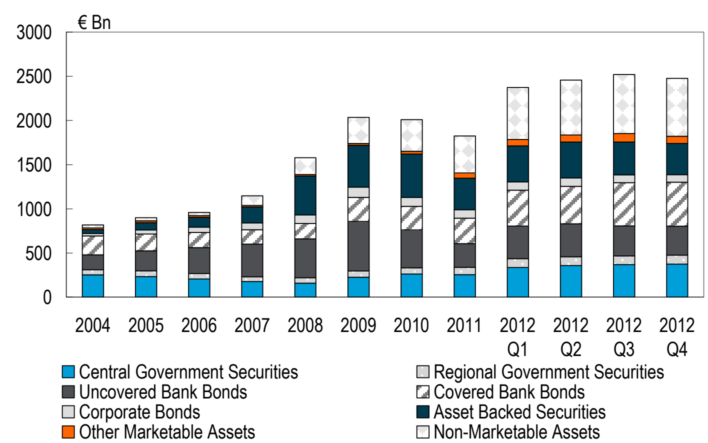
Alternatives like reduction in valuation haircuts for SME loans used as collateral and a special FLS scheme look unlikely to us

An alternative, but in our view less likely route, would be to harmonize the assessment of the non-marketable credit claims to SMEs across all euro area countries. But, because of the heterogeneity of these assets, such an approach is probably not feasible. While the extension of the acceptance by seven central banks of credit claims at their own risk increased the use of non-marketable assets substantially in Q1 2012, we doubt that, because of the large valuation haircuts, this helped much to promote lending to SMEs (see Figure 6).[10] Another way would be a special Funding for Lending Scheme (FLS) for SME lending. Given the rather poor results of such programmes in the UK[11], we do not expect that the ECB will go ahead in narrowing its broad-based full allotment procedure of lending to banks.

We expect ECB to cut rates and ease valuation haircuts on ABS based on SME loans

To sum up, the ECB seems to be unwilling to take additional substantial non-standard measures for the time being. However, we expect that the ECB will enact measures — probably later than May — to give incentives for securitizing SME loans, hoping that this will increase lending to SMEs. As its next action, we expect the ECB to react to a deteriorating economic outlook and to inflation likely clearly undershooting its target, by cutting the main refinancing rate in May. In our view the impact of these actions on the economy will be small, but they might at least help to reduce upside pressures on the currency which otherwise might turn into an extra headwind for the economy.

Figure 6. Euro Area — Use of Collateral For Eurosystem Open Market Operations, 2004 – Q4 12



Source: Citi Research

[9] See http://www.ecb.europa.eu/press/pr/date/2012/html/pr120622.en.html

[10] See http://www.ecb.int/press/pr/date/2012/html/pr120209_2.en.html

[11] See "UK - Funding For Not Lending", Michael Saunders, 4 March 2013, Citi

Key Economic Indicators (22 April – 26 April 2013)

Monday 22 April		**Forecast**	**Last**
10:00	Euro Area: General Government Deficit, 2012	2.7% of GDP	3.5% of GDP
	General Government Debt, 2012	91.7% of GDP	87.3% of GDP
15:00	Euro Area: Consumer Confidence, Apr Flash	-24.0	-23.5
	Greece: Current Account, Feb		
Tuesday 23 April		**Forecast**	**Last**
	Spain: House Prices, 1Q	-2.0% QQ, -9% YY	-2.2% QQ, -10% YY
07:00	Switzerland: Trade Balance, Mar		
07:45	France: Business Confidence, Apr	88	90
	Own-Company Production Outlook, Apr	-5	0
08:30	Netherlands: Consumer Spending, Feb		
08:30	Sweden: Unemployment Rate, Mar	8.5% NSA, 8.2% SA	8.5% NSA, 8.2% SA
09:00	Italy: Consumer Confidence, Apr	85.0	85.2
09:00	Euro Area: Manufacturing PMI, Apr Flash	45.7	46.8
	Services PMI, Apr Flash	45.9	46.4
	Composite PMI, Apr Flash	45.8	46.5
09:30	UK: Public Sector Net Borrowing (PSNB ex) Mar	£15.3 Billion Deficit	Year Ago: £16.7 Billion Deficit
	Fiscal Year To Date, Apr12-Mar13	£82.2 Billion Deficit	Year Ago: £120.9 Billion Deficit
09:30	UK: CBI Industrial Trends – Quarterly Business Confidence, Apr	+8%	Jan: 0%
	CBI Monthly Outlook Expectations, Apr	+4%	Mar: +22%
	CBI Monthly Order Books, Apr	-18%	Mar: -15%
	CBI Monthly Selling Prices, Apr	+5%	Mar: +5%
Wednesday 24 April		**Forecast**	**Last**
08:00	Spain: Producer Prices, Mar		
08:30	Netherlands: Producer Confidence, Apr		
09:00	Germany: ifo Business Climate, Apr	104.5	106.7
09:00	Italy: Retail Sales, Feb		
09:30	UK: BBA Loans for House Purchase, Mar		
11:00	UK: CBI Retail Survey, Apr		
14:00	Belgium: Business Confidence, Apr		
Thursday 25 April		**Forecast**	**Last**
08:00	Spain: Unemployment Rate, 1Q	26.3%	26.0%
08:30	Sweden: Producer Prices, Mar		
09:30	UK: GDP, 1Q Preliminary Estimate	0.0% QQ, 0.2% YY	-0.3% QQ, 0.3% YY
09:30	UK: Service Sector Output, Feb	0.1% MM, 1.5% YY	0.3% MM, 0.8% YY
11:00	Ireland: Residential Property Prices, Mar		
17:00	France: Jobseekers – Net Change, Mar	25K	18.4K
	Total Jobseekers, Mar	3,212.7K	3,1878.7K
Friday 26 April		**Forecast**	**Last**
07:00	Germany: Import Prices, Mar	-0.3% MM, -2.6% YY	0.3% MM, -1.6% YY
07:45	France: Consumer Confidence, Apr	83	84
08:00	Switzerland: KOF Economic Barometer, Apr		
08:15	Sweden: Consumer Confidence, Apr	2.5	2.8
	Manufacturing Confidence, Apr	-12	-10
08:30	Sweden: Household Credit Growth, Mar	4.6% YY	4.6% YY
08:30	Sweden: Trade Balance, Mar		
09:00	Euro Area: M3, Mar	2.7% YY, 3.1% 3-M YY	3.1% YY, 3.3% 3-M YY
11:00	Ireland: Retail Sales, Mar		

Sources: National statistical offices, central banks and Citi Research

Economic Indicators

Euro Area

Apr 22 10:00 London Time	***General Government Deficit, 2012***	**Forecast: 2.7% of GDP**	**Prior: 3.5% of GDP**
	General Government Debt, 2012	**Forecast: 91.7% of GDP**	**Prior: 87.3% of GDP**
	While the aggregate euro area deficit-to-GDP ratio will fall below 3% for the first time since 2008, thanks to a balance sheet improvement in most member countries, the debt-to-GDP ratio probably will increase further to a new high since the beginning of the 1990s (when the time series began).		
Apr 22 15:00 London Time	***Consumer Confidence, Apr Flash***	**Forecast: -24.0**	**Prior: -23.5**
	Following four months of modest gains, we expect a fall in sentiment to the lowest reading since December. In our view uncertainty created by the Cyprus bailout probably will be a reason for the decline.		
Apr 23 09:00 London Time	***Manufacturing PMI, Apr Flash***	**Forecast: 45.7**	**Prior: 46.8**
	Services PMI, Apr Flash	**Forecast: 45.9**	**Prior: 46.4**
	Composite PMI, Apr Flash	**Forecast: 45.8**	**Prior: 46.5**
	We expect a further fall in the PMIs in April reflecting uncertainty caused by developments in Cyprus, but also weaker data from the US and China suggesting moderation in external demand. The April readings for the PMIs will be the lowest since October 2012. If our forecast is correct, the composite PMI reading in April will be 1.5 standard deviations below its long term average.		
Apr 26 09:00 London Time	***M3, Mar***	**Forecast: 2.7% YY, 3.1% 3-M YY**	**Prior: 3.1% YY, 3.3% 3-M YY**
	We expect M3 growth moderation to continue in March, probably going back to the lowest reading since September. In our view the contraction in loans to the private sector is likely to continue with loan transactions to households and companies falling on a monthly comparison in March.		

Germany

Apr 24 09:00 London Time	***Ifo Business Climate, Apr***	**Forecast: 104.5**	**Prior: 106.7**
	We expect the second consecutive fall in the ifo business sentiment. However, the headline reading is likely to stay 0.6 standard deviations above the long term average. The main factor tor the decline probably will be a reduction in business expectations by 3.6 pp to 100.0 reflecting uncertainty caused by recent events in the euro area and also weaker than earlier expected non-euro area external demand. The assessment of the business situation is likely to fall as well by 0.9 pp to 109.0, partly due to distortions by unusually bad weather conditions in the first half of the month.		
Apr 26 07:00 London Time	***Import Prices, Mar***	**Forecast: -0.3% MM, -2.6% YY**	**Prior: +0.3% MM, -1.6% YY**
	A fall in oil and other commodity prices probably contributed to a monthly decline in import prices. The YY rate is likely to show the largest contraction since November 2011.		

France

Apr 23 07:45 London Time	***Business Confidence Indicator, Apr***	**Forecast: 88**	**Prior: 90**
	Own-Company Production Outlook, Apr	**Forecast: -5**	**Prior: 0**
	Although business confidence increased a little in 1Q-13 (average 89) compared to 4Q-12 (average 87), sentiment remains well below its long-term average. Going into the second quarter, we estimate that the general pessimism related to general output expectations and prices could have reflected on own-company prospects as the government announces a persistently tight fiscal stance ahead of the 2014 budget.		
Apr 25 17:00 London Time	***Jobseekers – Net Change, Mar (000s)***	**Forecast: 25K**	**Prior: 18.4K**
	Jobseekers, Mar (000s)	**Forecast: 3,212.7K**	**Prior: 3,187.7K**
	The last three months have seen a slight deceleration in the rate of unemployment increases despite continued evidence of weak business confidence, uncertainty about the direction of economic policy. Yet surveys (BdF and INSEE) continue to indicate some deterioration in employment expectations to three-year lows. We forecast that the jobless rate will likely increase to 10.6% in 1Q-13 after 10.2% in 4Q-12.		
Apr 26 07:45 London Time	***Consumer Confidence Indicator, Apr***	**Forecast: 83**	**Prior: 84**
	In March, consumer confidence fell to a 13-month low with households expressing fresh worries about their standards of living and the job-market situation. Sentiment is likely to have remained weak in April, with more evidence of rising unemployment, although the gradual decline in headline inflation should have helped. We see a good chance of the dissatisfaction with the President and PM being reflected in the April survey.		

Spain

Apr 23	***House Prices, 1Q***	**Forecast: -2.0% QQ, -9% YY**	**Prior: -2.2% QQ, -10% YY**
	House prices are likely to continue their slide in 1Q13, roughly at the same annual pace of the previous months (minus 9%-10% YY). We believe the housing adjustment in Spain is far from complete as several indicators – real house prices, house price-to-income ratios, etc. – suggest further room before moving closer to long-term averages.		
Apr 25 08:00 London Time	***Unemployment Rate, 1Q***	**Forecast: 26.3%**	**Prior: 26.0%**
	Unemployment likely continued its steep upward trajectory in 1Q13, rising to a new record-high of 26.3%, as suggested by monthly data available up to February on the harmonised unemployment rate. Data on employment dynamics are important to assess the speed of job destruction – we estimate a decline of 1.3% QQ, NSA – since the rise in the unemployment rate is somewhat contained by a falling labour force (-0.8% QQ in 4Q12, and a similar fall seen in 1Q13). The fall in the labour force stems from emigration and discouraged workers which in some cases are falling off the criteria for unemployment benefit eligibility.		

Economic Indicators

Italy

Apr 23 09:00 London Time

Consumer Confidence (Apr)	**Forecast: 85.0**	**Prior: 85.2**

Consumer sentiment likely stabilised in April, after the March drop. Positive news from the government's decision to repay its arrears and to delay the introduction of a new local authority tax may have offset the still negative mood on the general economic outlook. The index remains at its lowest levels of 2.6 standard deviations below its long-run average since the series began in 1982.

Sweden

Apr 23 08:30 London Time

Unemployment Rate, Mar	**Forecast: 8.5%**	**Prior: 8.5%**
Unemployment Rate, Mar (SA)	**Forecast: 8.2%**	**Prior: 8.2%**

The labour market is generally weakening in line with the Riksbank's assumption; unemployment has been trending upwards since mid-2012, driven by increasing labour supply, and we expect this will continue ahead. Meanwhile, employment is still rising slightly, and short-term indicators suggest that this trend will continue in the near-term. Statistics Sweden revised unemployment upwards by 0.3pp for the period 2010-2012. This has not affected the change of rate in unemployment, but unemployment has proved to be further from the historical trend than expected.

Apr 26 08:15 London Time

Consumer Confidence, Apr	**Forecast: 2.5**	**Prior: 2.8**

Consumer sentiment improved further in March and is now basically in line with its long-term average. House prices have recovered slightly in recent quarters and some house price indicators suggest slight upward pressure in the housing market also ahead. The equity market has had a bumpy road in March, but is now broadly around the level in February. Meanwhile, car sales fell again in March (by 15.1% YY), the third consecutive drop, and the labour market continues to weaken (short-term indicators, though, point to slightly rising employment growth ahead). On balance, we expect consumer confidence to remain around current levels in April. Inflation expectations have fallen in recent months and with very low current levels of inflation, inflation expectations should also stay low ahead (1.1% YY in Mar, the lowest since Jan-09).

Apr 26 08:15 London Time

Manufacturing Confidence, Apr	**Forecast: -12**	**Prior: -10**

Sentiment among manufacturers was basically unchanged in March and although being 0.5 std. dev below the long terms average, sentiment is now back to levels, indicating that the sector is expanding. However, lower German and euro area PMIs and signals of fairly large staff cut-backs among Swedish manufacturer ahead suggest that confidence likely will fall back somewhat heading into the second quarter.

Apr 26 08:30 London Time

Household Credit Growth, Mar	**Forecast: 4.6% YY**	**Prior: 4.6% YY**

Lending to households ticked slightly higher in February to 4.6% YY, but has otherwise gradually moderated from 9.3% YY in early 2010 and 5.0% YY a year ago. The largest part of households' loans consists of housing loans (63%), which in Feb had an annual growth rate of 4.7%, down from 5.2% YY a year ago and 10.5% YY in early 2010. Hence, it appears that the tightening in mortgage regulation is having the intended effect on household borrowing (an 85% loan-to-value mortgage cap was introduced in Oct-10). In late-Nov, the FSA proposed a 15% risk weight floor for mortgages as another measure to contain household indebtedness (170% of disposable income at present).

United Kingdom

Apr 23 09:30 London Time

Public Sector Net Borrowing, Mar	**Forecast: £15.3 Billion Deficit, £82.2 Billion Deficit Fiscal Year To Date**
(Figures Exclude Costs of Financial Intervention)	**Year Ago: £16.7 Billion Deficit, £120.9 Billion Deficit Fiscal Year To Date**

The March figures usually show a sharp rise in borrowing, as government departments rush to use up their spending allocations. A figure in line with our forecasts would put the full-year deficit part-way between the OBR's forecasts in the end-2012 Autumn Statement (£0.5bn) and that in the early-2013 Budget £86.5bn), although the monthly deficit figures often are revised markedly.

Apr 23 11:00 London Time

CBI Industrial Trends Survey, Apr		
Quarterly Business Confidence, Apr	**Forecast: +8%**	**Prior (Jan): 0%**
Monthly Output Expectations Net Balance, Apr	**Forecast: +4%**	**Prior (Mar): +22%**
Monthly Order Books Net Balance, Apr	**Forecast: -18%**	**Prior (Mar): -15%**
Monthly Selling Prices Net Balance, Apr	**Forecast: +5%**	**Prior (Mar): +5%**

The April survey often shows improving confidence, with an average improvement in the quarterly confidence index of 11 points between the January and April surveys over the past 10 years. The rise that we expect this year (8 points) therefore is slightly below the seasonal norm, reflecting adverse effects from the EMU recession and external uncertainties.

Apr 25 09:30 London Time

GDP, 1Q Preliminary	**Forecast: 0.0% QQ, 0.2% YY**	**Prior: -0.3% QQ, 0.3% YY**

The available data suggest that service sector output rose slightly in early 2013, while industrial production was roughly flat and construction fell. Combining these, we expect the ONS will report that overall GDP was roughly flat, but there are uncertainties relating to the February services output figure released at the same time and the extent of weather-related effects on March activity. Either way, the big picture is that the economy remains weak.

Apr 25 09:30 London Time

Service Sector Output, Feb	**Forecast: 0.1% MM, 1.5% YY**	**Prior: 0.3% MM, 0.8% YY**

The service sector PMI picked up a bit in February, and hence we expect another slight rise in output. Such a figure would put the average level of output in Jan-Feb 0.1%-0.2% above the 4Q average.

Sources: National Statistical Offices, National Central Banks, Bloomberg, and Citi Research forecasts.

Economic Indicators

Key Economic Indicators (29 April – 3 May 2013)

During The Week		Forecast	Last
07:00	Germany: Retail Sales, Mar (by 30 Apr)		
07:00	UK: Nationwide House Prices, Apr		
Monday 29 April		**Forecast**	**Last**
	Germany: Consumer Prices, Apr		
08:00	Spain: HICP, Mar Flash		
08:00	Spain: Retail Sales, Mar		
08:30	Sweden: Riksbank Minutes		
08:30	Sweden: Retail Sales, Mar		
09:00	Italy: Contractual Wages, Mar		
10:00	Italy: Business Confidence, Apr		
10:00	Euro Area: Business & Consumer Surveys, Apr		
Tuesday 30 April		**Forecast**	**Last**
00:01	UK: GfK Consumer Confidence, Apr		
07:00	Germany: GfK Consumer Confidence, May		
07:45	France: Consumer Spending, Mar		
07:45	France: Producer Prices, Mar		
08:00	Spain: GDP Flash Estimate, 1Q		
08:55	Germany: Unemployment, Apr		
09:00	Norway: LFS Unemployment, Feb		
09:00	Norway: Retail Sales, Mar		
09:30	UK: Personal Borrowing, Mar		
09:00	Italy: Unemployment, Mar		
09:30	UK: Personal Borrowing, Mar		
10:00	Italy: Consumer Prices, Apr		
10:00	Euro Area: HICP, Apr Flash		
10:00	Euro Area: Unemployment Rate, Mar		
	Spain: Current Account, Feb		
	Spain: Budget Balance, Mar		
	Greece: Retail Sales, Feb		
Wednesday 1 May		**Forecast**	**Last**
	Labour Day holiday in some European countries		
07:30	Sweden: PMI, Apr		
08:00	Norway: PMI, Apr		
09:30	UK: Manufacturing PMI, Apr		
19:00	US: FOMC Outcome		
Thursday 2 May		**Forecast**	**Last**
09:00	Norway: Credit Indicator C2, Mar		
09:00	Italy: Producer Prices, Mar		
09:00	Euro Area: Manufacturing PMI, Apr		
12:45	Euro Area: ECB Outcome – Press Conference at 13:30 (Bratislava)		
	Italy: Budget Balance, Apr		
Friday 3 May		**Forecast**	**Last**
09:00	Norway: Unemployment Rate, Apr		
09:30	UK: Services PMI, Apr		
10:00	EU Commission Spring Economic Forecasts		
10:00	Euro Area: Industrial Producer Prices, Mar		
14:00	Belgium: GDP, 1Q		

Sources: National statistical offices, central banks and Citi Research

Recent Research Publications	Author	Date
Euro Area		
Euro Area: Sovereign Debt Crisis Update	Jürgen Michels	Apr 19, 2013
European Economic Forecast Highlights - April 2013	Ann O'Kelly	Apr 18, 2013
ECB - Rate Cut Likely in May or June	Jürgen Michels	Apr 4, 2013
Euro Economics Weekly		
Italy's Credit Crunch	Giada Giani	Apr 12, 2013
France: Could Low Popularity Slow the Structural Reform Drive?	Guillaume Menuet	Apr 5, 2013
ECB: Rate Cut in 2Q, April Possible	Jürgen Michels	Mar 28, 2013
Cyprus and Contagion	Giada Giani and Jürgen Michels	Mar 22, 2013
Some Deserved Fiscal Leeway for Portugal	Giada Giani	Mar 15, 2013
Fiscal Compact: A Structural Straight-Jacket	Guillaume Menuet	Mar 8, 2013
Chief Economist Publications		
Global Economic Outlook and Strategy - April 2013	Willem Buiter	Apr 17,2 013
Global Economics View - Cyprus is systemically important – it changed the rules of the game	Willem Buiter	Apr 10,2 013
Italy		
Italian Election - Risks of Political Instability Have Increased	Giada Giani	Feb 15, 2013
Spain		
Spain - Registered Unemployment and Sector Accounts Data	Giada Giani	Apr 2, 2013
Greece		
Greece - Recession Not Showing Signs of Easing	Giada Giani	Mar 11, 2013
Greece		
Cyprus - Uninsured Depositors Hit By Major Losses	Giada Giani	Mar 25, 2013
Ireland		
Ireland - GDP Flat In Q4, Momentum Slowing	Michael Saunders	Mar 21, 2013
Norway		
Scandi Economics Update	Tina Mortensen	Apr 19, 2013
Norway - Household Credit Demand Slows in 1Q 2013	Tina Mortensen	Apr 18, 2013
Sweden		
Sweden - Riksbank Softening – Opens Door for July Rate Cut	Tina Mortensen	Apr 18, 2013
Sweden - Spring Budget Bill: Fiscal Middle Way	Tina Mortensen	Apr 15, 2013
UK		
UK - Retail Sales Fall Back, Probably Hit By Weather	Michael Saunders	Apr 18, 2013
UK - Unemployment Edges Up, Wage Growth Weakens	Michael Saunders	Apr 17, 2013
UK - Inflation Stable Above Target	Michael Saunders	Apr 16, 2013
UK Economics Weekly		
Economy Still Flat-Lining	Michael Saunders	Apr 12, 2013
Why Is Investment So Weak?	Michael Saunders	Apr 5, 2013
MPC Remit Changes - More Significant Than Generally Realised	Michael Saunders	Mar 28, 2013

Source: Citi Research

Accessing Citi Economic Research

We want to highlight to you that our research is also available for your convenience through the following research distribution providers:

- **Bloomberg using CTIR<GO>**
- **FactSet**
- **Thomson Reuters**
- **TheMarkets.com from Capital IQ**

You are automatically able to view Citi research if you have entitlement on one of these systems. If you do not currently have Citi entitlement on these systems, please contact your provider representative to request access. These services are available to you in addition to Citi website access and research email services you may already receive from Citi directly.

If you have any questions or we can be of further assistance please do not hesitate to contact us.

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.

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	Jürgen Michels; Giada Giani; Guillaume Menuet; Michael Saunders; Ebrahim Rahbari; 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 Research does not set a predetermined frequency for publication, if the Product is a fundamental research report, it is the intention of Citi Research to provide research coverage of the/those issuer(s) mentioned therein, including in response to news affecting this issuer, subject to applicable quiet periods and capacity constraints. The Product is for informational purposes only and is not intended as an offer or solicitation for the purchase or sale of a security. Any decision to purchase securities mentioned in the Product must take into account existing public information on such security or any registered prospectus.

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

Important Disclosures for Morgan Stanley Smith Barney LLC Customers: Morgan Stanley & Co. LLC (Morgan Stanley) research reports may be available about the companies that are the subject of this Citi Research research report. Ask your Financial Advisor or use smithbarney.com to view any

available Morgan Stanley research reports in addition to Citi Research research reports.
Important disclosure regarding the relationship between the companies that are the subject of this Citi Research 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.
For Morgan Stanley and Citigroup Global Markets, Inc. specific disclosures, you may refer to www.morganstanley.com/researchdisclosures and https://www.citivelocity.com/cvr/eppublic/citi_research_disclosures.
This Citi Research 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 Citi Research. 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 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, 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 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.

With the exception of our product that is made available only to Qualified Institutional Buyers (QIBs) and other product that is made available through other distribution channels only to certain categories of clients to satisfy legal or regulatory requirements, Citi Research concurrently disseminates its research via proprietary and non-proprietary electronic distribution platforms. Periodically, individual Citi Research analysts may also opt to circulate research posted on such platforms 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. Citi Research simultaneously distributes product that is limited to QIBs only through email distribution.