

Europe

Global Economics View Three bits of good and one piece of bad news about Europe

- Recent weeks brought three bits of good news and one piece of bad news for the euro area.
- The good news was:
 - I) the introduction of the ECB's Outright Monetary Transactions (OMT) facility,
 - ii) the decision of the German Constitutional Court to allow German participation in the ESM with small additional conditions,
 - and iii) the strong performance of centrist, pro-European parties in the Dutch election.
- The bad news was that differences between Germany (and allies) on one side, and France (and allies) on the other on certain aspects of banking union are becoming increasingly obvious. The latest disagreement is over whether all or only systemically important or cross-border banks should be supervised by the ECB.
- The OMT's main contribution is that it reduces the tail-risk of near-term sovereign default and euro area (EA) break-up as a result of a cut-off of market funding due to exit fear contagion and fears of break-up.
- In our view, the OMT does not materially change: i) the medium-term risk of sovereign debt restructuring in the euro area (we expect debt restructuring of some form at least in Greece, Portugal and in Ireland unless it can remove a significant part of its bank bail-out from the sovereign balance sheet), ii) the probability of Greek euro area exit (which we still see at 90% over the next 12-18 months), iii) the medium-term probability of wider euro area break-up (which we continue to consider to be low).
- We also continue to expect Spain and Italy to request an EFSF/ESM programme for the respective sovereigns. For Spain, it could come as early as the end of September, but is more likely to follow the regional elections on October 21. Italy's request is likely to be after Spain's, and could either precede or follow the general elections that are meant to take place by April 2013 at the latest.

Willem Buiter +44-20-7986-5944 willem.buiter@citi.com

With thanks to Juergen Michels, Ebrahim Rahbari and Deimante Kupciuniene

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

Citi Research is a division of Citigroup Global Markets Inc. (the "Firm"), which does and seeks to do business with companies covered in its research reports. As a result, investors should be aware that the Firm may have a conflict of interest that could affect the objectivity of this report. Investors should consider this report as only a single factor in making their investment decision.

i) the introduction of the ECB's Outright Monetary Transactions (OMT) facility,

ii) the decision of the German Constitutional Court to allow German participation in the ESM with small additional conditions,

and iii) the strong performance of centrist, pro-European parties in the Dutch election.

The bad news was the continuing disagreement between Germany on one side, and France on whether all EA banks or only systemically important or crossborder banks should be supervised by the ECB.

On September 6 ECB President Draghi announced a new conditional sovereign debt purchase instrument: Outright Monetary Transactions (OMT)¹

Three bits of good and one piece of bad news about Europe

The arrival in September 2012 of 4 bits of news about developments in the euro area sovereign and banking crisis, with the good news unexpectedly outnumbering the bad three to one, has caused policy makers, markets and pundits to heave a sigh of relief. This note argues that the sense of relief is not misplaced – up to a point, but that even just reaching the end of the periodic financial market "cardiac arrest" phase of the sovereign and banking crisis will still take at least two to three years. And even existential risks have been reduced but not eliminated.

The three bits of good news are (1) the announcement on September 6, 2012 by the President of the European Central Bank (ECB), Mario Draghi of Outright Monetary Transactions (OMT), the successor of the ECB's Securities Markets Programme (SMP); (2) the decision on September 12, 2012 by the German Federal Constitutional Court in favour of the ESM; and (3) the outcome of the Dutch parliamentary elections, also on September 12, 2012, which broke with a pan-European trend towards a weakening of the centre, a strengthening of extremist political parties of the left and right and the growth of anti-euro and anti EU sentiment. The bad news is the continuing disagreement between Germany on the one hand and France, the European Commission (and probably the ECB as well) on the scope of the ECB's supervisory role in euro area (EA) banking supervision, and on the speed with which progress towards banking union in the EA can be expected.

OMT eliminates a key tail risk

On September 6 the President of the ECB, Mario Draghi announced a new conditional sovereign debt purchase instrument: Outright Monetary Transactions $(OMT)^2$. It also relaxed its collateral requirements. Debt issued by or guaranteed by sovereigns that are beneficiaries of OMT and compliant with the relevant programme conditionality (see (6) and (7) below) can be offered for repo with no minimum credit or rating requirements. This measure institutionalizes the policy used for the existing programme countries on an ad-hoc basis and widens the collateral pool.

- 1. OMT purchases are *ex-ante* unlimited in size.
- 2. The ECB will be 'pari passu' with private and other creditors for its OMT purchases.³
- 3. Interventions are in the secondary markets only (primary market purchases of sovereign debt by the central bank are forbidden by the Treaty).
- 4. As a rule, sovereign debt with remaining maturity of one to three years will be purchased.⁴

http://www.ecb.int/press/pr/date/2012/html/pr120906_1.en.html)

¹ Please see *"Euro Economics Weekly - OMT: Unsheathing the Latest Weapon in the ECB's Armoury"*, Guillaume Menuet et al, 7 September 2012, Citi

² Please see *"Euro Economics Weekly - OMT: Unsheathing the Latest Weapon in the ECB's Armoury"*, Guillaume Menuet et al, 7 September 2012, Citi

³ "The Eurosystem intends to clarify in the legal act concerning Outright Monetary Transactions that it accepts the same (pari passu) treatment as private or other creditors with respect to bonds issued by euro area countries and purchased by the Eurosystem through Outright Monetary Transactions, in accordance with the terms of such bonds."

 The ECB wants company: it will engage in OMT operations only if the EFSF/ESM intervenes in the primary sovereign debt markets at the same time.

This interpretation is contested. The press release by the ECB on the OMT only required the *possibility* of such purchases by the EFSF/ESM to be present.⁵ However, Draghi's statement following the September 9, 2012 ECB Governing Council meeting appears to indicate that EFSF/ESM interventions are likely to be required for OMT to be activated: *"At the same time, governments must stand ready to activate the EFSF/ESM in the bond market when exceptional financial market circumstances and risks to financial stability exist – with strict and effective conditionality in line with the established guidelines. The adherence of governments to their commitments and the fulfillment by the EFSF/ESM of their role are necessary conditions for our outright transactions to be conducted and to be effective."*

- 6. OMT purchases will be sterilised they will not increase the monetary base.
- 7. OMT purchases will be made only if the ECB is satisfied that the beneficiary sovereign is on an effective programme and is, in the view of the ECB, compliant with that programme. Eligible programmes include the troika programmes that Greece, Ireland and Portugal are on, or MoU-based EFSF/ESM programmes or Precautionary programmes like the ESM ECCL (Enhanced Conditions Credit Line).
- 8. If a beneficiary country on a programme violates the conditionality of the programme, the ECB will stop the asset purchases. Jörg Asmussen, the German member of the Executive Board of the ECB, went one further and suggested that the ECB could, under these circumstances, even decide to sell some or all of the sovereign's debt it had purchased earlier.
- 9. Involvement of the IMF is welcomed, but not required to operate the OMT.
- The sovereign funding part of the SMP is closed down. This is not completely irrelevant, as the SMP has no maturity restrictions on its purchases of sovereign debt, unlike the OMT.
- 11. For the OMT, information on the aggregate holdings and their market values will be published on a weekly basis. In addition, the breakdown by country and the average duration of OMT holdings will be published each month.

Two important characteristics of the OMT have not been spelt out (and may never be spelt out). The first is the ratio of the sizes of the interventions under the OMT and EFSF/ESM purchases (effectively the leverage ratio for the EFSF/ESM primary market purchases), but is clearly crucial given the limited and indeed inadequate resources at the disposal of the EFSF/ESM. We doubt whether the average effective leverage ratio (ratio of OMT purchases in the secondary markets to EFSF/ESM purchases in the secondary markets plus any EFSF/ESM direct lending to the sovereign) will exceed 4. Having the IMF on board as a source of funds, as well as a source of wisdom, will therefore be highly desirable given the limited resources available to the EFSF/ESM).

⁵ "Such programmes can take the form of a full EFSF/ESM macroeconomic adjustment programme or a precautionary programme (Enhanced Conditions Credit Line), provided that they include the possibility of EFSF/ESM primary market purchases." ECB Press Release, 12 September 2012

The planned size or leverage ratio of the ECB OMT interventions and any yield or spread target have not been specified.

⁴ "Transactions will be focused on the shorter part of the yield curve, and in particular on sovereign bonds with a maturity of between one and three years." http://www.ecb.int/press/pr/date/2012/html/pr120906_1.en.html)

The second is the level of yields and spreads that is targeted or that is a trigger for ECB OMT interventions. ECB President Draghi has repeatedly emphasized that the OMT is in particular meant to reduce (possibly extinguish) foreign exchange rate risk premia, based on fears of EMU break-up. Undoubtedly, such break-up fear induced forex risk premia have contributed to the sharp increase in sovereign bond yields of, inter alia, Italy and Spain since mid-2011 up until the series of ECB announcements starting with ECB President Draghi's speech in London on July 26, 2012. However, credit risks orthogonal to break-up risks have likely also contributed to the run-up in yields and the ECB has been notably quiet on this issue – even though in the context of the programme, the fiscal austerity and structural reform conditionality is meant to take care of debt sustainability concerns. A related issue is how to operationalise the idea of foreign exchange rate risk premia to define entry points for intervention. Such an approach will necessarily involve a heavy dosage of judgement by the ECB Governing Council, but the analytical input is likely to define the foreign exchange risk premia as a measure of ignorance – the difference between actual market yields and a 'fair value' based on observable fundamental risk factors, including economic growth, government deficit and debt levels, indicators of private sector balance sheet health, etc.⁶

The tail risk that is eliminated by the OMT is the risk that fiscally and competitively weak but OMT-programme-compliant EA countries can be driven out of the EA against their will through a cut-off of market funding for sovereigns and/or banks. Specifically, the creation of the OMT rules out involuntary exits of programme-compliant EA member states through a sudden stop on funding driven by exit fear contagion following a Greek exit from the EA (which we still expect with a very high likelihood to occur over the next 12 two 18 months, probably early in 2013). The sovereign would get funded through the OMT and the banks through some combination of LTROs or shorter-duration refinancing operations which the ECB is able to set up in due course. By an *involuntary* exit of a country from the EA we mean an exit driven by a cut-off of concessional funding (by the troika, or by the EFSF/ESM combined with the OMT) to the sovereign and a cut-off of Eurosystem and Emergency Liquidity Assistance (ELA) facility funding for the banking sector of that country.

A country that is not programme-compliant can (in our view, will) ultimately be cut off from official funding sources for its sovereign and will thus be forced into sovereign default. Until we have EA banking union with an EA bank resolution and recapitalization fund and with mutualised guarantees for insured retail deposits, sovereign default will likely push the banking systems of most periphery member states into (near-) insolvency in our view. It is certainly likely that, following a sovereign default, the nation's banks will only be able to fund themselves at the Eurosystem or the national ELA. If bank funding from the Eurosystem and the ELA is also cut off, non-programme compliant countries can still be forced involuntarily out of the EA. With banking union, it is likely that sovereign debt restructuring and bank debt restructuring would take place in the EA. It is even possible that, should a national government be cut off from further participation in OMT because of failure to comply with programme conditionality, the banks of that nation might still be able to fund themselves at the Eurosystem or the national ELA, thus avoiding the need for exit from the EA. The sovereign would default/restructure inside the EA, like Greece in 2012.

OMT has eliminated the tail risk that fiscally and competitively weak but OMTcompliant EA countries are involuntarily driven out of EA through a cut-off of market funding.

⁶ For one recent attempt at computing fundamentally based levels of sovereign yields, see Di Cesare et al (2012), "Recent estimates of sovereign risk premia for euro-area countries", Bank of Italy Occasional Paper No 128, September 2012,

http://www.bancaditalia.it/pubblicazioni/econo/quest_ecofin_2/qef128/QEF_128.pdf

OMT design is meant to increase the 'bang for the buck' of ECB interventions.

Giving up seniority by the ECB may well backfire.

The different characteristics of the OMT programme, in particular forgoing seniority, the explicit reference to the lack of ex-ante limits, and additional information provided, appear in our view to be targeted to increase the 'bang for the buck' of ECB interventions to affect market yields, i.e. to increase the effect on market outcomes for any given amount of ECB purchases or balance sheet increase ostensibly meant, in our view, to reduce the amount of purchases that would actually need to take place, ideally to zero. While many of these aspects make sense, including the increased use of 'open mouth operations' even though the ECB fell short of specifying yield targets, one is not: forgoing seniority for ECB purchases appears ill-advised, in our view. With ECB seniority (de facto or de jure) OMT purchases would reduce probabilities of default for the sovereign whose bonds are being purchased, but a lower recovery rate for private investors in the case of default. Giving up seniority will increase the recovery rates for private investors relative to the alternative, but may adversely affect the probability of default. The reason is that giving up seniority implies that the ECB itself is exposed to more credit risk. The increase in balance sheet exposure of the ECB could then make it more timid in deploying its firepower - and therefore the credibility of the 'unlimitedness' statement.⁷ The OMT programme does have two elements that are meant to reassure the ECB that it is not taking on undue amounts of credit risk - the conditionality that comes with the EFSF/ESM programme, and the fact that purchases target short maturities – but that reassurance is likely to be imperfect, particularly in the early stages of the use of the facility, before Italy and Spain can have established a track record of fiscal austerity and structural reform. A second risk of giving up seniority is that while the ECB speaks of no limits to its ex-ante exposure, it could increase the likelihood of ex-post unlimited exposure. In that case, the risk that the core of the EA would leave could increase.

Despite the existence of the OMT, there remains the risk that political events, such as the strengthening of anti-bailout sentiment in the core countries, could force a stop to the funding of the periphery countries. This could manifest itself through a refusal to provide funding through the fiscal facilities (the EFSF and the ESM) and/or through pressure from the core countries on the ECB to limit or end its funding of periphery sovereigns and/or banks. As regards the fiscal facilities, even within the existing total funding envelope of €500bn, adding a new country programme will require the unanimous non-objection of all 17 member states (or their delegates on the Board of the ESM). Should the ECB and the European Commission jointly opine that a programme is essential for the survival of the euro, the qualifying majority goes down to 85 percent. A more likely obstacle to future fiscal funding will come when the fiscal facilities are exhausted and 17 EA member state governments and parliaments will have to agree on an increase in resources.

The Treaty-based independence of the ECB makes it unlikely that direct pressure would be brought to bear by national political leaders on the Executive Board and the Governing Council. There is, however, a tendency for some of the national central bank (NCB) Governors to act as national delegates rather than independent parties for whom only the ECB's mandate matters. In addition, the risk that excessive debt purchases by the ECB/Eurosystem (through the OMT or other mechanisms) would lead to a strong political response from the backbenchers in the core member states' parliaments and from vocal and influential parties in the wider polity and in the media. The threat that 'Weimarisation' of the ECB/Eurosystem balance sheet could trigger an exit from the euro by the core members will act as a constraint on how much sovereign debt the ECB can purchase. It also means, as noted already, that it is likely that countries that are non-compliant with programme conditionality will indeed be cut off from further participation in the OMT in our view.

⁷ In Global Economics View - Did Summit Avoid Nadir?, we similarly argued that it would be mis-guided for the ESM to give up seniority except for direct bank recapitalizations.

The OMT has much less effect on the risk (low in our view), that a fiscally and competitively weak EA member state would decide to walk out of the monetary union voluntarily.

The OMT somewhat increases the risk of a voluntary exit, in our view, of the fiscally and competitively stronger countries of the core EA (both hard and soft).

The OMT facility will not deliver unlimited, open-ended or uncapped mutualisation of EA sovereign debt, but it will result in *some*, possibly significant, mutualisation over and beyond what seemed likely prior to its creation. The OMT has much less of an effect on the risk (low in our view), that a fiscally and competitively weak EA member state would decide to walk out of the monetary union voluntarily. This could occur if a populist, nationalist, anti-euro and probably anti-EU government were to take office in one of the EA periphery countries (Greece, Portugal, Ireland, Spain, Italy, Cyprus and Slovenia) and decide that less or less painful austerity and structural reform would be achievable outside the EA, and/or that a swift, less painful and lasting improvement in real competitiveness could be achieved through a sharp devaluation vis-à-vis the euro of a new national currency.

The OMT somewhat increases the risk of a voluntary exit in our view of the fiscally and competitively stronger countries of the core EA (both hard and soft), especially Germany, Finland, Luxembourg, Austria, Slovakia, the Netherlands, Belgium, France, Estonia and Malta. This is because there is a risk (small in our view), that the extent of backdoor mutualisation of EA periphery sovereign debt through the OMT would be greater than the tolerance limits in Germany, Finland, the Netherlands and Austria especially, for creating a limited transfer Europe through the ECB/Eurosystem. It is clear that there is no political appetite in these four countries, for open-ended, uncapped sovereign debt mutualisation either through the fiscal facilities (Greek Loan Facility, EFSF and ESM) or through the ECB/Eurosystem. We believe any form of open-ended, uncapped one-sided transfer Europe without a prior or at least simultaneous quid-pro-quo in the form of a material surrender to the supranational level of national fiscal, regulatory, supervisory and other wide economic policy sovereignty, could lead to an exit by the hard core, who could then create a new greater DM zone.

The OMT facility will not deliver unlimited, open-ended or uncapped mutualisation of EA sovereign debt. It will, however, result in some, possibly significant, mutualisation over and beyond what seemed likely prior to its creation. The upper bound to the mutualisation tolerance threshold of the majority of the ECB Governing Council is given by the non-inflationary loss absorption capacity of the Eurosystem. According to our estimates, this could easily be as high as €3 trillion (see Buiter (2010) and Buiter and Rahbari (2012a,b). The total outstanding EA periphery general government debt at the end of 2011 was just over €3.4 trillion.⁸ In principle, this means that the 7 periphery countries could retire their entire existing debt (except the €210bn or so already held by the Eurosystem as a legacy from the SMP) and replace it with EA periphery sovereign debt with a remaining maturity of 3 years or less. This could all be bought by the ECB as long as the countries in question are on ECB-approved programmes and compliant with the conditionality. Recognising this, Maria Draghi has made it clear that the ECB does not want to see a significant shift in issuance to the short end of the maturity structure.⁹ The Governor of the Belgian central bank, Luc Coene, has even suggested that the debt purchased by the ECB under the OMT would be of 3-years maturity only, thus excluding all maturities shorter than three years.^{10 11} If all this EA periphery sovereign debt were then defaulted on, and assuming a recovery rate on EA

⁹ ECB, Introductory statement to the press conference (with Q&A)Mario Draghi, President of the ECB, Vítor Constâncio, Vice-President of the ECB,Frankfurt am Main, 6 September 2012 http://www.ecb.int/press/pressconf/2012/html/is120906.en.html

¹⁰ FT Alphaville, The OMT and 'Limits', 18 September 2012, http://ftalphaville.ft.com/blog/2012/09/18/1166021/

⁸ Source: Eurostat. The EA periphery is defined as Greece, Portugal, Ireland, Spain, Italy, Cyprus and Slovenia.

¹¹ This appears inconsistent with the words of Mario Draghi in an interview with the Süddeutsche Zeitung on September 14, 2012, *"Moreover, the Outright Monetary Transactions will focus only on the shorter term, in particular on bonds with a maturity of one to three years."* http://www.ecb.int/press/key/date/2012/html/sp120914.en.html

sovereign debt close to the historical average of sovereign defaults of 50 percent (a number consistent with the average recovery rate for sovereign defaults since 1983 in Moody's (2012)), the ECB would suffer a loss of \leq 1.7 trillion – well inside its non-inflationary loss absorption capacity.¹²

We believe that the actual binding constraint on the ECB's willingness (as opposed to its capacity) to absorb losses is probably quite a bit less than \$1.7 trillion, but even €1.0 trillion would provide material assistance to the periphery sovereigns.

The actual debt held de facto or de jure guaranteed by the sovereigns in the EA periphery is likely to increase rapidly if the deterioration of the financial circumstances of their banks continues. Both the belated recognition of legacy losses and the accretion of new losses because of the recessions, often deep, in many of the EA periphery member states, make it wise to consolidate the accounts of the sovereign and the accounts of the banks and other systemically important financial institutions in their national jurisdictions. Our best estimate of the size of the balance sheets of Monetary Financial Institutions (MFIs) excluding the Eurosystem balances in the EA periphery is €10.4 trillion at the end of July 2012.¹³ Non-inflationary mutualisation of sovereign and bank debt from the EA periphery by the ECB/Eurosystem is therefore highly unlikely to be even just technically feasible. It would be politically infeasible in our view. We return to this issue below.

Finally, despite the confidence bounce in financial markets following the announcement of the OMT, which has resulted in lower sovereign and other rates in the periphery at all maturities, and especially at the shorter end – a bonus obtained without the ECB actually spending any money or another EA member state making itself eligible for OMT support by going on a programme, there will only be a lasting impact if the key countries (at the moment Spain and Italy) actually agree on a programme with the EFSF/ESM (and possibly with the IMF also). We expect this to happen soon.

The Spanish government may apply for a programme as early as the end of September 2012. It is likely to formally contain no additional substantial fiscal austerity or structural reform conditionality, but strict timetables of concrete measures that will be monitored by outside parties.¹⁴ It is possible that the Spanish government will try to postpone the request for a programme till after the October 21, 2012 regional elections in Galicia and the Basque country. In view of the failure of its previous attempt to influence regional election outcomes in its favour by postponing the announcement of unpopular news (the Spanish government delayed announcing the full 2012 budget in March until after a regional elections in Andalusia and Asturias without this producing the desired electoral outcome), trying to influence the elections may not be a wise strategy this time.

¹³ Source: ECB

Lasting impact of the OMT will likely require that fiscally weak countries actually agree on a programme and ECB actually starts its purchases.

We still expect Spain and Italy to request an ESM programme, with Spain likely going first.

¹² Moody's (2012) states that for the 16 sovereign defaults it considered between 1998 and 2012H1, the Issuer-Weighted Recovery Rates were 51% of Par based on the Average Trading Price methodology and 64% according to the methodology based on the PV Ratio of Cash flows. The corresponding recovery rates for Value-Weighted recovery rates were 25% and 31% respectively.

¹⁴ On September 28, the Spanish government is expected to announce a range of additional structural reforms that are meant to address the main issues raised by the IMF and the European Commission in their recent assessments (Article IV for the IMF, for the Macroeconomic Imbalance Procedure for the EC). Following the announcement of these structural reforms, the EFSF/ESM programme that we expect is then unlikely to require substantial further measures, but is likely to insist on timely implementation.

The Italian government will no doubt wish to wait until after Spain has gone onto a programme before swallowing the bitter medicine itself. Unless the markets force the issue, the current administration may well prefer to leave the decision to the next government – general elections are due no later than April 2013, and could happen earlier, say in February. However, should the polls indicate that the next Italian government might be influenced significantly be the views of anti-austerity, anti-structural reform, anti-euro parties with a tendency towards nostalgia for the lira, then Premier Monti may well be tempted to constrain his successor by applying for a programme before the elections.

The markets may, for a wide range of fundamental or spurious reasons, lose confidence faster than currently anticipated, making market access without OMT support prohibitively expensive. In addition, the ECB itself can always force a country into a programme if that country's banks depend overwhelmingly for funding on the Eurosystem and/or the ELA. The Irish government responded to the implied threat to continued Eurosystem/ELA funding for its banks by applying for a troika programme on 21 November 2010, even through the sovereign itself (but not its banks) were funded until well into the Spring of 2011. Should the ECB want to see all seven periphery EA member states on programmes prior to the eruption of the financial turmoil that would inevitably result from Grexit, if it were to occur, the reluctant programme applicants may well get 'encouragement ' to apply from the ECB similar to that received by Ireland.

The Bundesverfassungsgericht strikes two blows for the euro.

On September 12, the German Federal Constitutional Court in Karlsruhe ruled in favour of the ESM – the permanent fiscally backed liquidity fund for sovereigns and capital fund for banks in the EA.¹⁵ Rather surprisingly, it imposed only minimal further conditions as regards German parliamentary oversight over German's exposure to the ESM. All it demanded was that any increase in German exposure beyond the current ceiling of €190bn (out of ESM capital of €700bn total) had to be approved by the German Representative on the Board of the ESM, that is, effectively, by the Bundestag.^{16 17}

The second condition it imposed was rather more interesting. And despite the confidentiality of the ESM's deliberations, it insisted that the German Parliament have access to all the information it required to keep the ESM accountable to the German Bundestag and Bundesrat for the German exposure under the ESM.¹⁸ In

http://www.bverfg.de/en/decisions/rs20120912_2bvr139012en.html .

On September 12, the German Constitutional Court ruled that German participation in the ESM was admissible, subject to two relatively weak additional conditions.

¹⁵ See "*Germany - Court Gives Green Light for ESM Participation Under Conditions*", Juergen Michels, 12 September 2012, Citi

¹⁶ "...the provision under Article 8 paragraph 5 sentence 1 of the Treaty establishing the European Stability Mechanism limits the amount of all payment obligations arising to the Federal Republic of Germany from this Treaty to the amount stipulated in Annex II to the Treaty in the sense that no provision of this Treaty may be interpreted in a way that establishes higher payment obligations for the Federal Republic of Germany without the agreement of the German representative;..." Extracts from the decision of the Federal Constitutional Court of 12 September 2012, http://www.bverfg.de/en/decisions/rs20120912_2bvr139012en.html .

¹⁷ The current limit on ESM capital is €700bn. This provides it with AAA funding capacity of €500bn.

¹⁸ "… the provisions under Article 32 paragraph 5, Article 34 and Article 35 paragraph 1 of the Treaty establishing the European Stability Mechanism do not stand in the way of the comprehensive information of the Bundestag and of the Bundesrat." Extracts from the decision of the Federal Constitutional Court of 12 September 2012, http://www.buogf.adu/on/decisions/sc20120012, http://www.buogf.adu/on/decisions/sc2012, http://wwww.buogf.adu/on/decisions/sc2012, http://ww

The Constitutional Court also enunciated fa on an issue that is likely to be beyond its for legal competency – namely that ECB for secondary market purchases of EA for sovereign debt were against the Treaty if for they were meant to help finance those for governments. cited for the formation of the formation of

the short run, this will, like any demand for openness, transparency and accountability, be an irritant to those managing the ESM and to the EA political leadership. It will slow down the decision making process and make it more cumbersome. However, it may also permit the arrangement to survive in a Europe where unaccountable, technocratic solutions to the euro area's woes are becoming increasingly unpopular. Unless the steady transfer of traditional national competences (all of monetary policy, parts of fiscal policy, banking supervision, banking regulation, bank resolution) to the supranational level is accompanied by a matching increase in effective democratic accountability, transparency, openness and oversight, the legitimacy of the new institutions and indeed the old (the European Commission and the ECB, for instance), will be questioned more and more openly and vigorously in our view. Unless the new emerging EA is much more democratic and accountable than the existing EU, it is unlikely – for purely political reasons - to survive. The German constitutional court did Europe and the EA a favour by firing this warning shot.

The German Federal Constitutional Court surprised many when it also enunciated on an issue likely to be beyond its legal competency. The Court's argument is that purchases by the ECB of government debt are banned by the Treaty because they amount to monetary financing. *"For an acquisition of government bonds on the secondary market by the European Central Bank aiming at financing the Members' budgets independently of the capital markets is prohibited as well, as it would circumvent the prohibition of monetary financing (see also Recital 7 of Council Regulation (EC) No 3603/93 of 13 December 1993 (OJ L 332 of 31 December 1993, p. 1)). This is taken account of by the Treaty establishing the European Stability Mechanism, whose Recital 4 calls for strict observance of the European Union framework, the integrated macroeconomic surveillance, in particular the Stability and Growth Pact, the macroeconomic imbalances framework and the economic governance rules of the European Union. Article 123 TFEU is one of these rules."*

As regards form, the Treaty on the Functioning of the European Union, to which Germany is of course a signatory, makes the European Court of Justice the supreme arbiter of legal matters involving just EU institutions.¹⁹ The matters pertaining to what the ECB does or does not do, unlike matters involving the ESM, are not part of the German Federal Constitutional Court's remit. They fall under the European Court of Justice in Luxembourg. Even though the German court is aware of this and even said so in its statement, it seems unusual to then proceed and comment on a matter out of its jurisdiction anyway.²⁰ As regards substance, both a cursory and a deep reading of Article 123 TFEU make it clear that the article says nothing about monetary financing. Monetary financing concerns the liability side of the balance sheet of the central bank. Article 123 TFEU exclusively puts restrictions

9

¹⁹ Article 263 TFEU (ex Article 230 TEC) states:

The Court of Justice of the European Union shall review the legality of legislative acts, of acts of the Council, of the Commission and of the European Central Bank, other than recommendations and opinions, and of acts of the European Parliament and of the European Council intended to produce legal effects *vis-à-vis* third parties. It shall also review the legality of acts of bodies, offices or agencies of the Union intended to produce legal effects *vis-à-vis* third parties.

It shall for this purpose have jurisdiction in actions brought by a Member State, the European Parliament, the Council or the Commission on grounds of lack of competence, infringement of an essential procedural requirement, infringement of the Treaties or of any rule of law relating to their application, or misuse of powers.

²⁰ See Extracts from the decision of the Federal Constitutional Court of 12 September 2012, <u>http://www.bverfq.de/en/decisions/rs20120912_2bvr139012en.html</u>

on the asset side of the balance sheet of the central bank.²¹ It bans overdraft facilities or any other type of credit facility with the ECB or the NCBs for any member state government institution and for Union institutions and direct purchases of government debt by the ECB and NCBs. This suggests the desirability of Basic Law and TFEU amendments banning bodies that don't know debit from credit to rule on matters that depend crucially on that distinction.

Even in the passages of the German Federal Constitutional Court's decision of 12 September, 2012, there is no statement to the effect that the total (€190bn) exposure limit of the German sovereign to sovereigns in the rest of the EA refers not to the ESM alone but to the sum of the ESM exposure and the OMT purchases by the ECB, assertions by Horst Seehofer (the Bavarian PM) and Peter Gauweiler, a member of the Bundestag from the Bavarian CSU, notwithstanding.²²

Dutch courage

Third, the Dutch parliamentary elections of 12 September 2012 saw a reversal (at least a local one) of the European trend towards political polarisation and the growth of right-wing and left-wing anti-bail-out and often anti euro and anti-EU extremism. The new government will be a pro-European, pro-conditional-bail-out government of the centre-right and centre-left. This eliminates two risks.

The first is that a new Dutch coalition government might have depended for its parliamentary survival on the support of the anti-bail-out parties of the extreme right and left. This could have forced the government to vote against proposals in the Eurogroup and the European Council, for the likely forthcoming programmes for Spain, Italy, Cyprus and Slovenia. Abstention instead of an active veto could have saved the day here, as the EFSF and, under its normal operating procedures also the ESM, require the unanimous non-objection of the 17 AE member states, not their unanimous approval. In addition, if the European Commission and the ECB were to jointly agree that a programme is essential for the survival of the euro, the unanimity principle for approval is replaced by an 85% qualified majority, as the emergency facility can be used.

The second and greater risk is that a Dutch government that depends for its survival on the anti-bailout parties would have had serious problems supporting an increase in the size of the ESM. Even if there are 'no step-out countries' (beneficiaries from the ESM that have some contributions waived as a result), the maximum amount of funding the ESM can ultimately support under the current Treaty is €500bn. This is supposed to be used both to recapitalise banks (after a single European banking

On September 12, centrist pro-European parties registered a strong performance at the Dutch general elections, reducing the risk that the Netherlands would be an impediment in the process of agreeing on additional support measures for fiscally weak EA countries if and when needed.

²¹ Article 123 TFEU (ex Article 101 TEC)

^{1.} Overdraft facilities or any other type of credit facility with the European Central Bank or with the central banks of the Member States (hereinafter referred to as "national central banks") in favour of Union institutions, bodies, offices or agencies, central governments, regional, local or other public authorities, other bodies governed by public law, or public undertakings of Member States shall be prohibited, as shall the purchase directly from them by the European Central Bank or national central banks of debt instruments.

^{2.} Paragraph 1 shall not apply to publicly owned credit institutions which, in the context of the supply of reserves by central banks, shall be given the same treatment by national central banks and the European Central Bank as private credit institutions.

²² Open Europe Blog, 17 September 2012: <u>http://openeuropeblog.blogspot.co.uk/2012/09/merkel-caught-in-middle-between.html</u>; and Eurointelligence, "A new legal case against ESM – that links Draghi's OMT to the current case", 10.09.2012; <u>http://www.eurointelligence.com/eurointelligence-news/news/singleview/article/a-new-legal-case-against-esm-that-links-draghis-omt-to-the-current-case.html?L=0&cHash=8e39802868889130252d9c296389045f.</u>

supervisor is created and probably further conditions have been met) and to make loans to sovereigns and/or purchase their debt in the primary or secondary markets. Of the \in 500bn, \in 100bn is earmarked for future Spanish bank recapitalisation. If Ireland retroactively gets full mutualisation of sovereign debt issued to recapitalise its banks, that would require another \in 64bn. Equivalent treatment for Greece would cost \in 45bn and for Portugal \in 8.5bn. That would leave \in 282.5bn, a pittance compared with the likely future funding needs of Spain and Italy, unless the ECB does most of the heavy lifting through the OMT.

German and other core EA scrutiny of the ECB's OMT purchases will likely limit severely the extent to which the OMT can leverage the ESM. Even through Chancellor Merkel is no doubt quite happy to get any assistance from the ECB that is available, she is constrained by her less flexible coalition partners and by German public opinion. So will the threat of a resignation by Jens Weidmann, the President of the Bundesbank, who is convincingly playing the German 'bad cop' role vis-à-vis bail-outs, with ECB's Executive Board member Jörg Asmussen playing the role of 'good cop'.

Banking Union at risk of delay and of being watered down

Not all is sunshine, however. The European Commission's proposal for a single supervisory mechanism for banks under the overall control and authority of the ECB is running into German resistance. Germany wants to keep national control over its regional banks (Landesbanken) and local banks (Sparkassen) and co-operative banks (Volksbanken). These institutions have been widely criticized in the press for engaging in dubious lending practices, and haven often appeared to be instruments of regional politics rather than profit-oriented financial institutions.

Because without banking union (a single EA-wide supervisor for all banks; rapid convergence of banking regulations among the 17 EA member states; a single bank resolution regime/authority and an associated resolution and recapitalisation fund; and a single EA-wide deposit insurance scheme and fund), the euro area cannot survive in our view, speedy progress is essential. Without the first step (the single supervisory mechanism (SSM) that Germany is now trying to emasculate), the next step - the ESM as bank recapitalisation fund and proto-bank resolution fund, cannot take place.²³ This is extremely serious. National supervisors in the core EA nations have, under the guise of prudential regulation, imposed de facto capital controls on interbank flows from the core to the periphery, including flows between subsidiaries of the same cross-border bank and between subsidiaries and parent. This results in cross-border bank X lending in South Tirol (Italy) to corporate clients at rates 350bps higher than for comparable corporate risks in North Tirol (Austria). When the Austrian subsidiary tries to send funds to its Italian parent it is stopped by the Austrian supervisor/regulator. With banking union, and with the ECB in charge of supervision, it will come down heavily on capital market "balkanizing" national supervisors, whose actions destroy the monetary transmission mechanism in the euro area.

The bad news is the continuing disagreement between Germany on one side, and France on whether all EA banks or only systemically important or crossborder banks should be supervised by the ECB.

 ²³ See "Global Economics View - Three unanticipated consequences of banking union", Willem Buiter,
2 April 2012, Citi

We expect market concerns about the EA support framework to return, possibly as a result of concerns about Grexit or programme requests in Spain or Italy.

The ECB's OMT has not materially altered the probability of Grexit, which we continue to put at 90%.

We do not see a major role for growth or inflation in resolving the problem of excessive public and private sector debt in many EA countries.

Instead, we are likely to see some expost mutualisation of sovereign and bank debt and a number of sovereign and bank debt restructurings.

We expect sovereign debt restructuring in Greece and Portugal, and in Ireland, unless Ireland can remove a substantial part of its bank bail-out from the sovereign balance sheet.

Sovereign debt restructuring in Spain or Italy is a material risk, but not our base scenario.

Conclusions and implications for markets

For the moment the markets are pleasantly surprised with what has been achieved. We expect this glow to wear off eventually. Potential triggers could be the troika report on Greece, even though the expected arrival date for the report continues to slip, with some not expecting the report until November), or as first Spain (possibly not until after the regional elections on October 21) and then Italy actually sign up for the OMT.

The possible exit of Greece from the EA is not made less likely through the most recent developments. We have therefore retained our assessment that the probability of Grexit is 90% over the next 12-18 months, and we believe the most likely date is in the next 2-3 quarters.²⁴

Because there is simply too much debt in the EA as a whole (private and public), mutualisation of enough of the excessive private and public debt of the periphery to restore the solvency of the sovereigns and of the systemically important private entities is not possible in our view.

Growth will not solve the EA debt problem in our view; excessive debt and the feasible conventional restrictive public and private responses to it will instead keep growth low unless and until another way of deleveraging can be found. We don't think inflation will solve the EA debt problem. Unlike the Fed and the Bank of England, for whose leadership the Great Depression of the 1930s is the 'Defining Moment', the 'Defining Moment' of most continental European central banks is the Weimar hyperinflation and the other hyperinflations of the 1920s. They will not deliberately create inflation to reduce the real burden of the excessive public and private debt in our view.

We will see some ex-post sovereign debt mutualisation and some mutualisation of bank debt that will migrate to the national sovereign's balance sheet or to that of the ESM. This will occur both through fiscal losses on the Greek Loan Facility, the EFSF and the ESM (explicit official sector involvement or OSI) and through backdoor quasi-fiscal mutualisation of sovereign debt and bank debt/loans by the ECB/Eurosystem.

We are still likely to see multiple sovereign debt restructurings of EA periphery sovereigns, starting possibly with Greece and probably lasting into 2015. We expect Portugal will likely require sovereign debt restructuring, possibly in 2014-15, but could happen even earlier, both through OSI and through PSI (Private sector involvement). Unless Ireland benefits from major OSI, say in the form of a mutualisation through the ESM of up to €64bn worth of sovereign debt - the counterpart of the capital injection into its banking system provided by the Irish authorities between 2008 and 2010 - we believe it too is likely to see sovereign debt restructuring.²⁵ The Spanish sovereign and banking sector taken together are most likely insolvent. The relevant question then becomes what combination of mutualisation, bank debt restructuring and sovereign debt restructuring will occur. We already know of the first source of potential mutualisation – the up to €100bn of the Spanish bank bail-out that will originally be provided as a loan by the EFSF/ESM to the Spanish sovereign, but which could be transformed into ESM capital injections into Spanish banks once several conditions are met, including the ECB's function as a single supervisor of EA banks. We also know that there is going to be

²⁴ Global Economic Outlook and Strategy - September 2012

²⁵ See "Euro Economics Weekly - Ireland — Crucial Period Ahead", Michael Saunders, 14 September 2012, Citi

bank debt restructuring. Unsecured creditors below the senior level are required to be bailed in when a Spanish bank has recourse to ESM funds. We expect that, as bank losses and government debt continue to grow, senior unsecured creditors too will have to be bailed in for some banks.²⁶ As regards the sovereign, its gross debt as a share of GDP is still at 76%, well below the EA average, even though it is rising fast and likely to catch up with the EA average soon. Three things would have to go wrong, in our view, for the Spanish sovereign to be unable to keep its creditors whole.

The first is that the banks' need for externally provided capital exceeds the €100bn available from the ESM by a significant margin. We believe this is quite likely, both through legacy hidden losses on residential mortgages and because of new losses on commercial, corporate and household loans as the Spanish economy continues to be mired in recession.

The second risk is that the Spanish central government will blink first in its confrontation with the 17 autonomous regions, some of whom refuse to follow the austerity mandate imposed on them by the central government.

The third risk is our suspicion that, like every other country where the central government imposed borrowing constraints on lower-tier authorities but forgot to forbid the granting of guarantees, Spain's autonomous regions, municipalities and social funds have created special purpose vehicles that borrowed when the lower-tier governments could not, that were guaranteed by these lower-tier authorities and that soon will have to move their unserviceable debts to the guarantors and hence to the central government.

A Spanish sovereign debt restructuring is, in our view, a material risk but not the most likely outcome at this point.

Italy should never suffer a sovereign default due to inability to pay in our view. It is a rich country with massive private wealth and, by the standards of the periphery, is in a relatively good economic shape, although massive structural reforms are required to get out of the swamp the country now finds itself in.²⁷ With the present administration, a sovereign default triggered by unwillingness to pay (rational default, strategic default or opportunistic default) is not a risk, despite the tempting configuration of a high debt burden (general government debt is more than 120 percent of GDP) and an actual and structural primary surplus. However, as pointed out in Buiter (2012), banking union, and the severing of the umbilical cord between banks and the national sovereign will somewhat tilt the cost-benefit of strategic default in favour of a possible default.²⁸

For Italy, the key driver of sovereign risk will be domestic politics, and especially the nature of the next coalition government that will emerge following the general elections, no later than the end of April 2013. If the new government is pro-European, with a healthy majority and reasonably committed to fiscal austerity and structural reform, Italian sovereign debt probably will be safe. If instead it depends on the support of parties that are populist, anti-euro (even nostalgic for the lira), anti-austerity and opposed to radical structural reform, then Italian sovereign debt

²⁶ See *"Global Economics View - What's Next for Spain and Italy?"*, Willem Buiter and Ebrahim Rahbari, 25 June 2012, Citi

²⁷ See *"Global Economics View - What's Next for Spain and Italy?"*, Willem Buiter and Ebrahim Rahbari, 25 June 2012, Citi, and *"Euro Economics Weekly - Focus on Italy"*, Juergen Michels, 8 June 2012, Citi

²⁸ See also Global Economics View - Three unanticipated consequences of banking union, Willem Buiter, 2 August 2012

The 'new normal' for how much sovereign debt in the EA is sustainably privately financeable is likely to be much lower than before the crisis.

Finally, at a global level, markets and financial institutions are about to drown in another massive wave of liquidity.

might not be safe. In Italy and in most of the rest of Europe, all economics has become macro and all macro has become politics.

Even though Italy and Spain are likely solvent, they will have for the foreseeable future ratios of (gross general government) debt to GDP that will exceed what is likely to be the 'new normal' for government debt in the euro area that can be financed sustainably by private investors. What the limit for privately financeable government debt is, is highly uncertain - neither theory nor empirical evidence give us much guidance in this regard. What we are left with then are focal points. One prime candidate for such a focal point is the 60% of GDP guideline for government debt that was one of the Maastricht criteria for entry into the Economic and Monetary Union (EMU). The Fiscal Compact also includes reference to the benchmark of 60% of GDP - signatory countries are expected to reduce their levels of government debt by one twentieth of the difference between the actual government debt-to-GDP ratio and 60%. A second reference point for government debt is the 90% of GDP that Reinhart and Rogoff (2009) found to be the threshold at which government debt historically tended to become a drag on growth. At levels of government debt above the (again, admittedly ill-defined) threshold, a lender of last resort for sovereigns better stand ready to avoid default as a result of a market funding strike.29

As noted in the case of Spain, we are still likely to see bank debt restructuring, including senior unsecured bank debt restructuring, not just in the periphery but throughout the EA, because some of the worst EA banks are in the core, and because, as pointed out in Buiter (2012), the option of recapitalising banks by bailing in the tax payers rather than the unsecured creditors, even if the sovereign is able and willing to do so, is likely to be much reduced as a result of banking union.

Finally, at a global level, markets and financial institutions are about to drown in another massive wave of liquidity. Add to the contingent balance sheet expansion of the Eurosystem through the OMT (and likely through future LTROs and other subsidized collateralised lending operations for banks as well), first, the state-contingent and in principle open-ended QE3 announced by the Fed; second, the time-dependent large scale asset purchases (LSAPs) announced (on a surprisingly large scale) by the Bank of Japan; and third, the prospect of the Bank of England extending its QE beyond the currently authorised £375bn Asset Purchase Facility, when the APF reaches its current limit at the end of October 2012. The result is another wall of advanced country money that will at least in part make its way through the foreign exchange markets towards the EMs, resulting in a range of policy responses there to prevent EM currency appreciation deemed excessive. Among these measures will be EM credit expansion policies also.

In the advanced economies, with the official policy rates at or near the effective lower bound, diminishing returns have set in well and truly to central bank balance sheet expansion through large-scale purchases of the highest available credit quality and liquidity. The Fed's purchases of Treasuries and of Agency MBS and the Bank of England's purchases of gilts fall into the 'minimally effective in stimulating the real economy' category. Because the ECB is still 75 basis points away from zero as regards the refi rate, and because the Eurosystem tends to expand its balance sheet through the outright purchase of less liquid and higher credit risk instruments, and through lending to often near-insolvent banks that offer as collateral instruments issued by or guaranteed by high-risk sovereigns, its enhanced credit support probably offers much greater bang-per-buck than the LSAPs of the Fed and the Bank of England.

²⁹ See also Buiter and Rahbari (2012b)

Everywhere, since the liquidity trap is not 'perfect', some of the liquidity will leak into the most liquid asset markets, including the sovereign debt markets, the foreign exchange markets, equity markets and commodity markets. Impacts on the much less liquid markets for real estate appear to be much smaller. This combination of near-zero or indeed negative interest rates at maturities of up to 2 or 3 years and unlimited liquidity makes markets other than short-term debt markets happy and creates the risk of financial asset booms, bubbles and busts almost anywhere in the world, even with the real economy performing, at best, in a disappointing manner. With official liquidity the main driver of generous asset valuations, the risk of asset market collapse is always with us.

References

Buiter, Willem H. (2010), "Games of chicken between the monetary and fiscal authority: Who will control the deep pockets of the central bank?" (long version), *Citi Economics, Global Economics View*, 21 Jul. 2010.

Buiter, Willem H. (2012), "Three unintended consequences of banking union", Citi Research, Global Economics View, August 2, 2012.

Buiter, Willem H. and Ebrahim Rahbari (2012a), "Looking into the deep pockets of the ECB", *Citi Research, Global Economics View*, 27 February 2012.

Buiter, Willem H. and Ebrahim Rahbari (2012b), "The ECB as Lender of Last Resort for Sovereigns in the Euro Area", with Ebrahim Rahbari, CEPR Discussion Paper No. 8974, May 2012, Journal of Common Market Studies. Special Issue: The JCMS Annual Review of the European Union in 2011, September 2012, Volume 50, Issue Supplement s2, pp. 6-35.

Moody's Investors Service (2012), "Sovereign Default and Recovery Rates, 1983-2012H1", Special Comment, http://www.moodys.com/research/Moodys-releases-2012-sovereign-default-study--PR_251946

Reinhart, Carmen M. and Kenneth S. Rogoff (2009), This *Time is Different: Eight Centuries of Financial Folly*, Princeton University Press

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

Willem Buiter

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 of

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 - 11° 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 gueries 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, JI. 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 guestions 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 gueries 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. Sonazhi 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, Cíti is required to disclose whether a Cíti related company or business has a commercial relationship with the subject company. Considering that Cíti operates multiple businesses in more than 100 countries around the world, it is likely that Cíti 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. The

preferences as to the frequency and manner of receiving communications from analysts, the client's risk profile and investment focus and perspective (e.g. market-wide, sector specific, long term, short-term etc.), the size and scope of the overall client relationship with Citi and legal and regulatory constraints. Citi Research product may source data from dataCentral. dataCentral is a Citi Research proprietary database, which includes Citi estimates, data from company reports and feeds from Reuters and Datastream.

© 2012 Citigroup Global Markets Inc. Citi Research is a division of Citigroup Global Markets Inc. Citi and Citi with Arc Design are trademarks and service marks of Citigroup Inc. and its affiliates and are used and registered throughout the world. All rights reserved. Any unauthorized use, duplication, redistribution or disclosure of this report (the "Product"), including, but not limited to, redistribution of the Product by electronic mail, posting of the Product on a website or page, and/or providing to a third party a link to the Product, is prohibited by law and will result in prosecution. The information contained in the Product is intended solely for the recipient and may not be further distributed by the recipient to any third party. Where included in this report, MSCI sourced information is the exclusive property of Morgan Stanley Capital International Inc. (MSCI). Without prior written permission of MSCI, this information and any other MSCI intellectual property may not be reproduced, redisseminated or used to create any financial products, including any indices. This information is provided on an "as is" basis. The user assumes the entire risk of any use made of this information. MSCI, its affiliates and any third party involved in, or related to, computing or compiling the information hereby expressly disclaim all warranties of originality, accuracy, completeness, merchantability or fitness for a particular purpose with respect to any of this information. Without limiting any of the foregoing, in no event shall MSCI, any of its affiliates or any third party involved in, or related to, computing or compiling the information have any liability for any damages of any kind. MSCI, Morgan Stanley Capital International and the MSCI indexes are services marks of MSCI and its affiliates. The Firm accepts no liability whatsoever for the actions of third parties. The Product may provide the addresses of, or contain hyperlinks to, websites. Except to the extent to which the Product refers to website material of the Firm, the Firm has not reviewed the linked site. Equally, except to the extent to which the Product refers to website material of the Firm, the Firm takes no responsibility for, and makes no representations or warranties whatsoever as to, the data and information contained therein. Such address or hyperlink (including addresses or hyperlinks to website material of the Firm) is provided solely for your convenience and information and the content of the linked site does not in anyway form part of this document. Accessing such website or following such link through the Product or the website of the Firm shall be at your own risk and the Firm shall have no liability arising out of, or in connection with, any such referenced website.

ADDITIONAL INFORMATION IS AVAILABLE UPON REQUEST