

12 June 2013 | 17 pages

Diversified Banks (GICS) | Banks (Citi)
Western Europe | Greece

National Bank of Greece SA (NBGr.AT)

Banking on Greekoverly?

■ Estimate Change

Neutral	2
Price (11 Jun 13)	€3.99
Target price	-
Expected share price return	-
Expected dividend yield	-
Expected total return	-
Market Cap	€9,563M
	US\$12,678M

Price Performance (RIC: NBGr.AT, BB: ETE GA)



Florent Nitu
+44-20-7986-3907
florent.nitu@citi.com

Stefan Nedialkov
+44-20-7986-4188
stefan.nedialkov@citi.com

- **Reliance on Macro Remains High** — NBG is working on its capital plan. The first step (recapitalisation) is almost behind us (13 June). Next will come the strengthening of capital ratios, likely through disposals of some international activities. Finally, NBG will need to deliver on expectations for its franchises, but a lot will depend on external factors (Greek macro & banking environment, asset quality reviews). NBG is on the right track, but the picture should be clearer later in the year, in our opinion.
- **Step 1: Recapitalisation** — NBG is raising €9.8bn capital as per Bank of Greece requirements (details scenarios in Figure 1). Should less than 10% of that target not be raised from private investors, NBG may need to raise expensive and potentially dilutive cocos or worse, control could be taken by HFSF (meaning no warrants). Our base case is 10% private sector take up, given solid investor demand.
- **Step 2: Capital Ratios to Be Further Boosted** — Management argue (and we agree) the bank needs to go beyond its 9.3% pro-forma B3 CET1 ratio. On our base case, the bank has enough capital (Figure 2), but we would welcome a 1-2% buffer to counter risks on State capital, asset quality and regulatory changes. Disposals are the key tool. One region that should not be overlooked is South Eastern Europe (SEE), where disposals could provide up to 110bp capital boost.
- **Step 3: Justify Valuations** — NBG shares trade at generous valuations (1.4x PBV, 2x PTBV - Figure 6), in our view driven by the robust earnings potential of core franchises, potentially even in Greece over time (Figure 7). 2014E could breakeven, and RoEs should reach double digits from 2015E (we forecast 12%). For current valuation multiples to be justified, we believe the bank needs to announce & deliver on its capital plan and reassure on asset quality & NII (partly driven by Greek macro & more deposits returning). Key dates: end of capital subscription (13 June), trading of new shares & warrants (25 June), more details on capital plans (mid-year), Greek & European banks asset quality (end-2013 and early 2014). Given the remaining uncertainty, we remain Neutral and do not assign a Target Price.

National Bank of Greece SA (EUR)

Year to 31 Dec	2011A	2012A	2013E	2014E	2015E
Net Income (€M)	-567.0	-1,847.5	-117.8	175.8	820.2
Diluted EPS (€)	-0.59	-1.93	-0.07	0.08	0.36
Diluted EPS (Old) (€)	-65.13	-6.24	-2.74	-0.33	na
PE (x)	-6.7	-2.1	-54.9	51.9	11.1
P/BV (x)	0.8	-1.0	1.4	1.4	1.3
DPS (€)	0.00	0.00	0.00	0.00	0.00
Net Div Yield (%)	0.0	0.0	0.0	0.0	0.0
ROE (%)	-8.2	-346.2	-9.7	2.8	11.9

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.

Fiscal year end 31-Dec	2011	2012	2013E	2014E	2015E
Valuation Ratios					
P/E adjusted (x)	-6.7	-2.1	nm	51.9	11.1
P/E reported (x)	-6.7	-2.1	nm	51.9	11.1
P/BV (x)	0.8	-1.0	1.4	1.4	1.3
P/Adjusted BV diluted (x)	0.8	-1.0	1.4	1.4	1.3
Dividend yield (%)	0.0	0.0	0.0	0.0	0.0
Per Share Data (€)					
EPS adjusted	-0.59	-1.93	-0.07	0.08	0.36
EPS reported	-0.59	-1.93	-0.07	0.08	0.36
BVPS	5.17	-4.05	2.75	2.83	3.19
Tangible BVPS	2.93	-6.28	1.81	1.89	2.25
Adjusted BVPS diluted	5.17	-4.05	2.75	2.83	3.19
DPS	0.00	0.00	0.00	0.00	0.00
Profit & Loss (€m)					
Net interest income	3,843	3,365	3,203	3,135	3,399
Fees and commissions	494	495	565	811	856
Other operating Income	35	-333	337	115	181
Total operating income	4,372	3,527	4,105	4,061	4,435
Total operating expenses	-2,548	-2,341	-2,313	-2,284	-2,363
Oper. profit bef. provisions	1,824	1,186	1,792	1,777	2,073
Bad debt provisions	-3,439	-2,966	-1,946	-1,550	-968
Non-operating/exceptionals	0	0	0	0	0
Pre-tax profit	-1,615	-1,780	-154	227	1,104
Tax	1,095	-158	79	-4	-221
Extraord./Min. Int./Pref. Div.	-48	90	-42	-47	-63
Attributable profit	-567	-1,848	-118	176	820
Adjusted earnings	-567	-1,848	-118	176	820
Growth Rates (%)					
EPS adjusted	-247.2	-225.7	96.2	205.9	366.4
Oper. profit bef. prov.	-13.7	-35.0	51.0	-0.8	16.6
Balance Sheet (€m)					
Total assets	106,870	104,799	103,737	106,855	111,758
Avg interest earning assets	96,736	89,959	88,628	89,502	92,911
Customer loans	78,616	76,905	78,592	80,559	83,695
Gross NPLs	9,591	14,612	16,190	17,809	17,809
Liab. & shar. funds	106,870	104,799	103,737	106,855	111,758
Total customer deposits	59,544	58,722	63,798	65,968	69,706
Reserve for loan losses	7,120	7,770	9,331	10,726	11,598
Shareholders' equity	4,937	-3,870	6,296	6,472	7,292
Profitability/Solvency Ratios (%)					
ROE adjusted	-8.2	-346.2	-9.7	2.8	11.9
Net interest margin	3.97	3.74	3.61	3.50	3.66
Cost/income ratio	58.3	66.4	56.4	56.2	53.3
Cash cost/average assets	2.2	2.2	2.2	2.2	2.2
NPLs/customer loans	12.2	19.0	20.6	22.1	21.3
Reserve for loan losses/NPLs	74.2	53.2	57.6	60.2	65.1
Bad debt prov./avg. cust. loans	4.4	3.8	2.5	1.9	1.2
Loans/deposit ratio	132.0	131.0	123.2	122.1	120.1
Tier 1 capital ratio	nm	nm	15.8	15.7	16.3
Total capital ratio	nm	nm	19.0	18.8	19.6

For further data queries on Citi's full coverage universe
please contact Citi Research Data Services at
CitiRsch.DataServices.Global@citi.com



Contents

Step 1: Recapitalisation	4
Step 2: Capital Ratios to Be Further Boosted	5
What to Do: Sell Stakes, Don't Overlook SEE	6
Step 3: Justify Valuations	7
Financials	8
Appendix: Key Dates	11
National Bank of Greece SA	12
Company description	12
Investment strategy	12
Valuation	12
Risks	12
Appendix A-1	12

Step 1: Recapitalisation

NBG is raising €9.8bn capital as per Bank of Greece requirements. We illustrate below four scenarios, driven by the take up from the private sector. We agree with management that cocos should be avoided due to their high cost and unattractive characteristics for shareholders (conversion at 50% of subscription price after 5 years or under certain circumstances). Our modelled base case is 10% private sector take up, given solid investor demand for Greek assets & NBG's franchises.

Figure 1. Details of NBG's €9.8bn capital raise

Step I: Underwriting Stats	(I) 12% Private	(II) 10% Private BASE CASE	(III) With Cocos - no conversion	(IV) With Cocos - with conversion
Total Target Volume (€m)	9,756	9,756	9,756	9,756
o/w Rights Offering Volume (€m)	1,171	976	800	800
in %	12%	10%	8%	8%
o/w Cocos (€m) - max amount	-	-	1,900	1,900
o/w HFSF Target Volume (€m)	8,585	8,780	7,056	7,056
Subscription Price (€)	4.29	4.29	4.29	4.29
Coco conversion Price (€)			2.15	2.15
Step II: Rights offering stats (based on 23 May prices of €9)				
Rights Target Volume	1,171	976	800	800
TERP Discount	25%	28%	30%	30%
TERP (€)	5.75	5.94	6.16	6.16
Nominal Discount	52%	52%	52%	52%
Weight	223%	185%	152%	152%
<i>Approx. Ratio</i>	<i>2.23</i>	<i>1.85</i>	<i>1.85</i>	<i>1.85</i>
Number New Private Sector Shares	273.0	227.4	186.5	186.5
Number Private Sector Shares: Old + Rights	395.6	350.1	309.1	309.1
Step III: HFSF Stats				
Number New Shares through HFSF	2001	2047	1645	1645
Number New Shares through HFSF post coco conversion	2001	2047	1645	2531
Total Number New Shares	2274	2274	1831	2717
Total Number of Shares	2397	2397	1954	2840
Step IV: Number of Shares Possible to Buy Through Warrants				
Number of Warrants (m)	273.0	227.4	186.5	186.5
Number of Warrants per Private Sector Share	1.00	1.00	1.00	1.00
Right to buy X shares per warrant	7.33	9.00	8.82	8.82
Step V: Valuations 1Q13 Pro-forma (based on 11 June price of €3.8)				
CET1	-4,621	-4,621	-4,621	-4,621
Pro-Forma CET1	5,135	5,135	5,135	5,135
- State Capital (Pref shares)	-1,350	-1,350	-1,350	-1,350
Pro-forma CET1 ex pref shares	3,785	3,785	3,785	3,785
Pro-forma RWAs	55,345	55,345	55,345	55,345
Shareholders' equity	-1,968	-1,968	-1,968	-1,968
Shareholders' equity ex State Capital	-3,318	-3,318	-3,318	-3,318
Pro-forma Shareholders' equity	6,438	6,438	6,438	6,438
- Intangibles	-2,137	-2,137	-2,137	-2,137
Tangible Equity ex State Cap	-5,455	-5,455	-5,455	-5,455
Pro-Forma Tangible Equity ex State Capital	4,301	4,301	4,301	4,301
Pro-Forma CET1 Ratio	9.3%	9.3%	9.3%	9.3%
Pro-Forma CET1 Ratio ex State capital	6.8%	6.8%	6.8%	6.8%
Pro-Forma BVPS (€)	2.7	2.7	3.3	2.3
P / BV	1.4x	1.4x	1.2x	1.7x
Pro-Forma TBVPS (€)	1.8	1.8	2.2	1.5
P / TBV	2.1x	2.1x	1.7x	2.5x
RoE (based on 2016E profits)	15%	15%	15%	15%

Source: Company Reports and Citi Research Estimates

Step 2: Capital Ratios to Be Further Boosted

NBG should have enough capital already,

We believe NBG does not need to raise capital much more above its 9.3% EBA CET1 ratio, based on our forecasts as per Figure 2, although a buffer would be preferable as explained below. Thanks to the solid pre-provision profits of the Group, we estimate the cumulative loan loss ratio (provisions over gross loans) could reach 17% (equivalent to 25-40% NPLs) by 2015E while maintaining a CET1 ratio above 9%. Indeed, our analysis of the Bank of Greece's assessment (Figure 3) suggests NBG is 'almost there' in terms of provisions to be taken. Furthermore, the Greek Government is considering reinforcing creditors' rights according to the Greek press (e.g. less rigid conditions on foreclosures), which could support some NPLs becoming performing again.

Figure 2. Enough Capital on Base Case

	1Q13 (pro-forma)	GOP 2Q13-2015E	Provisions 2Q13-2015E	2015E B3 Capital	Capital to 9% CET1 Ratio
EBA CET1 1Q13	5.1	+5.5	-4.5	6.2	-0.6
RWA	55.3	+6.0		61.4	
EBA CET1 Ratio	9.3%			10.1%	9%
Provision Reserve	7.9		+4.5	12.3	13.0
Provision / Gross loans	10%			16%	17%

Source: Company Reports and Citi Research Estimates

Figure 3. Almost There Based on Bank of Greece Requirements

€bn	Gross Loans (1)	Gross Provisions (2)	% loans	Reserves Dec 2011 (3)	2012 Provisions Taken (4)	2013-14 Provisions to be taken (2-3-4)
NBG	79	8.4	11%	5.4	2.5	0.4
o/w Greece 2011-14	49	4.4	9%		2.0	
Greek banks	255	46.8	18%	24.7		
o/w Greece 2011-14	223	33.1	15%			

Source: Company reports, ECB, Bank of Greece, Citi Research; Note: Gross loans at end 2011

BUT: Buffer needed to reassure on State capital, asset quality and regulation

Nevertheless, we believe NBG should target a CET1 ratio of at least 11% in order to absorb risks on asset quality, State capital and regulation.

- **State capital:** NBG has €1.35bn of State preference shares on which it does not pay interest as long as the bank remains loss making. As we expect the bank to break even in 2014E, this capital is likely to be paid before 2015, which will have a 230bp negative impact on its CET1 ratio.
- **Asset quality:** NBG is seen as one of the most conservative banks in Greece, as illustrated by the Bank of Greece's requirements in Figure 3. Nonetheless, we remain cautious at a European level on the ultimate provisioning requirements, in particular in the periphery. An example is on definitions: NBG had a 19.8% 90-day past due ratio at group level at end March (19% at end 2012) with a 54% cash coverage ratio. But according to IFRS 7 definitions, 32% of loans were impaired, implying a more modest 32% coverage ratio on this definition. We believe we will have to wait for the upcoming asset quality reviews (at year end next year) to support confidence in asset quality.
- **Regulation (Basel 3 & DTAs):** The impact of Basel 3 should be limited, but a change of the rules (e.g. on type of capital recognized on DTAs) could be detrimental. For example, as most of NBG's DTAs are related to the PSI, most do not need to be deducted from CET1 as long as they remain under the 20% filter set by the Bank of Greece. The near-term risk on DTAs appears limited nonetheless.

Figure 4. Example of Asset Quality Definition Issues: IFRS Impairments Stricter than 90 days-past-due Definitions

end 2012, €bn	Mortgages	Consumer	Credit Cards	SME	Corporate & Public Sector	Total
Total loans	23.5	9.0	6.7	6.3	31.4	76.9
Performing	15.0	4.7	4.9	3.1	18.2	45.9
% of total	64%	52%	73%	49%	58%	60%
Past due but not impaired	2.8	0.9	0.6	0.5	1.9	6.7
% of total	12%	11%	10%	8%	6%	9%
Impaired - collective	5.5	3.3	1.2	2.1	1.1	13.3
Impaired - individual	0.1	0.1	0.0	0.5	10.2	11.0
Total impaired	5.69	3.37	1.20	2.69	11.33	24.28
% of total	24%	38%	18%	43%	36%	32%
Allowance for impairment	1.0	1.9	0.9	1.1	2.9	7.8
Allowance / Total loans	4%	21%	14%	17%	9%	10%
'Coverage ratio' = Allowance / Impaired loans	17%	56%	76%	41%	25%	32%

Source: Company reports; Note: IFRS7 requirements, all loans with an impairment (individual or collective)

What to Do: Sell Stakes, Don't Overlook SEE

Beyond LME, disposals key to boost capital ratios. Timing: mid-year

NBG has been performing a number of capital boosting exercises (e.g. recent LME should provide up to €220m gain). But the main improvement should come from disposals. We believe small international operations should also be considered. According to management, the capital plan should come out by mid-year.

SEE could be 'sellable' again. Up to 110bp CET1 boost potential – likely to start with better funded units

South Eastern Europe (SEE) has been out of fashion since 2009, as NPLs rose rapidly and volume growth stopped in its track. Combined with high funding 'gaps' financed from the group, these operations have been seen as 'unsellable'. But life is reemerging in SEE M&A (e.g. KBC selling Serbian assets to SocGen, Raiffeisen buying Romanian banking assets). NBG has improved the loan-to-deposit ratio of these operations in recent years (from 200% in 2008 to 108% in 1Q13), we believe some of these units could be sold without a major hit to book. Given other banks' focus on the ability of their local units to self fund, better funded units (e.g. Bulgaria, Serbia, Albania) appear easier to dispose of. With an estimated €6bn RWAs tied to SEE, a sale close to book value could boost CET1 ratio by up to 110bp.

Figure 5. Selected International Activities Balance Sheets & P&L

2012, €m	Sum of Selected Markets	BG	RO	FYROM	CY	Serb	Alb	S Africa
Balance sheet								
Total assets	9,233	3,270	2,124	1,242	1,130	987	299	181
Customer Loans	6,217	2,352	1,586	758	572	617	187	145
Cash Coverage ratio (1Q13)		45%	46%	92%		55%		
Deposits	5,956	2,432	780	964	798	672	222	88
Funding gap	261	-80	806	-206	-226	-55	-35	57
P&L								
GOP*	128	80	-2	27	24	-4	2	1
Impairments	-199	-104	-51	-10	-20	-10	-3	-1
PBT	-71	-24	-53	17	4	-14	-1	0
Net profit	-61	-21	-46	17	2	-14	1	0

Source: Company Reports and Citi Research Estimates; Note: *Citi estimates

Step 3: Justify Valuations

Despite recent share weakness, NBG's valuations continue to be generous compared to European banks. Nevertheless, we see high return potential in international businesses. Even in Greece, we believe 10%+ RoEs are possible given relatively low levels of private debt and high concentration – but the key driver will be lower deposit costs, itself driven by more deposit growth, in our view (More on Greek retail in our 21 May report [Post Recap, Focus on Execution](#)).

Figure 6. Valuations ImPLY High RoEs

	1Q13 pro-forma	2013E	2014E	2015E	2016E
BV	6,438	6,321	6,545	7,443	8,740
Nbr of shares	2,286	2,286	2,286	2,286	2,286
BV per share*	2.82	2.76	2.86	3.26	3.82
TBV per share*	1.87	1.82	1.92	2.31	2.88
EPS	0.01	-0.06	0.10	0.39	0.57
RoE	2%	-7%	3%	13%	16%
DPS		0.0	0.0	0.0	0.0
Excess Capital (to 9% CET1 ratio)	154	-159	-140	487	1495
Excess Capital (to 9% CET1 ratio)*	-1,196	-1,509	-1,490	-863	145
P/B	1.4x	1.4x	1.4x	1.2x	1.0x
P/TB	2.1x	2.2x	2.1x	1.7x	1.4x
PE		-71x	40x	10x	7x

Source: Company Reports and Citi Research Estimates

Figure 7. Core Franchises Attractive in Mid-Term

	International Retail	o/w SEE	Greece & Other*	Group
Balance Sheet				
Assets 2016E	44.3	9.6	66.4	120.3
Gross loans 2016E	28.5	7.4	54.3	90.2
Financials				
Net Profit 2013E	0.5	-0.0	-0.6	-0.1
Net Profit 2016E	0.8	0.1	0.4	1.3
BV 2013E	4.7	1.2	0.5	6.3
BV 2016E	6.5	1.3	0.9	8.7
RWA 2013E Split	34%	11%	55%	
RWA 2013E	25	6	25	56
RWA 2016E	31	6	27	65
RoE 2013E	12%	-1%	-136%	-1%
RoE 2016E	12%	7%	42%	15%
RoE 2013E (on 9% RWA)	24%	-3%	-28%	-2%
RoE 2016E (on 9% RWA)	29%	15%	16%	22%

Source: Company Reports and Citi Research Estimates

Financials

We now expect NBG to become profitable in 2014, driven by cost reductions, normalising operating trends and meaningfully lower loan loss provisions. We introduce estimates for 2013-16E at -€0.07, €0.08, €0.36 and €0.50 respectively.

Figure 8. NBG – New vs Old Estimates

	Old 2013E	New 2013E	% Chg	Old 2014E	New 2014E	% Chg	Old 2015E	New 2015E	Old 2016E	New 2016E	% Chg
Net Interest Income	-	3,203	-	-	3,135	-	-	3,399	-	3,594	-
Fees	-	565	-	-	811	-	-	856	-	928	-
Trading Income	-	-39	-	-	55	-	-	55	-	55	-
Other Operating Income	-	376	-	-	60	-	-	126	-	143	-
Total Revenues	-	4,105	-	-	4,061	-	-	4,435	-	4,719	-
Total Expenses	-	-2,313	-	-	-2,284	-	-	-2,363	-	-2,447	-
Operating Income	-	1,792	-	-	1,777	-	-	2,073	-	2,273	-
Prov. Loan Losses (Net)	-	-1,946	-	-	-1,550	-	-	-968	-	-714	-
Associates & Other	-	2	-	-	0	-	-	0	-	0	-
PBT	-	-152	-	-	227	-	-	1,104	-	1,558	-
Taxes	-	79	-	-	-4	-	-	-221	-	-335	-
Net Income	-	-74	-	-	223	-	-	883	-	1,223	-
Attributable Profit	-	-115	-	-	176	-	-	820	-	1,152	-
Underlying Profit (Citi calculations)		-481			176			820		1,152	
EPS		-0.07			0.08			0.36		0.50	

Source: Company Reports and Citi Research Estimates

Figure 9. NBG — Group Profit and Loss Account, 2009-16E (Euros in Millions)

	2009	2010	% Chg	2011	% Chg	2012	% Chg	2013E	% Chg	2014E	% Chg	2015E	% Chg	2016E	% Chg	Avg. 05-08
Net Interest Income	3,940	4,148	5%	3,843	-7%	3,365	-12%	3,203	-5%	3,135	-2%	3,399	8%	3,594	6%	
Fees	686	610	-11%	494	-19%	495	0%	565	14%	811	44%	856	6%	928	8%	
Trading Income	428	(138)	-132%	(28)	-80%	(431)	1455%	(39)	-91%	55	-241%	55	0%	55	0%	
Other Operating Income	22	20	-10%	63	217%	98	56%	376	283%	60	-84%	126	109%	143	13%	
Total Revenues	5,077	4,639	-9%	4,372	-6%	3,527	-19%	4,105	16%	4,061	-1%	4,435	9%	4,719	6%	
Total Expenses	(2,500)	(2,525)	1%	(2,548)	1%	(2,341)	-8%	(2,313)	-1%	(2,284)	-1%	(2,363)	3%	(2,447)	4%	
Operating Income	2,577	2,114	-18%	1,824	-14%	1,186	-35%	1,792	51%	1,777	-1%	2,073	17%	2,273	10%	
Prov. Loan Losses (Net)	(1,295)	(1,450)	12%	(3,439)	137%	(2,966)	-14%	(1,946)	-34%	(1,550)	-20%	(968)	-38%	(714)	-26%	
Associates & Other	0	2	nm	1	nm	2	nm	2	nm	0	nm	0	nm	0	nm	
PBT	1,282	666	-48%	(1,614)	-342%	(1,778)	10%	(152)	-91%	227	-249%	1,104	386%	1,558	41%	
Taxes	(289)	(211)	-27%	1,095	-620%	(158)	-114%	79	-150%	(4)	-105%	(221)	5306%	(335)	52%	
Net Income	993	455	-54%	(518)	-214%	(1,935)	273%	(74)	-96%	223	-403%	883	296%	1,223	38%	
Minorities	(41)	(35)	-14%	(19)	-45%	4	-122%	(16)	-485%	(21)	30%	(37)	76%	(45)	21%	
Intangibles Amortisation / Other	(30)	(28)		(23)		(22)		(25)		(26)		(26)		(26)		
Hybrids/State prefs	(87)	(54)		(5)		111		(0)		(0)		(0)		(0)		
GGB impairments under PSI	0	0		(11,783)		(187)		0		0		0		0		
Attributable Profit	836	338	-60%	(12,349)	-3752%	(2,029)	-84%	(115)	-94%	176	-253%	820	366%	1,152	40%	
Underlying Profit (Citi calculations)				(566)		(1,842)		(481)		176		820		1,152		
Per Share Data (€)																
EPS	1.26	0.44	-65%	(12.92)	-3013%	(2.12)	-84%	(0.07)	-97%	0.08	-208%	0.36	366%	0.50	40%	
DPS	0.00	0.00	nm	0.00	nm	0.00	nm	0.00	nm	0.00	nm	0.00	nm	0.00	nm	
BVPS	11.30	9.33	-17%	5.17	-45%	(4.05)	-178%	2.75	-168%	2.83	3%	3.19	13%	3.69	16%	
TBVPs	7.82	6.65	-15%	2.93	-56%	(6.28)	-314%	1.81	-129%	1.89	4%	2.25	19%	2.75	22%	
Shares in Millions (Period end)	714.4	955.3	34%	955.7	0%	955.9	0%	2,286.3	139%	2,286.3	0%	2,286.3	0%	2,286.3	0%	
Operating Ratios																
NII as a % of ATA	3.66%	3.54%		3.38%		3.18%		3.07%		2.98%		3.11%		3.14%		3.3%
Cost / Income	49.2%	54.4%		58.3%		66.4%		56.4%		56.2%		53.3%		51.8%		55%
NPL Ratio	6.4%	8.5%		12.2%		19.0%		20.6%		22.1%		21.3%		20.5%		
Coverage	52%	53%		74%		53%		58%		60%		65%		69%		
LLP	1.83%	1.98%		4.69%		4.22%		2.81%		2.23%		1.36%		0.97%		0.7%
ROA	0.78%	0.29%		-10.9%		-1.9%		-0.1%		0.2%		0.8%		1.0%		1.5%
ROE	12.2%	4.1%		-178.3%		-380.2%		-9.5%		2.8%		11.9%		14.6%		23%
Balance Sheet (€m)																
Total Assets	113,394	120,745	6%	106,870	-11%	104,799	-2%	103,737	-1%	106,855	3%	111,758	5%	116,946	5%	
Gross Loans	74,052	78,667	0%	78,616	0%	76,905	-2%	78,592	2%	80,559	3%	83,695	4%	86,971	4%	
Net Customer Loans	71,593	75,105	5%	71,496	-5%	69,135	-3%	69,261	0%	69,833	1%	72,097	3%	74,730	4%	
Customer Deposits	71,194	68,039	-4%	59,544	-12%	58,722	-1%	63,798	9%	65,968	3%	69,706	6%	73,668	6%	
Loan to Deposit Ratio	104%	101%	0%	110%	0%	107%	0%	99%	0%	97%	0%	95%	0%	93%	0%	
Shareholders' Equity	8,071	8,915	10%	4,937	-45%	(3,870)	-178%	6,296	-263%	6,472	3%	7,292	13%	8,444	16%	
Capital Ratios																
RWAs	67,407	68,198	1%	64,248	-6%	64,521	0%	55,950	-13%	57,632	3%	60,276	5%	63,075	5%	
RWA/TA	59%	56%		60%		62%		54%		54%		54%		54%		
Core Tier 1	6,333	8,192	29%	(3,371)	-141%	(4,648)	38%	4,857	-205%	5,033	4%	5,853	16%	7,005	20%	
Tier 1 Capital	7,590	8,958	18%	4,609	-49%	6,117	33%	15,622	155%	15,798	1%	16,618	5%	17,770	7%	
Core Tier 1 Ratio	9.4%	12.0%		-5.2%		-7.2%		8.7%		8.7%		9.7%		11.1%		
State prefs		350		1,350		1,350		1,350		1,350		1,350		1,350		
CET1 Ratio ex State Prefs		11.5%		-7.3%		-9.3%		6.3%		6.4%		7.5%		9.0%		0%
Excess / (Deficit) to 9% CET1		1,704		(10,503)		(11,805)		(1,528)		(1,504)		(921)		(21)		

Source: Company Reports and Citi Research Estimates

Figure 10. NBG — Divisional Profit and Loss Account, 2009-16E (Euros in Millions)

	2009	2010	2011	2012	% Chg	2013E	% Chg	2014E	% Chg	2015E	% Chg	2016E	% Chg	Avg 05-08
GREECE														
Lending NII			2160	2094	-3%	1,883	-10%	1,788	-5%	1,699	-5%	1,699	0%	
Deposit NII			-141	-350	148%	-481	37%	-300	-38%	-150	-50%	-50	-67%	
Eurosistem NII			-93	-547	488%	-188	-66%	-120	-36%	-75	-38%	-50	-33%	
Bonds & Other NII			626	591	-6%	313	-47%	183	-42%	215	17%	191	-11%	
Net Interest Income	2,509	2,632	2,552	1,788	-30%	1,527	-15%	1,552	2%	1,689	9%	1,790	6%	
Fees	338	245	86	4	-95%	33	735%	240	623%	238	-1%	275	16%	
Other	336	(195)	(6)	(517)	8287%	247	-148%	20	-92%	78	295%	87	11%	
Total Revenues	3,182	2,683	2,632	1,275	-52%	1,807	42%	1,811	0%	2,005	11%	2,152	7%	
Total Expenses	(1,703)	(1,593)	(1,619)	(1,337)	-17%	-1,235	-8%	-1,208	-2%	-1,211	0%	-1,215	0%	
Operating Income	1,479	1,089	1,013	(62)	-106%	572	-1016%	603	5%	794	32%	937	18%	
Provisions	(856)	(1,096)	(14,875)	(2,613)	-82%	-1,482	-43%	-1,162	-22%	-626	-46%	-370	-41%	
PBT	624	(5)	(13,861)	(2,673)	-81%	-908	-66%	-558	-39%	168	-130%	567	237%	
Cost/ Income	54%	59%	62%	105%		68%		67%		60%		56%		52%
NII/ Assets	3.3%	3.1%	3.1%	2.5%		2.2%		2.3%		2.4%		2.4%		3.0%
LLPs/Assets	1.1%	1.3%	18.2%	3.6%		2.2%		1.7%		0.9%		0.5%		0.4%
- Greece Retail														
Net Interest Income	1,402	1,368	1,203	940	-22%	730	-22%	803	10%	947	18%	1,042	10%	
Revenues	1,542	1,471	1,280	1,020	-20%	807	-21%	888	10%	1,048	18%	1,153	10%	
Gross Operating Profit	516	429	257	105	-59%	-25	-124%	92	-466%	252	174%	351	40%	
Profit Before Tax	73	(368)	(923)	(1,331)	44%	-1,115	-16%	-780	-30%	-184	-76%	112	-161%	
Cost/ Income	67%	71%	80%	90%		103%		90%		76%		70%		51%
NII/ Assets	4.7%	4.4%	4.2%	3.5%		2.8%		3.1%		3.5%		3.7%		6.5%
LLPs/Assets	-1.4%	-2.6%	-4.3%	-5.6%		-4.2%		-3.3%		-1.6%		-0.8%		-0.9%
- Greece Corporate & IB														
Net Interest Income	536	622	776	745	-4%	689	-8%	627	-9%	570	-9%	547	-4%	
Revenues	541	626	796	781	-2%	730	-7%	668	-8%	603	-10%	578	-4%	
Gross Operating Profit	431	517	693	684	-1%	641	-6%	578	-10%	513	-11%	485	-5%	
Profit Before Tax	280	313	(1,408)	76	-105%	213	181%	279	31%	363	30%	395	9%	
Cost/ Income	20%	17%	13%	12%		12%		13%		15%		16%		29%
NII/ Assets	2.9%	3.3%	4.4%	4.9%		5.1%		4.9%		4.1%		3.6%		2.2%
LLPs/Assets	-0.8%	-1.1%	-12.0%	-4.0%		-3.2%		-2.3%		-1.1%		-0.6%		-0.3%
- Global Markets & AM														
Net Interest Income	584	472	371	(106)	-129%	-66	-38%	0 NM		50 NM		80	60%	
Revenues	948	304	273	(752)	-375%	-302	-60%	10	-103%	100	900%	160	60%	
Gross Operating Profit	848	206	187	(831)	-544%	-378	-54%	-65	-83%	24	-136%	86	266%	
Profit Before Tax	678	166	(10,515)	(1,058)	-90%	-148	-86%	-15	-90%	24	-260%	86	266%	
Revenues/ Assets	3.5%	1.0%	1.1%	-3.8%		-1.8%		0.1%		0.6%		0.9%		2.2%
INTERNATIONAL														
Net Interest Income	1,432	1,515	1,291	1,577	22%	1,676	6%	1,584	-5%	1,710	8%	1,804	5%	
Net Fee and Commission Income	349	365	408	491	20%	532	8%	571	7%	618	8%	653	6%	
Other Operating Income	115	76	41	185	345%	90	-51%	96	6%	103	7%	110	7%	
Revenues	1,895	1,957	1,740	2,252	29%	2,298	2%	2,250	-2%	2,431	8%	2,567	6%	
Total Op. Expenses	(827)	(960)	(952)	(1,025)	8%	-1,104	8%	-1,102	0%	-1,178	7%	-1,258	7%	
Gross Operating Profit	1,068	997	788	1,227	56%	1,194	-3%	1,148	-4%	1,253	9%	1,310	5%	
Provisions	(439)	(354)	(347)	(540)	56%	-464	-14%	-388	-16%	-342	-12%	-345	1%	
PBT	628	643	441	687	56%	730	6%	759	4%	910	20%	965	6%	
Cost/ Income	44%	49%	55%	46%		48%		49%		48%		49%		49%
NII/ Assets	4.3%	4.8%	4.0%	4.4%		4.7%		4.3%		4.4%		4.4%		4.4%
LLPs/Assets	1.3%	1.1%	1.1%	1.5%		1.3%		1.0%		0.9%		0.8%		0.8%

Source: Company Reports and Citi Research Estimates

Appendix: Key Dates

Time line of capital raise:

- 29 April: AGM approval of €9.8bn share capital increase
- 24 May: Suspension of shares
- 30 May: Shares trading ex-rights & start trading of rights
- 7 June: End of rights trading
- 13 June: End of subscription period
- 25 June: Trading of new shares & warrants

Asset quality related events:

- End-2013: Post-recap test of Greek banks
- 2014: SSM (Single Supervisory Mechanism) asset quality review

National Bank of Greece SA

Company description

National Bank of Greece S.A. offers retail and corporate banking services. The Bank accepts deposits and offers loans, lease financing, mortgages, and investing and insurance services to industrial, commercial, and consumer clients. National Bank of Greece operates domestically and overseas.

Investment strategy

We rate NBG Neutral. In Greece, the group has the most under-leveraged balance sheet of the large Greek banks (loans-to-deposit ratio of c100%). In SEE, NBG group also has franchises in Bulgaria and Serbia, with further presence in Romania, among others. A large part of the bank's revenues derive from Greece, where we believe there are significant macro risks and elevated risks of an exit from the Euro Area. Such elevated market concerns could affect the short-term and the long-term performance of the shares.

Valuation

This company has a Neutral rating. We have not assigned a target price and therefore no valuation methodology is applicable.

Risks

A number of risks could move NBG's share price meaningfully away from current levels. We list some of these risks below:

1. Better or worse than expected margin development trends.
2. Better or worse than expected asset quality, leading to fewer loan losses.
3. A sharp change in the valuation of Greek government bonds.
4. Dilution from a further common equity injection.

A meaningful part of the bank's activities are conducted in Greece, but also in several countries in South Eastern Europe where changes in the macro or political environment could impact significantly NBG's share price.

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

National Bank of Greece SA (NBGr.AT)

Ratings and Target Price History Fundamental Research

Analyst: Florent Nitu
Covered since April 2 2013



	Date	Rating	Target Price	Closing Price
1	14-Jun-10	1H	*51.20	43.73
2	21-Jun-10	*2H	*42.67	43.39
3	24-Aug-10	2H	*48.00	42.54
4	17-Nov-10	2H	*41.43	34.80

* Indicates change

	Date	Rating	Target Price	Closing Price
5	10-Dec-10	2H	*38.92	35.50
6	7-Sep-11	2H	*17.58	16.97
7	6-Oct-11	*2S	*12.55	10.95
8	7-Oct-11	Stock rating system changed		

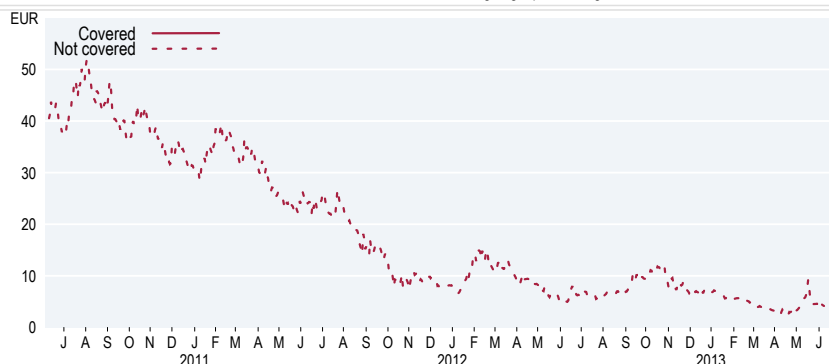
	Date	Rating	Target Price	Closing Price
9	8-Oct-11	*2H	12.55	10.90
10	20-Jun-12	*2	-	7.18

Rating/target price changes above reflect Eastern Standard Time

National Bank of Greece SA (NBGr.AT)

Ratings and Target Price History Best Ideas Research Relative Call (3 Month)

Analyst: Florent Nitu
Covered since April 2 2013



* Indicates change

Rating/target price changes above reflect Eastern Standard Time

Within the past 12 months, Citigroup Global Markets Inc. or its affiliates has acted as manager or co-manager of an offering of securities of National Bank of Greece SA.

Citigroup Global Markets Inc. or its affiliates has received compensation for investment banking services provided within the past 12 months from National Bank of Greece SA.

Citigroup Global Markets Inc. or its affiliates expects to receive or intends to seek, within the next three months, compensation for investment banking services from National Bank of Greece SA.

Citigroup Global Markets Inc. or an affiliate received compensation for products and services other than investment banking services from National Bank of Greece SA in the past 12 months.

Citigroup Global Markets Inc. currently has, or had within the past 12 months, the following as investment banking client(s): National Bank of Greece SA.

Citigroup Global Markets Inc. currently has, or had within the past 12 months, the following as clients, and the services provided were non-investment-banking, securities-related: National Bank of Greece SA.

Citigroup Global Markets Inc. currently has, or had within the past 12 months, the following as clients, and the services provided were non-investment-banking, non-securities-related: National Bank of Greece SA.

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.

Citi Research Equity Ratings Distribution

12 Month Rating

Relative Rating

Data current as of 31 Mar 2013

	Buy	Hold	Sell	Buy	Hold	Sell
Citi Research Global Fundamental Coverage	48%	39%	12%	7%	87%	7%
% of companies in each rating category that are investment banking clients	53%	49%	43%	65%	49%	51%

Guide to Citi Research Fundamental Research Investment Ratings:

Citi Research stock recommendations include an investment rating and an optional risk rating to highlight high risk stocks.

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 ratings distribution table for our 12-month fundamental rating system. However, we reiterate that we do not consider Under Review to be a recommendation.

Relative three-month ratings: Citi Research may also assign a three-month relative call (or rating) to a stock to highlight expected out-performance (most preferred) or under-performance (least preferred) versus the geographic and industry sector over a 3 month period. The relative call may highlight a specific near-term catalyst or event impacting the company or the market that is anticipated to have a short-term price impact on the equity securities of the company. Absent any specific catalyst the analyst(s) will indicate the most and least preferred stocks in the universe of stocks under consideration, explaining the basis for this short-term view. This three-month view may be different from and does not affect a stock's fundamental equity rating, which reflects a longer-term total absolute return expectation. For purposes of NASD/NYSE ratings-distribution-disclosure rules, most preferred calls correspond to a buy recommendation and least preferred calls correspond to a sell recommendation. Any stock not assigned to a most preferred or least preferred call is considered non-relative-rated (NRR). For purposes of NASD/NYSE ratings-distribution-disclosure rules we correspond NRR to Hold in our ratings distribution table for our 3-month relative rating system. However, we reiterate that we do not consider NRR to be a recommendation.

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.

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

Florent Nitu; Stefan Nedialkov

OTHER DISCLOSURES

The subject company's share price set out on the front page of this Product is quoted as at 11 June 2013 04:15 PM on the issuer's primary market.

Citigroup Global Markets Inc. and/or its affiliates has a significant financial interest in relation to National Bank of Greece SA. (For an explanation of the determination of significant financial interest, please refer to the policy for managing conflicts of interest which can be found at www.citi-velocity.com.)

For securities recommended in the Product in which the Firm is not a market maker, the Firm is a liquidity provider in the issuers' financial instruments and may act as principal in connection with such transactions. The Firm is a regular issuer of traded financial instruments linked to securities that may have been recommended in the Product. The Firm regularly trades in the securities of the issuer(s) discussed in the Product. The Firm may engage in securities transactions in a manner inconsistent with the Product and, with respect to securities covered by the Product, will buy or sell from customers on a principal basis.

Securities recommended, offered, or sold by the Firm: (i) are not insured by the Federal Deposit Insurance Corporation; (ii) are not deposits or other obligations of any insured depository institution (including Citibank); and (iii) are subject to investment risks, including the possible loss of the principal amount invested. Although information has been obtained from and is based upon sources that the Firm believes to be reliable, we do not guarantee its

accuracy and it may be incomplete and condensed. Note, however, that the Firm has taken all reasonable steps to determine the accuracy and completeness of the disclosures made in the Important Disclosures section of the Product. The Firm's research department has received assistance from the subject company(ies) referred to in this Product including, but not limited to, discussions with management of the subject company(ies). Firm policy prohibits research analysts from sending draft research to subject companies. However, it should be presumed that the author of the Product has had discussions with the subject company to ensure factual accuracy prior to publication. All opinions, projections and estimates constitute the judgment of the author as of the date of the Product and these, plus any other information contained in the Product, are subject to change without notice. Prices and availability of financial instruments also are subject to change without notice. Notwithstanding other departments within the Firm advising the companies discussed in this Product, information obtained in such role is not used in the preparation of the Product. Although Citi Research does not set a predetermined frequency for publication, if the Product is a fundamental research report, it is the intention of Citi Research to provide research coverage of the/those issuer(s) mentioned therein, including in response to news affecting this issuer, subject to applicable quiet periods and capacity constraints. The Product is for informational purposes only and is not intended as an offer or solicitation for the purchase or sale of a security. Any decision to purchase securities mentioned in the Product must take into account existing public information on such security or any registered prospectus.

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

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

Important disclosure regarding the relationship between the companies that are the subject of this Citi Research research report and Morgan Stanley Smith Barney LLC and its affiliates are available at the Morgan Stanley Wealth Management disclosure website at www.morganstanley.com/online/researchdisclosures.

For Morgan Stanley and Citigroup Global Markets, Inc. specific disclosures, you may refer to www.morganstanley.com/researchdisclosures and https://www.citivelocity.com/cvr/eppublic/citi_research_disclosures.

This Citi Research research report has been reviewed and approved on behalf of Morgan Stanley Smith Barney LLC. This review and approval was conducted by the same person who reviewed this research report on behalf of Citi Research. This could create a conflict of interest.

The Citigroup legal entity that takes responsibility for the production of the Product is the legal entity which the first named author is employed by. The Product is made available in **Australia** through Citi Global Markets Australia Pty Ltd. (ABN 64 003 114 832 and AFSL No. 240992), participant of the ASX Group and regulated by the Australian Securities & Investments Commission. Citigroup Centre, 2 Park Street, Sydney, NSW 2000. The Product is made available in Australia to Private Banking wholesale clients through Citigroup Pty Limited (ABN 88 004 325 080 and AFSL 238098). Citigroup Pty Limited provides all financial product advice to Australian Private Banking wholesale clients through bankers and relationship managers. If there is any doubt about the suitability of investments held in Citigroup Private Bank accounts, investors should contact the Citigroup Private Bank in Australia. Citigroup companies may compensate affiliates and their representatives for providing products and services to clients. The Product is made available in **Brazil** by Citigroup Global Markets Brasil - CCTVM SA, which is regulated by CVM - Comissão de Valores Mobiliários, BACEN - Brazilian Central Bank, APIMEC - Associação dos Analistas e Profissionais de Investimento do Mercado de Capitais and ANBID - Associação Nacional dos Bancos de Investimento. Av. Paulista, 1111 - 11º andar - CEP. 01311920 - São Paulo - SP. If the Product is being made available in certain provinces of **Canada** by Citigroup Global Markets (Canada) Inc. ("CGM Canada"), CGM Canada has approved the Product. Citigroup Place, 123 Front Street West, Suite 1100, Toronto, Ontario M5J 2M3. This product is available in **Chile** through Banchile Corredores de Bolsa S.A., an indirect subsidiary of Citigroup Inc., which is regulated by the Superintendencia de Valores y Seguros. Agustinas 975, piso 2, Santiago, Chile. The Product is made available in **France** by Citigroup Global Markets Limited, which is authorised and regulated by Financial Services Authority. 1-5 Rue Paul Cézanne, 8ème, Paris, France. The Product is distributed in **Germany** by Citigroup Global Markets Deutschland AG ("CGMD"), which is regulated by Bundesanstalt fuer Finanzdienstleistungsaufsicht (BaFin). CGMD, Reuterweg 16, 60323 Frankfurt am Main. Research which relates to "securities" (as defined in the Securities and Futures Ordinance (Cap. 571 of the Laws of Hong Kong)) is issued in **Hong Kong** by, or on behalf of, Citigroup Global Markets Asia Limited which takes full responsibility for its content. Citigroup Global Markets Asia Ltd. is regulated by Hong Kong Securities and Futures Commission. If the Research is made available through Citibank, N.A., Hong Kong Branch, for its clients in Citi Private Bank, it is made available by Citibank N.A., Citibank Tower, Citibank Plaza, 3 Garden Road, Hong Kong. Citibank N.A. is regulated by the Hong Kong Monetary Authority. Please contact your Private Banker in Citibank N.A., Hong Kong, Branch if you have any queries on or any matters arising from or in connection with this document. The Product is made available in **India** by Citigroup Global Markets India Private Limited, which is regulated by Securities and Exchange Board of India. Bakhtawar, Nariman Point, Mumbai 400-021. The Product is made available in **Indonesia** through PT Citigroup Securities Indonesia. 5/F, Citibank Tower, Bapindo Plaza, Jl. Jend. Sudirman Kav. 54-55, Jakarta 12190. Neither this Product nor any copy hereof may be distributed in Indonesia or to any Indonesian citizens wherever they are domiciled or to Indonesian residents except in compliance with applicable capital market laws and regulations. This Product is not an offer of securities in Indonesia. The securities referred to in this Product have not been registered with the Capital Market and Financial Institutions Supervisory Agency (BAPEPAM-LK) pursuant to relevant capital market laws and regulations, and may not be offered or sold within the territory of the Republic of Indonesia or to Indonesian citizens through a public offering or in circumstances which constitute an offer within the meaning of the Indonesian capital market laws and regulations. The Product is made available in **Israel** through Citibank NA, regulated by the Bank of Israel and the Israeli Securities Authority. Citibank, N.A., Platinum Building, 21 Ha'arba'ah St, Tel Aviv, Israel. The Product is made available in **Italy** by Citigroup Global Markets Limited, which is authorised and regulated by Financial Services Authority. Via dei Mercanti, 12, Milan, 20121, Italy. The Product is made available in **Japan** by Citigroup Global Markets Japan Inc. ("CGMJ"), which is regulated by Financial Services Agency, Securities

and Exchange Surveillance Commission, Japan Securities Dealers Association, Tokyo Stock Exchange and Osaka Securities Exchange. Shin-Marunouchi Building, 1-5-1 Marunouchi, Chiyoda-ku, Tokyo 100-6520 Japan. If the Product was distributed by SMBC Nikko Securities Inc. it is being so distributed under license. In the event that an error is found in an CGMJ research report, a revised version will be posted on the Firm's Citi Velocity website. If you have questions regarding Citi Velocity, please call (81 3) 6270-3019 for help. The Product is made available in **Korea** by Citigroup Global Markets Korea Securities Ltd., which is regulated by the Financial Services Commission, the Financial Supervisory Service and the Korea Financial Investment Association (KOFIA). Citibank Building, 39 Da-dong, Jung-gu, Seoul 100-180, Korea. KOFIA makes available registration information of research analysts on its website. Please visit the following website if you wish to find KOFIA registration information on research analysts of Citigroup Global Markets Korea Securities Ltd. <http://dis.kofia.or.kr/fs/dis2/fundMgr/DISFundMgrAnalystPop.jsp?companyCd2=A03030&pageDiv=02>. The Product is made available in Korea by Citibank Korea Inc., which is regulated by the Financial Services Commission and the Financial Supervisory Service. Address is Citibank Building, 39 Da-dong, Jung-gu, Seoul 100-180, Korea. The Product is made available in **Malaysia** by Citigroup Global Markets Malaysia Sdn Bhd (Company No. 460819-D) ("CGMM") to its clients and CGMM takes responsibility for its contents. CGMM is regulated by the Securities Commission of Malaysia. Please contact CGMM at Level 43 Menara Citibank, 165 Jalan Ampang, 50450 Kuala Lumpur, Malaysia in respect of any matters arising from, or in connection with, the Product. The Product is made available in **Mexico** by Acciones y Valores Banamex, S.A. De C. V., Casa de Bolsa, Integrante del Grupo Financiero Banamex ("Accival") which is a wholly owned subsidiary of Citigroup Inc. and is regulated by Comision Nacional Bancaria y de Valores. Reforma 398, Col. Juarez, 06600 Mexico, D.F. In **New Zealand** the Product is made available to 'wholesale clients' only as defined by s5C(1) of the Financial Advisers Act 2008 ("FAA") through Citigroup Global Markets Australia Pty Ltd (ABN 64 003 114 832 and AFSL No. 240992), an overseas financial adviser as defined by the FAA, participant of the ASX Group and regulated by the Australian Securities & Investments Commission. Citigroup Centre, 2 Park Street, Sydney, NSW 2000. The Product is made available in **Pakistan** by Citibank N.A. Pakistan branch, which is regulated by the State Bank of Pakistan and Securities Exchange Commission, Pakistan. AWT Plaza, 1.1. Chundrigar Road, P.O. Box 4889, Karachi-74200. The Product is made available in the **Philippines** through Citicorp Financial Services and Insurance Brokerage Philippines, Inc., which is regulated by the Philippines Securities and Exchange Commission. 20th Floor Citibank Square Bldg. The Product is made available in the Philippines through Citibank NA Philippines branch, Citibank Tower, 8741 Paseo De Roxas, Makati City, Manila. Citibank NA Philippines NA is regulated by The Bangko Sentral ng Pilipinas. The Product is made available in **Poland** by Dom Maklerski Banku Handlowego SA an indirect subsidiary of Citigroup Inc., which is regulated by Komisja Nadzoru Finansowego. Dom Maklerski Banku Handlowego S.A. ul.Senatorska 16, 00-923 Warszawa. The Product is made available in the **Russian Federation** through ZAO Citibank, which is licensed to carry out banking activities in the Russian Federation in accordance with the general banking license issued by the Central Bank of the Russian Federation and brokerage activities in accordance with the license issued by the Federal Service for Financial Markets. Neither the Product nor any information contained in the Product shall be considered as advertising the securities mentioned in this report within the territory of the Russian Federation or outside the Russian Federation. The Product does not constitute an appraisal within the meaning of the Federal Law of the Russian Federation of 29 July 1998 No. 135-FZ (as amended) On Appraisal Activities in the Russian Federation. 8-10 Gashka Street, 125047 Moscow. The Product is made available in **Singapore** through Citigroup Global Markets Singapore Pte. Ltd. ("CGMSPL"), a capital markets services license holder, and regulated by Monetary Authority of Singapore. Please contact CGMSPL at 8 Marina View, 21st Floor Asia Square Tower 1, Singapore 018960, in respect of any matters arising from, or in connection with, the analysis of this document. This report is intended for recipients who are accredited, expert and institutional investors as defined under the Securities and Futures Act (Cap. 289). The Product is made available by The Citigroup Private Bank in Singapore through Citibank, N.A., Singapore Branch, a licensed bank in Singapore that is regulated by Monetary Authority of Singapore. Please contact your Private Banker in Citibank N.A., Singapore Branch if you have any queries on or any matters arising from or in connection with this document. This report is intended for recipients who are accredited, expert and institutional investors as defined under the Securities and Futures Act (Cap. 289). This report is distributed in Singapore by Citibank Singapore Ltd ("CSL") to selected Citigold/Citigold Private Clients. CSL provides no independent research or analysis of the substance or in preparation of this report. Please contact your Citigold/Citigold Private Client Relationship Manager in CSL if you have any queries on or any matters arising from or in connection with this report. This report is intended for recipients who are accredited investors as defined under the Securities and Futures Act (Cap. 289). Citigroup Global Markets (Pty) Ltd. is incorporated in the **Republic of South Africa** (company registration number 2000/025866/07) and its registered office is at 145 West Street, Sandton, 2196, Saxonwold. Citigroup Global Markets (Pty) Ltd. is regulated by JSE Securities Exchange South Africa, South African Reserve Bank and the Financial Services Board. The investments and services contained herein are not available to private customers in South Africa. The Product is made available in **Spain** by Citigroup Global Markets Limited, which is authorised and regulated by Financial Services Authority. 29 Jose Ortega Y Gasset, 4th Floor, Madrid, 28006, Spain. The Product is made available in the **Republic of China** through Citigroup Global Markets Taiwan Securities Company Ltd. ("CGMTS"), 14 and 15F, No. 1, Songzhi Road, Taipei 110, Taiwan and/or through Citibank Securities (Taiwan) Company Limited ("CSTL"), 14 and 15F, No. 1, Songzhi Road, Taipei 110, Taiwan, subject to the respective license scope of each entity and the applicable laws and regulations in the Republic of China. CGMTS and CSTL are both regulated by the Securities and Futures Bureau of the Financial Supervisory Commission of Taiwan, the Republic of China. No portion of the Product may be reproduced or quoted in the Republic of China by the press or any third parties [without the written authorization of CGMTS and CSTL]. If the Product covers securities which are not allowed to be offered or traded in the Republic of China, neither the Product nor any information contained in the Product shall be considered as advertising the securities or making recommendation of the securities in the Republic of China. The Product is for informational purposes only and is not intended as an offer or solicitation for the purchase or sale of a security or financial products. Any decision to purchase securities or financial products mentioned in the Product must take into account existing public information on such security or the financial products or any registered prospectus. The Product is made available in **Thailand** through Citicorp Securities (Thailand) Ltd., which is regulated by the Securities and Exchange Commission of Thailand. 18/F, 22/F and 29/F, 82 North Sathorn Road, Silom, Bangrak, Bangkok 10500, Thailand. The Product is made available in **Turkey** through Citibank AS which is regulated by Capital Markets Board. Tekfen Tower, Eski Buyukdere Caddesi # 209 Kat 2B, 23294 Levent, Istanbul, Turkey. In the **U.A.E.**, these materials (the "Materials") are communicated by Citigroup Global Markets Limited, DIFC branch ("CGML"), an entity registered in the Dubai International Financial Center ("DIFC") and licensed and regulated by the Dubai Financial Services Authority ("DFSA") to Professional Clients and Market Counterparties only and should not be relied upon or distributed to Retail Clients. A distribution of the different Citi Research ratings distribution, in percentage terms for Investments in each sector covered is made available on request. Financial products and/or services to which the Materials relate will only be made available to Professional Clients and Market Counterparties. The Product is made available in **United Kingdom** by Citigroup Global Markets Limited, which is authorised and regulated by Financial Services Authority. This material may relate to investments or services of a person outside of the UK or to other matters which are not regulated by the FSA and further details as to where this may be the case are available upon request in respect of this material. Citigroup Centre, Canada Square, Canary Wharf, London, E14 5LB. The Product is made available in **United States** by Citigroup Global Markets Inc, which is a member of FINRA and registered with the US Securities and

Exchange Commission, 388 Greenwich Street, New York, NY 10013. Unless specified to the contrary, within EU Member States, the Product is made available by Citigroup Global Markets Limited, which is regulated by Financial Services Authority.

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

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

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

The Product may have been distributed simultaneously, in multiple formats, to the Firm's worldwide institutional and retail customers. The Product is not to be construed as providing investment services in any jurisdiction where the provision of such services would not be permitted.

Subject to the nature and contents of the Product, the investments described therein are subject to fluctuations in price and/or value and investors may get back less than originally invested. Certain high-volatility investments can be subject to sudden and large falls in value that could equal or exceed the amount invested. Certain investments contained in the Product may have tax implications for private customers whereby levels and basis of taxation may be subject to change. If in doubt, investors should seek advice from a tax adviser. The Product does not purport to identify the nature of the specific market or other risks associated with a particular transaction. Advice in the Product is general and should not be construed as personal advice given it has been prepared without taking account of the objectives, financial situation or needs of any particular investor. Accordingly, investors should, before acting on the advice, consider the appropriateness of the advice, having regard to their objectives, financial situation and needs. Prior to acquiring any financial product, it is the client's responsibility to obtain the relevant offer document for the product and consider it before making a decision as to whether to purchase the product. With the exception of our product that is made available only to Qualified Institutional Buyers (QIBs) and other product that is made available through other distribution channels only to certain categories of clients to satisfy legal or regulatory requirements, Citi Research concurrently disseminates its research via proprietary and non-proprietary electronic distribution platforms. Periodically, individual Citi Research analysts may also opt to circulate research posted on such platforms to one or more clients by email. Such email distribution is discretionary and is done only after the research has been disseminated via the aforementioned distribution channels. Citi Research simultaneously distributes product that is limited to QIBs only through email distribution.

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

© 2013 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
