

## Spain: 2013 Budget, Structural Reforms and Bank Stress Test

- On September 27, the Spanish government announced the 2013 central government (CG) budget and a new package of structural reforms. On September 28, the Bank of Spain presented the results of the bottom-up bank stress test.
- The 2013 CG budget includes budget cuts of 1.3% of GDP, of which 58% are on the expenditure side, and 42% relate to revenue increases. Social spending, including pensions, was shielded from the budget cuts. **Comment:** Given the government's optimistic growth forecast for 2013 of -0.5% (Citi forecast: -3.2%), we consider these budget measures to be insufficient to meet the (general government) budget deficit forecast of 4.5% of GDP. The emphasis on protecting social spending is likely aimed at containing austerity fatigue after recent increases in public protests.
- The Spanish government announced that by the end of March 2013 it will launch over 43 additional structural reform measures, covering labour markets, education, public administration and finances, energy and the environment, competition, and the judiciary. **Comment:** The structural reform package looks ambitious and addresses many of the areas of structural weakness in Spain, even though many details are lacking at this stage. Further decisive labour market and judiciary reform, and increases in the retirement age did not feature in the package.
- The new bank stress implies a capital deficit of €54bn (€59bn before tax) under the adverse scenario for a sample of 14 banking groups representing 90% of the banking system. Spain's Deputy Finance Minister expects the final amount of capital aid to be requested from the EFSF/ESM to be "around €40bn" taking into account ongoing bank restructuring processes. **Comment:** In our view, the assumptions on GDP growth, house prices and loan loss rates are too optimistic for a stress test and the resulting capital injections are therefore unlikely to be large enough to dissipate investor concerns about the health of the Spanish banking system.
- In our view, it is likely that the 2013 budget and the set of structural reforms imply that further conditionality under a potential EFSF/ESM sovereign bail-out will likely be limited to calibrating some of the announced measures and setting timetables. We continue to expect a request for a sovereign bail-out soon, likely after regional elections on October 21, but the request could come sooner.
- Following a reclassification of some bank support, the Spanish government noted that the budget deficit for 2011 would be revised up to 9.4% of GDP (from 8.9% before) and that the deficit for 2012 would likely be 7.4% of GDP rather than 6.3%.

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Ebrahim Rahbari

+44-20-7986-6522

ebrahim.rahbari@citi.com

Jürgen Michels

+44-20-7986-3294

juergen.michels@citi.com

Guillaume Menuet

+44-20-7986-1314

guillaume.menuet@citi.com

*With thanks to*

Antonio Montilla

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# 2013 budget, Structural Reforms and Bank Stress Test

## 2013 Draft Budget

**The 2013 State budget includes projected savings of 1.3% of GDP (58% from spending cuts, and 42% from expenditure increases)**

On September 27, the Spanish government presented the draft central government budget (State budget) for 2013.<sup>1</sup> It reaffirmed its commitment to meeting the (general government) budget deficit targets of 6.3% of GDP for 2012 and 4.5% of GDP for 2013.<sup>2</sup> The 2013 State budget includes savings of 1.3% of GDP, of which 58% are to be achieved through spending cuts, and 42% through expenditure increases, while social spending (in particular on pensions) was protected. The government did not change its macroeconomic projections and in particular continues to expect GDP to drop by -0.5% of GDP in 2013.

In our view, the measures announced are likely to be insufficient to meet the budget deficit target of 4.5% of GDP for 2013, mostly because we consider the underlying assumption for GDP growth to be too optimistic (we expect 2013 growth to be -3.2%). Nevertheless, we consider it unlikely that a potential EFSF/ESM sovereign bail-out would include substantial additional fiscal conditionality.

## Expenditures

**Central government expenditures (excluding pre-committed spending) are expected to fall by 7.3%YY (0.8% of GDP), including:**

- 8.9% cut in expenditures of ministries
- 3.9% reduction in staff costs
- 20-42% cut in subsidies and grants to unions, and political parties

Under the 2013 budget, central government expenditures (excluding pre-committed spending) are to fall by 7.3% YY (0.8% of GDP):

- Total social security spending is to go up by 5.6% to €169.8bn in 2013. Pension spending, the biggest part of social security expenditures, will rise by 4.9% (to €121.6bn), including a 1% rise in monthly pension payments. The government will tap €3bn from a €69bn social security reserve fund to finance part of the spending for 2012 and 2013. Public sector workers are set to receive two extra payments in 2013 after having their Christmas bonus cut in 2012.
- Expenditures by ministries are to fall by 8.9% to €39.7bn, with the biggest reductions to be delivered by the Ministries of Agriculture (25.4%), Industry and Energy (21.3%), and Education (17.2%).
- Staff costs are to fall by 3.9%: wages of civil servants will be frozen for the third consecutive year, while public sector workers who retire will not be replaced except for one in ten positions in priority areas such as hospitals, schools, firefighting, security, and research.
- Subsidies and grants to unions, and political parties are to be cut by 20-42%.
- Prison spending is to fall by 5.3% and spending on the judiciary by 4.3%.
- Interest payments are expected to jump from €28.8bn in 2012 to €38.6bn in 2013 (33.8%YoY).
- Civilian R&D expenditures are maintained at €5.6bn.

<sup>1</sup> See

[http://www.minhap.gob.es/Documentacion/Publico/GabineteMinistro/Notas%20Prensa/2012/CONSEJO%20DE%20MINISTROS/27-09-12%20CM\\_PGE\\_2013.pdf](http://www.minhap.gob.es/Documentacion/Publico/GabineteMinistro/Notas%20Prensa/2012/CONSEJO%20DE%20MINISTROS/27-09-12%20CM_PGE_2013.pdf) and

<http://www.minhap.es/Documentacion/Publico/GabineteMinistro/Notas%20Prensa/2012/SE%20PRESUPUESTOS%20Y%20GASTOS/29-09-12%20Presentación%20Congreso%20PGE%202013.pdf>

<sup>2</sup> As noted on the front-page and below, revisions are likely for the 2011 deficit and the 2013 deficit projection on account of a reclassification of banking sector support. For the time being, however, there was no indication that the budget deficit targets ex-bail-outs are to be amended.

## Revenues

Non-interest revenues of the central government are expected to go up by 4% YY to €124.0bn in 2013

**Central government revenues to increase by 4%YY, including:**

- a 14.6% increase in VAT revenues
- a €2.4bn increase by limiting the tax deductibility of depreciation of tangible fixed assets by large companies
- tax increases on lottery winnings and capital gains

Tax revenues (before transfers to the regions) are to rise by 3.8% to €175bn.

- Personal income tax revenues to grow by 1.5% to €74.2bn.
- Corporate income tax revenues to fall by 2.8% to €19bn.
- VAT revenues to increase by 14.6% to €54.7bn in 2013 as a result of the VAT increase that took effect on September 1, 2012. Revenues from excise fees to rise by 8.3% to €20.0bn.
- For 2013 and 2014, the Treasury will limit the tax deductibility of depreciation of tangible fixed assets by large companies (SMEs and small companies are excluded), raising €2.4bn.
- Capital gains for shares sold within one year are to be taxed at the rate of personal income tax (to raise €0.1bn)
- Lottery winnings over €2,500 are to be taxed at 20% (to yield €0.8bn)
- Additional measures on the taxation of wealth and on tax deductibility for real estate investments (€0.1bn) were also announced.

Figure 1. Spain - Macroeconomic Assumptions for 2013 Budget

All values in %YY unless indicated	2012	2013
Real GDP	-1.5	-0.5
Final Domestic Demand	-4.0	-2.9
Public Consumption	-4.8	-8.2
Private Consumption	-1.5	-1.4
Fixed Investment	-9.9	-2.1
Exports of Goods and Services	1.6	6.0
Imports of Goods and Services	-6.7	-1.5
Unemployment Rate (%)	24.6	24.3
General Government Balance (% of GDP)	6.3	-4.5
Nominal GDP	-1.2	1.2

Note: values correspond to %YoY except for the unemployment rate and the general government balance.

Source: Ministerio de Hacienda y Administraciones

## Structural Reforms

On September 27, the Spanish government announced that it will launch over the coming months (by the end of March 2013) 43 additional structural reform measures, including in the following areas:<sup>3</sup>

1. **Labour market and education:** Promoting vocational training, a comprehensive evaluation of active labour market policies, formulating an overall strategy for employment and young entrepreneurship by the end of the year, education reform to be developed by the end of 2012 to improve the employability of young people.

<sup>3</sup> [http://www.lamoncloa.gob.es/ConsejodeMinistros/Referencias/\\_2012/refc20120927.htm#Estrategia](http://www.lamoncloa.gob.es/ConsejodeMinistros/Referencias/_2012/refc20120927.htm#Estrategia)

The Spanish government will announce over the coming months 43 additional structural reform measures in key areas, including:

- (i) employment,
- (ii) public finances,
- (iii) energy and the environment,
- (iv) competition, and
- (v) social security

2. **Public finances:** Besides fiscal measures announced to reduce the budget deficit, the measures include creating an independent fiscal body in Q1 2013 to oversee and monitor budget execution and projections at all levels of government, a new Transparency Law which will facilitate the release of information on the use of public resources, reform of local administrations (from which the government aims to save €3.5bn), streamlining health services, education and regional television services in the Autonomous Regions.
3. **Energy and environment:** Energy reform, promoting fuel efficiency for vehicles.
4. **Competition and telecommunications:** Market unity law to ensure the free movement of goods and services throughout the country, updating and strengthening the competition law and authority, steps to advance the liberalization of the telecommunications sector.
5. **Social security:** Measures to raise the effective retirement age by making early retirement less attractive, reviewing the parameters of pension expenditure, such as the sustainability factor, reforming the provisions for disability benefits.

The announcement also included measures to reinvigorate the housing market (in particular the rental market), limited judicial reforms, reforms to the system of wage bargaining and reforms of the agricultural and other primary resources sectors.

While at this stage many of the details of the reforms are not available, these reforms do touch upon many of the areas of structural weakness in the Spanish economy, including the lack of competition in certain sectors (notably energy and telecommunications), the poor state of the labour market and poor employability of young Spaniards. Among the potential reforms that did not feature in the announcement were a reduction in unemployment benefits (level and duration), an increase in the retirement age and further labour market reform (such as a further reduction in firing costs, further harmonization of job contracts, or limiting the involvement of courts for redundancy disputes). In our view, it is unlikely that a potential ESM/EFSF sovereign bail-out for Spain would substantially add to the list of reforms, and that the associated conditionality would be limited to calibrating the scope of some of these reforms and setting timetables for implementation.

## Bank Stress Test

The 'bottom' up bank stress test of 14 banking groups (accounting for 90% of total banking assets) implied capital deficits of €9.3bn (€4bn after tax) under the adverse scenario of the test.

On September 28, the Bank of Spain presented the results of the long-awaited bottom-up review ('stress test') of the balance sheets of 14 banking groups, accounting for 90% of the assets of the Spanish banking system.<sup>4</sup> The stress test exercise involved 12 advisors including auditors, appraisal companies and consultants and its results relate to potential bank losses on domestic private sector credit under a baseline and an adverse scenario between 2012 and 2014.

The stress test arrived at total cumulative losses on the domestic credit portfolio of €183bn under the baseline scenario and of €270 billion under the adverse scenario. In terms of capital deficits, the stress tests yielded €26bn of capital deficits in the baseline scenario and €54bn under the adverse scenario. Under the adverse scenario, which is to be the basis for capital injections the capital deficits are €59bn before tax.

<sup>4</sup> See [http://www.bde.es/f/webbde/SSICOM/20120928/presbe2012\\_41e.pdf](http://www.bde.es/f/webbde/SSICOM/20120928/presbe2012_41e.pdf), [http://www.bde.es/f/webbde/SSICOM/20120928/background\\_ow280912e.pdf](http://www.bde.es/f/webbde/SSICOM/20120928/background_ow280912e.pdf) and [http://www.bde.es/f/webbde/SSICOM/20120928/informe\\_ow280912e.pdf](http://www.bde.es/f/webbde/SSICOM/20120928/informe_ow280912e.pdf)

**EFSF/ESM funds for the bank  
recapitalization are to be around €40bn.**

Spanish Deputy Finance Minister Fernando Jimenez Latorre said that, based on the results of the stress test, public capital injections (and therefore the size of the bank bail-out request from the EFSF/ESM) would be around €40bn, with the difference accounted for by (i) disposals, (ii) private capital raisings, (iii) transfer of assets to the bad bank and (iv) hybrid debt haircuts.<sup>5</sup> Seven banking groups representing 62% of the lending portfolio analysed in the test do not require any capital needs. Four nationalised institutions account for 86% (€46bn) of the capital needs of the system. Three non-nationalised institutions account for the remaining capital needs.

The capital deficits were calculated based on balance sheet information at the end of 2011, an estimate of total cumulative losses on the domestic credit portfolio between 2012 and 2014 (€183bn under the baseline scenario, €270bn under the adverse scenario), and a minimum core tier one (CT1) capital ratio of 9% of risk-weighted assets under the baseline scenario and 6% for the adverse scenario. The losses were calculated based on loan- and institution-specific information as well as macroeconomic and asset price assumptions (see Figure 3), which are reflected in loan loss assumptions for the system. The €54 billion represents less than 2% of the Spanish banking assets.

Figure 2. Stress test loan loss assumptions

Adverse Scenario	Spain	Ireland
Total Asset Losses	17.3%	-
Total Loan Losses	14.6%	14.6%
Non financial companies		
- RE related (ie developers)	42.8%	46.2%
- Other sectors	13.8%	12.3% *
- Corporates	-	5.8%
Individuals		
- with collateral	4.1%	12.0%
- without collateral	18.6%	27.1%

Source: BoS, NAMA, Citi Research [Spanish Banks - Reading Between the Lines](#). \*Note: SMEs

In our view, the assumptions underlying the stress test are too optimistic and the projected capital injections are therefore unlikely to dissipate investor concerns about the health of the Spanish banking system. The reasons parallel the concerns we had about the 'top down' stress test results published on June 21. First, the macroeconomic assumptions underlying the adverse scenario are not particularly harsh for a 'stress' case. In particular, the GDP forecasts for 2013 and 2014 (-2.1% and -0.3%, respectively) are above our forecast for these two years of -3.2% and -0.8%, respectively.<sup>6</sup> The assumptions of cumulative falls in house prices of 25% for 2012-14 under the adverse scenario also appear more appropriate for a 'baseline'. Second, the loan loss assumptions also appear optimistic. In particular, the 4.1% loss rate for HH loans 'with collateral' (mostly residential mortgages) seems optimistic, even taking into account the factors that are generally cited as supporting household debt servicing capacity, such as that mortgage loans are 'full recourse', generous unemployment benefits, family support and relatively high household wealth. The 4.1% loss rate for Spain compares with a 12% loan loss rate in the adverse scenario of the Irish bank stress test, even though we acknowledge the many differences between the two countries.<sup>7</sup> Furthermore, exposure to the Spanish general government sector or banks' equity holdings were not stressed. Under these macroeconomic and loan loss assumptions, a minimum CT1 ratio of 6% in the adverse scenario appears generous.<sup>8</sup>

Now that the results of the stress test have been published and the capital deficits of individual institutions identified, the next steps in the bank bail-out are:

- Formulation of recapitalisation plans for banks with a capital shortfall vis-à-vis the minimum level established in the stress test.

<sup>5</sup>[http://wap.elpais.com/index.php?module=elp\\_gen&page=elp\\_gen\\_noticia&idNoticia=20120928elpnepeco\\_71.Tes&seccion=eco](http://wap.elpais.com/index.php?module=elp_gen&page=elp_gen_noticia&idNoticia=20120928elpnepeco_71.Tes&seccion=eco)

<sup>6</sup> Please note that the macroeconomic assumptions underlying the bank stress tests are not identical to the latest macroeconomic scenario of the Spanish government.

<sup>7</sup> See also [Global Economics View - What's Next for Spain and Italy?](#) and [Spanish Banks - Bank Recapitalisation Ahead](#)

<sup>8</sup> The Irish bank stress test also included a minimum CT1 ratio of 6% under the adverse scenario, but it also included an additional 'buffer' of capital. See <http://www.centralbank.ie/regulation/industry-sectors/credit-institutions/documents/the%20financial%20measures%20programme%20report.pdf>

- Review of these plans by the authorities and classification of banks into Group 2 (banks that will require public support) and Group 3 (banks that will have until 30 June 2013 to implement their recapitalisation plan and to meet the capital needs established without requiring public support thereafter). Group 2 banks must also submit a restructuring/resolution plan which will be evaluated by the Bank of Spain and sent to the European Commission for its approval.
- Transfer of the troubled assets of the banks that require public support to the Asset Management Company for Assets Arising from Bank Restructuring (AMC) envisaged for these purposes in the recent Royal Decree-Law 24/2012 of 31 August 2012.
- Provision of public support to banks.

For a detailed discussion of the stress test results and the next steps, see [Spanish Banks - Reading Between the Lines](#)

Figure 3. Spain – Bank Stress Test Macroeconomic Scenarios 2012-2014 (%)

	2011	Baseline			Adverse		
		2012	2013	2014	2012	2013	2014
Real GDP	0.7	-1.7	-0.3	0.3	-4.1	-2.1	-0.3
Nominal GDP	2.1	-0.7	0.7	1.2	-4.1	-2.8	-0.2
Unemployment rate (%)	21.6	23.8	23.5	23.4	25.0	26.8	27.2
Harmonised CPI	3.1	1.8	1.6	1.4	1.1	0.0	0.3
GDP deflator	1.4	1.0	1.0	0.9	0.0	-0.7	0.1
House prices	-5.6	-5.6	-2.8	-1.5	-19.9	-4.5	-2.0
Land prices	-6.7	-25.0	-12.5	-5.0	-50.0	-16.0	-6.0
EURIBOR, 3 months	1.4	0.9	0.8	0.8	1.9	1.8	1.8
EURIBOR, 12 months	2.0	1.6	1.5	1.5	2.6	2.5	2.5
10-years yields (%)	5.6	6.4	6.7	6.7	7.4	7.7	7.7
Exchange Rate (USD/EUR)	1.4	1.3	1.3	1.3	1.3	1.3	1.3
Loans to HH	-1.5	-3.8	-3.1	-2.7	-6.8	-6.8	-4.0
Loans to NFC	-3.6	-5.3	-4.3	-2.7	-6.4	-5.3	-4.0
Ibex 35	5.6	6.4	6.7	6.7	7.4	7.7	7.7

Note: values correspond to %YoY except for the unemployment rate and the 10-years government yield.

Source: Bank of Spain, and Citi Research

## In other news

**A statement by the Finnish, German and Dutch finance ministers highlights that the transfer of the bank bail-out from the Spanish sovereign balance sheet should not be taken for granted.**

On September 26, the Finnish, German and Dutch finance ministers released a statement noting that the ESM should only get the ability to directly recapitalise euro area banks once the ECB has become the an effective single supervisor of EA banks, suggesting that the likely timing of any such recapitalizations is still some time away.<sup>9</sup> In addition, the ministers suggested that such capital injections should only take place once private capital and national resources would be exhausted and should not be used for legacy assets. While this announcement should not be interpreted as the final word on the question of ESM direct bank recapitalisations, it does highlight that the transfer of all or part of the Spanish bank bail-out from the balance sheet of the Spanish sovereign to the ESM is by no means to be taken for granted.

<sup>9</sup>[http://www.vm.fi/vm/en/03\\_press\\_releases\\_and\\_speeches/01\\_press\\_releases/20120925JointS/name.jsp](http://www.vm.fi/vm/en/03_press_releases_and_speeches/01_press_releases/20120925JointS/name.jsp)

**Likely budget deficit revisions due to a reclassification of previous bank bail-outs:**

- for 2011 revised up to 9.4% of GDP (from 8.9% before), and
- for 2012 would likely be 7.4% of GDP rather than 6.3% of GDP

Following a reclassification of some bank support, the Spanish government noted that the budget deficit for 2011 would be revised up to 9.4% of GDP (from 8.9% before) and that the deficit for 2012 would likely be 7.4% of GDP rather than 6.3%.<sup>10</sup>

Moody's noted on October 1 that even though it considered the estimates of capital deficits by the stress test as too low, it would consider the upcoming bank recapitalizations as credit positive for the affected institutions and the banking system as a whole.<sup>11</sup> The result of Moody's review of the Spanish sovereign rating has not yet been published. We continue to expect that Moody's will eventually downgrade Spain by one notch. However, we think that the uncertainties given as a reason for Moody's to extend the review period for the Spanish sovereign rating on August 31 have not fully been resolved, notably the scope and timing of a potential EFSF/ESM sovereign bail-out for Spain.<sup>12</sup> Following this rationale, we would expect Moody's to further extend the ratings review ([International Interest Rate Strategist - Can The Positive Mood In EMU Last?](#)).

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<sup>10</sup> [http://economia.elpais.com/economia/2012/09/29/actualidad/1348912177\\_069679.html](http://economia.elpais.com/economia/2012/09/29/actualidad/1348912177_069679.html)

<sup>11</sup> [http://www.moody.com/researchdocumentcontentpage.aspx?docid=PBC\\_145834](http://www.moody.com/researchdocumentcontentpage.aspx?docid=PBC_145834)

<sup>12</sup>

[http://www.moody.com/page/viewresearchdoc.aspx?docid=PR\\_254224&WT.mc\\_id=MDCAAlerts\\_realtime](http://www.moody.com/page/viewresearchdoc.aspx?docid=PR_254224&WT.mc_id=MDCAAlerts_realtime)



## Appendix A-1

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The performance data quoted represents past performance. Past performance is no guarantee of future results. The investment return and principal value of an investment will fluctuate so that an investor's shares, when redeemed, may be worth more or less than their original cost. Current performance may be higher or lower than the performance data quoted.

**Inverse and Leveraged ETFs:** Most leveraged ETFs seek to provide a multiple of the investment returns of a given index or benchmark on a daily basis. Inverse ETFs seek to provide the opposite of the investment returns, also daily, of a given index or benchmark, either in whole or by multiples. Due to the effects of compounding and possible correlation errors, leveraged and inverse ETFs may experience greater losses than one would ordinarily expect. Compounding can also cause a widening differential between the performances of an ETF and its underlying index or benchmark, so that returns over periods longer than one day can differ in amount and direction from the target return of the same period. Consequently, these ETFs may experience losses even in situations where the underlying index or benchmark has performed as hoped. Aggressive investment techniques such as futures, forward contracts, swap agreements, derivatives and options can increase ETF volatility and decrease performance. Investors holding these ETFs should therefore monitor their holdings consistent with their strategies, as frequently as daily.

**International investing and Sector Specific ETFs:** International investing involves special risks such as currency fluctuation and political instability. Investing in emerging markets may accentuate these risks. Since sector- and commodity-specific funds are not diversified and focus their investments entirely in a single sector, commodity, or basket of commodities, the funds will involve a greater degree of risk than an investment in other diversified fund types.

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#### Guide to Citi Research Fundamental Research Investment Ratings:

Citi Research's stock recommendations include a risk rating and an investment rating.

**Risk ratings**, which take into account both price volatility and fundamental criteria, are: Low (L), Medium (M), High (H), and Speculative (S).

**Investment ratings** are a function of Citi Research's expectation of total return (forecast price appreciation and dividend yield within the next 12 months) and risk rating.

Analysts may place covered stocks "Under Review" in response to exceptional circumstances (e.g. lack of information critical to the analyst's thesis) affecting the company and/or trading in the company's securities (e.g. trading suspension). Stocks placed "Under Review" will be monitored daily by management. As soon as practically possible, the analyst will publish a note re-establishing a rating and investment thesis.

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#### Guide to Citi Research Fundamental Research Investment Ratings:

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**Risk rating** takes into account both price volatility and fundamental criteria. Stocks will either have no risk rating or a High risk rating assigned.

**Investment Ratings:** Citi Research investment ratings are Buy, Neutral and Sell. Our ratings are a function of analyst expectations of expected total return ("ETR") and risk. ETR is the sum of the forecast price appreciation (or depreciation) plus the dividend yield for a stock within the next 12 months. The Investment rating definitions are: Buy (1) ETR of 15% or more or 25% or more for High risk stocks; and Sell (3) for negative ETR. Any covered stock not assigned a Buy or a Sell is a Neutral (2). For stocks rated Neutral (2), if an analyst believes that there are insufficient valuation drivers and/or investment catalysts to derive a positive or negative investment view, they may elect with the approval of Citi Research management not to assign a target price and, thus, not derive an ETR. Analysts may place covered stocks "Under Review" in response to exceptional circumstances (e.g. lack of information critical to the analyst's thesis) affecting the company and / or trading in the company's securities (e.g. trading suspension). As soon as practically possible, the analyst will publish a note re-establishing a rating and investment thesis. To satisfy regulatory requirements, we correspond Under Review and Neutral to Hold in our

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Prior to October 8, 2011, the firm's stock recommendation system included a risk rating and an investment rating. **Risk ratings**, which took into account both price volatility and fundamental criteria, were: Low (L), Medium (M), High (H), and Speculative (S). **Investment Ratings** of Buy, Hold and Sell were a function of the Citi Research expectation of total return (forecast price appreciation and dividend yield within the next 12 months) and risk rating. Additionally, analysts could have placed covered stocks "Under Review" in response to exceptional circumstances (e.g. lack of information critical to the analyst's thesis) affecting the company and/or trading in the company's securities (e.g. trading suspension). Stocks placed "Under Review" were monitored daily by management and as practically possible, the analyst published a note re-establishing a rating and investment thesis. For securities in developed markets (US, UK, Europe, Japan, and Australia/New Zealand), investment ratings were: Buy (1) (expected total return of 10% or more for Low-Risk stocks, 15% or more for Medium-Risk stocks, 20% or more for High-Risk stocks, and 35% or more for Speculative stocks); Hold (2) (0%-10% for Low-Risk stocks, 0%-15% for Medium-Risk stocks, 0%-20% for High-Risk stocks, and 0%-35% for Speculative stocks); and Sell (3) (negative total return). For securities in emerging markets (Asia Pacific, Emerging Europe/Middle East/Africa, and Latin America), investment ratings were: Buy (1) (expected total return of 15% or more for Low-Risk stocks, 20% or more for Medium-Risk stocks, 30% or more for High-Risk stocks, and 40% or more for Speculative stocks); Hold (2) (5%-15% for Low-Risk stocks, 10%-20% for Medium-Risk stocks, 15%-30% for High-Risk stocks, and 20%-40% for Speculative stocks); and Sell (3) (5% or less for Low-Risk stocks, 10% or less for Medium-Risk stocks, 15% or less for High-Risk stocks, and 20% or less for Speculative stocks).

Investment ratings are determined by the ranges described above at the time of initiation of coverage, a change in investment and/or risk rating, or a change in target price (subject to limited management discretion). At other times, the expected total returns may fall outside of these ranges because of market price movements and/or other short-term volatility or trading patterns. Such interim deviations from specified ranges will be permitted but will become subject to review by Research Management. Your decision to buy or sell a security should be based upon your personal investment objectives and should be made only after evaluating the stock's expected performance and risk.

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Citi Research closed-end fund recommendations include a risk rating and an investment rating.

**Risk ratings**, which take into account the quality and liquidity of the underlying securities, financial leverage, and foreign currency exposure, are: Low [L] (fund invests in high quality, liquid securities with little to no financial leverage or foreign currency exposure); Medium [M] (overall, fund invests in moderate-to-high-quality, liquid securities with reasonable financial leverage, and provides primarily United States dollar currency exposure); High [H] (fund may invest in low-quality, less-liquid securities, have exposure to foreign currencies, and use above-average degrees of financial leverage); and Speculative [S] (fund invests in low-grade, illiquid and/or highly volatile securities, have exposure to foreign currency, and may also use high degrees of financial leverage).

**Investment ratings** are based upon the Citi Research expectation of the funds total return relative to its peer group of closed-end-funds, and the ability to provide stable to rising dividends, where applicable. Investment ratings are: Outperform [1] (fund is expected to outperform its peer group, and/or the fund is expected to provide stable to rising dividends, where applicable); In-Line [2] (fund is expected to perform in line with its peer group, and/or the fund is expected to provide stable dividends, where applicable); and Underperform [3] (fund is expected to underperform its peer group, and/or the fund is expected to provide a declining dividend, where applicable).

#### Guide to Citi Research Quantitative Research Investment Ratings:

Citi Research Quantitative Research World Radar Screen recommendations are based on a globally consistent framework to measure relative value and momentum for a large number of stocks across global developed and emerging markets. Relative value and momentum rankings are equally weighted to produce a global attractiveness score for each stock. The scores are then ranked and put into deciles. A stock with a decile rating of 1 denotes an attractiveness score in the top 10% of the universe (most attractive). A stock with a decile rating of 10 denotes an attractiveness score in the bottom 10% of the universe (least attractive).

Citi Research Asia Quantitative Radar Screen model recommendations are based on a regionally consistent framework to measure relative value and momentum for a large number of stocks across regional developed and emerging markets. Relative value and momentum rankings are equally weighted to produce a global attractiveness score for each stock. The scores are then ranked and put into quintiles. A stock with a quintile rating of 1 denotes an attractiveness score in the top 20% of the universe (most attractive). A stock with a quintile rating of 5 denotes an attractiveness score in the bottom 20% of the universe (least attractive).

Citi Research Australia Quantitative Radar Screen model recommendations are based on a robust framework to measure relative value and momentum for a large number of stocks across the Australian market. Stocks with a ranking of 1 denotes a stock that is above average in terms of both value and momentum relative to the stocks in the Australian market. A ranking of 10 denotes a stock that is below average in terms of both value and momentum relative to the stocks in the Australian market.

Citi Research Quantitative Decision Tree model recommendations are based on a predetermined set of factors to rate the relative attractiveness of stocks. These factors are detailed in the text of the report. The Decision Tree model forecasts whether stocks are attractive or unattractive relative to other stocks in the same sector (based on the Russell 1000 sector classifications).

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For purposes of NASD/NYSE ratings-distribution-disclosure rules, a Citi Research Quantitative World Radar Screen recommendation of (1), (2) or (3) most closely corresponds to a buy recommendation; a recommendation from this product group of (4), (5), (6) or (7) most closely corresponds to a hold recommendation; and a recommendation of (8), (9) or (10) most closely corresponds to a sell recommendation. An (NR) recommendation indicates that the stock is no longer in the screen.

For purposes of NASD/NYSE ratings distribution disclosure rules, a Citi Research Asia Quantitative Radar Screen recommendation of (1) most closely corresponds to a buy recommendation; a Citi Research Asia Quantitative Radar Screen recommendation of (2), (3), (4) most closely corresponds to a hold recommendation; and a recommendation of (5) most closely corresponds to a sell recommendation. An (NR) recommendation indicates that the stock is no longer in the screen.

For purposes of NASD/NYSE ratings-distribution-disclosure rules, a Citi Research Quantitative Research Decision Tree model or Quantitative Research Australia Radar Screen recommendation of "attractive" (1) most closely corresponds to a buy recommendation. All other stocks in the sector are considered to be "unattractive" (10) which most closely corresponds to a sell recommendation. An (NR)/(0) recommendation indicates that the stock is no longer in the screen.

Recommendations are based on the relative attractiveness of a stock, thus can not be directly equated to buy, hold and sell categories. Accordingly, your decision to buy or sell a security should be based on your personal investment objectives and only after evaluating the stock's expected relative performance.

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