11 July 2014 | 16 pages

Developed Markets
Western Europe

Euro Economics Weekly

Why Banking Union Matters: Then and Now

- Banking union matters a great deal, in our view. In fact, its official aims of increasing financial stability, improving access to credit and reducing financial fragmentation are probably necessary for the Eurozone to survive and prosper. The current initiatives towards banking union are incomplete, but they are a significant step in the right direction, in our view, even if progress will be slow and beset with risks.

- A rigorous Comprehensive Assessment is key for the success of banking union. Uncertainty about the size of potential capital shortfalls remains large. That brings the risk of surprises or the possibility of continued high provisioning by banks.

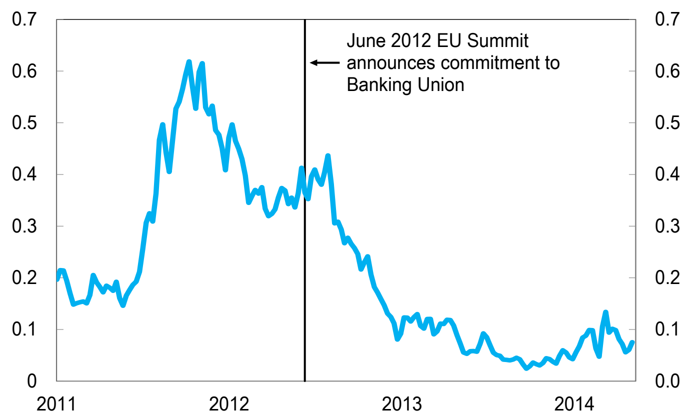
- But banking union matters in another way: efforts towards and commitments to banking union have probably been important factors in increasing the ECB's willingness to take measures to support the Eurozone financial system, in our view, both through the OMT and through the upcoming TLTRO measures. Banking union will continue to be important for future ECB measures, in our view, including for the ECB to be willing to function as an effective lender of last resort for the Eurozone.

Figure 1. Citi Forecasts

	$/€	Euro Repo	10-yr Bunds	£/€	UK Bank Rate	10-Yr Gilt-Bund
4Q 14	1.36	0.15	1.50	0.77	0.75	157
2Q 15	1.36	0.15	1.55	0.77	1.25	162

Source: Citi Research

Figure 2. Euro Area — Composite Indicator of Systemic Stress in the Financial System (CISS), 2011-14



Sources: ECB and Citi Research

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

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

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

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

Antonio Montilla
+44-20-7986-3282
antonio.montilla@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
Ebrahim Rahbari

Why Banking Union Matters

Banking union matters, both in the short-term and in the long-term

- In the short-term, the AQR probably weighed on financial conditions and could continue to raise bank provisioning

- In the long-term, it could boost financial stability, lending and reintegrate financial markets

- In the short- and long-term, banking union likely makes it easier for the ECB to do more

On November 4, the ECB is due to take over the task of single supervisor of the Eurozone's largest banks and the ECB's Comprehensive Assessment (CA) of such banks is on its final stretch. We have long emphasised that we think some form of banking union is key for the euro area to survive and prosper.[1] This is mostly due to the importance of banking union's 'core' objectives: safeguarding financial stability, reducing cross-country financial fragmentation and improving access to funding for the Eurozone's private sector. These objectives remain very important, and current initiatives towards banking union are a step in the right direction, even though much remains to be done.

Much depends on the success of the ECB's CA. In our view the CA looks just about able to satisfy the minimum conditions for the rigour needed to defend the ECB's reputation and to accelerate the clean-up of Eurozone bank balance sheets. Inter alia, that probably means continued relatively high provisioning by Eurozone banks in the near-term to prepare for the CA results.

In our view, in the near-term an *indirect* effect of banking union is most important: efforts towards banking union raise the likelihood that the ECB will provide both actual policy stimulus and insurance against adverse shocks. This has been true in the more distant past (such as for the ECB's OMT decision) and recently (for the TLTROs) and probably also for a future QE decision. But even in the medium-to-long term, when the original banking union aims have major significance, these indirect effects efforts will still be important. This is because the ECB will continue to play a key role in a new banking union setup on top of its supervisory role, namely as a much-needed lender (and potentially market maker) of last resort.

Banking Union, the ECB and Eurozone Governments

Banking union has from the start interacted with other Eurozone policies

The movement toward banking union was an important factor in the ECB's OMT and TLTRO decisions, in our view

From its inception, banking union's significance has gone beyond its potential direct impacts through indirect effects on other policies. Thus, in the summer of 2012 the willingness of the various euro area governments (e.g. the French and the Spanish) to give up sovereignty over banking supervision encouraged the German government to do the same, contributed to Germany allowing the Target2 system to continue when Target2 imbalances were soaring, and for Germany to agree to, at some point, create a mutualised bank recapitalisation facility.

In our view, the commitment to move towards banking union (notably the decision to improve and centralise supervisory standards, and to create more effective laws and institutions to resolve and potentially jointly recapitalise banks across the Eurozone) in turn was a major factor in the ECB's decision to create the OMT in 2012.[2] These developments jointly were hugely significant in ending the (so far) most acute phase of the Eurozone crisis (see Figure 2 on the Front Page). But banking union's significance for ECB policy continues. In our view, without banking union, the ECB probably would have been more reluctant to create the TLTRO facilities recently. We expect the partly reciprocal interplay between ECB policy and other Eurozone policies to continue, but with banking union entrenched, the ECB should generally be more willing (and, through its supervisory role, more able) to act supportively, which should probably also apply to a potential QE decision.[3]

---

[1] See e.g. "Will Banking Union Save EMU?", *Global Economic Outlook and Strategy* Dec 2013, page 8.

[2] The ECB did not claim the role of single supervisor for itself. Rather, the commitment to carry out a rigorous Comprehensive Assessment was a prerequisite for both the ECB and the Eurozone 'creditor countries' to accept that role for the ECB.

[3] The reciprocity between ECB action and other policies did of course not start with banking union. For instance, the ECB's decision to carry out government purchases under the SMP was contingent on EU-IMF bailout programmes in the case of Greece, Ireland and Portugal (a weaker version of such a link was also there for SMP purchases of Italian and Spanish bonds).

The ECB's Comprehensive Assessment

The ECB's Comprehensive Assessment (CA) is on its final stretch — the AQR finishes in July and CA results are due to be published in mid-to-late October

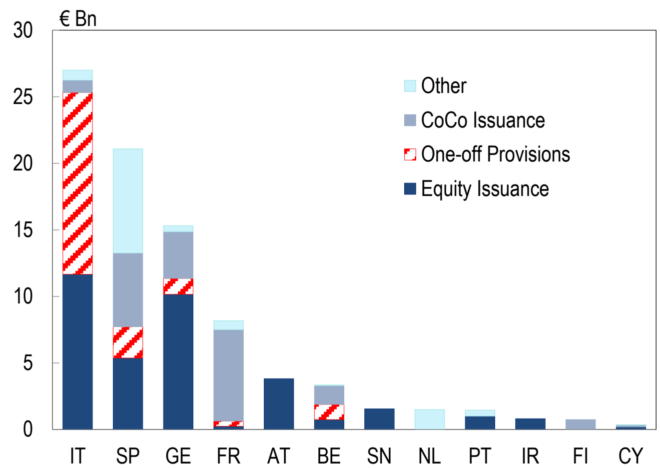
The currently most visible part of the Banking Union efforts is the ECB's CA (including an asset quality review, AQR, and a stress test) of 128 Eurozone banks, accounting for approximately 85% of the assets of the banking system. The AQR and stress test results are due to be communicated jointly in mid-to-late October 2014.[4] For the CA to achieve its objectives, it needs to be rigorous to help burnish the ECB's credibility as an effective supervisor and to reliably reveal potential capital holes in Eurozone banks. To make it likely that these holes are revealed and to assure that these are filled, sufficient backstops must also be available.

Figure 3. Euro Area and US — Stress Test Adverse Scenarios

	US	Euro Area
Minimum Common Equity Tier 1 Ratio (% of RWA)	4.5	5.5
Deviation in Adverse Scenario from Baseline:		
■ Real GDP (%YY)	-8	-6.6
■ Inflation (%YY)	-2.7	-1.9
■ Unemployment rate (%)	4.6	2.2
■ Equity Prices (%YY)	-27	-18.1
■ Residential Property Prices (%YY)	-30.7	-19.2
■ Commercial Property Prices (%YY)	-39.8	-11.7

Note: RWA are risk-weighted assets. For the US, this is the 'severely adverse scenario' under the 2014 Comprehensive Capital Analysis and Review. For the Eurozone, the assumptions are included in the 2014 EBA Stress Test.
Sources: EBA, Fed and Citi Research

Figure 4. Selected Countries -- Capital Raised Since July 2013 (€Bn)



Sources: ECB Financial Stability Review and Citi Research

In our view, the CA will be relatively rigorous:

1. Its process and setup look broadly appropriate for a rigorous assessment

In our view, the CA will be relatively rigorous, even if it may still fall short of a 'deep clean' of Eurozone bank balance sheets. This is based on an assessment of three types of information: i) the process and powers given to the ECB, ii) the available AQR and stress test assumptions and iii) the behaviour of the parties involved.

The process and setup of the CA seem broadly appropriate, in our view. This is because in contrast to previous pan-European stress tests, the CA ticks a number of boxes: i) the CA includes an asset quality review, ii) the ECB has direct access to supervisory information, iii) the ECB has direct relationships with the assessed banks (and can request information from them and the national supervisors), and iv) third-party advisors are hired to assist in the AQR.[5] However, we highlight three caveats: the third-party advisors are not chosen by the ECB, the test relies very heavily on national authorities (even though there is supposed to be 'cross-checking' across national authorities) and the ECB has limited enforcement powers.[6]

4 Bloomberg recently reported that the CA results could be announced on October 18, even though the date could change and ECB officials have suggested a publication date in the second half of October.

5 The incentive for the ECB to protect its reputation is another often-cited reason why the CA could be effective. However, even though the ECB values and has an incentive to protect its reputation, in the face of various trade-offs the preference to protect its reputation may not dominate.

6 The ECB's analytical approach has also been criticised, including by the German bank supervisor Bafin. See e.g. http://www.handelsblatt.com/politik/konjunktur/geldpolitik/bafin-chefin-koenig-deutsche-finanzaufsicht-kritisiert-ezb/10139672.html

Its assumptions are selectively conservative

In our view, the publicly available assumptions are *selectively* conservative, even though the rigour of the CA assumptions are difficult to assess conclusively, particularly for the most important part (the AQR), as much depends on the enforcement and interpretation of the assumptions and valuation approaches.

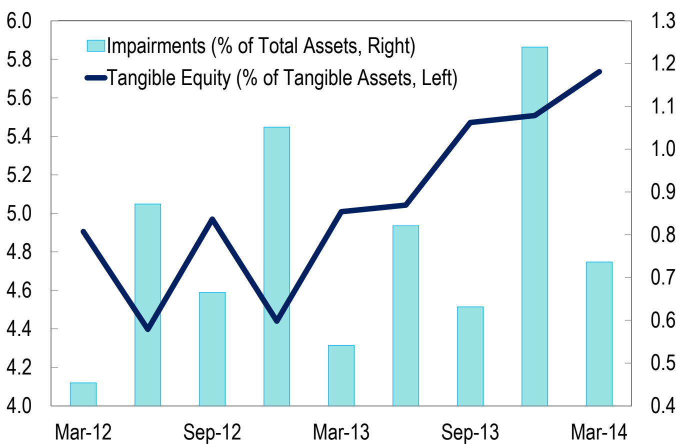
The stress test assumptions are more benign than in the US CCAR…

…but the NPL definitions led- and collateral valuation could lead- to higher provisioning by banks

For instance, the capital hurdle is 8% Common Equity Tier 1 for the base case of the stress test and 5.5% for the adverse scenario, somewhat higher than the 4.5% hurdle for the 'severely adverse' scenario in the latest US stress test. Even though the assumptions of the stress test appear somewhat conservative in absolute terms, they are relatively benign compared to, say, the most recent US stress test (Figure 3). For instance, the cumulative three-year deviations in the adverse scenario ('severely adverse' in the US case) are less harsh in the EU stress tests for GDP, inflation, unemployment, equity prices and property prices. Sovereign bond holdings are stressed in the EU stress test, even though much more harshly for holdings in the trading book than for hold-to-maturity portfolios. Assumptions for future net interest income on the other hand appear relatively conservative.

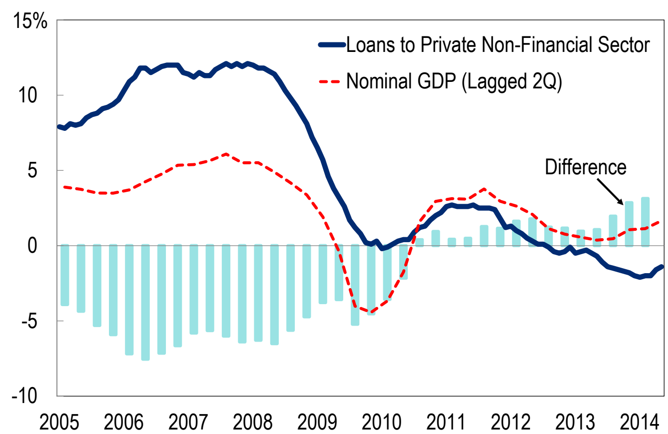
The **definitions for NPLs and forbearance were tightened** for quite a few countries for the AQR (giving rise to notable increases in bank provisions in Q4 2013). In that context, it is worth noting that collateral (as well as other types of valuation) are among the focus areas of the AQR and that lower collateral valuations could be a significant driver of another round of high provisions. The ECB's indicative timeline suggests that the first calculation of an AQR-adjusted CET1 ratio will be carried out in mid-July.

Figure 5. Euro Area — Significant Banking Groups Tangible Equity (% of Tangible Assets) and Impairments (% of Total Assets), 2012-14



Sources: ECB and Citi Research

Figure 6. Euro Area — Nominal GDP (%YY, Lagged By Two Quarters) and Bank Loans to the Private Sector (%YY), 2005-14



Note: Loans to private non-financial sector adjusted by securitization and sales.
Sources: ECB, Eurostat and Citi Research

The CA has affected bank and government behaviour: banks have bolstered their balance sheets and governments have pushed and helped

In terms of the behaviour of banks and governments, the CA is having noticeable effects, in our view. Thus, the **ECB's recent Financial Stability Review (FSR)** highlights that:

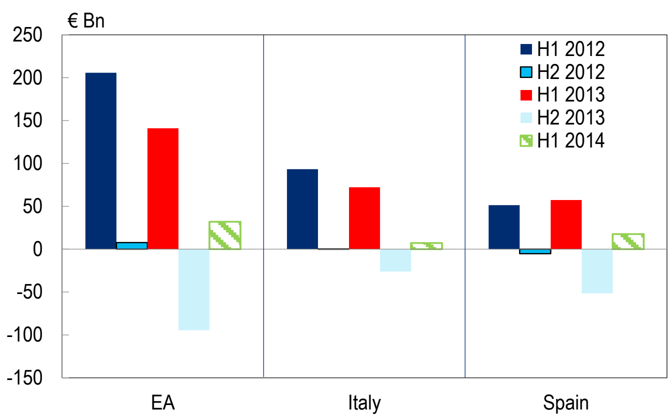
- The Eurozone's 'Significant Banking Groups' (SBGs) have raised capital by €45bn since July 2013.[7] The bulk of this capital build-up has taken place in Italy, followed by banks in Spain and Germany (see Figure 4), and, at least anecdotally, equity offerings of Eurozone banks appear to continue.

[7] The ECB defines SBGs as the 'consolidated group level analogue of these significant banks, which amounts to up to 90 banking groups (depending on data availability).

- Impairment charges taken by Eurozone banks were comparatively high in Q4 2013 (at more than 1% of assets for the median SBG) and Q1 2014 and are expected to continue to be high in Q2 as noted above (see Figure 5). Despite the increase in impairment charges, leverage ratios (ratios of tangible equity to tangible assets) are still rising fairly steadily. In Q1 2014, they stood at 5.7% for the median SBG, compared to 5.0% in Q1 2013 and 4.2% in 2008.

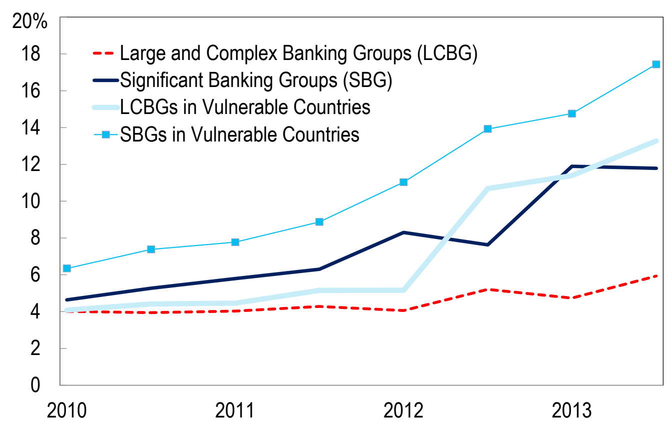
- Eurozone monetary-financial institutions (MFIs) have reduced assets by €4.3trn since May 2012 and SBGs by more than €5trn or 20% from the peak. The balance sheet reduction has been fairly steady, but deleveraging efforts may in fact have accelerated in some ways since the CA was announced. For instance, the difference between nominal GDP growth (lagged by two quarters) and growth in private sector loans seems to have picked up noticeably in mid-2013 when the CA prepared and announced and has continued to go up (see Figure 6).

Figure 7. Selected Countries — Net Purchases of Domestic General Government Securities (€Bn), 2012-14



Note: H1 2014 is for January to May only.
Sources: ECB and Citi Research

Figure 8. Euro Area — Non-Performing Loans (% of Loans), 2010-13



Note: Vulnerable countries include CY, GR, IR, IT, PT, SN and SP.
Sources: ECB, Eurostat and Citi Research

But in addition to banks, national supervisors. central banks and governments also seem to have adjusted their behaviour in light of the CA in certain ways. Thus, central banks and national supervisors in a number of countries have carried out their own 'pre-assessments' of bank balance sheets (including Germany and Italy) and put pressure on domestic banks to increase provisions and raise capital ahead of the CA results. Governments have also taken measures to bolster bank balance sheets, including through the conversion of deferred tax assets (DTAs) into tax credits in Spain and the revaluation of Bank of Italy stakes in Italy.

The CA has modestly reduced banks' willingness to buy domestic government debt

The CA has probably had a modest impact on banks' willingness to take on exposure to domestic governments. Relative to total assets, domestic government exposure is at multi-year highs for a broad range of EA countries, but that is partly a feature of the ongoing bank deleveraging process (as well as valuation gains). *Net purchases* of domestic government bonds and loans have on average been negative since H2 2013 for the euro area as a whole as well as countries, including Italy, Portugal and Spain (see Figure 7). By contrast, the previous 18 months had seen sizable net purchases of government bonds and loans. In addition, there was a sizable 'window dressing' effect in December 2013, the snapshot date for the AQR, when some Eurozone banks sold government bonds to buy some back in January 2014.

How large will capital holes be?

The range of uncertainty for the potential capital holes is large

Given the uncertainties pointed out above, it is difficult to forecast how large potential capital holes will be. In December, the Bruegel think-tank reported that analyst estimates ranged from €50-650bn and we doubt the range of estimates has shrunk materially since.[8] We do not have an own estimate, but make the following observations:

Eurozone banks have built up more capital, but NPLs are still rising and the weak economy hurts profitability

First, the ECB notes that the median Common Equity Tier 1 (CET1) ratio of large and complex banking groups (LCBGs, a subset of SBGs) in the Eurozone, at 10.4% in Q1 2014 was slightly below the global median of LCBGs, but already above the fully phased in 2019 Basel III minimum. Second, **total write-downs of Eurozone banks in the ECB's Consolidated Banking Database** have been almost €700bn since 2008. Third, subdued growth, very low inflation and net interest margins will likely weigh persistently on bank profitability. NPLs are still rising (notably for banks in 'vulnerable countries', see Figure 8), and fast enough for coverage ratios to barely have kept up with the rise in NPLs.

'True' capital needs will be much smaller than announced capital shortfalls, as much capital has been raised since the CA's snapshot date in end-December

Overall, the uncertainty around potential capital shortfalls remains large, in our view. Communication by policymakers has not helped in this regard. A number of national and EU policymaker statements have suggested that they do not expect capital needs to be very large, at least for 'their' banks.[9] At the same time, various policymakers have exhorted banks to try to raise capital before the CA is concluded. But it is worth noting that even large 'headline' announced capital shortfalls in October need not be destabilising. In particular, the ECB's communication will likely highlight capital needs as of the balance sheet snapshot date of end-December 2013. As highlighted above, since then banks have continued to strengthen their balance sheets, so a substantial amount of the capital holes will have been filled in the meantime. Furthermore, many banks continue to have access to equity markets to fill potential capital shortfalls, and the ECB will reportedly give banks at least six months to do so (or to dispose of assets) after the CA is concluded.

The SRM and SSM matter, too

More than half of the banks in the CA are not listed — that is one of the reasons why effective resolution mechanisms and public backstops are important

However, the majority of banks in the CA are not publicly listed. The uncertainty about the size of capital losses and question marks over access to equity markets make alternative backstops essential to fend off potential financial stability risks in the wake of the CA. Subject to the EU's State Aid rules, governments could step in to recapitalise domestic banks once more, even though the capacity to do so will be limited by fiscal constraints in some countries and political constraints in most. EU finance ministers at long last recently decided to grant the ESM the ability to recapitalise banks directly, but only subject to a long list of conditions, including bailing in senior unsecured bank creditors as required under the EUs banking recovery and resolution directive (BRRD). In principle, the BRRD as well as the Single Resolution Mechanism (SRM) will take effect at the beginning of 2015, but their bail-in provisions will only take effect from 2016, and to our knowledge only a few countries (e.g. Germany) are installing or have installed robust national special resolution regimes for banks that allow bailing in senior unsecured creditors.

The SRM and its bail-in provisions will not be ready in time, but they will be significant in the future, in our view

Even though these bail-in provisions will thus likely not be available in the aftermath of the CA, they are still very significant: they are the Eurozone's best bet to minimise the risk that insolvent banks could drag their sovereigns down with them at some point in the future. The set-up of the SRM appears by no means ideal, with a

[8] See Merler, S. and G. Wolff, "Ending Uncertainty: Recapitalisation under European Central Bank Supervision", Bruegel Policy Contribution, December 2013.

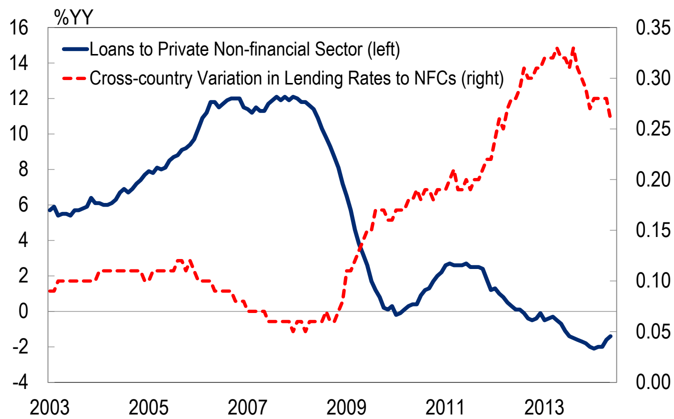
[9] For instance, the head of the SSM Supervisory Board Danielle Nouy noted on 9 July that she thought 'Eurozone banks are in better shape than markets think'.

complex decision-making process and significant remaining influence for national authorities. Nevertheless, we consider the SRM a major step forward, albeit one that probably will need to be improved significantly over time.[10]

The SSM is almost ready, whereas common deposit insurance is still far off

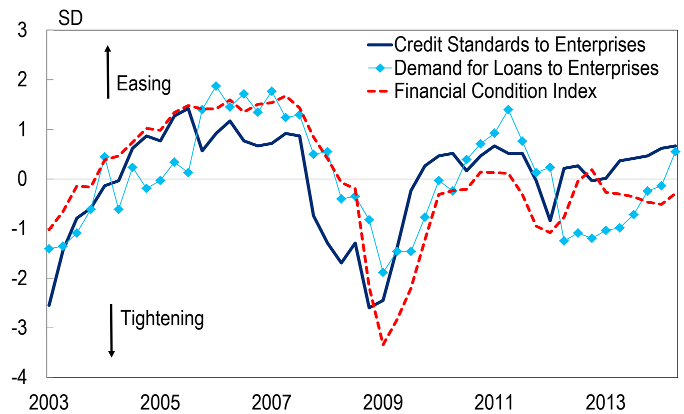
The set-up of the Single Supervisory Mechanism (SSM), in some contrast, seems to be more genuinely supranational and sensible. Still, the process towards effective Eurozone-wide supervision is still likely to be complex, not least as progress towards a true Single Regulatory Rulebook will be gradual. Common deposit insurance — which could form the third pillar of banking union — remains off the table, even though a fully functional lender of last resort may make its absence less problematic.

Figure 9. Euro Area — Cross-Country Variation in Lending Rates to NFCs and Loans to Private Non-Financial Sector (%YY), 2003-14



Note: NFCs are non-financial corporations. Coefficient of cross-country variation in lending rates to NFCs for loans up to €1ml. Loans to private non-financial sector adjusted by securitisation and sales. Sources: ECB and Citi Research

Figure 10. Euro Area — Citi Financial Conditions Index, Bank Lending Standards and Expected Demand for Loans to Non-Financial Corporations (SD around Long-Term Average), 2003-14



Note: NFCs are non-financial corporations.
Sources: ECB, Eurostat and Citi Research

Banking union is hugely significant for the Eurozone for different reasons

Overall, banking union remains a hugely significant project for the Eurozone, both in the near-term and in the medium-to-long-term, if for different reasons. The largest positive near-term impact of banking union could be coming through **the recently announced TLTROs, in our view** and perhaps through an increase in the ECB's willingness to undertake QE measures. On the other hand, over the last 12 months or so, the CA has probably raised uncertainty and accelerated bank deleveraging efforts, which probably weighed on both financial conditions and growth.

Very recently, there are some signs that financial conditions seem to slowly be on the mend, and fragmentation may be receding a bit

Very recently, there have been some signs that financial conditions may be ever so slowly on the mend (see Figure 10). Thus, **our financial conditions index eased** a little in the last two months and the rate of contraction of private sector lending is finally getting smaller (see Figure 9). Bank lending surveys show that credit standards have stopped tightening, and most recently even suggest that banks expect credit demand to tick up a bit. Furthermore, some gauges of financial fragmentation have started to narrow, including cross-country variation in lending rates or deposit rates. The road to an efficient, stable and integrated banking and financial system in the Eurozone is still long and we expect the Eurozone's recovery to remain mostly creditless, but the coming months could well see a further improvement in financial conditions and a further reduction in fragmentation.

[10] However, the SRM also carries risks, notably that an ineffective SRM would be even worse than the previous national resolution regimes or that selective application of bail-in provisions would entrench rather than diminish financial fragmentation in the Eurozone.

Key Economic Indicators (14 July – 18 July 2014)

		Forecast	Last
Monday 14 July		**Forecast**	**Last**
09:30	Italy: General Government Debt, May		
10:00	Euro Area: Industrial Production, May	-1.3% MM	0.8% MM
Tuesday 15 July		**Forecast**	**Last**
08:15	Switzerland: Producer and Import Prices, Jun		
08:30	Netherlands: Trade Balance, May		
08:30	Netherlands: Retail Sales, May		
09:00	Italy: Consumer Prices, Jun Final		
09:30	UK: Consumer Prices, Jun	-0.1% MM, 1.6% YY	-0.1% MM, 1.5% YY
	CPI Ex Food, Drink, Tobacco, Energy, Jun	-0.1% MM, 1.7% YY	0.0% MM, 1.6% YY
	Retail Prices, Jun	0.1% MM, 2.6% YY	0.1% MM, 2.4% YY
	RPIX – Ex Mortgages, Jun	0.1% MM, 2.7% YY	0.1% MM, 2.5% YY
09:30	UK: Producer Input Prices, Jun	-0.4% MM, -5.1% YY	-0.9% MM, -5.0% YY
09:30	UK: Producer Output Prices, Jun	0.1% MM, 0.5% YY	-0.1% MM, 0.5% YY
	Excluding Food, Drink, Tobacco, Energy, Jun	0.1% MM, 1.1% YY	0.0% MM, 1.0% YY
10:00	Germany: ZEW Economic Sentiment, Jul	27.8	29.8
	ZEW Current Situation, Jul	64.7	67.7
Wednesday 16 July		**Forecast**	**Last**
09:00	Norway: Trade Balance, June		
09:00	Italy: Trade Balance, May		
09:30	UK: LFS Unemployment, 3-Month Average, Mar-May	-122K QQ, 6.5% Rate	-161K QQ, 6.6% Rate
	LFS Unemployment, Single Month, May	6.2% Rate	6.4% Rate
	Claimant Count Unemployment, Jun	-25K MM, 3.1% Rate	-27.4K MM, 3.2% Rate
	Average Earnings ex Bonuses, Mar-May	0.7% YY	0.9% YY
10:00	Euro Area: Trade Balance, May		
	ECB announces revised 2015 schedule for six-weekly Monetary Policy Meetings together with publication of Minutes		
Thursday 17 July		**Forecast**	**Last**
07:00	EU-27: New Car Registrations, Jun		
08:30	Netherlands: Unemployment, Jun		
09:00	Norway: Survey of Bank Lending, 2Q		
10:00	Italy: Current Account, May		
10:00	Euro Area: HICP, Jun Final	0.5% YY	0.5% YY
10:00	Euro Area: Construction Output, May		
Friday 18 July		**Forecast**	**Last**
08:30	Netherlands: Consumer Confidence, Jun		
09:00	Euro Area: Balance of Payments, May		
14:00	Belgium: Consumer Confidence, Jul		

Sources: National statistical offices, central banks and Citi Research

Economic Indicators

Euro Area			
Jul 14 10:00 London Time	***Industrial Production, May***	**Forecast: -1.3% MM**	**Prior: 0.8% MM**
	Based on the very weak country data available so far, we estimate euro area industrial output plummeted by 1.3% MM in May, more than reversing the April gain. The annual rate of growth likely declined to +0.4% YY, from +1.2% YY in April, posting the slowest rate of increase since Sept 2013. While some temporary factors (uncertainty about the Russia/Ukraine situation) and calendar effects may have weighed on the May output data, overall these data confirm that the economic recovery in the euro area remains feeble.		
Jul 17 10:00 London Time	***HICP F, Jun***	**Forecast: 0.5% YY**	**Prior: 0.5%YY**
	Headline inflation is likely to be confirmed at 0.5% YY in June, in line with the flash estimate and unchanged relative to the May reading. Core HICP inflation likely edged higher to 0.8% YY, from 0.7% YY in April, moving back in line with the average of the previous eight months. We expect headline inflation to ease further during the summer to around 0.3% YY on favourable base effects, further price weakness in food and energy prices and firms' generally muted pricing power.		
Germany			
Jul 15 10:00 London Time	***ZEW Economic Sentiment, Jul*** ***ZEW Current Situation, Jul***	**Forecast: 27.8** **Forecast: 64.7**	**Prior: 29.8** **Prior: 67.7**
	We expect the ZEW index of financial market analysts to show a decline in June for both the current conditions component and the economic sentiment index. Incoming data have mostly been poor recently, including for IP, retail sales and industrial orders, which should break the trend of increases in the ZEW's current conditions index (it currently stands at the highest level since June 2011 after seven consecutive monthly increases). The expectations component is not nearly as elevated, but we expect yet another small decline to leave it still very close to its long-term average.		
Norway			
Jul 17 09:00 London Time	***Survey of Bank Lending, 2Q***		
	According to the latest survey of bank lending, banks reported slightly higher household credit demand in 1Q, while slightly lower demand had been expected (despite credit standards having been eased). This should not come as a big surprise given the recovery in the housing market. With house prices up 0.6% YY on average in 2Q, a large downward correction on the housing market has become more remote, in our view. The 1Q bank lending report also showed that corporate credit demand edged higher. There were only minor changes in overall credit standards for both households and enterprises in 1Q, while lending margins to enterprises fell. Ahead, banks expect lower margins on lending to both households and enterprises in 2Q. We expect the upcoming report to more or less confirm the picture painted in the first quarter.		
United Kingdom			
Jul 15 09:30 London Time	***Consumer Prices, Jun*** ***CPI Ex Food, Drink, Tobacco, Energy, Jun*** ***Retail Prices, Jun*** ***RPIX – Excludes Mortgages, Jun***	**Forecast: -0.1% MM, 1.6% YY** **Forecast: -0.1% MM, 1.7% YY** **Forecast: 0.1% MM, 2.6% YY** **Forecast: 0.1% MM, 2.7% YY**	**Prior: -0.1% MM, 1.5% YY** **Prior: 0.0% MM, 1.6% YY** **Prior: 0.1% MM, 2.4% YY** **Prior: 0.1% MM, 2.5% YY**
	Base effects from the relatively soft core inflation figure of a year ago may cause CPI inflation to edge up a little in June, although we think the outlook is for three quarters of roughly stable inflation rather than a sustained uptrend. Our forecast implies that 2Q CPI inflation averaged 1.6% YY, well below the MPC's forecast for 2Q-14 made a year ago (2.9%).		
Jul 15 09:30 London Time	***Producer Input Prices. Jun***	**Forecast: -0.4% MM, -5.1% YY**	**Prior: -0.9% MM, -5.0% YY**
	With sterling still appreciating, and commodity prices levelling off, we expect these data to show another decline in input prices – the sixth decline in a row and the tenth decline out of the past 12 months. Weakness in input prices will help keep a lid on inflation nearterm.		
Jul 15 09:30 London Time	***Producer Output Prices, Jun*** ***Output Prices Ex Tax, Jun*** ***Excluding Food, Drink, Tobacco, Energy, Jun***	**Forecast: 0.1% MM, 0.5% YY** **Forecast: 0.1% MM, 0.6% YY** **Forecast: 0.1% MM, 1.1% YY**	**Prior: -0.1% MM, 0.5% YY** **Prior: -0.1% MM, 0.6% YY** **Prior: 0.0% MM, 1.0% YY**
	Surveys suggest that manufacturing firms' expectations for their selling prices have fallen back recently and are similar to a year ago. Against this backdrop, we expect that output price inflation will remain stable this month, with the ex-tax rate at 0.6% YY for the fifth month in a row.		
Jul 16 09:30 London Time	***LFS Unemployment, 3-Mo Avge, Mar-May*** ***LFS Unemployment, Single Month, May*** ***Claimant Count Unemployment, Jun*** ***Average Earnings Ex Bonuses, Mar-May***	**Forecast: -122,000 QoQ, 6.5% Rate** **Forecast: 6.2% Rate** **Forecast: -25,000 MM, 3.1% Rate** **Forecast: 0.7% YY**	**Prior: -161,000 QoQ, 6.6% Rate** **Prior: 6.4% Rate** **Prior: -27,400 MM, 3.2% Rate** **Prior: 0.9 % YY**
	We expect the jobless rate to continue to fall rapidly, and a figure in line with our forecast would put the jobless rate at 6.5% -- a full percent below the MPC's forecast for 3Q-2014 made when forward guidance was launched in August 2013. Average earnings growth ex bonuses is likely to stay weak on the three-month average, although we expect the single month figure to tick up to 0.9% YY in May from 0.4% YY in April.		

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

Key Economic Indicators (21 July – 25 July 2014)

		Forecast	Last
Monday 21 July		**Forecast**	**Last**
07:00	Germany: Producer Prices, Jun		
09:00	Italy: Industrial Orders, May		
	Greece: Current Account, May		
Tuesday 22 July		**Forecast**	**Last**
07:00	Switzerland: Trade Balance, Jun		
09:30	UK: Public Sector Net Borrowing (Ex RM, APF & Fin. Interventions), Jun	£11.0 Billion Deficit	Year Ago: £11.6 Billion Deficit
	Fiscal Year To Date, Apr-Jun	£35.2 Billion Deficit	Year Ago: £33.8 Billion Deficit
10:00	Euro Area: Government Debt, 1Q		
11:00	UK: CBI Quarterly industrial Confidence, Jul	+28%	Apr: +33%
	CBI Monthly Output Expectations, Jul	+30%	Jun: +32%
	CBI Monthly Order Books, Jul	+10%	Jun: +11%
	CBI Monthly Selling Prices, Jul	0%	Jun: +3%
Wednesday 23 July		**Forecast**	**Last**
07:45	France: Industrial Confidence, Jul		
08:30	Netherlands: Consumer Spending, May		
09:30	UK: MPC Minutes of July 10 Meeting		
09:30	UK: BBA Mortgage Advances, Jun		
10:00	Euro Area: Government Deficit, 1Q		
11:00	UK: CBI Retail Survey, Jul		
15:00	Euro Area: Consumer Confidence, Jul Flash		
Thursday 24 July		**Forecast**	**Last**
08:00	Spain: Unemployment Rate, 2Q		
08:30	Sweden: Unemployment Rate, Jun		
08:30	Sweden: Producer Prices, Jun		
09:00	Italy: Retail Sales, May		
09:00	Euro Area: PMI, Jul Flash		
09:30	UK: Retail Sales Volumes, Jun	0.6% MM, 4.2% YY	-0.5% MM, 3.9% YY
10:00	Italy: Consumer Confidence, Jul		
Friday 25 July		**Forecast**	**Last**
07:00	Germany: GfK Consumer Confidence, Aug		
08:00	Spain: Producer Prices, Jun		
08:30	Netherlands: Producer Confidence, Jul		
08:30	Sweden: Household Lending, Jun		
08:30	Sweden: Retail Sales, Jun		
08:30	Sweden: Trade Balance, Jun		
09:00	Germany: ifo Business Climate, Jul		
09:00	Italy: Contractual Wages, Jun		
09:00	Euro Area: M3, Jun		
09:30	UK: Service Sector Output, May	0.4% MM, 3.4% YY	0.3% MM, 3.1% YY
09:30	UK: GDP, 1Q Preliminary Estimate	0.9% QQ, 3.2% YY	0.8% QQ, 3.0% YY
14:00	Belgium: Business Confidence, Jul		
17:00	France: Jobseekers, Jun		

Sources: National statistical offices, central banks and Citi Research

Publication Title	Author	Date
Euro Area — Sovereign Debt Update		
French Economy Minister: ECB Must Do More	European Economics Team	Jul 11, 2014
Draghi Calls for Greater Coordination on Reforms	European Economics Team	Jul 10, 2014
EcoFin: No Decisions on Flexibility of Budget Rules	European Economics Team	Jul 9, 2014
ECB's Lautenschläger Would Support QE Only If Emergency Deflation Threat;	European Economics Team	Jul 8, 2014
ECB Stresses Divergent Monetary Policy with US, UK	European Economics Team	Jul 7, 2014
Euro Area		
Portugal - One Lender Causes Widespread Market Turbulence	Giada Giani	Jul 10, 2014
Euro Area - Financial Conditions Improve in Q2, But Remain Tight	Giada Giani	Jul 9, 2014
Euro Area - ECB sheds light on TLTROs but no news on ABS purchases	Guillaume Menuet	Jul 3, 2014
Europe - Monthly Inflation Profiles for Selected Countries	Ann O'Kelly	Jul 2, 2014
Euro Area - Non-Core Items to Keep Pushing Headline Inflation Lower	Giada Giani	Jun 30, 2014
Euro Area - Money and credit: persistent weakness to require more support	Guillaume Menuet	Jun 30, 2014
ECB Preview - Rendez-vous in September?	Guillaume Menuet	Jun 26, 2014
European Economic Forecast Highlights - June 2014	Ann O'Kelly	Jun 26, 2014
Spain - Housing Adjustment: Are We Nearly There?	Antonio Montilla	Jun 13, 2014
Italy - Q1 GDP Details And April Industrial Output	Giada Giani	Jun 10, 2014
ECB - Door firmly open to additional stimulus and QE in late 2014	Guillaume Menuet	Jun 5, 2014
Monthly Inflation Profiles for Selected Countries	Ann O'Kelly	Jun 26, 2014
Europe - Monthly Inflation Profiles for Selected Countries	European Economics Team	Jun 5, 2014
Euro Area - Inflation Surprises Once Again to the Downside	Giada Giani	Jun 3, 2014
Euro Area - Economic Sentiment Strengthens, But France Stays Weak	Ebrahim Rahbari/Antonio Montilla	May 28, 2014
Euro Area - Weak M3 but fall in private sector loans eases in April	Ebrahim Rahbari/Antonio Montilla	May 28, 2014
Italy - Q1 GDP Downward Surprise and Political Uncertainty	Giada Giani	May 23, 2014
Euro Economics Weekly		
Is The Euro Area Recovery at Risk of Faltering?	Guillaume Menuet	Jul 4, 2014
Weak Pay Trends Imply Further Inflation Undershoot	Giada Giani	Jun 27, 2014
A Great Rotation towards Eurozone Portfolio Assets?	Ebrahim Rahbari	Jun 20, 2014
Labour Market Slack	Giada Giani	Jun 13, 2014
ECB TLTRO: Ambitious But Probably Not Enough, QE Lies Ahead	Guillaume Menuet	Jun 6, 2014
Negative Deposit Rate: Limiting Risks, Limited Upside	Ebrahim Rahbari	May 30, 2014
Soft Growth, Low HICP And Weak SPF Point To ECB Cut In June	Guillaume Menuet	May 23, 2014
Long Live (s) The Rise of the Current Account Surplus	Ebrahim Rahbari	May 16, 2014
Euro Economics Weekly - How Might QE Affect Financial Conditions?	Giada Giani	May 9, 2014
ECB: Reaction Function Points to Looser Stance Ahead	Guillaume Menuet	May 2, 2014
Private Deleveraging: Picking Up, but Hurting Less	Ebrahim Rahbari	Apr 25, 2014
Portugal: "Clean Exit" or Precautionary Credit Line?	Giada Giani	Apr 17, 2014
France: Will Valls Succeed Where Others Have Failed?	Guillaume Menuet	Apr 11, 2014
The Rise of The Output Gap	Ebrahim Rahbari	Apr 4, 2014
Italy — Some Short-Term Optimism	Giada Giani	Mar 28, 2014
Euro Area: Upside Risks To Q2 GDP	Guillaume Menuet	Mar 21, 2014
The Eurozone Investment Recovery	Ebrahim Rahbari	Mar 14, 2014
Internal Devaluation in the Periphery	Giada Giani	Feb 7, 2014
Chief Economist Publications		
Global Economic Market Forecasts	Michael Saunders	Jul 3, 2014
Global Economic Outlook and Strategy - June 2014	Willem Buiter	Jun 25, 2014
Global Economics View - The Long-Run Decline in Advanced-Economy Investment	Willem Buiter	Jun 12, 2014
Scandi and Switzerland		
Scandi Economics Update	Tina Mortensen	Jul 10, 2014
Sweden - Very Weak Production And Orders Data In May	Tina Mortensen	Jul 4, 2014
Sweden — Major Shift in Riksbank Policy - Cuts by 50bp and Lowers Rate Path Substantially	Tina Mortensen	Jul 3, 2014
UK		
UK - Why is Average Earnings Growth So Weak?	Michael Saunders	Jul 8, 2014
UK - Manufacturing Output Falls Back	Michael Saunders	Jul 8, 2014
UK - Surveys Highlight Economic Boom;;	Michael Saunders	Jul 8, 2014
UK Economics Weekly		
Economy Likely to Outperform Further	Michael Saunders	Jul 11, 2014
Is 2.5% Really the "New Neutral"?	Michael Saunders	Jul 4, 2014
PMIs Still Point to Strong Economic Growth	Michael Saunders	Jun 27, 2014
How Resilient Will The Economy Be To Rising Rates?	Michael Saunders	Jun 20, 2014
The "Jobs Miracle" Continues	Michael Saunders	Jun 13, 2014

Source: Citi Research

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	Ebrahim Rahbari; Guillaume Menuet; Giada Giani; Michael Saunders; Antonio Montilla; 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 Bell Potter Customers: Bell Potter is making this Product available to its clients pursuant to an agreement with Citigroup Global Markets Australia Pty Limited. Neither Citigroup Global Markets Australia Pty Limited nor any of its affiliates has made any determination as to the suitability of the information provided herein and clients should consult with their Bell Potter financial advisor before making any investment decision.

The Citigroup legal entity that takes responsibility for the production of the Product is the legal entity which the first named author is employed by. The Product is made available in **Australia** through Citigroup Global Markets Australia Pty Limited. (ABN 64 003 114 832 and AFSL No. 240992), participant of the ASX Group and regulated by the Australian Securities & Investments Commission. Citigroup Centre, 2 Park Street, Sydney, NSW 2000. The Product is made available in Australia to Private Banking wholesale clients through Citigroup Pty Limited (ABN 88 004 325 080 and AFSL 238098). Citigroup Pty Limited provides all financial product advice to Australian Private Banking wholesale clients through bankers and relationship managers. If there is any doubt about the suitability of investments held in Citigroup Private Bank accounts, investors should contact the Citigroup Private Bank in Australia. Citigroup companies may compensate affiliates and their representatives for providing products and services to clients. The Product is made available in **Brazil** by Citigroup Global Markets Brasil - CCTVM SA, which is regulated by CVM - Comissão de Valores Mobiliários, BACEN - Brazilian Central Bank, APIMEC - Associação dos Analistas e Profissionais de Investimento do Mercado de Capitais and ANBID - Associação Nacional dos Bancos de Investimento. Av. Paulista, 1111 - 11º andar - CEP. 01311920 - São Paulo - SP. If the Product is being made available in certain provinces of **Canada** by Citigroup Global Markets (Canada) Inc. ("CGM Canada"), CGM Canada has approved the Product. Citigroup Place, 123 Front Street West, Suite 1100, Toronto, Ontario M5J 2M3. This product is available in **Chile** through Banchile Corredores de Bolsa S.A., an indirect subsidiary of Citigroup Inc., which is regulated by the Superintendencia de Valores y Seguros. Agustinas 975, piso 2, Santiago, Chile. The Product is distributed in **Germany** by Citigroup Global Markets Deutschland AG ("CGMD"), which is regulated by Bundesanstalt fuer Finanzdienstleistungsaufsicht (BaFin). CGMD, Reuterweg 16, 60323 Frankfurt am Main. Research which relates to "securities" (as defined in the Securities and Futures Ordinance (Cap. 571 of the Laws of Hong Kong)) is issued in **Hong Kong** by, or on behalf of, Citigroup Global Markets Asia Limited which takes full responsibility for its content. Citigroup Global Markets Asia Ltd. is regulated by Hong Kong Securities and Futures Commission. If the Research is made available through Citibank, N.A., Hong Kong Branch, for its clients in Citi Private Bank, it is made available by Citibank N.A., Citibank Tower, Citibank Plaza, 3 Garden Road, Hong Kong. Citibank N.A. is regulated by the Hong Kong Monetary Authority. Please contact your Private Banker in Citibank N.A., Hong Kong, Branch if you have any queries on or any matters arising from or in connection with this document. The Product is made available in **India** by Citigroup Global Markets India Private Limited, which is regulated by Securities and Exchange Board of India. 1202, 12th Floor, FIFC, G Block, Bandra Kurla Complex, Bandra East, Mumbai - 400051 Corporate Identity Number: U99999MH2000PTC126657 Tel:+9102261759999 Fax:+9102261759961. The Product is made available in **Indonesia** through PT Citigroup Securities Indonesia. 5/F, Citibank Tower, Bapindo Plaza, Jl. Jend. Sudirman Kav. 54-55, Jakarta 12190. Neither this Product nor any copy hereof may be distributed in Indonesia or to any Indonesian citizens wherever they are domiciled or to Indonesian residents except in compliance with applicable capital market laws and regulations. This Product is not an offer of securities in Indonesia. The securities referred to in this Product have not been registered with the Capital Market and Financial Institutions Supervisory Agency (BAPEPAM-LK) pursuant to relevant capital market laws and regulations, and may not be offered or sold within the territory of the Republic of Indonesia or to Indonesian citizens through a public offering or in circumstances which constitute an offer within the meaning of the Indonesian capital market laws and regulations. The Product is made available in **Israel** through Citibank NA, regulated by the Bank of Israel and the Israeli Securities Authority. Citibank, N.A, Platinum Building, 21 Ha'arba'ah St, Tel Aviv, Israel. The Product is made available in **Italy** by Citigroup Global Markets Limited, which is authorised by the PRA and regulated by the FCA and the PRA. Via dei Mercanti, 12, Milan, 20121, Italy. The Product is made available in **Japan** by Citigroup Global Markets Japan Inc. ("CGMJ"), which is regulated by Financial Services Agency, Securities and Exchange Surveillance Commission, Japan Securities Dealers Association, Tokyo Stock Exchange and Osaka Securities Exchange. Shin-Marunouchi Building, 1-5-1 Marunouchi, Chiyoda-ku, Tokyo 100-6520 Japan. If the Product was distributed by SMBC Nikko Securities Inc. it is being so distributed under license. In the event that an error is found in an CGMJ research report, a revised version will be posted on the Firm's Citi Velocity website. If you have questions regarding Citi Velocity, please call (81 3) 6270-3019 for help. The Product is made available in **Korea** by Citigroup Global Markets Korea Securities Ltd., which is regulated by the Financial Services Commission, the Financial Supervisory Service and the Korea Financial Investment Association (KOFIA). Citibank Building, 39 Da-dong, Jung-gu, Seoul 100-180, Korea. KOFIA makes available registration information of research analysts on its website. Please visit the following website if you wish to find KOFIA registration information on research analysts of Citigroup Global Markets Korea Securities Ltd. http://dis.kofia.or.kr/fs/dis2/fundMgr/DISFundMgrAnalystPop.jsp?companyCd2=A03030&pageDiv=02. The Product is made available in Korea by Citibank Korea Inc., which is regulated by the Financial Services Commission and the Financial Supervisory Service. Address is Citibank Building, 39 Da-dong, Jung-gu, Seoul 100-180, Korea. The Product is made available in **Malaysia** by Citigroup Global Markets Malaysia Sdn Bhd (Company No. 460819-D) ("CGMM") to its clients and CGMM takes responsibility for its contents. CGMM is regulated by the Securities Commission of Malaysia. Please contact CGMM at Level 43 Menara Citibank, 165 Jalan Ampang, 50450 Kuala Lumpur, Malaysia in respect of any matters arising from, or in connection with, the Product. The Product is made available in **Mexico** by Acciones y Valores Banamex, S.A. De C. V., Casa de Bolsa, Integrante del Grupo Financiero Banamex ("Accival") which is a wholly owned subsidiary of Citigroup Inc. and is regulated by Comision Nacional Bancaria y de Valores. Reforma 398, Col. Juarez, 06600 Mexico, D.F. In **New Zealand** the Product is made available to 'wholesale clients' only as defined by s5C(1) of the Financial Advisers Act 2008 ('FAA') through Citigroup Global Markets Australia Pty Ltd (ABN 64 003 114 832 and AFSL No. 240992), an overseas financial adviser as defined by the FAA, participant of the ASX Group and regulated by the Australian Securities & Investments Commission. Citigroup Centre, 2 Park Street, Sydney, NSW 2000. The Product is made available in **Pakistan** by Citibank N.A. Pakistan branch, which is regulated by the State Bank of Pakistan and Securities Exchange Commission, Pakistan. AWT Plaza, 1.1. Chundrigar Road, P.O. Box 4889, Karachi-74200. The Product is made available in the **Philippines** through Citicorp Financial Services and Insurance Brokerage Philippines, Inc., which is regulated by the Philippines Securities and Exchange Commission. 20th Floor Citibank Square Bldg. The Product is made available in the Philippines through Citibank NA Philippines branch, Citibank Tower, 8741 Paseo De Roxas, Makati City, Manila. Citibank NA Philippines NA is regulated by The Bangko Sentral ng Pilipinas. The Product is made available in **Poland** by Dom Maklerski Banku Handlowego SA an indirect subsidiary of Citigroup Inc., which is regulated by Komisja Nadzoru Finansowego. Dom Maklerski Banku Handlowego S.A. ul.Senatorska 16, 00-923 Warszawa. The Product is made available in the **Russian Federation** through ZAO Citibank, which is licensed to carry out banking activities in the Russian Federation in accordance with the general banking license issued by the Central Bank of the Russian Federation and brokerage activities in accordance with the license issued by the Federal Service for Financial Markets. Neither the Product nor any information contained in the Product shall be considered as advertising the securities mentioned in this report within the territory of the Russian Federation or outside the Russian Federation. The Product does not constitute an appraisal within the meaning of the Federal Law of the Russian Federation of 29 July 1998 No. 135-FZ (as amended) On Appraisal Activities in the Russian Federation. 8-10 Gasheka Street, 125047 Moscow. The Product is made available in **Singapore** through Citigroup Global Markets Singapore Pte. Ltd. ("CGMSPL"), a capital markets services license holder, and regulated by Monetary

Authority of Singapore. Please contact CGMSPL at 8 Marina View, 21st Floor Asia Square Tower 1, Singapore 018960, in respect of any matters arising from, or in connection with, the analysis of this document. This report is intended for recipients who are accredited, expert and institutional investors as defined under the Securities and Futures Act (Cap. 289). The Product is made available by The Citigroup Private Bank in Singapore through Citibank, N.A., Singapore Branch, a licensed bank in Singapore that is regulated by Monetary Authority of Singapore. Please contact your Private Banker in Citibank N.A., Singapore Branch if you have any queries on or any matters arising from or in connection with this document. This report is intended for recipients who are accredited, expert and institutional investors as defined under the Securities and Futures Act (Cap. 289). This report is distributed in Singapore by Citibank Singapore Ltd ("CSL") to selected Citigold/Citigold Private Clients. CSL provides no independent research or analysis of the substance or in preparation of this report. Please contact your Citigold//Citigold Private Client Relationship Manager in CSL if you have any queries on or any matters arising from or in connection with this report. This report is intended for recipients who are accredited investors as defined under the Securities and Futures Act (Cap. 289). Citigroup Global Markets (Pty) Ltd. is incorporated in the **Republic of South Africa** (company registration number 2000/025866/07) and its registered office is at 145 West Street, Sandton, 2196, Saxonwold. Citigroup Global Markets (Pty) Ltd. is regulated by JSE Securities Exchange South Africa, South African Reserve Bank and the Financial Services Board. The investments and services contained herein are not available to private customers in South Africa. The Product is made available in the **Republic of China** through Citigroup Global Markets Taiwan Securities Company Ltd. ("CGMTS"), 14 and 15F, No. 1, Songzhi Road, Taipei 110, Taiwan and/or through Citibank Securities (Taiwan) Company Limited ("CSTL"), 14 and 15F, No. 1, Songzhi Road, Taipei 110, Taiwan, subject to the respective license scope of each entity and the applicable laws and regulations in the Republic of China. CGMTS and CSTL are both regulated by the Securities and Futures Bureau of the Financial Supervisory Commission of Taiwan, the Republic of China. No portion of the Product may be reproduced or quoted in the Republic of China by the press or any third parties [without the written authorization of CGMTS and CSTL]. If the Product covers securities which are not allowed to be offered or traded in the Republic of China, neither the Product nor any information contained in the Product shall be considered as advertising the securities or making recommendation of the securities in the Republic of China. The Product is for informational purposes only and is not intended as an offer or solicitation for the purchase or sale of a security or financial products. Any decision to purchase securities or financial products mentioned in the Product must take into account existing public information on such security or the financial products or any registered prospectus. The Product is made available in **Thailand** through Citicorp Securities (Thailand) Ltd., which is regulated by the Securities and Exchange Commission of Thailand. 399 Interchange 21 Building, 18th Floor, Sukhumvit Road, Klongtoey Nua, Wattana ,Bangkok 10110, 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 by the Prudential Regulation Authority ("PRA") and regulated by the Financial Conduct Authority ("FCA") and the PRA. This material may relate to investments or services of a person outside of the UK or to other matters which are not authorised by the PRA nor regulated by the FCA and the PRA and further details as to where this may be the case are available upon request in respect of this material. Citigroup Centre, Canada Square, Canary Wharf, London, E14 5LB. The Product is made available in **United States** by Citigroup Global Markets Inc, which is a member of FINRA and registered with the US Securities and Exchange Commission. 388 Greenwich Street, New York, NY 10013. Unless specified to the contrary, within EU Member States, the Product is made available by Citigroup Global Markets Limited, which is authorised by the PRA and regulated by the FCA and the PRA.

Pursuant to Comissão de Valores Mobiliários Rule 483, Citi is required to disclose whether a Citi related company or business has a commercial relationship with the subject company. Considering that Citi operates multiple businesses in more than 100 countries around the world, it is likely that Citi has a commercial relationship with the subject company.

Many European regulators require that a firm must establish, implement and make available a policy for managing conflicts of interest arising as a result of publication or distribution of investment research. The policy applicable to Citi Research's Products can be found at https://www.citivelocity.com/cvr/eppublic/citi_research_disclosures.

Compensation of equity research analysts is determined by equity research management and Citigroup's senior management and is not linked to specific transactions or recommendations.

The Product is not to be construed as providing investment services in any jurisdiction where the provision of such services would not be permitted.

Subject to the nature and contents of the Product, the investments described therein are subject to fluctuations in price and/or value and investors may get back less than originally invested. Certain high-volatility investments can be subject to sudden and large falls in value that could equal or exceed the amount invested. Certain investments contained in the Product may have tax implications for private customers whereby levels and basis of taxation may be subject to change. If in doubt, investors should seek advice from a tax adviser. The Product does not purport to identify the nature of the specific market or other risks associated with a particular transaction. Advice in the Product is general and should not be construed as personal advice given it has been prepared without taking account of the objectives, financial situation or needs of any particular investor. Accordingly, investors should, before acting on the advice, consider the appropriateness of the advice, having regard to their objectives, financial situation and needs. Prior to acquiring any financial product, it is the client's responsibility to obtain the relevant offer document for the product and consider it before making a decision as to whether to purchase the product.

Citi Research generally disseminates its research to the Firm's global institutional and retail clients via both proprietary (e.g., Citi Velocity and Citi Personal Wealth Management) and non-proprietary electronic distribution platforms. Certain research may be disseminated only via Citi's proprietary distribution platforms; however such research will not contain changes to earnings forecasts, target price, investment or risk rating or investment thesis or be otherwise inconsistent with the author's previously published research. Certain research is made available only to institutional investors to satisfy regulatory requirements. Individual Citi Research analysts may also opt to circulate published research to one or more clients by email; such email distribution is discretionary and is done only after the research has been disseminated.

The level and types of services provided by Citi Research analysts to clients may vary depending on various factors such as the client's individual preferences as to the frequency and manner of receiving communications from analysts, the client's risk profile and investment focus and perspective (e.g. market-wide, sector specific, long term, short-term etc.), the size and scope of the overall client relationship with Citi and legal and regulatory constraints.

Citi Research product may source data from dataCentral. dataCentral is a Citi Research proprietary database, which includes Citi estimates, data from company reports and feeds from Thomson Reuters.