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Diversified Banks
EMEA

Greek Banks

Attractive Margins, Economic Recovery and Questions on Capital – Upgrade Alpha to Buy, NBG Focus List, Initiate on Eurobank

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- **Attractive Margins:** Greek Banks have net interest margins (2.4% NII/ATA) above Euro Area peers, and a post crisis oligopoly of four banks with c95% share are increasing NIMs with the help of pricing power, a client-centric balance sheet mix and falling funding costs – all of which should be evident in 3Q14 results in late Nov. ***Greek banks' domestic revenue/employee of €150k already exceeds Italian banks' real levels and we expect their revenue/employee productivity gap to best-in-class Spain to narrow to only 10% by 2016, helped by higher margins***.

- **Economic Recovery and Higher Profits:** Greek banks, despite their attractive NIMs, were loss making in 1H14 (ROA average -0.6%) due to loan losses c2-3x domestic Spanish and Italian banks. However, we also expect Greece to be the standout market in the Euro Area periphery for a bad debt recovery cycle, driven by GDP recovery (3Q14 +ve GDP) and new job creation. ***We expect Greek banks' ROA to improve c2ppt between 1H14 and 2016E, driven primarily by lower loan losses, ahead of ROA rises in domestic Spain (+70bps) or Italy (c30bps).***

- **The ECB's AQR/Stress Test:** Based on the BoG Stress Test updated for 4Q13 results, we expect a €5 billion capital deficit for the Greek banks; but it could be more if the ECB is tougher than the BoG. But with the capital raised ytd (€6.3bn net of prefs repaid) plus potential DTA conversion and other benefits, most Greek banks will offset any headline deficits. ***We think share prices are implying capital raises across the board of up to €1bn per bank. Eurobank is a concern**: **it performed poorly in the BoG Stress Test and has the lowest fully loaded CET1 ratio***.

- **Rising Political Risks and Rising Bond Yields:** The Greek 10Y bond spread vs Bunds has increased from a low of c4ppt in June 14 to a high of c5.5ppt in late Sep/early Oct. This was driven by increased political risk fears. However, our base case remains a Coalition Government. Near term, the current administration should win a confidence vote this Friday. Accompanied by positive 3Q14 GDP data, passing the ECB Stress Test milestone (26 Oct) with only limited bank capital increases and solid 3Q14 results, should help reduce risk premia. ***Greek bank shares, 0.8x P/TB after a c20% sell off -3M, look increasingly attractive.***

- **Upgrading Alpha to Buy, Initiating on Eurobank:** We upgrade Alpha to Buy following the recent sell off in Greek shares and raise our TP €0.75 (from €0.70), reflecting increased EPS estimates (c6% 2015-16E). ***The most AQR/Stress Test resilient Greek bank remains NBG,*** which we added to our CEEMEA Focus List in August this year. Eurobank and Piraeus are the most geared Greek bank plays on improving funding costs and bad debts. However, ***we are cautious on Eurobank's capital position and hence initiate coverage with a Neutral, High Risk rating.***

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

Data Summary

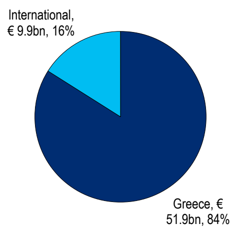
		Rating		Target Price		Current Year Earnings Estimates	
Company	**Ticker**	**Old**	**New**	**Old**	**New**	**Old**	**New**
Alpha Bank	ACBr.AT	2	1	€0.70	€0.75	€0.03	€0.03
Piraeus Bank	BOPr.AT	1	1	€1.65	€1.65	€-0.07	€-0.07
Eurobnk Ergasias	EURBr.AT	NA	2H	NA	€0.31	NA	€-0.05
National Bank of Greece	NBGr.AT	1	1	€3.00	€3.00	€0.36	€0.36

Contents

Investment Overview

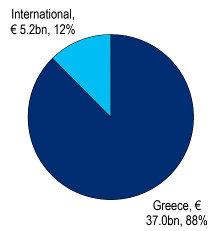
	Investment Attractions	Investment Risks
Alpha	**Conservatively Managed Gearing to Greece:** Alpha bank has high gearing to the Greek banking market which accounts for about 85% of the assets, deposits and NPLs. It is the largest Greek corporate bank. The group has a reputation for conservative management.	**High 90D Past Due Ratio:** Alpha's 90DPD ratio of 33.6% is the second highest reported by Greek banks after Piraeus. However Alpha Bank also has a conservative approach to NPL coverage (58% 2Q14, higher than peers) and also for impairment classification (93% restructured loans are classified as impaired).
	Benefit From Deposit Re-pricing: About two-thirds of Alpha Banks Greek deposits are high cost time deposits. Its time deposit spreads of 213bps (2Q14) can further decline to c100bps by 2017E.	**AQR/Stress Test:** AQR/Stress Test worries are a short term overhang on Greek stocks. There is a risk of increase in provisions post AQR/Stress test at Alpha Bank, and peers, and this could negatively affect equity and capital ratios.
	Strong Capital Position: Alpha's reported 2Q14 FL B3 CET1 ratio of 12% is the highest among Greek banks. Post DTA to DTC conversion, the ratio may increase by another 380bps to 15.8%. We expect surplus capital to grow by more than €900m from 2016 and the company could start capital return in 2017.	
Eurobank	**Low NIMs and High Gearing to Lower Funding Costs:** Eurobank 1H14 reported a NII/Asset of 2.0%, the lowest among Greek banks. The lower margin is a combination of lower lending spread and higher funding cost. Eurobank's time deposit spread in Greece is 238bps (2Q14), 25bps worse than Alpha. Its lending spread is also slightly lower (450bps vs 480bps of Alpha). Due to its higher deposit cost, Eurobank is potentially the most geared to margin expansion through deposit re-pricing.	**Weak Capital Position:** Eurobank had a capital shortfall of €5.0bn in the adverse scenario in Bank of Greece's stress test, highest of the big four Greek banks. Post their €2.9bn capital raise, Eurobank's B3 transitional capital increased to 17.8% in 2Q14 but the fully loaded CET1 capital ratio ex DTAs is only 6.5%, the lowest among peripheral EA banks we cover. The DTA to DTC legislation passed by Greek parliament could be a game-changer as it adds 600bps to Eurobank's fully loaded CET1 ratio.
	Normalising Credit Cost: Eurobank's loan loss ratio is higher than its peers. With domestic NPL formation halving qoq in 2Q14, we expect Eurobank's NPL level to peak in 2015 and credit costs (as a percentage of average loans) to normalise from the current 350bps to 80bps in 2016.	**AQR/Stress Test:** Further loan loss provisions might be required post AQR to increase coverage ratio. In our updated version of the Bank of Greece Stress Test, Eurobank performs the weakest of the four Greek banks in the Adverse Scenario.
NBG	**Relatively High Profitability:** NBG is the only Greek bank that is making a positive return as of today. Its ROTE is expected to increase to 11%-12% in 2016-2018. Excluding surplus capital (assuming a 10% minimum CET1), the ROTE reaches c18% in 2018.	**Less Gearing To Falling Rates:** NBG has relatively inexpensive Greek funding as time deposits account for only half of total Greek deposits compared to two thirds at Alpha, Piraeus and Eurobank. This will result in lower gearing to falling term deposit costs.
	AQR/Stress Test Resilient: NBG has the option to sell down Finansbank if there were any capital shortfall due to stress test whereas other Greek banks in the same situation would have to raise capital. Selling 40% of Finansbank could add about €1bn to NBG core capital, assuming 1x carrying value and would boost FL CET1 2015 by 170bps to 12.2%.	**Less Benefit from Greek Recovery:** About one third of NBG's loan book is outside Greece, higher than other Greek banks. Thus, it is relatively less geared to Greece economic recovery.
	Low NPL Ratio: NBG's group 90DPD ratio of 23.2%, lowest of Greek banks. Its domestic 90DPD ratio of 29.3% is also lower than peers.	
Piraeus	**Gearing To Falling Greek Bad Debts:** With over 90% of assets, deposits and NPLs located in Greece, Piraeus has the greatest gearing to Greek economic recovery. Its group 90DPD ratio of 38.5% is also the highest. This provides upside from decline in Greek NPLs in late 2014 or early 2015.	**Weak Asset Quality**: Piraeus's 90DPD ratio of 38.5% is the highest among Greek banks. Its domestic 90DPD ratio of 38.9% is also higher than peers due to high ratio of small business lending (36% vs 10-15% of other Greek banks).
	Benefit of Lower Funding Costs, Lower COE: About two-thirds of Greek deposits and over half of total group deposits are high cost term deposits. Piraeus is thus most geared to falling term deposit cost. NIM was up 14bps qoq in 2Q, the best performance qoq of all Greek banks, also helped by a boost to corporate loan yields.	**AQR/Stress Test:** Due to its high NPLs and low coverage ratio Piraeus may be among the banks more at risk to higher loan loss provisions post the AQR. However, CEO Anthimos Thomopolous has spoken publicly (CNBC, 29 Sep 14) on their comfortable capital position. Any Stress Test related equity issuance would thus be a disappointment to investors.
	Cost Cutting Upside Significant: Piraeus' C/I ratio is expected to decline the most of peers to low 40s in 2016-18E due to a reduction in its branch network and headcount (down 30% yoy and target a further 10% decline to 800).	

Figure 1. Alpha Bank – Loan Split 2Q14



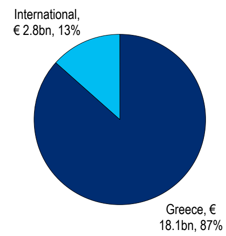
Source: Company Reports

Figure 2. Alpha Bank – Deposit Split 2Q14



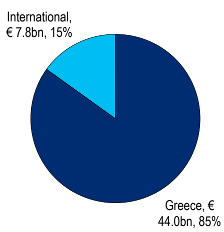
Source: Company Reports

Figure 3. Alpha Bank – NPL Split 2Q14



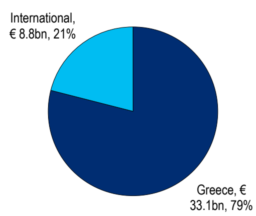
Source: Company Reports

Figure 4. Eurobank – Loan Split 2Q14



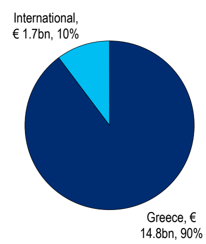
Source: Company Reports

Figure 5. Eurobank – Deposit Split 2Q14



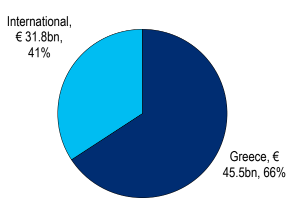
Source: Company Reports

Figure 6. Eurobank – NPL Split 2Q14



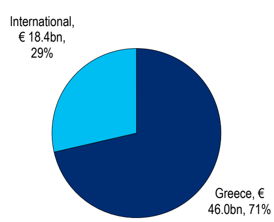
Source: Company Reports

Figure 7. NBG – Loan Split 2Q14



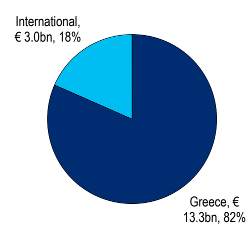
Source: Company Reports

Figure 8. NBG – Deposit Split 2Q14



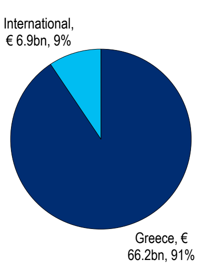
Source: Company Reports

Figure 9. NBG – NPL Split 2Q14



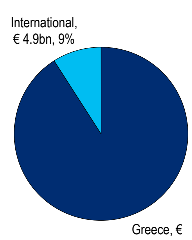
Source: Company Reports

Figure 10. Piraeus – Loan Split 2Q14



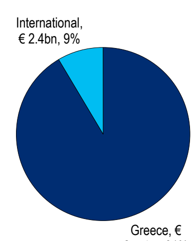
Source: Company Reports

Figure 11. Piraeus – Deposit Split 2Q14



Source: Company Reports

Figure 12. Piraeus – NPL Split 2Q14



Source: Company Reports

Greek Banks vs Peers: Valuation Overview

Figure 13. GIIPS Banks Valuations

			Share Price				Adj P/E[a]		Tangible		Tangible		Div Yield
Bank	**RIC**	**Rec**		**Now**	**Target**	**+/-%**	**2015E**	**2016E**	**P/B 15E**	**P/B 16E**	**ROE 15E**	**ROE 16E**	**2015E**
Greece/Cyprus							**19.1x**	**8.5x**	**0.79x**	**0.72x**	**5.0%**	**9.0%**	**0.0%**
Alpha Bank	ACBr.AT	Buy	E	.60	.75	+25%	17.2x	9.7x	0.84x	0.78x	5.0%	8.3%	0.0%
National Bank of Greece	NBGr.AT	Buy	E	2.09	3.00	+44%	10.0x	7.0x	0.78x	0.70x	8.6%	10.7%	0.0%
Piraeus Bank	BOPr.AT	Buy	E	1.24	1.65	+33%	29.9x	9.0x	0.84x	0.77x	2.8%	8.9%	0.0%
Eurobank	EURBr.AT	Neutral	E	.29	.31	+6%	19.5x	8.2x	0.69x	0.64x	3.6%	8.1%	0.0%
Iberia						**+5%**	**12.2x**	**9.9x**	**1.39x**	**1.29x**	**11.7%**	**13.5%**	**5.5%**
Banco BPI	BBPI.LS	Neutral	E	1.51	1.60	+6%	8.5x	7.1x	0.90x	0.80x	11.2%	12.0%	0.0%
Banco Popular	POP.MC	Sell	E	4.77	4.40	-8%	17.0x	11.0x	0.97x	0.93x	5.8%	8.6%	2.4%
Banco Santander	SAN.MC	Neutral	E	7.27	7.60	+5%	10.8x	9.7x	1.63x	1.51x	15.7%	16.1%	8.3%
Bankia	BKIA.MC	Buy	E	1.42	1.80	+27%	12.2x	10.0x	1.24x	1.11x	10.7%	11.7%	2.9%
Bankinter	BKT.MC	Neutral	E	6.68	6.35	-5%	15.7x	12.7x	1.79x	1.66x	12.1%	13.6%	2.3%
BBVA	BBVA.MC	Neutral	E	9.21	9.50	+3%	13.9x	10.1x	1.39x	1.29x	10.2%	13.3%	4.0%
Bco de Sabadell	SABE.MC	Sell	E	2.30	1.90	-17%	16.7x	10.6x	1.06x	1.01x	6.5%	9.8%	3.0%
CaixaBank	CABK.MC	Buy	E	4.60	5.30	+15%	11.7x	9.4x	1.25x	1.17x	11.0%	12.8%	4.3%
Liberbank	LBK.MC	Buy	E	.72	.83	+15%	13.5x	8.2x	0.83x	0.79x	6.3%	9.9%	3.5%
Italy						**+20%**	**12.3x**	**9.2x**	**0.76x**	**0.73x**	**6.3%**	**8.1%**	**3.5%**
Banco Popolare	BAPO.MI	Neutral	E	11	na		13.2x	9.5x	0.51x	0.49x	3.9%	5.2%	1.9%
BP Emilia	EMII.MI	Buy	E	6.19	7.70	+24%	14.3x	9.1x	0.66x	0.62x	4.7%	7.1%	2.1%
BP Milano	PMII.MI	Neutral	E	.64	.70	+10%	15.7x	11.5x	0.61x	0.59x	4.0%	5.2%	2.9%
Intesa Sanpaolo	ISP.MI	Buy	E	2.28	2.70	+18%	11.5x	9.1x	0.92x	0.87x	8.2%	9.8%	4.8%
Mediobanca	MDBI.MI	Buy	E	6.67	8.00	+20%	8.7x	8.1x	0.72x	0.68x	8.3%	8.5%	3.2%
Monte dei Paschi	BMPS.MI	Neutral	E	1.00	1.35	+35%	24.0x	13.9x	0.53x	0.51x	2.2%	3.7%	0.0%
UBI Banca	UBI.MI	Buy	E	6.34	7.30	+15%	17.0x	13.2x	0.70x	0.68x	4.2%	5.2%	3.3%
UniCredit	CRDI.MI	Buy	E	6.03	7.30	+21%	12.1x	8.5x	0.76x	0.72x	6.4%	8.7%	2.9%
UK/Ireland						**+10%**	**18.8x**	**11.7x**	**1.34x**	**1.20x**	**7.4%**	**10.8%**	**4.6%**
Bank of Ireland	BKIR.I	Sell	E	.30	.20	-33%	18.8x	11.7x	1.34x	1.20x	7.4%	10.8%	0.0%

Source: Citi Research; Powered by dataCentral; Priced as of 07 Oct 14

Greek Bank shares have sold-off recently – down 10-25% in past 3 months – much higher than most of the other peripheral banks

Figure 14. GIIPS Banks Share Performance

	-1M Change	-3M Change	-12M Chg	YTD Chg	vs Peak YTD	vs Precap Price
Alpha Bank	-10%	-9%	5%	-2%	-18%	-5%
National Bank of Greece	-19%	-20%	-33%	-43%	-49%	0%
Piraeus Bank	-14%	-26%	-5%	-17%	-39%	-25%
Eurobank	-17%	-17%	-55%	-57%	-59%	-6%
Banco BPI	1%	4%	56%	28%	-22%	NA
Banco Espirito	0%	-83%	-85%	-87%	-91%	-82%
Banco Popular	-1%	1%	19%	12%	-18%	NA
Banco Santander	-5%	0%	29%	22%	-6%	NA
Bankia	-4%	1%	49%	18%	-9%	NA
BBVA	-3%	1%	13%	8%	-4%	NA
Bankinter	3%	18%	63%	37%	-1%	NA
Bco de Sabadell	-6%	-4%	26%	25%	-11%	NA
CaixaBank	-1%	4%	42%	29%	-4%	NA
Banco Popolare	-10%	-4%	16%	6%	-29%	25%
BP Milano	1%	-1%	48%	59%	-12%	49%
Intesa Sanpaolo	-5%	4%	38%	30%	-11%	NA
Mediobanca	-4%	-5%	15%	7%	-19%	NA
Monte dei Paschi	-16%	-31%	-26%	-9%	-61%	0%
UBI Banca	1%	1%	48%	32%	-14%	NA
UniCredit	-5%	0%	19%	15%	-11%	NA
Bank of Ireland	-4%	22%	38%	23%	-21%	NA

Source: DataStream; Priced as of 07 Oct 14

Greek Banks in a Global Context

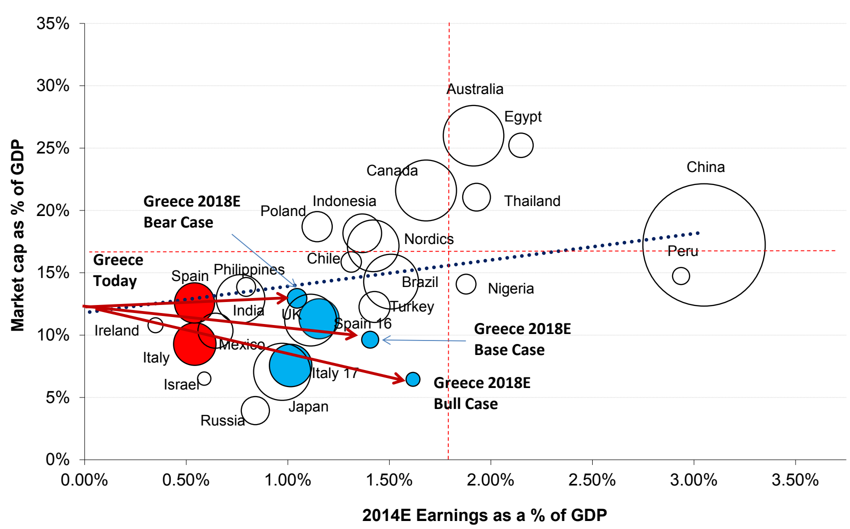
From a top down perspective, Greek banks appear at valuations similar to Brazil and Turkey on our base case

From a top down perspective, based on bank earnings and market value relative to GDP, Greek domestic banking appears fairly valued. In our chart below, we illustrate the size of the domestic banking system for a selection of developed and emerging markets. Note that the system earnings and market value figures are a Citi estimate based on the domestic earnings and market shares of quoted banks we cover in each country.

- **Base case**: 2018E domestic earnings reach close to 1.4% of Greek GDP and market capitalisation is c10% of GDP. We do not assume any special capital return. This would place Greece in the valuation neighbourhood of Brazil and Turkey, and pretty much in the middle of our global sample. The implied P/E is c7x normalised earnings (e.g. 2018E).
- **Bull case**: Profitability reaches company targets, which is 15% ahead of Citi estimates on average. Additionally, surplus capital surplus of up to 40% of the current market cap is returned to shareholders (based on 2018E CET1 levels above 10%). The bull case implied P/E is 4x.
- **Bear case**: From the point of view of today's investor who needs to inject an equivalent of a further 0.5x of market capitalization (due to latent losses on loans): this would result in the equivalent of Greek bank earnings to GDP of c1.0%, similar to UK or Japan, but a market capitalisation to GDP of c13%, or similar to an Turkey. The bear case implied P/E is 12x.

Based on bank earnings and market value relative to GDP, Greek banks appear attractive in our base case and bull case and fair value in our bear case (e.g. capital raise not return)

Figure 15. Banking Systems' Market Cap (% GDP) vs Earnings (illustrative 2018E for Greece, 2017 for Italy and 2016 for Spain)



Source: Central bank, Citi Research Estimates; Note: estimates based on domestically focused activities; Greece 2018E bull case is based on company targets.

Mapping Greek Banking Profitability

A New Oligopoly Emerges Via Consolidation

New Greek banking oligopoly emerged post crisis, with top 4 banks accounting for 95% of system loans – making it the most consolidated market in Europe

As in other countries that have recently experienced a crisis, Greek banking has experienced a wave of domestic consolidation as weak or failing banks have been merged with larger banks, with the support of official policy. The top four banks' market shares have increased from c60% pre crisis to c95% today (see Figure 16 - Figure 17). As we will discuss in this report, this new Greek banking oligopoly is helping banks to reduce operating expenses and – along with the improvement in the broader monetary environment for the Euro Area – is helping to reduce future funding costs. In addition, bad debt (NPL) formation is slowing and their absolute levels should start declining from 2015. However, before the expected bank sector's return to profitability in 2015 and onwards, the Greek banks will have to navigate the ECB's AQR and Stress Test process - the latter will likely result in a large headline capital deficit for the Greek banks and potentially new equity issued by one or two Greek banks.

Figure 16. Market Share of Top 5 banks by Country*

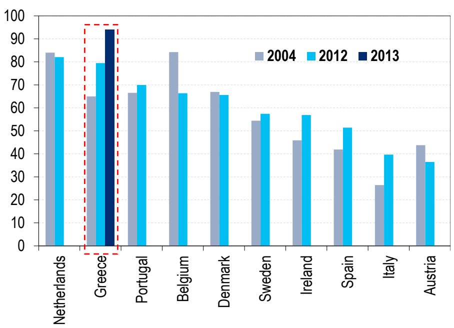


Figure 17. Greek Banks Loan Market Share FY13

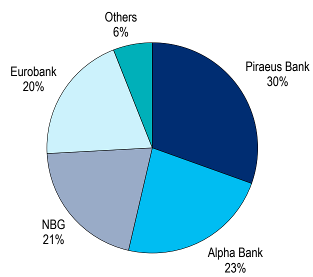
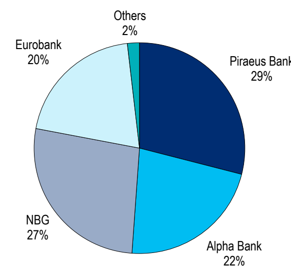


Figure 18. Greek Banks Deposit Market Share FY13



Source: Company Reports; * based on ECB Data Top 5 banks assets% total except 2013 Greek market share is estimated based on loan market share of top 4 banks.

Figure 19. Overview of recent history of Greek banks

Postwar until early 1990s: Pre liberalisation	Government interventionism
Late 90s until 2009 : Rapid growth	Liberalisation & privatisations, sharp fall of interest rates with entry in euro area, rapid growth of banking sector, international expansion (especially in neighbouring countries)
2009 - 2011: Moderate recession	Despite concerns following the failure of Lehman, the economy in Greece and its region remains fairly resilient and the banks' primarily retail & commercial focus resist well
2011-12: Sovereign crisis, Greek PSI	Privately held Greek government debt gets haircut through voluntarily exchange of bonds - the so-called PSI (Private Sector Involvement). Consolidation of the system is launched through resolution of 'bad' part of non-systemic banks', acquisition of 'bad' part of non-systemic banks (or whole of foreign banks) by 'core' (systemic) banks
Spring 2013: Recapitalisation	Recapitalisation of the four 'core' (systemic) banks, . Three banks remain under private control (private investors having injected over 10% of required capital), the fourth intends to attract private capital to complete its capitalisation
Since mid-2013: Consolidation	The banking system further consolidated. The big four Greek banks together has more than 90% of the banking system market share
Since 2014: Recapitalisation and Recovery	The big four Greek banks raised c€8bn of new capital post BoG stress test. The profitability of Greek banks also started to recover from 2013 low due to lower funding cost.
2H 2014 AQR/Stress test	The upcoming AQR/stress test will give investors more visibility around Greek banks' balance sheet.

Source: Citi Research

Figure 20. Eurobank – Select Historical Events

Established in **1990**
2000s: Strong growth in innovative businesses. International expansion.
Late 2012: Accepts merger with NBG
Spring 2013: Merger with NBG is rejected by authorities. Eurobank does not raise private capital as part of its recapitalisation process and is fully recapitalized by the HFSF.
2013: Eurobank Group acquires New TT Hellenic Postbank and New Proton Bank.
Spring 2014: Eurobank recap through €2,864m capital increase

Source: Citi Research

Figure 21. Greek Banks Key M&A Transactions 2008- Today

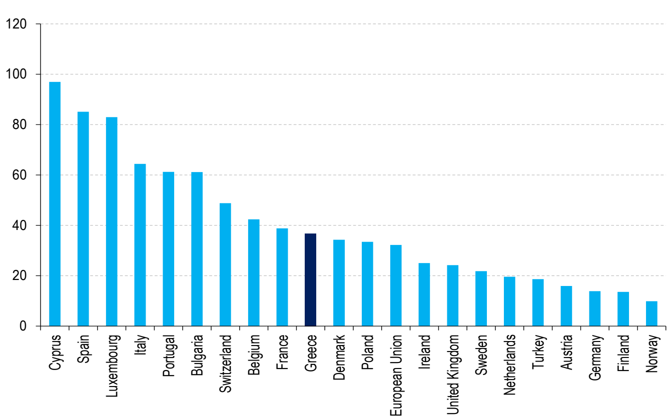
Announce Date	Deal Title	Transaction Value	Role
Alpha Bank			
31 Jul '12	Alpha Bank SA acquires Emporiki Bank SA from Credit Agricole SA	0	Buyer
27 Mar '08	Alpha Bank SA takes a majority stake in Astra Bank OJSC	14	Buyer
National Bank of Greece			
10 Feb '10	National Bank of Greece SA takes a majority stake in Millenium Bank AS from Banco Comercial Portugues SA	84.9	Buyer
20 Aug '08	National Bank of Greece SA takes a minority stake in Finansbank AS	725.0	Buyer
22 Apr '08	National Bank of Greece SA takes a minority stake in Greek Postal Savings Bank	154.8	Buyer
Piraeus Bank			
22 Apr '13	Piraeus Bank SA acquires Millennium Bank SA /Greece/ from Banco Comercial Portugues SA	1.3	Buyer
26 Mar '13	Piraeus Bank SA offers to acquire Bank of Cyprus Public Co. Ltd. /Greek Divisions/ from Bank of Cyprus Public Co. Ltd.	--	Buyer
26 Mar '13	Piraeus Bank SA offers to acquire Cyprus Popular Bank Public Co. Ltd. /Greek Divisions/ from Cyprus Popular Bank Public Co. Ltd.	--	Buyer
26 Mar '13	Piraeus Bank SA offers to acquire Hellenic Bank Ltd. /Greek Divisions/ from Hellenic Bank Ltd.	--	Buyer
03 Oct '12	Piraeus Bank SA takes a majority stake in GENIKI Bank SA from Societe Generale SA	1.3	Buyer
27 Jul '12	Piraeus Bank SA acquires Agricultural Bank of Greece SA /Operating Assets/ from Agricultural Bank of Greece SA	116.8	Buyer
14 Jun '12	Investors Bancorp, Inc. /Old/ acquires Marathon Banking Corp. from Piraeus Bank SA	135.0	Seller
Eurobank			
13 Jul '13	Eurobank Ergasias SA acquires TT Hellenic Postbank SA	--	Buyer
11 Jul '13	Eurobank Ergasias SA acquires Proton Bank SA	0.0	Buyer
20 Dec '12	Eurobank Ergasias SA acquires Erste Bank Ukraine JSC from Erste Group Bank AG	83.0	Buyer
09 Apr '12	Burgan Bank SAK takes a majority stake in Eurobank Tekfen AS from EFG Eurobank Ergasias SA	357.6	Seller
03 Feb '11	Raiffeisen Bank International AG takes a majority stake in Polbank EFG SA from EFG Eurobank Ergasias SA	676.6	Seller

Source: FactSet

Emergence of the new oligopoly in Greek banking has led to a sharp drop in the number of branches: from peak levels, branch numbers are down by one-third

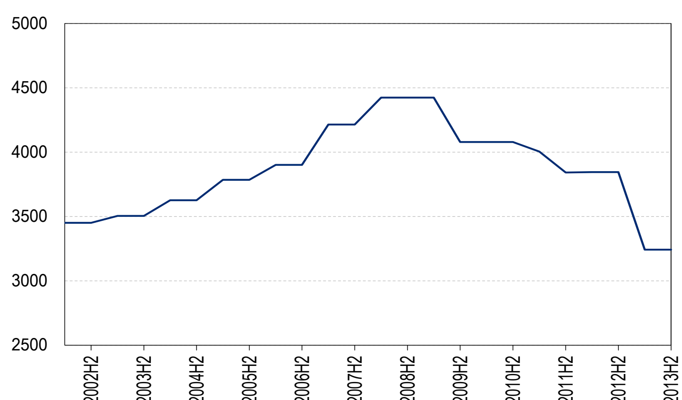
The emergence of the new oligopoly in Greek banking has led to a sharp drop in the number of branches in the country, from close to 4500 to about 3200 by end 2013. At end 2013, Piraeus accounted for one-third of Greek branches and the other three major banks had about one fifth each of the system branches (Figure 25). The big four Greek banks have further reduced their branch network by c7.5% during 1H14 to c2600. Piraeus accounted for c70% of the big four Greek banks branch reductions in 1H14 hoh. System branches are about 3000 at present and should decline another 5% during 2H14 hoh, largely led by Piraeus which targets a reduction in its Greek branch network from 889 end 1H14 to 800 at end 2014. Headcount is down end 1H14 yoy for the Greek banks 7% at a group level and 14% for their Greek operations. Underlying costs have also fallen, typically by about 10% yoy for most of the banks at a group level (Figure 28).

Figure 22. Number of Commercial Bank Branches per 100k Adults 2012



Source: World Bank

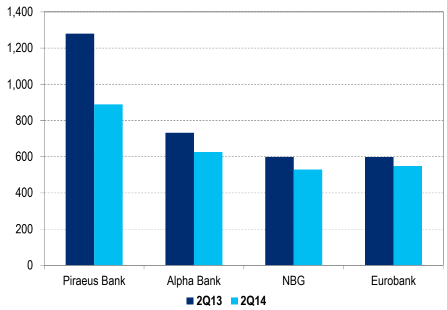
Figure 23. Greece: Number of Branches of Credit Institutions



Source: ECB

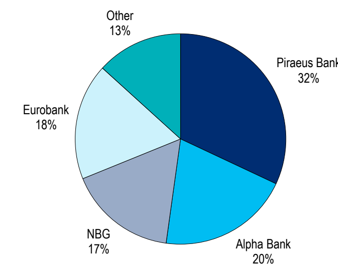
Group cost down 5-12% yoy driven by headcount optimisation (-7% yoy) and branch reduction (-14% yoy).

Figure 24. Number of Branches in Greece



Source: Company Reports; Branch numbers adjusted for acquisitions.

Figure 25. Branch Market Share in Greece 4Q13



Source: Company Reports, ECB

Figure 26. Group Headcount

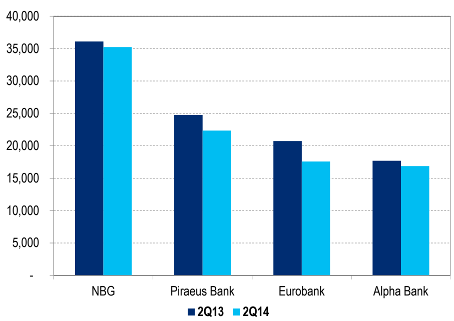
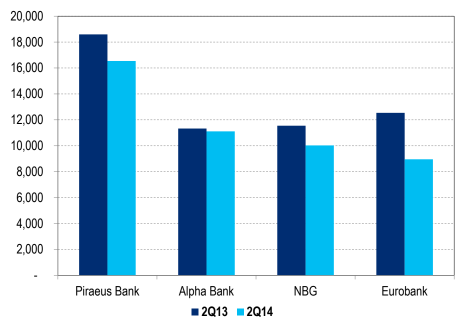
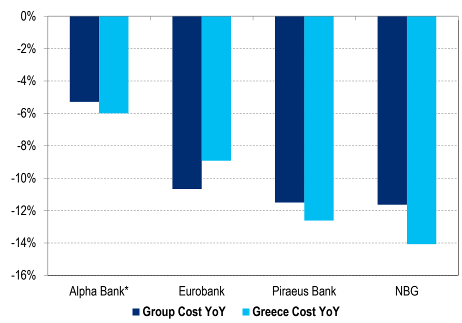


Figure 27. Greece Headcount



Source: Company Reports; Eurobank 2Q13 FTE proforma for TT& Proton acquisition and exclude FTE from Ukraine operation.

Figure 28. Change in Underlying Cost 1H14 YoY



Source: Company Reports; *Alpha bank Greek Expenses estimated based on Group – SEE; All expenses exclude restructuring costs.

Financial Targets vs Citi Estimates

Figure 29. Greek Banks Financial Targets and Citi Estimates

	NIM			ROA Targets			Expenses			Credit Costs		
	1H14	Target	2016E	1H14	Target	2016E	1H14	Target	2016E	1H14	Target	2016E
Alpha	2.6%	>3.3% (2016-18 for all KPIs)	2.9%	73 bps	** >150-160bps ROA	105bps	€1.37bn 2013 u/l; (C/I 54%)	<€1.15bn 2016E (c42%)**	€1.24bn (C/I 45%)	240bps	<100bps	75bps
NBG	2.70%	NIM > 400bps 2016 (Eq. to Citi calculation 350bps)	3.15%	160bps; -20bps u/l	^ROA 160bps by 2016	89bps	59%	c45% 2016	49%	234bps	100bps 2016	84bps
Piraeus	2.20%	>3.2% medium term	2.70%	-19bps	c140bps medium term	100bps	56%	c40% medium term	44%	283bps		64bps
Eurobank*	1.95%		2.40%	-81bps	c12-15%	74bps	56%		48%	355bps		80bps

Source: Citi Research; * based on Citi revenue forecasts; **based on ROE target of >15% (at 9% CET1); ^ROA based on adjusted assets excluding €9bn HFSF

Figure 30. Greek Banks – GOP and PBT (€m)

	2013		1H14 Annualized		2014E		2015E		2016E	
	GOP	PBT	GOP	PBT	GOP	PBT	GOP	PBT	GOP	PBT
Alpha Bank	918	2,205	1155	(333)	1,167	(117)	1,354	567	1,494	1,021
National Bank of Greece	1,219	(99)	1,450	14	1,549	251	2,033	1,213	2,317	1,703
Piraeus Bank	498	(2,058)	1,217	(872)	1,127	(838)	1,335	346	1,586	1,117
Eurobank	517	(1,940)	832	(1,036)	890	(439)	1,042	321	1,123	730

Source: Company Reports, Citi Research Estimates

Greek Revenue Margins High, But So Are Costs and Loan Losses

Greek banks pre-provision profits/asset ratio of 1.3% is similar to domestic Spanish or Italian banks with higher NIMs offset by higher costs and low non NII.

Greek banks have a high net interest margin and revenue/asset margin. Greek bank NII/assets of 2.4% is well ahead of Southern European peers. These high NIMs are due to a combination of attractive asset yields and a high proportion of loans and deposits in the balance sheet relative to lower margin securities assets or funding. However, a low level of non NII reduces the revenue/asset advantage of Greek banks versus peers in Spain or Italy that usually have much larger and well developed sources of fee income. Accounting for a higher level of expenses relative to assets, the Greek banks' gross operating profits or pre-provision profits (1.3% of assets) are almost identical to domestic Italian or Spanish banks (1.2%).

High loan loss provisions push Greek bank pre-tax ROAs negative (-0.6%), with Eurobank (-1.4%) and Piraeus (-1.0%) the weakest in 1H14

At a stock specific level, the Greek bank with the highest level of revenue and GOP to asset ratio was Alpha Bank in 1H14 at 3.4% and 1.6% respectively. By contrast, Eurobank had the lowest level of revenue and GOP to asset ratio in 1H14 at 2.5% and 1.1% respectively – this is an asset productivity level similar to Italian domestic banks in 1H14 but well behind Greek peers. The low returns at Eurobank relative to Greek peers are due to lower net interest income/assets, reflecting a relatively low loan/assets mix and the presence of lower yielding assets on its balance sheet and relative low NII/loans, and also much higher domestic loan loss provisions.

Figure 31. DuPont Analysis of Greek Banks vs Banks in Other Countries (1H14 Annualised)

	NII/Assets	Rev/Assets	Exp/Assets	GOP/Assets	Prov/Assets	PBT/Assets	Assets/Equity	Pretax RoE
Greece	2.4%	3.0%	-1.7%	1.3%	-2.0%	-0.6%	10.4	-6.7%
Spain	2.0%	3.0%	-1.5%	1.6%	-0.9%	0.6%	15.4	9.0%
Spain Domestic	1.2%	2.3%	-1.1%	1.2%	-0.9%	0.3%	15.8	5.0%
Italy	1.4%	2.7%	-1.5%	1.2%	-0.7%	0.5%	15.0	7.8%
Italy Domestic	1.3%	2.6%	-1.4%	1.2%	-0.8%	0.4%	14.1	6.3%
Nordics	0.9%	1.6%	-0.7%	0.9%	-0.1%	0.8%	20.4	16.9%

Source: Company Reports and Citi Research; Spanish Domestic exclude BBVA and SAN, Italy Domestic excludes UniCredit and Mediobanco

Figure 32. Greek Banks DuPont Analysis (1H14 Annualised)

	NII/Assets	Rev/Assets	Exp/Assets	GOP/Assets	Prov/Assets	PBT/Assets	Assets/Equity	Pretax RoE
Piraeus Bank	2.2%	3.0%	-1.6%	1.4%	-2.4%	-1.0%	9.4	-9.3%
Alpha Bank	2.6%	3.4%	-1.8%	1.6%	-2.0%	-0.5%	8.5	-3.9%
NBG	2.7%	3.1%	-1.8%	1.3%	-1.3%	0.0%	11.8	0.1%
Eurobank	2.0%	2.5%	-1.4%	1.1%	-2.5%	-1.4%	12.2	-16.9%
Greece	**2.4%**	**3.0%**	**-1.7%**	**1.3%**	**-2.0%**	**-0.6%**	**10.4**	**-6.7%**

Source: Company Reports and Citi Research

Figure 33. Greek Banks Domestic Operations Profitability Comparison (1H14 Annualised)

	NII/Loans	Rev/Loans	Exp/Loans	GOP/Loans	Prov/Loans	PBT/Loans
Piraeus Bank	2.5%	3.5%	-1.9%	1.6%	-2.7%	-1.0%
Alpha Bank	3.0%	3.8%	-1.9%	1.9%	-2.2%	-0.3%
NBG	3.7%	3.7%	-2.3%	1.4%	-2.3%	-0.9%
Eurobank	2.5%	3.1%	-1.8%	1.3%	-3.7%	-2.4%
Greece Domestic	**2.9%**	**3.5%**	**-2.0%**	**1.6%**	**-2.7%**	**-1.1%**

Source: Company Reports and Citi Research

Figure 34. Greek Banks International Operations Profitability Comparison (1H14 Annualised)

	NII/Loans	Rev/Loans	Exp/Loans	GOP/Loans	Prov/Loans	PBT/Loans
Piraeus Bank	4.6%	5.2%	-3.3%	2.0%	-4.7%	-2.8%
Alpha Bank	3.6%	4.9%	-3.4%	1.5%	-3.5%	-2.0%
NBG	8.6%	11.4%	-6.2%	5.2%	-2.4%	2.8%
Eurobank	5.1%	7.0%	-3.7%	3.3%	-3.3%	0.2%
Greece International	**6.0%**	**7.9%**	**-4.5%**	**3.4%**	**-3.3%**	**0.2%**

Source: Company Reports and Citi Research

How Greeks Returns Can Rise: Even Higher NIMs, Lower Provisions

We expect Greek banks' pre-tax ROAs to increase c2ppt between 1H14 and 2016E primarily due to a lot lower loan losses (140bps) and higher NIMs (40bps)

We expect to see continued NIM (NII/ATA) expansion in the next 12-18 months, driven by ongoing funding cost improvements, as we will discuss later in this report (see pages 15-23). And as previously noted, Greek banks are continuing to reduce their branch network. The combination of these factors should lead to an improvement in Greek banks' GOP/asset ratios to 1.9% in 2016 (+60bps vs 1H14) whereas we expect smaller improvements in Italy (+30bps) and Spain (+10bps) in the same time period. The 60bps increase in our Greek banks' GOP/asset forecast is attributable to higher NII/assets (+40bps), higher non NII / assets (+10bps) and lower expenses/assets (+10bps). Adding the 140bps reduction in loan losses/assets from 1H14 annualised to 2016 produces a c2ppt increase in pre-tax ROA. This is considerably ahead of our forecast 70bps increase in Spanish domestic banks' pre-tax ROA (of which 60bps is driven by lower loan losses) and the 40bps increase in Italian banks' pre-tax ROA (of which 30bps is driven by lower loan losses).

At a stock specific level, the Greek banks that we forecast to have the greatest increase in pre-tax ROA between last reported results and our 2016 estimates are Eurobank and Piraeus Bank (+240bps). Once again, the largest driver of the ROA improvement is expected to be lower loan losses (180-200bps as a pct of assets).

Figure 35. DuPont Analysis of Greek Banks vs Banks in Other Countries (2016 Citi Estimates)

	NII/Assets	Rev/Assets	Exp/Assets	GOP/Assets	Prov/Assets	PBT/Assets	Assets/Equity	Pretax RoE
Greece	2.8%	3.5%	-1.6%	1.9%	-0.6%	1.3%	9.3	12.1%
Spain	2.3%	3.2%	-1.4%	1.8%	-0.6%	1.1%	13.9	15.0%
Spain Domestic	1.5%	2.3%	-1.0%	1.3%	-0.3%	1.0%	13.2	13.2%
Italy	1.5%	2.9%	-1.4%	1.5%	-0.5%	0.8%	13.7	11.4%
Italy Domestic	1.4%	2.8%	-1.3%	1.5%	-0.5%	0.9%	12.8	11.5%
Nordics	0.9%	1.6%	-0.7%	0.9%	-0.1%	0.8%	18.3	15.5%

Source: Company Reports and Citi Research Estimates; Spanish Domestic exclude BBVA and SAN, Italy Domestic excludes UniCredit and Mediobanco

Figure 36. Greek Banks DuPont Analysis (2016 Citi Estimates)

	NII/Assets	Rev/Assets	Exp/Assets	GOP/Assets	Prov/Assets	PBT/Assets	Assets/Equity	Pretax RoE
Piraeus Bank	2.8%	3.4%	-1.5%	1.9%	-0.6%	1.4%	8.1	11.0%
Alpha Bank	2.9%	3.7%	-1.7%	2.0%	-0.6%	1.4%	7.3	10.1%
NBG	3.1%	3.7%	-1.8%	1.9%	-0.5%	1.4%	10.6	14.9%
Eurobank	2.3%	2.9%	-1.4%	1.5%	-0.5%	1.0%	12.2	11.9%
Greece	**2.8%**	**3.5%**	**-1.6%**	**1.9%**	**-0.6%**	**1.3%**	**9.3**	**12.1%**

Source: Company Reports and Citi Research Estimates

Figure 37. Greek Banks Domestic Operations Profitability Comparison (2016 Citi Estimates)

	NII/Loans	Rev/Loans	Exp/Loans	GOP/Loans	Prov/Loans	PBT/Loans
Piraeus Bank	3.0%	3.7%	-1.5%	2.2%	-0.5%	1.7%
Alpha Bank	3.3%	4.2%	-1.8%	2.4%	-0.5%	1.9%
NBG	4.3%	4.6%	-2.3%	2.4%	-0.5%	1.8%
Eurobank	3.1%	3.7%	-1.7%	2.0%	-0.7%	1.3%
Greece Domestic	**3.4%**	**4.0%**	**-1.8%**	**2.2%**	**-0.6%**	**1.7%**

Source: Company Reports and Citi Research Estimates

Figure 38. Greek Banks International Operations Profitability Comparison (2016 Citi Estimates)

	NII/Loans	Rev/Loans	Exp/Loans	GOP/Loans	Prov/Loans	PBT/Loans
Piraeus Bank	4.3%	5.1%	-3.0%	2.1%	-1.8%	0.2%
Alpha Bank	3.5%	4.5%	-2.5%	2.0%	-1.8%	0.2%
NBG	6.3%	8.4%	-4.1%	4.3%	-1.3%	3.0%
Eurobank	5.0%	6.5%	-3.4%	3.0%	-1.0%	2.0%
Greece International	**5.2%**	**6.9%**	**-3.5%**	**3.4%**	**-1.4%**	**1.9%**

Source: Company Reports and Citi Research Estimates

Greek Banks Profitability Relatively Low: Per Employee Metrics

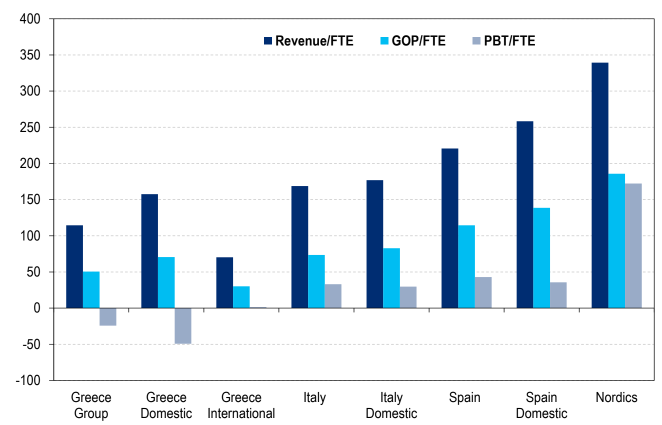
Greek banks' productivity levels remain poor on a per employee basis: revenues of €150k are c40% below Spanish banks, but similar to Italian banks …

Despite the emerging Greek banking oligopoly, the system profitability remains relatively low when measured on a per employee basis. Greek banks' domestic operations generated revenues of about €150,000 per employee in 1H14 on an annualized basis; pre-provision profits amounted to about €70,000 per employee and high credit losses pushed the banks into a pre-tax loss. Italian banks are similar to Greek banks on a nominal basis. Spanish banks lead the way in the Med Rim with domestic banks' revenues of about €250,000 and pre-provision profits of about €140,000 per employee in 1H14 on an annualized basis. While Nordic banks are the best in class in Europe on a nominal basis, indexed to GDP/capita levels the Spanish banks' revenue and PPP productivity exceeds even the Nordics.

.. but indexed to national income levels, Greek banks' per employee revenues and pre-provision profits exceed Italian levels by 18% and 12% respectively

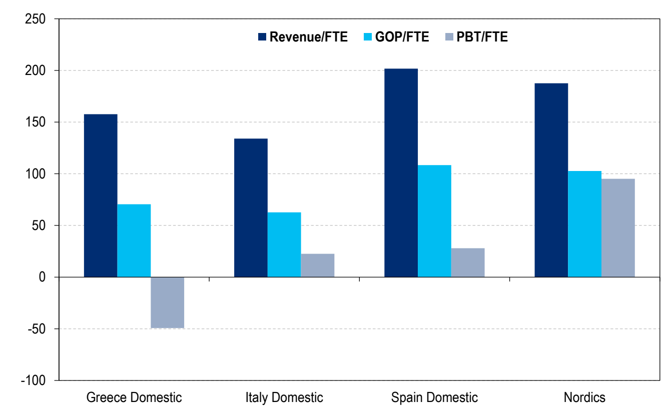
Adjusted for differences in GDP/capita levels, as a proxy for the available banking revenues in the country, Greek banks appear to be slightly better than Italian banks at a revenue and PPP level (see Figure 40). Relative to their respective GDP/capita levels, Greek banks domestic revenues and PPP per employee were higher than their Italian peers by 18% and 12% respectively. Based on our forecasts, we expect the per employee productivity of Greek banks to further increase relative to Italians in the next couple of years as they have greater potential benefit from rising margins and cost-cutting. Adjusted for GDP/capita levels, we see Greek banks' revenue and PPP per employee productivity converging towards Spanish levels by 2016E, despite not being best in class in the use of technology and also suffering from cost inefficiencies reflecting geography (i.e. Greece covers 1000s of islands).

Figure 39. Profitability Comparisons Across Countries, 1H14 Annualised



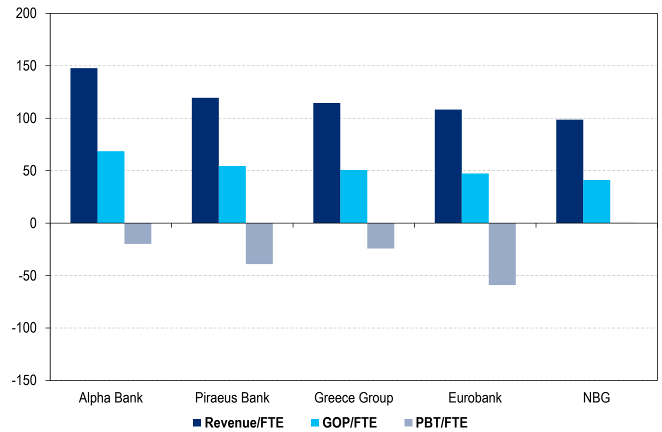
Source: Company Reports; Citi Research; Bloomberg; Spanish Domestic exclude BBVA and SAN, Italy Domestic excludes UniCredit and Mediobanco

Figure 40. GDP Adjusted Profitability Comparisons, 1H14 Annualised



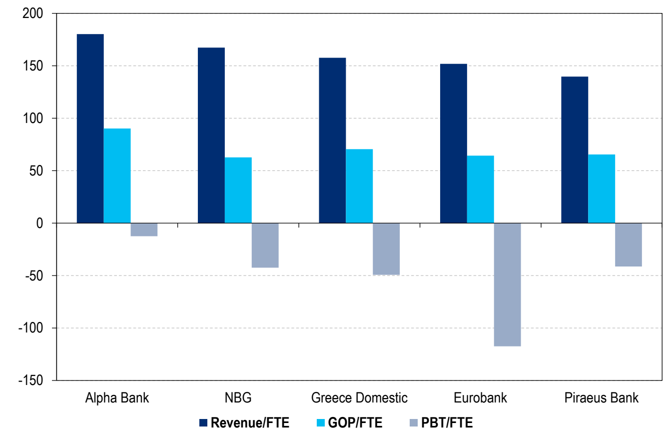
Source: Company Reports; Citi Research, OECD; The Revenue, GOP and PBT numbers are adjusted by dividing the GDP/capita relative to Greece

Figure 41. Greek Banks Group Profitability, 1H14 Annualised



Source: Company Reports; Citi Research;

Figure 42. Greek Banks Domestic Operations Profitability, 1H14 Annualised



Source: Company Reports; Citi Research;

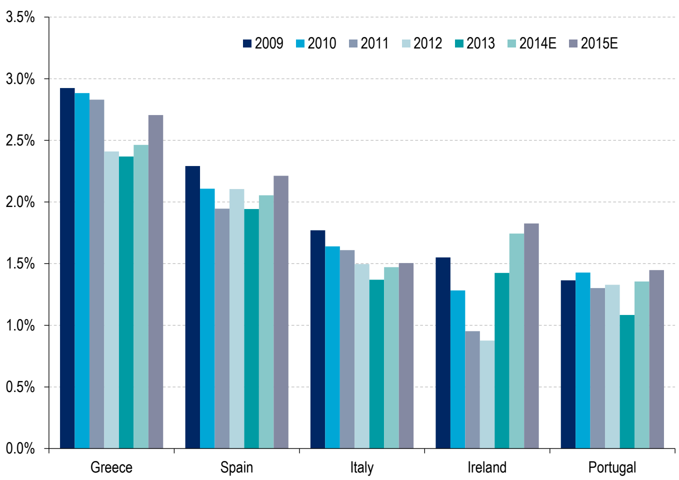
Margins, NII and the Greek Premium

We believe Greek bank NIMs will continue to command the premium it had over other EA markets pre-European sovereign crisis

Greek banks had higher net interest margins relative to other Euro Area countries before the European sovereign crisis and we believe it will continue to do so in coming years due to (1) client-focused balance sheet mix with limited securities assets or wholesale funding, (2) gearing to high loan yields due to client mix and local market conditions and (3) falling funding costs, as the Greek premium of the sovereign crisis years fades away.

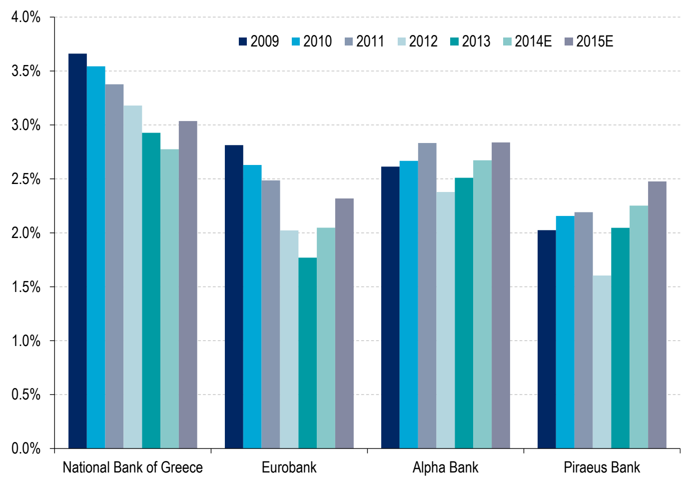
In 2009, our coverage universe of Greek banks had an NII/ATA of almost 3% or 60bps above Spanish banks or 110bps above Italian banks. The impact of the recent sovereign, banking and economic crisis resulted in a c50bps decline in Greek bank NIMs in 2012 relative to 2009-11, as funding costs and bad debts increased. However, following a trough in 2013, Greek bank NIMs are beginning to pick up in 2014 and we expect a further rebound in 2015, helped primarily by falling funding costs.

Figure 43. GIIPS Banks NII/ATA (%) Extend to 2015E



Source: Company Reports; Note: Based on average of Citi coverage banks

Figure 44. Greek Banks NII/ATA (%) Extend to 2015E



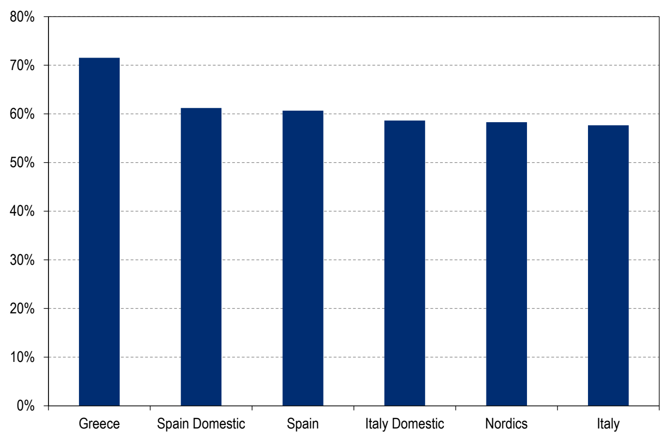
Source: Company Reports

Why are Greek banking NIMs high and will they remain high?

High proportion of higher margin client loans and deposits, higher asset yields and falling funding costs support high NIMs for Greek banks

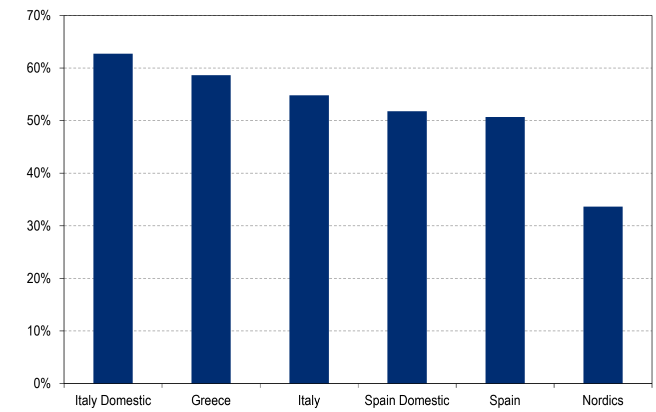
Balance sheet mix: Greek banks have a high proportion of client loans and deposits on their balance sheet and this segment is usually higher margin relative to securities portfolios or wholesale funding. In addition, Greek banks' loan portfolios tend to be biased towards higher yielding consumer and small and medium business clients with relatively low exposure to low margin large corporate clients (Figure 47).

Figure 45. GIIPS Banks Loan to Asset Ratio 1H14



Source: Company Reports

Figure 46. GIIPS Banks Deposit to Asset Ratio 1H14



Source: Company Reports

Figure 47. EAD Split by Borrower for GIIPS Countries (EBA Transparency Exercise 1H13)

	Spain	Greece	Italy	Ireland	Portugal
Corp	**28%**	**31%**	**41%**	**28%**	**35%**
Large Corp	19%	14%	21%	23%	25%
SME	10%	18%	20%	5%	11%
Retail	**35%**	**39%**	**30%**	**45%**	**38%**
Retail on Mortgages	29%	29%	17%	40%	32%
Retail other	6%	10%	13%	5%	6%
Retail Other + SME	**16%**	**27%**	**33%**	**10%**	**17%**
Central Bank	18%	14%	18%	21%	15%
Institutions	11%	8%	8%	3%	2%
Others	8%	8%	3%	4%	9%

Source: EBA, Citi Research

Relatively high asset yields: Greek corporate lending rates have averaged closed to 6% from mid 2012 to mid 2014, and remained between 2-3ppt above other Euro Zone peripheral countries. During the 2000s up to the onset of the global financial crisis in 2008, Greek corporate loan rates had ranged between c5.5-7% and averaged c1-2ppt above EZ peers. The higher loan rates in Greece versus peers over the past decade has reflected business mix (greater proportion of SME loans), domestic banks' recognition of higher credit risks in Greece vs other EZ countries and also banks pricing for higher operating costs (on an expenses/asset basis).

Funding costs are falling: Greek household term deposits are declining rapidly but remain above EZ peers. Latest available data from the ECB had Greek banks new term deposit costs for household clients c70bps above Portugal, c80bps above Italy, c140bps above Spain and c170bps above Ireland. Prior to the Greek sovereign crisis, while Greek banks also paid the highest term deposit rates to their household clients they were typically only marginally above most EZ peers. The September spike in sovereign bond yields has not so far fed into Greek deposit pricing

Figure 48. NBG – Assets, 2Q14

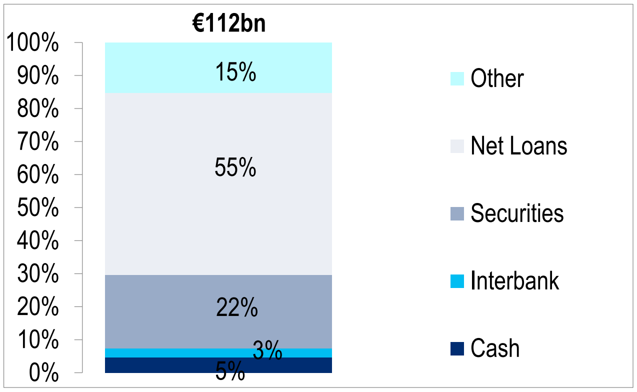


Figure 49. NBG – Liabilities , 2Q14

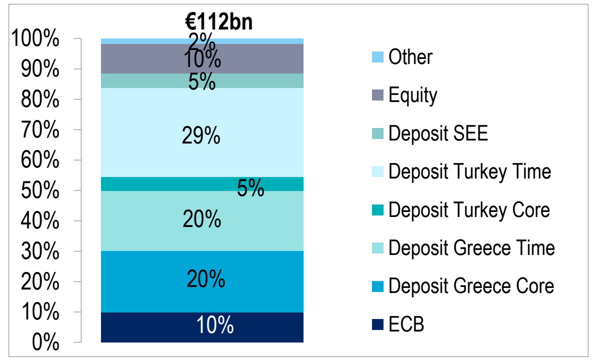


Figure 50. Piraeus – Assets, 2Q14

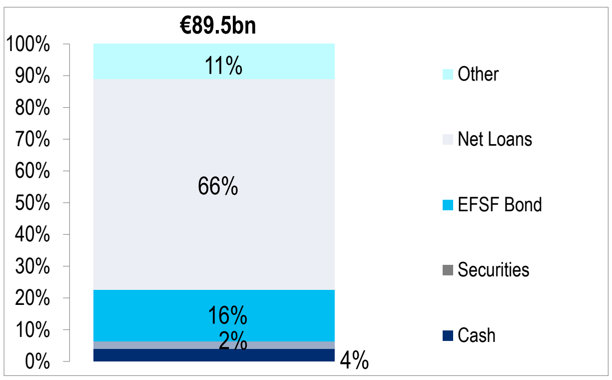


Figure 51. Piraeus – Liabilities , 2Q14

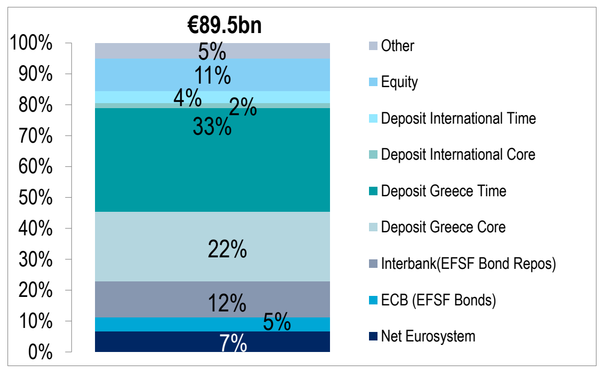


Figure 52. Alpha – Assets, 2Q14

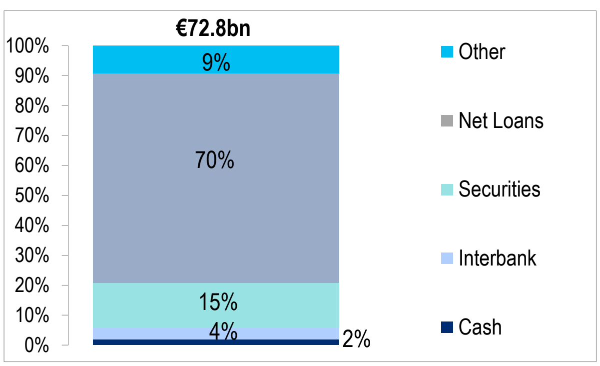


Figure 53. Alpha – Liabilities , 2Q14

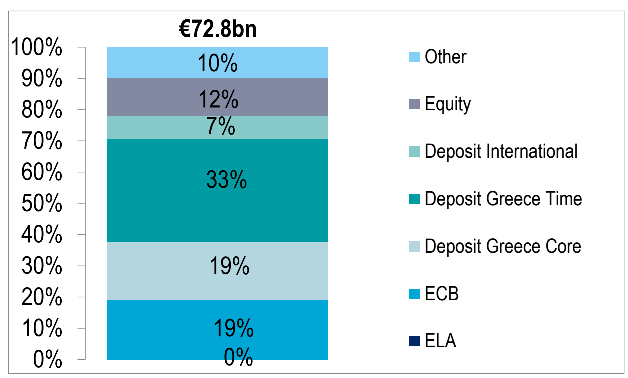


Figure 54. Eurobank – Assets, 2Q14

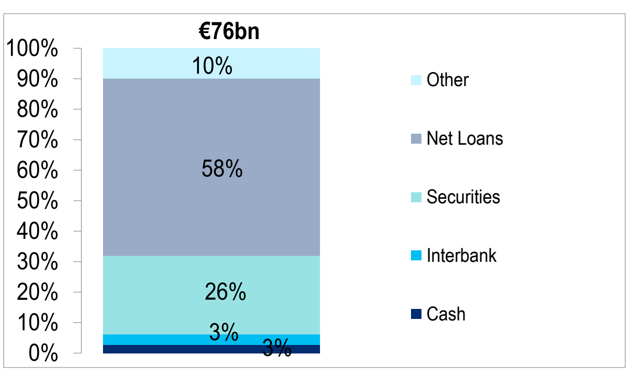
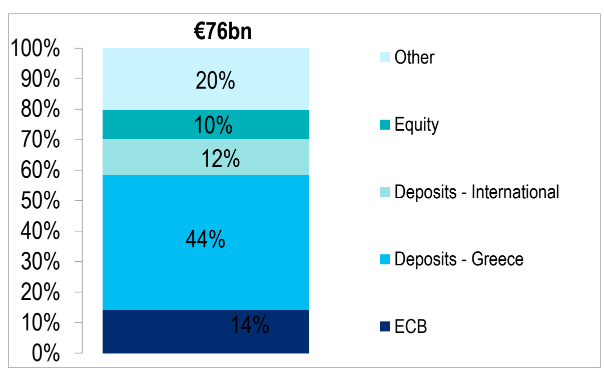


Figure 55. Eurobank – Liabilities , 2Q14



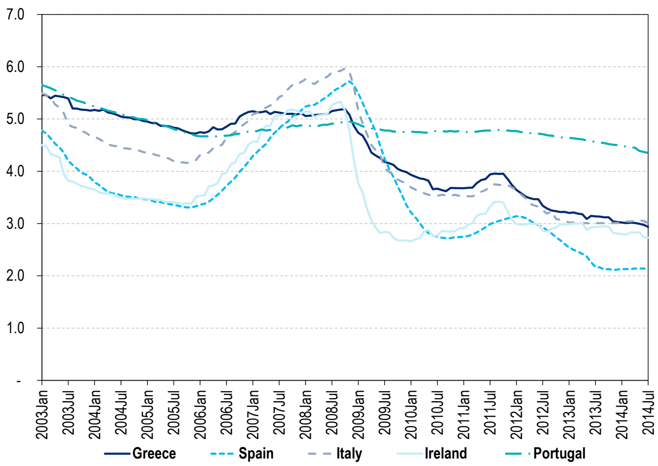
Source: Source for all charts: Company Reports

Greek Loan and Deposit Rates Before and After Sovereign Crisis

Higher corporate lending rates in Greece driven by business mix bias towards smaller corporate clients and local market conditions

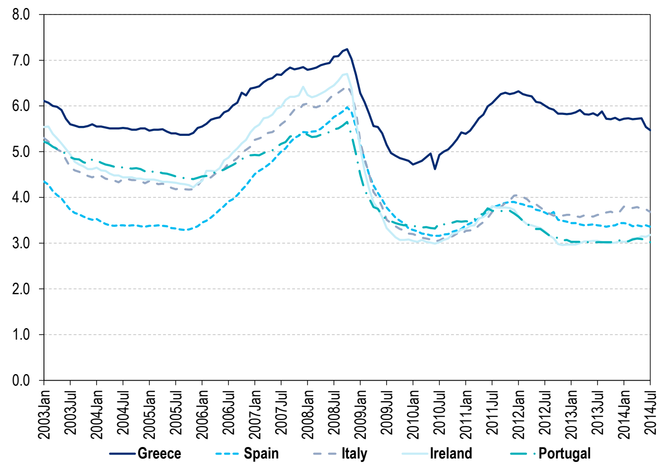
Greece has consistently had high corporate lending rates relative to its Euro Area peers, reflecting its business mix bias towards smaller corporate clients and also local market conditions e.g. Greek banks pricing takes into account higher domestic credit risk and higher operating expenses in the local market versus the rest of Europe.

Figure 56. GIIPS Outstanding Mortgage Lending Rates



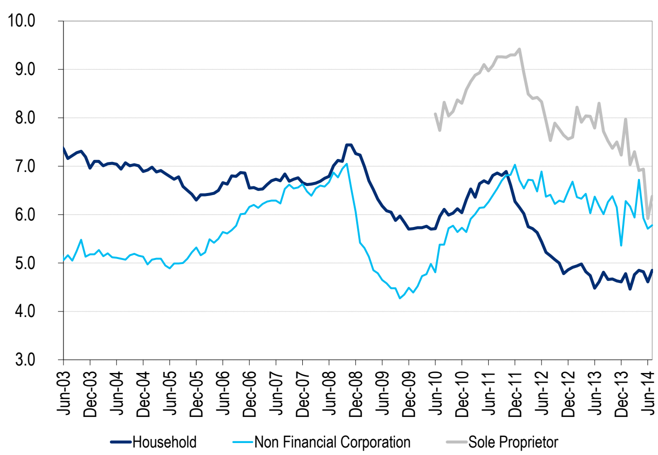
Source: Bank of Greece, ECB

Figure 57. GIIPS Outstanding Corp Lending Rates



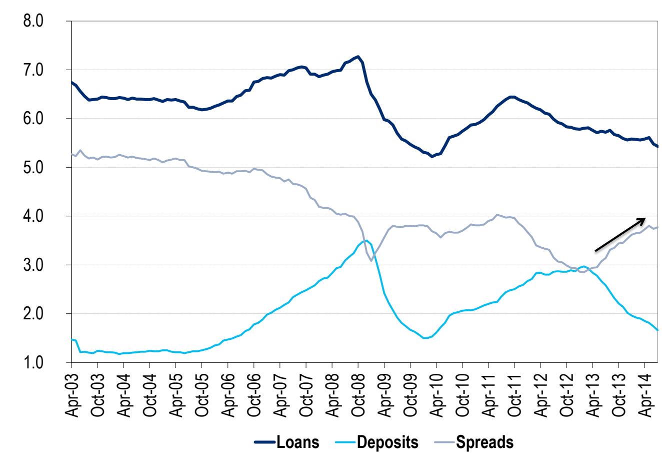
Source: ECB

Figure 58. Greece New Loan Rate By Borrower (Jul 14)



Source: Bank of Greece

Figure 59. Greece Outstanding Loan and Deposit Rate (Jul 14)

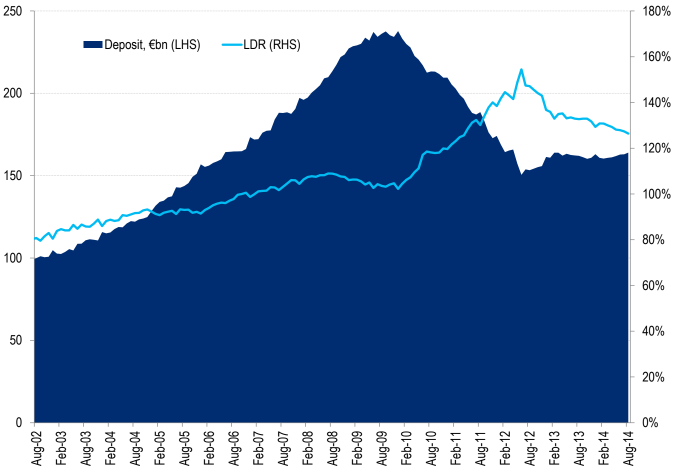


Source: Bank of Greece; Spread calculated as Loan rate – Deposit Rate

Greek deposit premium vs other EA banks widened steeply during the crisis; but have been falling and now close to the 2010 levels

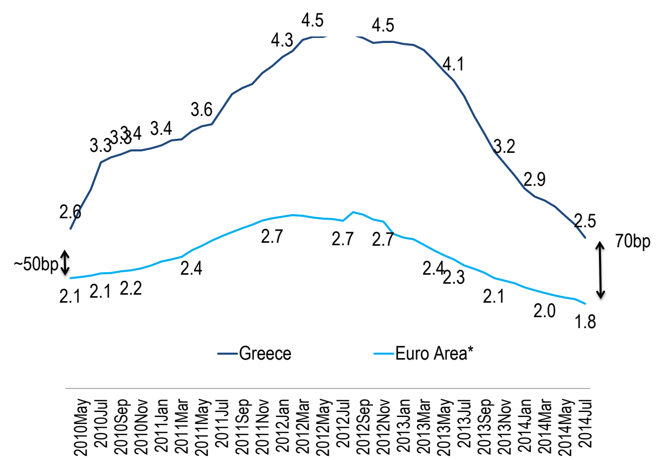
Greek deposit costs have also been higher than EZ peers, but the Greek premium not surprisingly widened out substantially from early 2010 onwards as deposits left the banking system (for destinations overseas, cash withdrawals etc). In early 2010, Greek deposit rates were on average 50bps wider than the Euro Area average. The Greek premium reached a peak of c180bps in 2012. Since 2013, it has been steadily declining. By start 3Q14, the Greek premium for deposits was almost back to early 2010 levels. But for new term deposits, there remains a large extra cost paid by Greek banks – and this is larger still for corporate deposits (Figure 63).

Figure 60. Greece – Deposits & LDR (Aug 02- Aug 14)



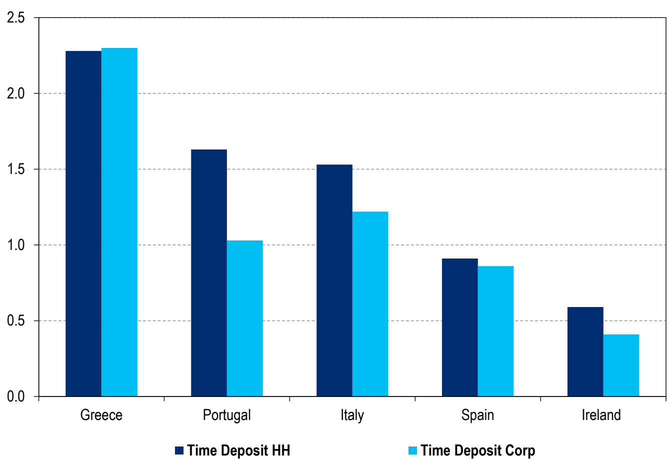
Source: Bank of Greece, Citi Research

Figure 61. Average Deposit Rates – Greece vs Euro Area



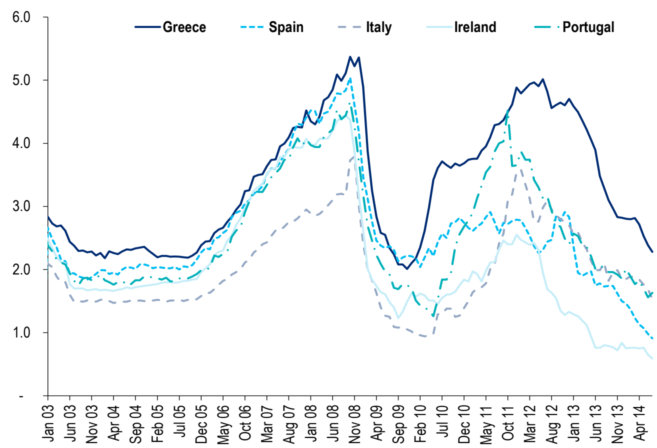
Source: ECB, Citi Research; Source: ECB, Note: * linear average, based on countries where data is available

Figure 62. GIIPS New Term Deposit Rates (Jul 14)



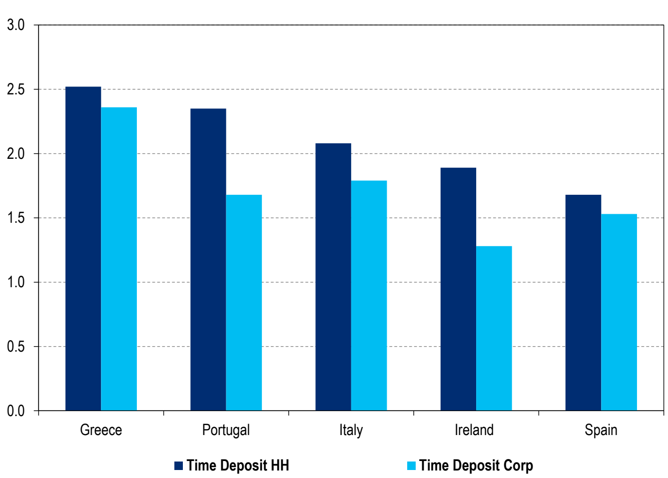
Source: Bank of Greece; ECB

Figure 63. GIIPS New Term Deposit Rates Over Time (Latest Jul 14)



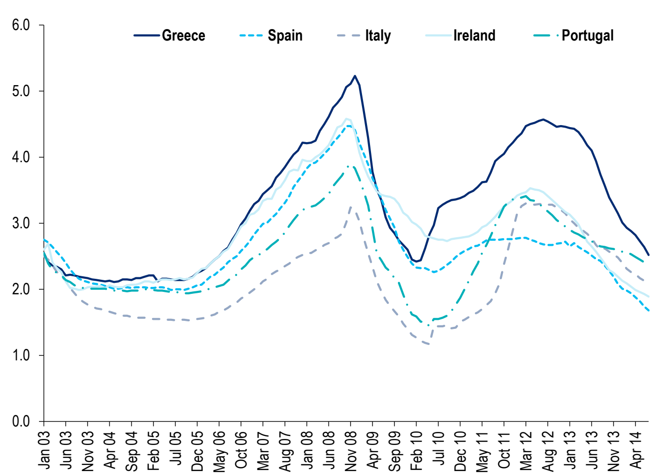
Source: Bank of Greece; ECB

Figure 64. GIIPS Outstanding Term Deposit Rates (Jul 14)



Source: Bank of Greece; ECB

Figure 65. GIIPS Outstanding Term Deposit Rates Over Time (Latest Jul 14)



Source: Bank of Greece; ECB

Interest Rates and Risk Premia: A Short Term Challenge?

Greek 10 year bond yields have gone from c30% to 6% and should decline further to 4.5%

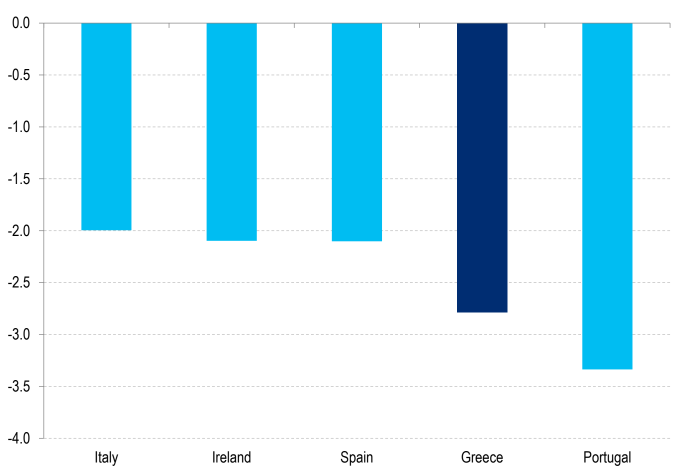
Long term bond yields (10Y) for Greece have declined materially since Sep 2013, with peak-to-trough yield declines of 4.1pct and yoy decline of 2.8pct. Our economic team forecasts Greek sovereign yields will fall considerably during 2014-2017, to close to 4.5% by end-2017, while yields for the other peripheral markets could remain broadly unchanged or maybe decline very slightly over the same time. Greek sovereign bond yields were close to 30% at the peak of the Greek sovereign crisis in mid-2012. However, with recovery in the economy and improvement in investor confidence towards Greece, the 10 year bond yields have fallen to close to 6% at the end of June 2014 – and this is positive for Greek banks' funding costs and valuations (via lower cost of equity).

Figure 66. Greek 10Y Gov Bond Yield (06 Oct 14)

Source: Bloomberg

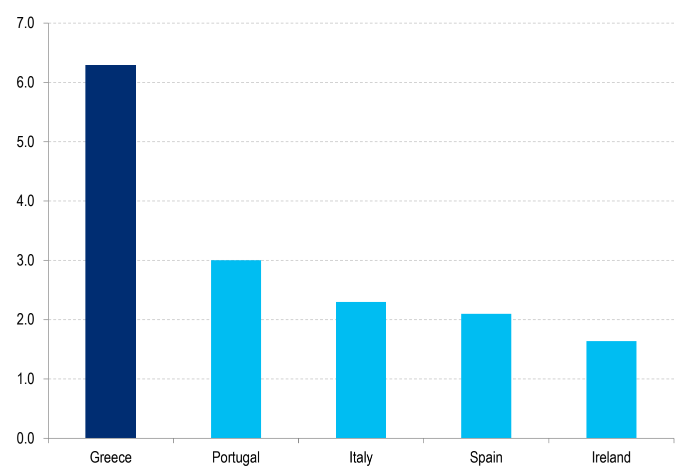
The recent opinion polls from various sources show that the left-wing Syriza party is leading the current governing New Democracy party by 4-11%. This trend has increased political uncertainty in Greece. Although the parliamentary election is planned to take place in 2016, the presidential election is due in February 2015. Should no presidential candidate receive a qualified majority, the parliament is automatically dissolved and parliament elections will be held. Concerns around policy continuity, fears over local political comments on exiting IMF and Troika supervision, and the risk of early elections has led to a recent spike in bond yields. Greek 10Y bond yields reached as high as 6.8%a couple of days ago, up from 5.5% earlier in September. However, our base case remains that a general election is not imminent and even if it took place sooner rather than later, polls suggest, it would lead to another Coalition government rather than a Syriza only administration.

Figure 67. GIIPS – 1 Year Change in 10Yr Yield (06 Oct 2014, %pt)



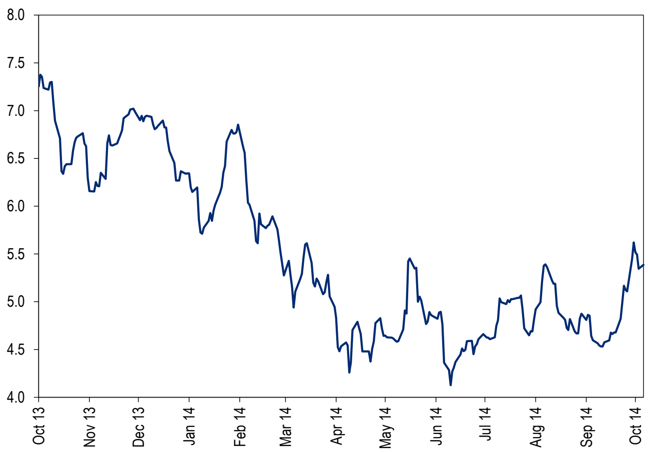
Source: Bloomberg, Citi Research

Figure 68. GIIPS – 10Yr Yield (06 Oct 2014, %)



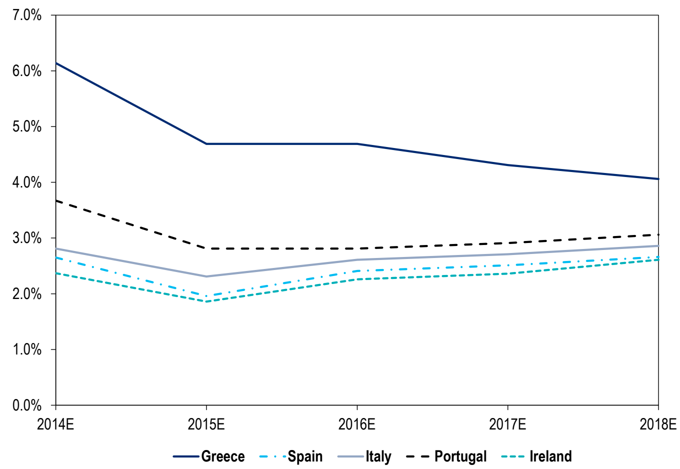
Source: Bloomberg, Citi Research

Figure 69. Greece 10Y Bond Yield Spread to German 10Y Bond Yield (06 Oct 14)



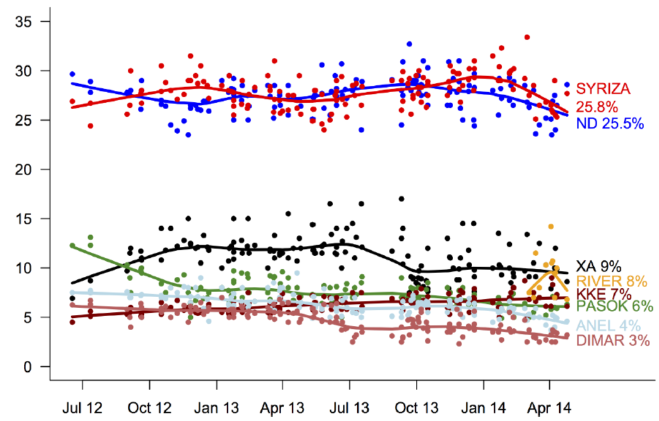
Source: Bloomberg

Figure 70. GIIPS – 10Yr Government Yield Forecasts (%)



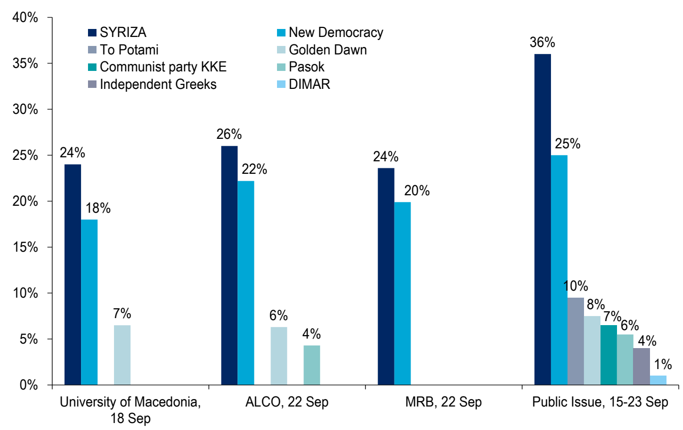
Source: Citi Research; Based on data from Citi Economists from Sep GEOS

Figure 71. Greece Political Polls (June 12- Apr 14)



Source: Citi Research Poll Trend of 135 surveys conducted by major Greek pollsters

Figure 72. Latest Greece Political Polls



Source: University of Macedonia; Alco, MRB and Public Issue

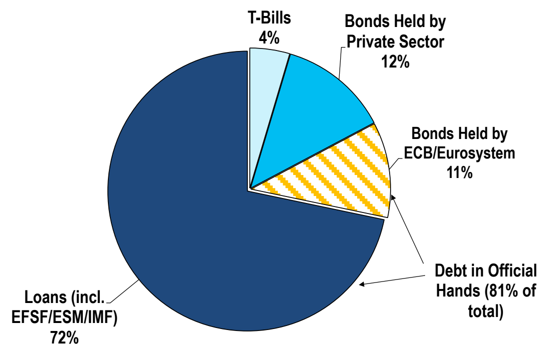
Figure 73. Greece — Recent Opinion Polls on Voting Intention

Date	Polling Firm	N.D.	SYRIZA	PA.SO.K.	Anel	XA	DIMAR	K.K.E.	To Potami
23-Sep-14	Public Issue*	25.0	36.0	5.5	4.0	7.5	1.0	6.5	9.5
20-Sep-14	MRB	19.9	23.6	4.2	3.2	6.7	1.0	5.1	5.6
18-Sep-14	Alco	22.2	26.0	4.3	3.1	6.2	1.7	4.4	4.3
18-Sep-14	RASS	25.8	22.0	4.2	3.2	6.7	1.0	5.5	4.7
15-Sep-14	UoM	18.0	24.0	5.5	3.0	6.5	1.0	5.5	5.5
12-Sep-14	Metron Analysis	23.0	20.4	4.6	3.0	5.3	1.0	5.6	4.8
05-Sep-14	E-Voice	20.2	17.7	4.8	2.4	7.1	1.3	6.5	3.9
03-Sep-14	Alco	25.5	21.7	4.3	3.5	7.3	2.3	4.6	3.7
25-May-14	**EP Election**	**22.7**	**26.6**	**8.0**	**3.5**	**9.4**	**1.2**	**6.1**	**6.6**
17-Jun-12	**National Election**	**29.7**	**26.9**	**12.3**	**7.5**	**6.9**	**6.2**	**4.5**	**N/A**

Note: Public Issue poll of 23-Sep-14 disregards undecided voters and assigns them to the parties by using same shares of those decided.
New Democracy (ND), Independent Greeks (Anel), Golden Dawn (XA), Democratic Left (DIMAR), Communist Party of Greece (K.K.E.).
Sources: polling firms, Hellenic Parliament and Citi Research

According to the IMF's Jun 14 report on Greece, the cost of servicing largely officially held Greek sovereign debt is only 2.4-2.8% in 2014-15E (or 4.2-4.9% of GDP).

Figure 74. Greece — Government Debt Composition by Debt Holders, August 2014



Source: Citi Research

Greek Banks: Recent Quarterly NII Trends

Figure 75. Quarterly NII for Greek Banks

	2Q13	3Q13	4Q13	1Q14	2Q14	QoQ	YoY
Alpha	417	447	476	471	480	1.9%	15.2%
NBG	837	772	776	751	760	1.2%	-9.2%
Piraeus	419	454	475	479	500	4.4%	19.4%
Eurobank	294	320	386	367	375	2.3%	27.7%

Source: Company Reports and Citi Research

Domestic NII was up qoq across the board led by Piraeus on lower term depo costs and business loan re-pricing; outlier was NBG, hurt by lower bond NII.

Figure 76. Domestic Quarterly NII for Greek Banks

	2Q13	3Q13	4Q13	1Q14	2Q14	QoQ	YoY
Alpha	331	351	371	384	391	1.8%	18.0%
NBG	385	393	413	418	414	-1.0%	7.5%
Piraeus	354	378	383	400	420	5.2%	18.8%
Eurobank	200	205	267	269	274	1.9%	37.0%

Source: Company Reports and Citi Research

Group NIM continued to expand qoq. Piraeus' margin expanded the most at +14bps qoq. NBG yoy comps hurt by lower Turkish NIMs.

Figure 77. Quarterly NIM for Greek Banks

	2Q13	3Q13	4Q13	1Q14	2Q14	QoQ	YoY
Alpha	2.28%	2.42%	2.59%	2.57%	2.66%	0.09%	0.38%
NBG	3.12%	2.79%	2.80%	2.70%	2.72%	0.03%	-0.39%
Piraeus	1.85%	1.93%	2.06%	2.11%	2.25%	0.14%	0.40%
Eurobank	1.83%	1.75%	1.99%	1.91%	1.99%	0.08%	0.16%

Source: Company Reports and Citi Research; NIM is calculated as NII divided by average total assets

Lower funding cost drove Greek NIM expansion. Domestic NIM expansion largest at Piraeus qoq (+17bps), Alpha yoy (+53bps).

Figure 78. Domestic Quarterly NIM for Greek Banks

	2Q13	3Q13	4Q13	1Q14	2Q14	QoQ	YoY
Alpha	2.46%	2.63%	2.80%	2.92%	2.99%	0.06%	0.53%
NBG	3.52%	3.53%	3.58%	3.65%	3.61%	-0.04%	0.09%
Piraeus	2.13%	2.22%	2.24%	2.36%	2.53%	0.17%	0.40%
Eurobank	2.21%	2.01%	2.43%	2.40%	2.47%	0.07%	0.26%

Source: Company Reports and Citi Research; NIM is calculated as NII divided by average gross loans

Eurobank NII Forecast: Detailed Loan and Deposit Pricing model

Figure 79. Eurobank NII Forecasts

	2011	2012	2013	2014E	2015E	2016E	2017E	2018E
NII Contribution (m)								
Total Lending - Greece		**1,903**	**1,958**	**2,008**	**1,876**	**1,825**	**1,812**	**1,850**
Retail Lending - Greece		899	880	947	910	870	832	817
Corporate Lending - Greece		1,003	1,078	1,062	966	955	980	1033
Total Deposit - Greece - Calc		**-461**	**-652**	**-519**	**-358**	**-286**	**-247**	**-240**
Total Deposit/Other - Greece - Company		**-873**	**-1,112**	**-871**	**-600**	**-480**	**-414**	**-403**
Savings and Slight - Greece				-31	-28	-27	-27	-28
Time Greece				-485	-330	-260	-220	-213
Total Greece NII	**1,428**	**1,030**	**846**	**1,137**	**1,275**	**1,345**	**1,398**	**1,447**
International NII	**570**	**430**	**423**	**400**	**390**	**387**	**387**	**387**
Group NII	**1,998**	**1,460**	**1,269**	**1,537**	**1,665**	**1,732**	**1,785**	**1,834**
Avg Balances (m)								
Total Lending - Greece		**39,350**	**41,650**	**43,812**	**42,528**	**42,518**	**43,101**	**43,904**
Retail Lending - Greece		17,250	20,050	22,699	22,196	21,759	21,333	20,957
Corporate Lending - Greece		22,100	21,600	21,114	20,332	20,759	21,768	22,947
Total Deposit - Greece		**22,200**	**27,250**	**32,671**	**32,279**	**32,277**	**32,762**	**33,418**
Savings and Slight - Greece				10,781	10,652	10,652	10,812	11,028
Time Greece				21,889	21,627	21,626	21,951	22,390
Total Greece (AIEA)	**63,618**	**55,868**	**57,401**					
International (AIEA)	**15,392**	**14,649**	**12,798**	**12,158**	**11,915**	**11,915**	**11,915**	**11,915**
Group (AIEA)	**78,746**	**70,458**	**70,628**					
Spreads (bps)								
Total Lending - Greece		***469***	***456***	***445***	***428***	***416***	***408***	***409***
Retail Lending - Greece		521	439	417	410	400	390	390
Corporate Lending - Greece		454	499	503	475	460	450	450
Total Deposit - Greece		**- 208**	**- 239**	**- 159**	**-111**	**-89**	**-75**	**-72**
Savings and Slight - Greece				- 29	- 26	-25	-25	-25
Time Greece				- 222	-153	-120	-100	-95
Total Greece NIM	**224**	**184**	**147**					
International NIM	**370**	**294**	**331**	**329**	**327**	**325**	**325**	**325**
Group NIMs	**254**	**207**	**180**					

Source: Company Reports and Citi Research Estimates; NII = interest income.

Figure 80. NII Accrual Comparison Between Greek Banks

	NBG			Piraeus Bank			Alpha			Eurobank				
	NII (ex Unwind)	NII (Unwind)	Unwind %Total	NII (Non-impaired)	NII (impaired)	Impaired % Total	NII (Non-impaired)	NII (impaired)	Impaired % Total	NII (Non-impaired)	NII (impaired)	NII (Unwind)	Impaired % Total	Unwind %Total
Retail Lending	2833	239	8%	895	60	6%	724	444	38%	1,223	232		16%	
Corporate Lending	1610	5	0%	1,727	426	20%	1471	256	15%	763	176		19%	
Public Lending	197		0%	23	3	12%	25	3	9%	2			0%	
Total	**4640**	**244**	**5%**	**2,644**	**489**	**16%**	**2220**	**702**	**24%**	**1,988**	**408**	**249**	**17%**	**10.4%**

Source: Company Reports and Citi Research

Greek Recovery & Lower Bad Debts

The Green Shoots of Greek Economic Recovery

After a peak-to-trough decline of 25% from 2008 to 2014, Greece appears to be recovering in the past few quarters

The Greek economy has had a major correction, with a peak-to-trough decline of 25% from 2008 to 2014. To put this into context, the recent Greek economic contraction is over 2.5x the Italian economic contraction and 3.5x the Spanish economic contraction. The cumulative loan loss provisions for the Greek banks over this time period is similar to the Swedish banking crisis of the early 1990s and more than double the experience of Spain and Italy in the recent crisis. The one variable on which Greece does not screen as an outlier is cumulative loan contraction: most other historical banking crises have resulted in greater loan book reduction than in Greece recently.

Figure 81. Benchmarking of Select Crises

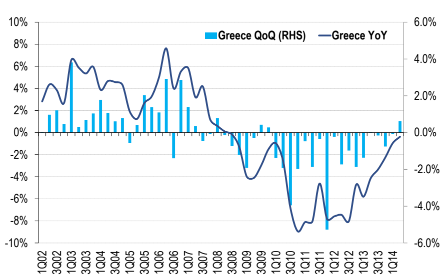
	GDP Peak-to-through	Cost of risk peak	Cumulative loan losses	Loan contraction (cumulative)	NIM contraction from peak
Greece 2008-1H14	**-25% to 1Q14**	**c4-5% (2011-13)**	**c17% to date**	**c18% to date**	**c1%**
Sweden early 1990s	-4.5% (1991-93)	c6%	c16%	c25% (1992-95)	c1.5% (c3% peak 1994 to 1.5% to 1998)
Japan late 1990s	-5%	c3% (1998)	c10% in 1997-99	c35%	
Spain 2008-2013	-6.8%	c3%	c8%	c24%	c0.6%
Italy 2008-2013	-8.7%	c2.3%	c8%	c6%	c0.9%
US early 1930s	-30%	c3%	c8.5% (1932-34)	c22%	

Source: Central banks, ECB, Citi Research Estimates (Greek data), Note: more details in our note Swedish models (23 February 2009); Note: Data for Italy based on our coverage; NIM contraction for Spain shows the decline in mortgage loan rates

After the precipitous economic fall of recent years, Greece appears to be recovering in the past few quarters. GDP may have expanded in 3Q14 on a year-on-year basis for the first time since 2008 and 2Q14 already experienced GDP growth on a q-o-q basis for the first time in 6 years. Tourism, which accounts for 16% of the Greek GDP and 18% of employment in 2013, is having a very strong year. Tourist arrivals in the 2Q14 are up 15% y-o-y and 32% over the past 2 years. Looking ahead to 2015 and beyond, economists forecast a recovery in the Greek economy: the IMF's forecasts are for 3.4% GDP CAGR over 2015-18 whereas Citi economists forecast a more cautious 1.5% GDP CAGR, but a recovery to growth nevertheless.

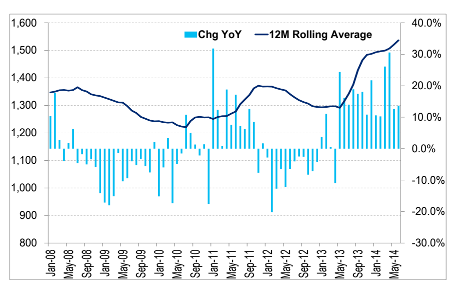
Tourist arrivals in the 2Q14 are up 15% y-o-y and 32% over the past 2 years; IMF's bullish forecasts are for 3.4% GDP CAGR over 2015-18 for Greece

Figure 82. Greece — Real GDP Growth (2Q14)



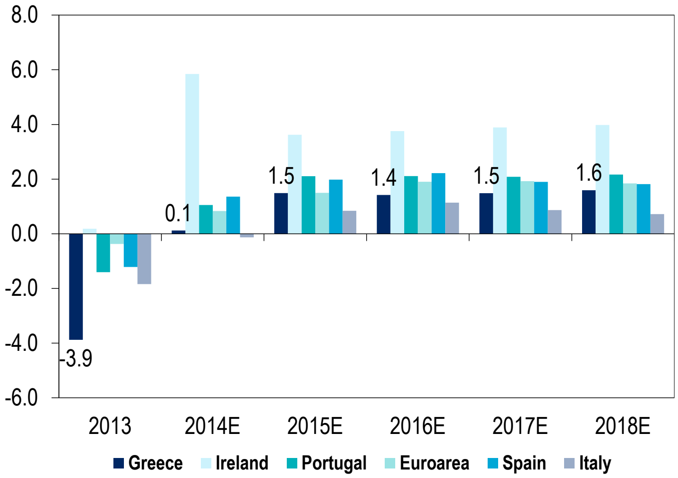
Source: DataStream

Figure 83. Greece – Tourist Arrival (Jun 14)



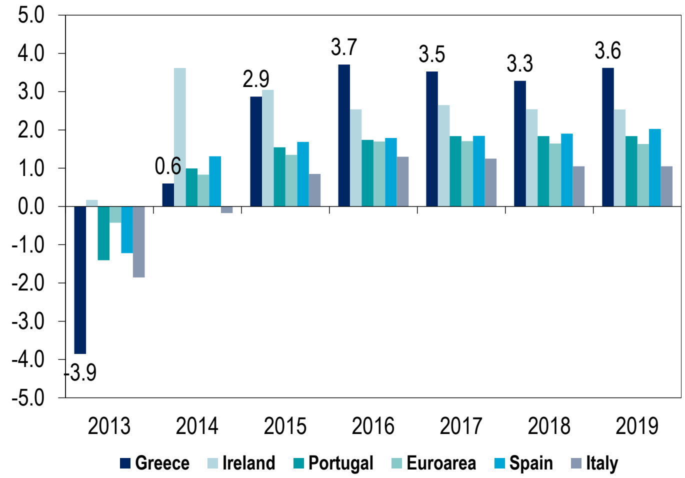
Source: DataStream

Figure 84. Citi GIIPS Countries Real GDP Forecasts(% YoY)



Source: Citi Research Estimates

Figure 85. IMF GIIPS Countries Real GDP Forecasts(% YoY)

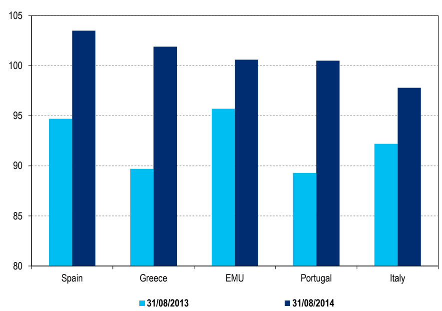


Source: IMF Oct 14 World Economic Outlook.

There has been a strong recovery in Greek economic sentiment, as measured by the EU Commission's economic sentiment indicators (see Figure 86-Figure 87). Among the Med Rim countries, Greece was second only to Spain for the absolute reading on the Commissions' ESI and slightly ahead of the Euro Area average. In terms of yoy change, Greece has reported one of the largest ESI increases (+14% yoy), along with Portugal (+13% yoy). Confidence indicators in Greece have improved across the board over the past 2 years from very depressed levels. Business confidence levels continue to be higher than consumer confidence but even the latter shows some evidence of a rebound in the past couple of quarters.

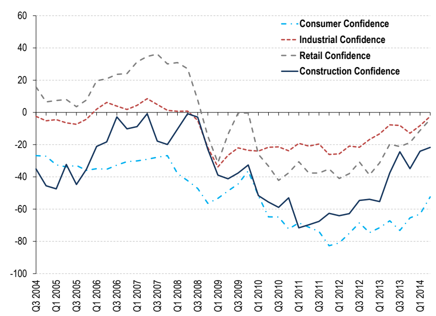
Greece economic sentiment improved most (+14% yoy) among GIIPS countries.

Figure 86. GIIPS Economic Sentiment Indicator



Source: Bloomberg; European Commission;

Figure 87. Greece Confidence Indicators (2Q14)

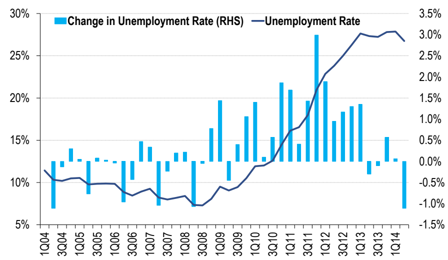


Source: Datastream

The Greek unemployment rate soared from c7% in 2008 and reached a peak of c27% in 2012-13. However, there are tentative signs of an improvement in Greek employment trends: the unemployment rate declined c1ppt in 2Q14 qoq, following smaller qoq declines in the unemployment rate in 2Q13 and 3Q13. Greek labour costs in the past few years have had a material de-rating: from end 2009 peak levels to end 1H14, Greek labour costs are down 26%, significantly outpacing the mid-teens ppt cost improvement in Ireland and Spain and the single digit ppt cost improvement in Italy and Portugal.

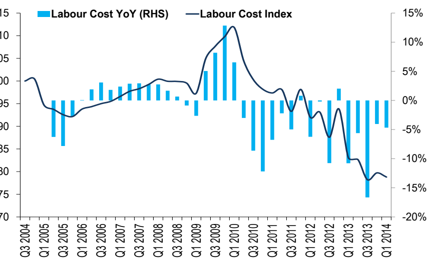
Greek recent employment trends: Decline in unemployment rate but labour costs remain low

Figure 88. Greece Unemployment Rate Has Fallen (2Q14)



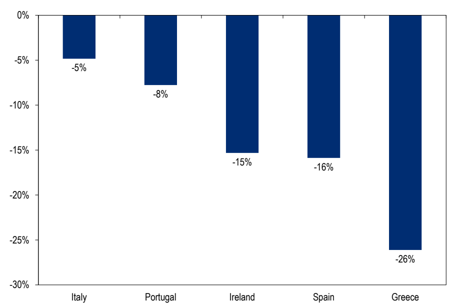
Source: DataStream

Figure 89. Labour Cost is Significantly Lower (1Q14)



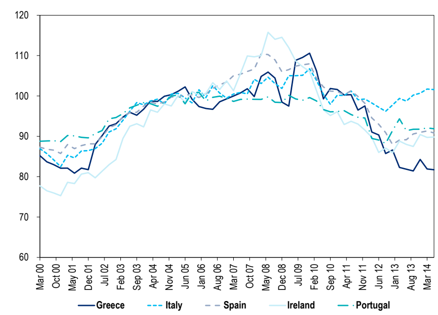
Source: DataStream and Citi Research; Labor cost calculated as average of all sectors

Figure 90. Change in Labour Cost Dec 09-Jun 14



Source: Bloomberg; OECD Competitiveness Indicator Unit Labour Costs

Figure 91. OECD Unit Labour Costs Index



Source: Bloomberg; OECD Competitiveness Indicator Unit Labour Costs

Unemployment has most likely already peaked for the EA Peripheral economies and in several economies is expected to be on a rapid path of improvement. Italy is the laggard among the GIIPS with the unemployment rate expected to peak in 2014 for this economic cycle. Ireland has led the way with a peak unemployment reached in 2012 at 14.7%. At other EA Peripheral countries, peak unemployment was likely reached in 2013. From 2013 levels, the fastest drop in unemployment is expected in Greece: from 27% in 2013 to 14% in 2019E, according to IMF forecasts, driven by an expected above trend GDP growth in coming years as the country recovers from depressed economic levels (GDP declined 24% from 2007 peak levels to 2013).

From 2013 levels, the fastest drop in unemployment amongst EA peripheral countries is expected in Greece: Greek NPL improvement has high gearing to falling unemployment levels

Figure 92. GIIPS Banks NPL Regression Analysis with GDP and Unemployment Rate

R-Square	Greece	Italy	Ireland	Portugal	Spain
NPL vs GDP	43%	1%	29%	42%	60%
NPL vs Unemployment	98%	88%	85%	82%	91%

Source: Citi Research; All regression based on annual data from 2000-2013; Greece 2013 NPL is estimated based on the average of Greek banks (Alpha, NBG and Eurobank) domestic NPL ratio.

Figure 93. GDP and Unemployment Turning Points (IMF Forecast)

	Greece	Italy	Ireland	Portugal	Spain
GDP Bottom	2013	2013	2013	2013	2013
Unemployment Peak	2013	2014	2012	2013	2013

Source: IMF

Figure 94. IMF GIIPS GDP Forecasts

	2013	2014	2015	2016	2017	2018	2019	Cumulative Change from 2013
Greece	(3.86)	0.60	2.87	3.71	3.53	3.28	3.62	17.61
Italy	(1.85)	(0.17)	0.85	1.30	1.25	1.05	1.05	5.33
Ireland	0.17	3.62	3.05	2.54	2.65	2.54	2.54	16.93
Portugal	(1.41)	0.99	1.55	1.74	1.84	1.84	1.84	9.80
Spain	(1.22)	1.31	1.69	1.79	1.85	1.90	2.03	10.56

Source: IMF Global Economic Outlook Oct 2014

Greece is forecast to have the highest decline in unemployment among GIIPS.

Figure 95. IMF GIIPS Unemployment Forecasts

	2013	2014	2015	2016	2017	2018	2019	Cumulative Change from 2013
Greece	27.25	25.76	23.84	20.88	18.58	15.82	12.71	(14.54)
Italy	12.21	12.57	11.97	11.27	10.47	9.77	9.17	(3.04)
Ireland	13.05	11.22	10.46	10.09	9.63	9.33	8.93	(4.12)
Portugal	16.18	14.20	13.51	12.98	12.45	11.88	11.30	(4.88)
Spain	26.10	24.64	23.54	22.38	21.21	19.90	18.52	(7.59)

Source: IMF Global Economic Outlook Oct 2014

Modelling NPL Outlook – Based on Macro-Economic Assumptions

We demonstrate very high correlations between NPL and unemployment for banks in GIIPS countries. Correlations with GDP are weaker.

Greece is the standout market for positive bad debt gearing to an improving macro-economic environment, especially unemployment, among our sample of Peripheral Euro Area banking systems. Based on the historical relationship of system gross NPLs and macro-economic variables such as unemployment and GDP growth rates, we estimate 2013-19 bad debts will decline between half and 20% in Greece and on average c20% in Iberia and Ireland. For Italian banks, the sensitivity to lower unemployment is large, with a predicted c30% drop in gross NPLs; however, using GDP growth forecasts, we expect limited improvement for Italian bank debts.

Of course, the future may not mirror the past, and a statistical relationship that worked during 2000-13 may evolve in a different manner in the years ahead. Our bottom-up forecasts are set out below: for Greece, Ireland and Spain we are within the range guided by the top down models; for Italy and Portugal we currently forecast limited, if any, improvement in bad debts.

Tables on the right show the NPL projection for GIIPS countries using IMF unemployment and GDP regression as well as Citi Bottom up forecasts.

Figure 96. Predicted Gross NPL Ratio Using IMF Unemployment Forecasts

	Greece	Italy	Ireland	Portugal	Spain
2013	30.9	8.4	24.6	7.4	13.6
2014E	29.0	8.7	21.2	6.6	12.6
2015E	26.7	8.2	19.8	6.3	11.9
2016E	23.0	7.6	19.2	6.1	11.2
2017E	20.1	7.0	18.3	5.9	10.5
2018E	16.7	6.4	17.8	5.6	9.6
2019E	12.8	5.9	17.0	5.4	8.7
Change from 2013	**(18.1)**	**(2.5)**	**(7.6)**	**(2.1)**	**(4.8)**

Source: Citi Research; Greece 2013 NPL is estimated based on the average of Greek banks (Alpha, NBG and Eurobank) domestic NPL ratio. Change in Gross NPL is forecasted based on factors from Gross NPL vs unemployment regression analysis. IMF unemployment forecast is used to forecast NPL development.

According to IMF GDP forecasts, we could witness steep improvement in Greek NPLs by 2019 – much higher than other EA peripheral markets

Figure 97. Predicted Gross NPL Ratio Using IMF GDP Forecasts

	Greece	Italy	Ireland	Portugal	Spain
2013	30.9	8.4	24.6	7.4	13.6
2014E	26.2	8.3	20.7	6.1	10.5
2015E	23.9	8.2	21.3	5.8	10.0
2016E	23.0	8.2	21.9	5.7	9.9
2017E	23.2	8.2	21.8	5.6	9.8
2018E	23.4	8.2	21.9	5.6	9.7
2019E	23.1	8.2	21.9	5.6	9.6
Change from 2013	**(7.8)**	**(0.2)**	**(2.7)**	**(1.8)**	**(4.0)**

Source: Citi Research; Greece 2013 NPL is estimated based on the average of Greek banks (Alpha, NBG and Eurobank) domestic NPL ratio. Change in Gross NPL is forecasted based on factors from Gross NPL vs GDP regression analysis. IMF GDP forecast is used to forecast NPL development.

Figure 98. Citi Bottom Up Gross NPL Ratio Estimates

	Greece	Italy	Ireland	Portugal	Spain
2013	31.6	9.9	20.3	5.0	13.9
2014E	34.5	10.8	18.4	5.4	13.0
2015E	33.4	11.1	17.2	5.2	12.4
2016E	30.8	11.1	16.5	5.0	11.4
2017E	27.7	11.1	15.6	5.0	
2018E	23.9	10.8		5.0	
2019E	-			5.0	
Latest Forecast from 2013	**(7.7)**	**0.9**	**(4.6)**	**-**	**(2.5)**

Source: Citi Research; System NPL ratio is estimated based on market cap weighted Gross NPL ratio of banks in Citi coverage universe; Spanish System NPL excludes SAN and BBVA. NBG Greece NPL, Alpha Bank and Piraeus Group NPL ratio are used to estimate Greece System NPL. Italian banks' group NPL ratio is used; BPI is used estimate Portugal NPL

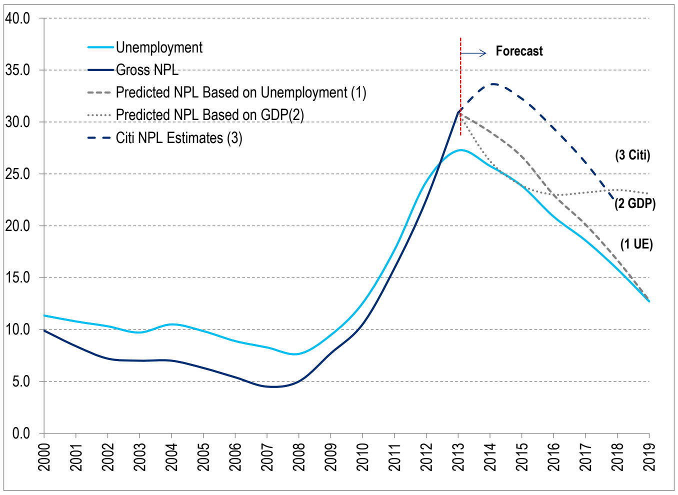
Greek NPLs – A Major Turning Point?

We forecast NPL to peak in 2014-15 using bottom up analysis, more conservative than unemployment regression projects.

Greek banking is potentially at a major turning point. We forecast system gross NPL levels will increase to just under c35% of total loans at end 2014E, from c32% at end 2013, and decline to 23% in 2018E. Based on the historical relationship between unemployment and bad debts, we would expect the outlook for gross NPLs to improve faster: using the IMF forecasts for unemployment would lead to a forecast c15% gross NPL ratio by 2018-19.

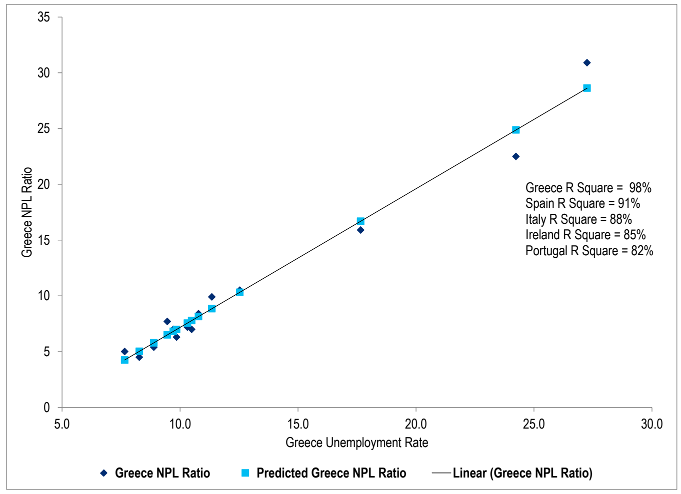
Using the IMF's GDP forecasts, we would anticipate a rapid drop in gross NPLs between 2013 and 2015E followed by a levelling out of bad debt declines. We would note that the historical correlation of GDP growth and NPLs has historically been low for Greece (43% R-squared) relative to the relationship of unemployment levels versus NPLs (98% R-squared).

Figure 99. Greece Gross NPL Ratio vs Unemployment Rate



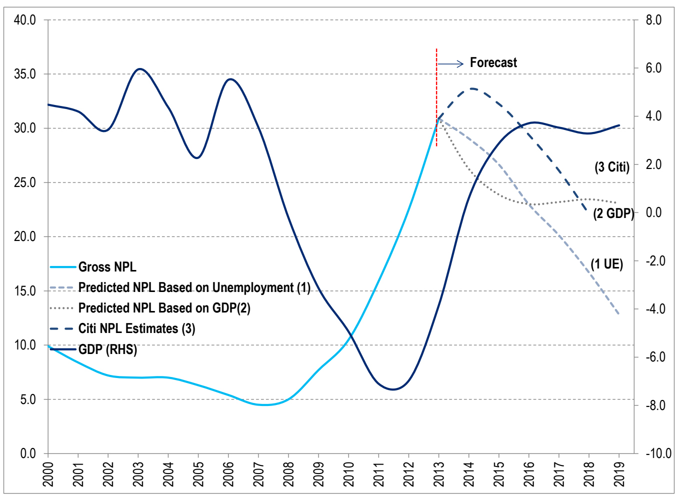
Source: Citi Research, Bank of Greece, IMF

Figure 100. …Linear Fit of Changes Greece, R^2=98%



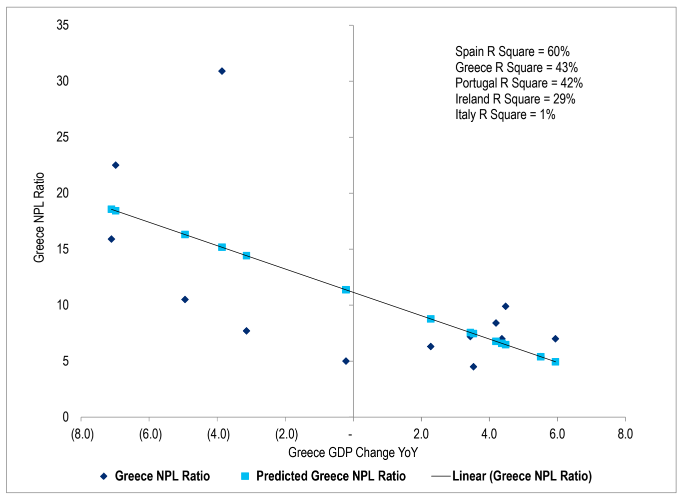
Source: Citi Research, Central Bank Data, IMF; All regression based on annual data from 2000-2013

Figure 101. Greece Gross NPL Ratio vs GDP Growth Rate Greece



Source: Citi Research, Bank of Greece, IMF

Figure 102. …Linear Fit of Changes Greece, R^2=43%



Source: Citi Research, Central Bank Data, IMF; All regression based on annual data from 2000-2013

A high gearing to household debts may help explain the higher sensitivity of Greek bad debts to trends in unemployment. Mortgage loans are about one-third of total defaulted loans in Greece. It also has a large exposure to the “retail-other” category which we believe may be inflated by small business owner financing secured via personal assets. If we combine Retail and SME bad debts, Greece (84% of total bad debts) and Italy (78%) stand out as the most geared to these segments. Only 12% of Greek defaulted loans were to large corporates whereas it was as high as 48% for Ireland.

Greek banks NPLs are more retail focused and thus more sensitive to unemployment.

Figure 103. GIIPS Countries Defaulted Loans by Counterparty 1H13 Data

	Defaulted Loans				
	Italy	Portugal	Ireland	Spain	Greece
Corp	**64%**	**63%**	**62%**	**60%**	**39%**
Large Corp	21%	32%	48%	27%	12%
SME	43%	31%	14%	34%	27%
Retail	**35%**	**35%**	**38%**	**24%**	**57%**
Retail on Mortgages	11%	25%	35%	20%	32%
Retail other	24%	10%	3%	4%	25%
Retail + SME	**78%**	**67%**	**52%**	**58%**	**84%**
Central Bank	0%	0%	0%	0%	0%
Institutions	1%	0%	0%	1%	1%
Others	0%	1%	0%	15%	3%

Source: EBA Transparency Data; Citi Research

How Quickly Will Greek Unemployment Turn?

IMF forecasts a rapid reduction in Greek unemployment from 27% in 2013 to 14% in 2019.

The IMF forecasts a rapid reduction in Greek unemployment from 27% in 2013 to 14% in 2019. The IMF forecasts GDP growth to turn positive to about 0.5% in 2014 due to specific factors such as less drag from fiscal adjustment, a strong season for the key tourism sector and improved financial market access for Greek banks and corporates. The IMF's medium-term forecasts include "a rebound from (current) very compressed levels" and GDP "growth is projected above the estimated long-term potential growth of about 2 percent per year, assuming strong reform implementation."

The direction of IMF forecasts is also a positive: it has marginally reduced its 2019 unemployment forecast from 14% in April 2014 to 13% in June 2014, and for 2014-18 it has reduced its unemployment forecasts by c50bps between its April and June reports. Consensus forecasts for Greece have also improved: 2014 GDP growth rate forecasts have been upgraded from -0.4% in July 2013 to +0.3% in July 2013; 2015 GDP growth rates forecasts have been upgraded from +1.0% to +1.7% over the same period. Similarly, consensus forecasts for Greek unemployment have been upgraded: the forecast for 2014 has improved 1.1% over the past 12 months; for 2015 it has improved 1.8%.

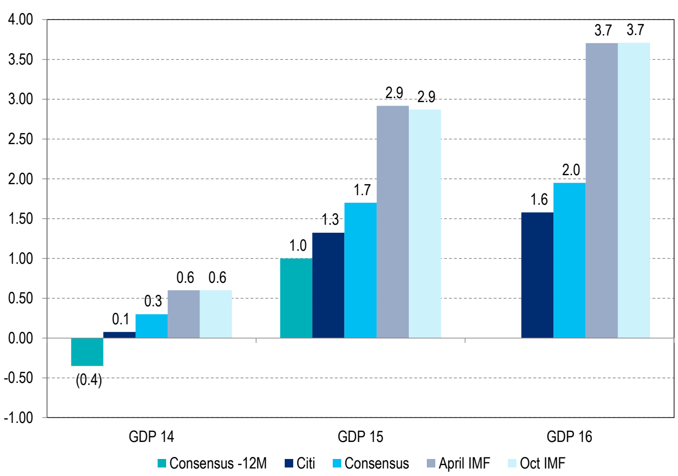
IMF unemployment forecasts are more optimistic than private sector forecasts.

Despite the rapid improvement in consensus forecasts for Greek unemployment, the IMF's 2015 expectations are still 2ppt better than the private sector consensus. Looking out to 2016-19, the IMF has factored in a large unemployment drop in its estimates. The availability of private sector economic estimates beyond 2016 is limited and so consensus figures do not exist. Citi Economist estimates are a bit more cautious than the 2014-15 consensus and hence considerably more cautious relative to the IMF forecasts. The IMF itself has noted various challenges facing the Greek economy, including the high level of long-term unemployment.

IMF economic forecasts for Greece are relatively bullish – we use both the IMF and our Citi economist forecasts to guide our bank bad debt forecasts

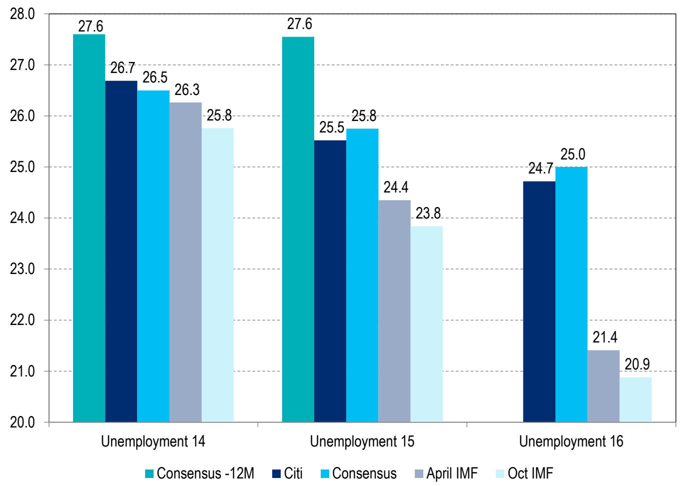
The IMF quantitative forecasts, including for Greek unemployment and GDP, appear bullish relative to consensus expectations. However, the qualitative comments by the IMF in their latest country report on Greece (June 2014) include many negative comments. The IMF fears that the Greek banks high level of bad debts and relative caution in undertaking bad debt write-offs and raising additional capital may in itself lead to a negative feedback loop for the economy. In their June 2014 report, the IMF notes: "given the constraints of currency union and structural impediments to growth, *the Bank of Greece targets for additional capital reflect optimistic assumptions about banks' ability to grow their way out of the NPL problem as the economy recovers.* While there is no acute stability risk, staff is concerned that banks will struggle to do so and that capital constraints will force them into prolonged de-leveraging, with attendant risk to the economy."

Figure 104. Greece - GDP Forecasts Comparison



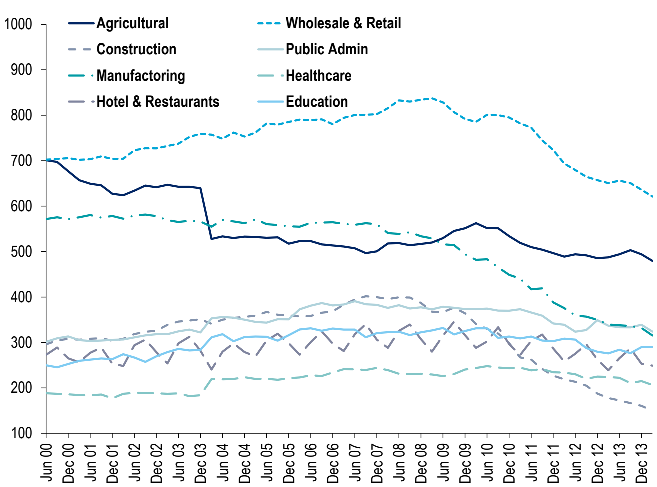
Source: Citi Research; Bloomberg; IMF Global Economic Outlook (April 14 and Oct 14)

Figure 105. Greece - Unemployment Forecasts Comparison



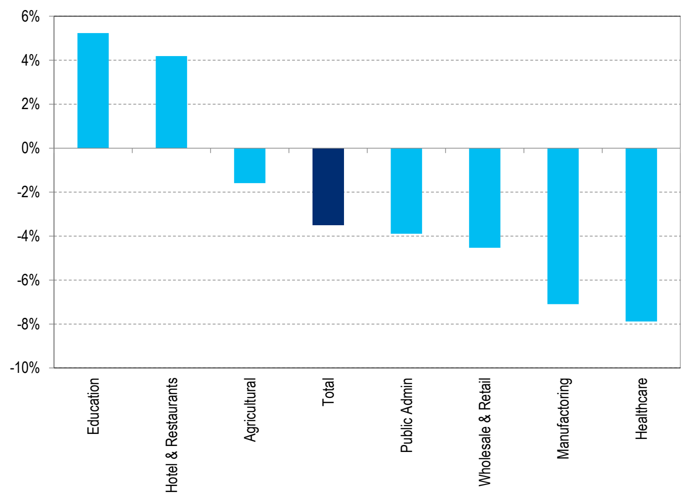
Source: Citi Research; Bloomberg; IMF Global Economic Outlook (April 14 and Oct 14)

Figure 106. Greece Employment By Sector 1Q14



Source: Bloomberg

Figure 107. Greece Employment By Sector Change YoY (1Q14)



Source: Bloomberg

At the end of December 2013 the Greek parliament passed a bill that will partially lift the previous moratorium on foreclosure. The new bill opens the way for banks to foreclose properties of debtors who cannot pay off their mortgages. Banks can repossess homes from people that defaulted on mortgages, exempting for a year households whose annual net income is less than €35k and those with homes worth less than €200k. The government estimated that between 85-90% of households are exempted.

The Greek government and the Troika agreed on 7 Oct 14 to proceed with legislation that will allow the restructuring of business debts, but progress on household debt restructuring is still some time away.

Key Bad Debt Trends

2Q14 Group NPL ratio increase slowed vs. 1Q14 qoq. Group NPL ratio increased least qoq for NBG (+20bps) and Alpha (+30bps).

Figure 108. Quarterly NPL Ratio for Greek Banks

	2Q13	3Q13	4Q13	1Q14	2Q14	QoQ	YoY
Alpha	31.8%	32.9%	32.7%	33.3%	33.6%	0.3%	1.8%
NBG	20.8%	21.9%	22.5%	23.0%	23.2%	0.2%	2.4%
Piraeus	33.2%	35.2%	36.6%	37.9%	38.5%	0.6%	5.3%
Eurobank	26.3%	27.7%	29.4%	30.9%	31.8%	0.9%	5.5%

Source: Company Reports and Citi Research

Alpha bank had the slowest domestic NPL ratio increase qoq (+30bps) and yoy (+150bps). Eurobank had the highest qoq (+90bps), yoy (+550bps) increase.

Figure 109. Domestic Quarterly NPL Ratio for Greek Banks

	2Q13	3Q13	4Q13	1Q14	2Q14	QoQ	YoY
Alpha	33.4%	34.7%	34.3%	34.6%	34.9%	0.3%	1.5%
NBG	25.9%	27.1%	27.4%	28.4%	29.3%	0.9%	3.4%
Piraeus				38.2%	38.9%	0.7%	na
Eurobank	28.1%	29.1%	31.1%	32.7%	33.6%	0.9%	5.5%

Source: Company Reports and Citi Research

Group NPL formation dropped 20-45% qoq. Alpha had the slowest NPL formation of all Greek banks.

Figure 110. Quarterly NPL Formation for Greek Banks

	2Q13	3Q13	4Q13	1Q14	2Q14	QoQ	YoY
Alpha	791	546	(352)	228	158	-30.7%	-80.0%
NBG	563	476	403	380	304	-20.0%	-46.0%
Piraeus	1,267	1,180	989	773	500	-35.3%	-60.5%
Eurobank	569	536	684	682	382	-44.0%	-32.9%

Source: Company Reports and Citi Research; Piraeus and NBG NPL formations are pre-write offs. Eurobank and Alpha NPL formation are net of any write offs.

Domestic NPL formation slowed further qoq, especially for Piraeus.

Figure 111. Domestic Quarterly NPL Formation for Greek Banks

	2Q13	3Q13	4Q13	1Q14	2Q14	QoQ	YoY
Alpha	-	-	-	-	-	-	-
NBG	378	382	332	312	262	-16.0%	-30.7%
Piraeus				663	371	-44.0%	na
Eurobank	493	461	675	599	299	-50.1%	-39.4%

Source: Company Reports and Citi Research Estimates; Piraeus, Eurobank and NBG NPL formations are pre-write offs. Alpha NPL formation are net of any write offs.

Figure 112. Domestic Quarterly NPL Formation By Loan Type

	2Q13	3Q13	4Q13	1Q14	2Q14	QoQ	YoY
Piraeus Bank							
Business				371	143	-61.5%	na
Mortgages				174	149	-14.4%	na
Consumer				119	79	-33.6%	na
Eurobank							
Small Business	125	77	103	117	101	-13.7%	-19.2%
Corporate	201	170	296	165	38	-77.0%	-81.1%
Mortgages	115	171	221	245	94	-61.6%	-18.3%
Consumer	54	43	55	72	66	-8.3%	22.2%

Source: Company Reports; Piraeus and Eurobank NPL formations are pre-write offs.

Loan losses continued to trend down qoq. Alpha bank had the highest qoq (-12%) and yoy (-27%) declines.

Figure 113. Quarterly I/S Loan Loss Provisions for Greek Banks

	2Q13	3Q13	4Q13	1Q14	2Q14	QoQ	YoY
Alpha	(479)	(490)	(449)	(395)	(349)	-11.8%	-27.3%
NBG	(279)	(397)	(386)	(367)	(351)	-4.4%	25.8%
Piraeus	(549)	(489)	(674)	(481)	(476)	-1.0%	-13.3%
Eurobank	(422)	(419)	(660)	(479)	(455)	-5.1%	7.6%

Source: Company Reports and Citi Research

Alpha bank's domestic loan losses declined even more qoq (-16%) and yoy (-35%).

Figure 114. Domestic Quarterly I/S Loan Loss Provisions for Greek Banks

	2Q13	3Q13	4Q13	1Q14	2Q14	QoQ	YoY
Alpha	(401)	(438)	(221)	(310)	(260)	-16.2%	-35.2%
NBG	(113)	(263)	(341)	(272)	(255)	-6.1%	125.5%
Piraeus	(418)	(416)	(630)	(417)	(414)	-0.7%	-1.0%
Eurobank	(353)	(366)	(557)	(422)	(383)	-9.2%	8.5%

Source: Company Reports and Citi Research

Capital, AQR and Stress Test

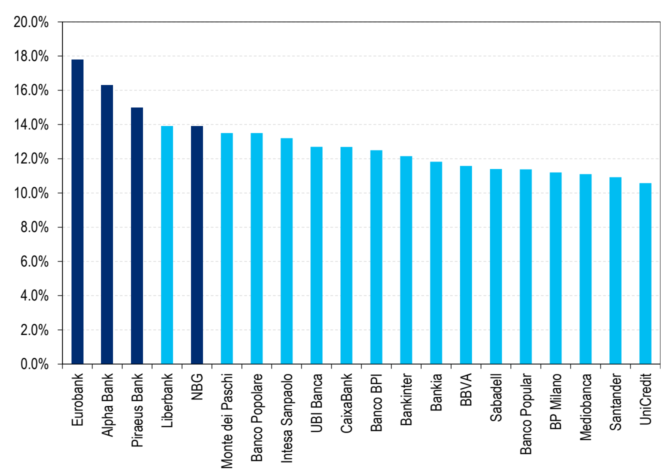
Which Capital Ratio Are You Looking At?

Greek banks have solid capital positions on Basel 3 transitional basis; but capital strengths vary on B3 FL basis

Greek banks' regulatory capital ratios vary considerably depending on the definition used. Based on Basel 3 transitional rules – which are the regulatory ratios in effect today from a legal perspective and used by the authorities as the reference capital in Stress Tests and similar exercises – Greek banks have among the highest core capital (CET1) ratios among peripheral Euro Area banks. However, based on fully loaded Basel 3 capital ratios – the regulatory ratios that will be in effect once all the new rules are phased in by 2024 but the reference capital most market participants look at today – the Greek banks have a wide range of capital positions.

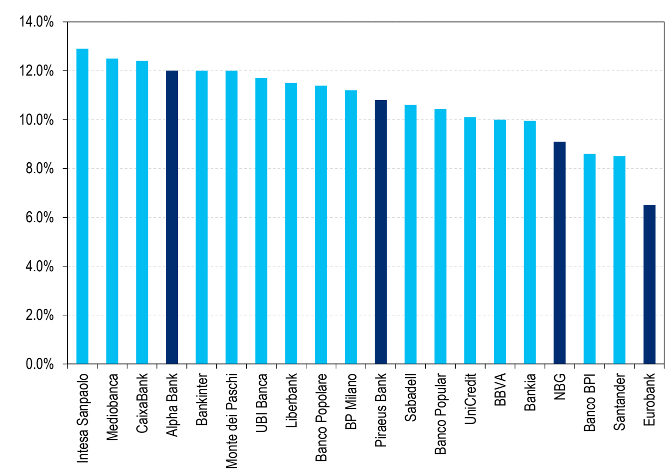
The poster child of the variability of Greek banks' capital ratios is Eurobank: under transitional Basel 3 rules, Eurobank has the highest CET1 ratio among peripheral EA banks in our coverage universe (17.8%) but under fully loaded Basel 3 rules Eurobank has the lowest ratio in our sample (at only 6.5%). For the Greek banks, the biggest component of the difference between fully loaded and transitional Basel 3 core capital ratios is the treatment of deferred tax assets (DTAs).

Figure 115. B3 CET1 Ratio Transitional Rules vs GIIPS Banks, 1H14



Source: Company Reports; NBG numbers excludes 2.3% of BoG approved capital action

Figure 116. B3 CET1 Ratio Fully Loaded vs GIIPS Banks, 1H14



Source: Company Reports; Eurobank excludes E950m preference shares; NBG numbers excludes 2.3% of BoG approved capital action

More on DTAs and Why They Matter for Greek Banks

Greek banks should benefit from a material improvement in their capital ratios, if the DTA to DTC conversion is accepted by the European authorities

On 25 September, the Greek Parliament passed legislation that will allow the conversion of a material amount of a bank's deferred tax assets (DTAs) to deferred tax credits (DTCs), hence reducing the deduction made from core capital calculations. If this legislative change is accepted by the European authorities (EBA/ECB), Greek banks should benefit from a material improvement in their reported fully loaded Basel 3 CET1 ratios and also a small improvement in their transitional B3 CET1 ratios, especially for 2016, to be used in the ongoing Stress Test.

Company disclosed numbers from the Greek banks suggest that 78%-90% of the DTA balances on the balance sheet of the banks will benefit from conversion to DTCs. These converted DTAs mainly apply to losses related to PSI and loan losses. Figure 117 below sets out per bank the amount of DTAs on balance sheet and the percentage that should benefit from conversion. In terms of fully loaded B3 CET1, the conversion of DTAs to DTCs could benefit Greek banks by 360-600 bps. Eurobank is the largest potential beneficiary given their relatively low current fully loaded B3 CET1 of only 6.5%, which management estimate will increase to 12.5% (see Figure 118).

78%-90% of the DTA balances on the balance sheet of the banks will benefit from conversion to DTCs

Figure 117. Greek Banks DTAs on Balance Sheet and Amount Can Be Converted to DTC (€bn)

	Alpha	NBG	Piraeus	Eurobank
DTA on balance sheet	3.2	3.6	3.3	3.3
-o/w eligible for DTC	2.9	3.0	2.8	2.6
-o/w eligible for DTC (%Total DTA)	90%	84%	86%	78%

Source: Company Reports

Figure 118. Greek Banks Impact of DTA to DTC Conversion to Fully Loaded B3 CET1 Ratio

	Alpha*	NBG	Piraeus	Eurobank
B3 CET1 Ratio FL	12.0%	9.1%	10.8%	6.5%
B3 CET1 Ratio FL Post Conversion	15.8%	13.1%	14.4%	12.5%
Increase in FL B3 CET1 Ratio	3.8%	4.0%	3.6%	6.0%

Source: Company Estimates; Citi Research Estimates. Alpha FL B3 CET1 Post DTA conversion assumes €2.9bn of DTA is eligible for DTC.

DTA rule change could add up to a maximum of €10bn of extra capital to B3 end point / FL CET1 (2Q14 numbers) and approx €2bn to the end 2016 transitional CET1 core capital for Greek banks

Why DTAs Matter for Greek Banks (1): If the Greeks do get the DTA rule change approved by the EU authorities it will add up to a maximum of €10bn of extra capital to B3 end point / FL CET1 (2Q14 numbers) and add approximately €2bn to the end 2016 transitional CET1 core capital (used for the Stress Test). An extra €2bn buffer would be 6% of the four Greek banks' current market capitalisation and is a useful buffer to mitigate any shortfalls in the ECB's Stress Test. And on a fully loaded basis, the up to extra €10bn of capital is equivalent to 30% of the four Greek banks' market capitalisation.

Why DTAs Matter for Greek Banks (2): The four Greek banks have recognised between €3.2bn (Alpha) and €3.6bn (NBG) of on-balance sheet DTAs at end 2Q14. For most Greek banks approximately 70% of these DTA balances are deducted from end point core capital (FL B3 CET1) ratios. On the transitional B3 basis, there are no DTA deductions from the end 2013 B3 CET1 transitional ratios (used for the ECB's AQR) but by end 2016 approximately €2bn DTAs will be removed from B3 core capital on a phased in basis (Stress Test time line 2014-16).

Both Spanish and Italian Banks have implemented similar DTA conversions that have positively impacted capital positions for these banks

Spanish Example: Spain's November 2013 rule change enabled about €30bn DTA forbearance that added to capital. DTA forbearance was allowed in the following areas among others: loan losses due to special provisioning; foreclosed assets losses; pensions/early retirement losses; tax loss carry forwards since Jan 2011. For mid-cap Spanish banks, DTA forbearance amounts to an estimated 70-90% of the DTA deductions from FL CET1 per bank and between c160bps-370bps improvement to FL CET1 ratios.

Italian Example: Italy's Feb 2011 rule change allowed the "transformation" of banks' DTAs into credit to the state (in the event of bank insolvency/losses). For the Italian banks we cover it cut the DTA balance by approximately €6.5bn. The rule change enabling DTA forbearance reduced DTA balances by c90-100% at the mid-cap Italian banks that we covered at the time and for the most impacted improved FL CET1s by an estimated c150bps (BP) to c200bps (MPS).

DTAs increased 4% to 40% qoq due to further recognition on improving economic outlook. NBG's DTA more than doubled yoy.

Figure 119. Quarterly DTA for Greek Banks

	2Q13	3Q13	4Q13	1Q14	2Q14	QoQ	YoY
Alpha	2,053	2,058	2,789	2,789	3,234	16.0%	57.5%
NBG	1,547	1,561	2,409	2,555	3,587	40.4%	131.9%
Piraeus	2,627	2,676	2,862	2,929	3,260	11.3%	24.1%
Eurobank	2,945	3,028	3,063	3,207	3,322	3.6%	12.8%

Source: Company Reports and Citi Research

DTAs contributed 36%-59% of Greek banks' tangible common equity as of 2Q14.

Figure 120. Quarterly DTA/TCE for Greek Banks

	2Q13	3Q13	4Q13	1Q14	2Q14	QoQ (%pt)	YoY (%pt)
Alpha	30%	31%	39%	34%	38%	4.0	7.3
NBG	38%	43%	59%	60%	47%	(13.4)	8.6
Piraeus	32%	33%	39%	33%	36%	3.1	4.2
Eurobank	80%	75%	99%	104%	59%	(44.9)	(20.5)

Source: Company Reports and Citi Research

Figure 121. Most DTAs are Eliminated from FL B3 CET1 calculation

	2Q14 DTA	DTA Eliminated from B3	%Current
Alpha	3,234	2,300	71%
NBG	3,587	2,500	70%
Piraeus	3,260	2,400	74%
Eurobank	3,322	2,200	66%

Source: Company Reports and Citi Research

Who is at risk in the ECB AQR/ Stress Test?

Greek and Cypriot banks screen the worst for low provision coverage of bad debts, on both an NPE and TPA basis. But headline ratios can be misleading.

On an NPE basis, the EA Peripheral Banks with highest bad debt exposure and lowest coverage levels are largely Greek and Cypriot. The best in class for NPE coverage are the international Spanish banks, Unicredit and Caixabank. On a total potential problem asset basis, the Greeks and Cypriots still screen poorly, along with Popular, MPS, Bank of Ireland, among others. Large-cap Spanish and Italian banks screen relatively well. Of course, the data set out in Figure 123 and Figure 124 are based on company reported data and do not include all the qualitative adjustments that will likely be made during the AQR harmonisation process.

Among the Greek banks, Eurobank appears to perform well in our comparative analysis as they have the highest NPE (and total problem asset) coverage ratio, well above NBG. However, in the 2013 Bank of Greece Stress Test (1H13 data) (Figure 127 - Figure 128), NBG and Piraeus had the best provision coverage ratio of BoG projected credit losses in both base and adverse scenarios. This is also the case if we compare last reported provisions levels to the BoG projected credit losses (Figure 131-Figure 132). Also, Alpha and NBG classify most of their restructured loans as impaired loans, unlike Eurobank and Piraeus, and absent a material difference in the underlying quality of these restructured loans it would appear that bad debt classifications amongst banks has been open to considerable variability, and thus the soon to be released AQR will be of considerable value.

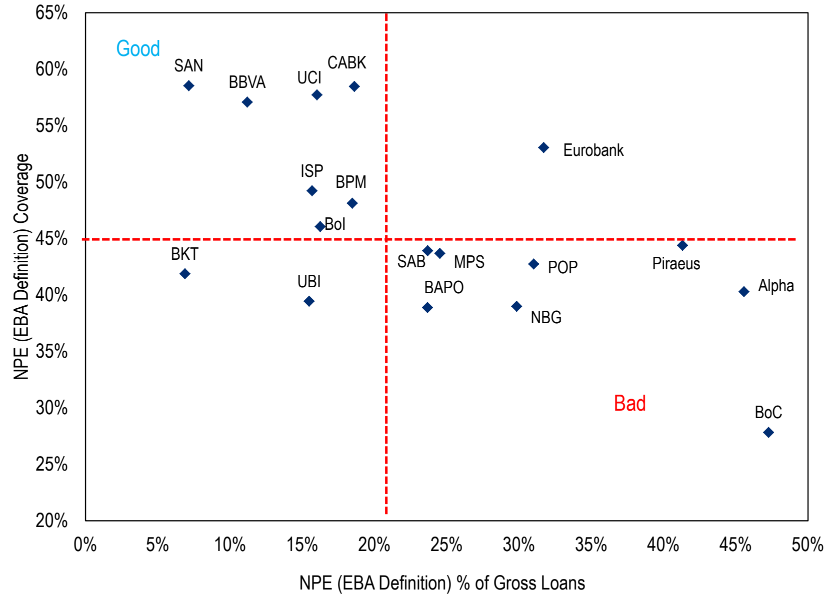
Figure 122. Greek Banks Restructured Loans 2013

	Alpha		NBG		Piraeus		Eurobank	
Gross Restructured Loans	6,726	100%	10,229	100%	11,430	100%	9,246	100%
-o/w neither past due nor impaired	394	6%	0	0%	5,371	47%	1,776	19%
- o/w past due not impaired	81	1%	0	0%	3,395	30%	3,501	38%
- o/w impaired	6,252	93%	10,229	100%	2,663	23%	3,969	43%

Source: Company Reports and Citi Research

On an NPE basis, the EA Peripheral Banks with highest bad debt exposure and lowest coverage levels are largely Greek and Cypriot

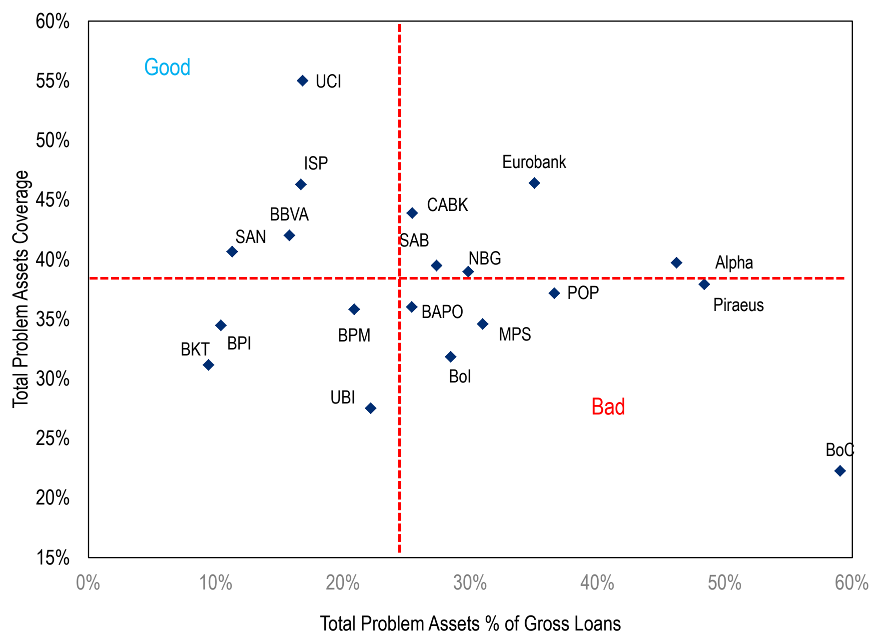
Figure 123. GIIPS Banks NPE (EBA Definition) vs NPE Coverage Ratio 2013



Source: Company Reports, Citi Research;
1. NPE (EBA Definition) is calculated from company reported NPL numbers plus foreclosed assets.
2. Company reported NPL numbers include 90D past due and impaired loans, except for Greek banks which is based on 90D Past Due
3. The horizontal and vertical dashed lines are based on median.

On a total potential problem asset basis, the Greeks and Cypriots still screen poorly – along with Popular, MPS, Bank of Ireland, among others

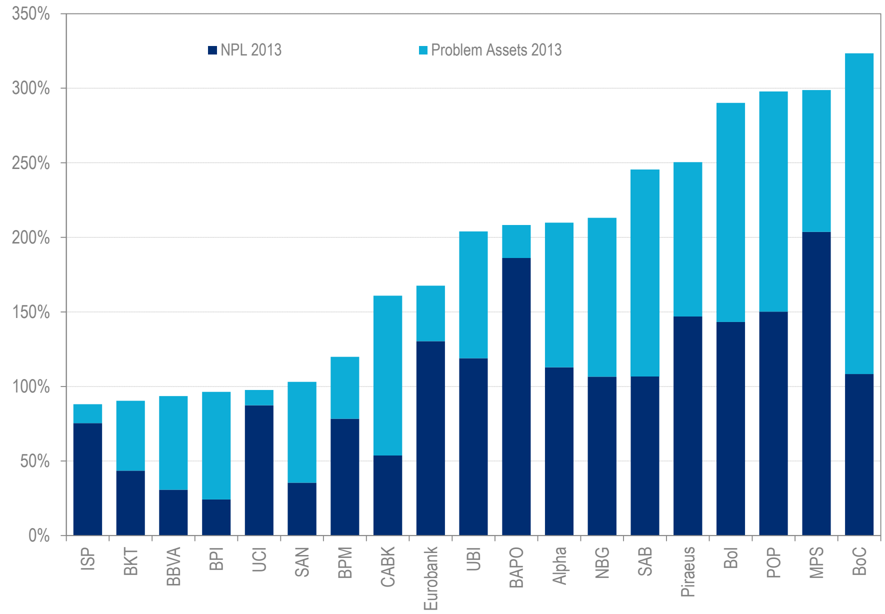
Figure 124. GIIPS Banks Total Problem Assets vs Total Problem Assets Coverage Ratio 2013



Source: Company Reports, Citi Research;
1. Total Problem Asset (Citi Definition) is calculated from company reported NPL numbers plus foreclosed assets and performing and substandard restructured loans.
2. Company reported NPL numbers include 90D past due and impaired loans, except for Greek banks which is based on 90D Past Due
3. The horizontal and vertical dashed lines are based on median.

Uncovered Bad Debts (Total Problem Asset basis) relative to tangible book value is highest for Bank of Cyprus followed by MPS, Banco Popular, BoI.

Figure 125. Uncovered Total Problem Assets % TBV 2013



Source: Company Reports, Citi Research
Note: 1) Uncovered Total Problem Asset is calculated as Total Problem Assets as defined in Figure 124 minus cash provisions for NPLs, cash provisions for foreclosed assets and cash provisions for performing and substandard restructured loans
2) The ratio 'Uncovered Total Problem Assets % TBV' excludes collateral.
3) 2013 TBV adjusted for capital raises for Eurobank, Piraeus, NBG, Alpha, BAPO, BPM and MPS

A Look Back at the Bank of Greece Stress Test

Many EA Peripheral NCAs, including the Bank of Greece, have recently conducted their own AQRs and Stress Tests, giving their banks experience of the process

The Bank of Greece conducted a follow-up stress test in the second half of 2013, based on end-June 2013 data. The results were announced on March 6, 2014. The main features of the exercise are reproduced in the table below. The exercise comprised: an Asset Quality Review (AQR) of the banks' loan portfolios conducted by BlackRock; and a Capital Needs Assessment, conducted by the Bank of Greece. Two scenarios were used: the baseline scenario reflects the Troika programme projections as of the fourth review, while the adverse scenario developed by the Bank of Greece assumed that the economic recovery was delayed further.

The capital needs produced by the Bank of Greece 2013 Stress Test for the four major banks amounted to €5.8bn in the base-line scenario and €8.8bn in the adverse scenario. Three of the four Greek banks subsequently raised equity capital in 2014 that exceeded the adverse scenario capital requirements. Eurobank's 2014 equity issuance was similar to their base-line scenario Stress Test capital need (€2.9 billion) but was considerably short of the adverse scenario (€5.0 billion).

2013 BoG Stress Test revealed a capital need for the four larger Greek banks of €5.8bn in the Base Scenario and €8.8bn in the Adverse Scenario

Figure 126. Bank of Greece 2013 Stress Test; Capital Needs Summary

(Millions of euros)	Capital Needs - Baseline Scenario	Capital Needs - Adverse Scenario
Alpha	262	560
Eurobank	2,945	4,980
NBG	2,183	2,502
Piraeus	425	757
Sub Total	**5,815**	**8,799**
Attica	397	434
Panellinia	169	186
Total	**6,382**	**9,419**

Source: Bank of Greece

The details of the 2013 BoG Stress Test and capital needs calculation are set out below in Figure 127 and Figure 128. Eurobank performed the worst in the BoG Stress Test due to a low level of starting reference capital and also limited internal capital generation, especially in the Adverse Scenario. Relative to loan loss reserves, BoG credit loss projections in the Adverse Scenario were highest for Alpha Bank and Eurobank.

Figure 127. Summary of Capital Needs Calculation in the Base Scenario

Banks	Reference Core Tier 1 capital (June 2013) (A)	Loan loss reserves (June 2013) (B)	CLPs for Greek risk (C)	CLPs for foreign risk (D)	Internal capital generation (E)	Stress Test Core Tier 1 capital (Dec. 2016) (F)	Capital needs (G) = (F) - (A) - (B) - (C) - (D) - (E)
Alpha	7,380	10,416	-14,720	-2,936	4,047	4,450	262
Eurobank	2,228	7,000	-9,519	-1,628	2,106	3,133	2,945
NBG	4,821	8,134	-8,745	-3,100	1,451	4,743	2,183
Piraeus	8,294	12,362	-16,132	-2,342	2,658	5,265	425
Attica	225	403	-888	0	106	243	397
Panellinia	61	66	-237	0	-26	31	169
Total	**23,009**	**38,380**	**-50,241**	**-10,005**	**10,341**	**17,866**	**6,382**

Source: Bank of Greece

Figure 128. Summary of Capital Needs Calculation in the Adverse Scenario

Banks	Reference Core Tier 1 capital (June 2013) (A)	Loan loss reserves (June 2013) (B)	CLPs for Greek risk (C)	CLPs for foreign risk (D)	Internal capital generation (E)	Stress Test Core Tier 1 capital (Dec. 2016) (F)	Capital needs (G) = (F) - (A) - (B) - (C) - (D) - (E)
Alpha	7,380	10,416	-15,720	-3,238	3,172	2,570	560
Eurobank	2,228	7,000	-10,522	-2,001	25	1,710	4,980
NBG	4,821	8,134	-9,509	-3,536	656	3,068	2,502
Piraeus	8,294	12,362	-17,183	-2,832	1,831	3,228	757
Attica	225	403	-1,000	0	77	139	434
Panellinia	61	66	-260	0	-35	17	186
Total	**23,009**	**38,381**	**-54,194**	**-11,607**	**5,726**	**10,732**	**9,419**

Source: Bank of Greece

Greek banks' reference capital for the ECB Stress Test may be as much as €10bn higher vs BoG Stress Test and €5bn more provisions

For reference, we updated the BoG capital needs calculation in Figure 131 and Figure 132 to include the 1Q14 reported loan loss reserves and Basel 3 CET1 on a transitional basis (the basis for the ECB 2014 Stress Test). Assuming the same credit loss projections and internal capital generation as in the BoG stress test, all four Greek banks would have a negative capital need (e.g. a surplus). NBG screens as the best of the Greek peers in both the updated Base and Adverse scenarios. Eurobank comes out the worst in the updated Adverse scenario but not in the Base Case, where both Alpha Bank and Piraeus do worse.

Figure 129. Capital Needs of Top 4 Greek Banks Using 4Q13 Reported Numbers in the Base Scenario

Banks	Reference CET1 capital (4Q13) (A)	Loan loss reserves (4Q13) (B)	CLPs for Greek risk* (C)	CLPs for foreign risk (D)	Internal capital generation (E)	Stress Test Core Tier 1 capital (Dec.2016) (F)	Capital needs (G) = (F) - (A) - (B) - (C) - (D) - (E)
Alpha	7,635	11,100	-14,720	-2,936	4,047	4,450	-676
Eurobank	2,837	7,848	-9,519	-1,628	2,106	3,133	1,489
NBG	5,100	8,851	-8,745	-3,100	1,451	4,743	1,186
Piraeus	8,200	13,748	-16,132	-2,342	2,658	5,265	-867
Top 4 Total	**22,876**	**41,547**	**-49,116**	**-10,006**	**10,262**	**17,591**	**1,132**

Source: Bank of Greece, Company Reports and Citi Research; NBG Reference CET1 in column A excludes BoG approved capital actions. A negative number in column (G) means capital surplus

Figure 130. Capital Needs of Top 4 Greek Banks Using 4Q13 Reported Numbers in the Adverse Scenario

Banks	Reference CET1 capital (4Q13) (A)	Loan loss reserves (4Q13) (B)	CLPs for Greek risk* (C)	CLPs for foreign risk (D)	Internal capital generation (E)	Stress Test Core Tier 1 capital (Dec.2016) (F)	Capital needs (G) = (F) - (A) - (B) - (C) - (D) - (E))
Alpha	7,635	11,100	-15,720	-3,238	3,172	2,570	-379
Eurobank	2,837	7,848	-10,522	-2,001	25	1,710	3,523
NBG	5,100	8,851	-9,509	-3,536	656	3,068	1,506
Piraeus	8,200	13,748	-17,183	-2,832	1,831	3,228	-536
Top 4 Total	**22,876**	**41,547**	**-52,934**	**-11,607**	**5,684**	**10,576**	**4,114**

Source: Bank of Greece, Company Reports and Citi Research; NBG Reference CET1 in column A excludes BoG approved capital actions. A negative number in column (G) means capital surplus

Figure 131. Capital Needs of Top 4 Greek Banks Using 2Q14 Reported Numbers in the Base Scenario

Banks	Reference CET1 capital (2Q14) (A)	Loan loss reserves (2Q14) (B)	CLPs for Greek risk* (C)	CLPs for foreign risk (D)	Internal capital generation (E)	Stress Test Core Tier 1 capital (Dec.2016) (F)	Capital needs (G) = (F) - (A) - (B) - (C) - (D) - (E))
Alpha	8,818	12,100	-14,720	-2,936	4,047	4,450	-2,859
Eurobank	6,530	8,415	-9,519	-1,628	2,106	3,133	-2,771
NBG	8,118	9,197	-8,745	-3,100	1,451	4,743	-2,178
Piraeus	8,970	14,346	-16,132	-2,342	2,658	5,265	-2,235
Top 4 Total	**32,435**	**44,058**	**-49,116**	**-10,006**	**10,262**	**17,591**	**-10,042**

Source: Bank of Greece, Company Reports and Citi Research; NBG Reference CET1 in column A excludes BoG approved capital actions. A negative number in column (G) means capital surplus

Figure 132. Capital Needs of Top 4 Greek Banks Using 2Q14 Reported Numbers in the Adverse Scenario

Banks	Reference CET1 capital (2Q14) (A)	Loan loss reserves (2Q14) (B)	CLPs for Greek risk* (C)	CLPs for foreign risk (D)	Internal capital generation (E)	Stress Test Core Tier 1 capital (Dec.2016) (F)	Capital needs (G) = (F) - (A) - (B) - (C) - (D) - (E))
Alpha	8,818	12,100	-15,720	-3,238	3,172	2,570	-2,562
Eurobank	6,530	8,415	-10,522	-2,001	25	1,710	-737
NBG	8,118	9,197	-9,509	-3,536	656	3,068	-1,858
Piraeus	8,970	14,346	-17,183	-2,832	1,831	3,228	-1,904
Top 4 Total	**32,435**	**44,058**	**-52,934**	**-11,607**	**5,684**	**10,576**	**-7,060**

Source: Bank of Greece, NBG Reference CET1 in column A excludes BoG approved capital actions. A negative number in column (G) means capital surplus

ECB vs Bank of Greece Stress Tests

ECB 2014 Stress test might be tougher than BoG 2013 in definition of bad debts.

Of course, the BoG and the ECB Stress Tests will not be the same (see Figure 133). For example, the BoG assumed a dynamic balance sheet whereas the ECB will use a static balance sheet in its base case: the latter reduces capital generation or loss mitigation from future balance sheet actions. In addition, the ECB may use a tougher definition of bad debts that that used by the BoG as well as more cautious interpretations of how macro-economic variables will interplay with bank balance sheet performance. Offsetting partly these tougher factors it appears as though the ECB will allow a “dynamic” balance sheet approach to be considered in the Stress Test period as part of any mitigation of capital short falls at the Greek banks. Even using 1H14 or 9M14 actual pre-provision profitability, rather than 2013 data, will be helpful to Greek banks: we believe it could add €200-500 million in additional buffer capital to absorb losses in the Stress Test.

Figure 133. Bank of Greece and ECB Stress Test Comparison

	Bank of Greece Exercise	EBA 2014 EU-Wide Exercise
Horizon	3.5 years Jun., 2013 – Dec., 2016	3 years Dec., 2013 – Dec., 2016
Balance sheet assumption	Dynamic balance sheet	Static balance sheet
Reference point	Jun., 2013	Dec., 2013
Binding scenario	Baseline	Baseline
Coverage	All Greek commercial banks covering 95 percent of banking system assets.	All "significant" credit institutions (130 banks in 18 countries covering 85 percent of euro area bank assets). Covers four core banks in Greece.
Pass/fail threshold	8 percent and 5.5 percent under the baseline and adverse scenarios, respectively	8 percent and 5.5 percent under the baseline and adverse scenarios, respectively
Capital definition	Core tier 1	Common equity tier 1

Source: Bank of Greece; EBA

Fully loaded B3 CET1 ratios were flat or down 20-80 bps qoq while transitional B3 CET1 ratios were up 10-80 bps helped by DTA recognition.

Figure 134. Quarterly CET1 Ratio (B3 Fully Loaded) for Greek Banks

	2Q13	3Q13	4Q13	1Q14*	2Q14	QoQ
Alpha				12.0%	12.0%	0.0%
NBG				9.3%	9.1%	-0.2%
Piraeus				11.0%	10.8%	-0.2%
Eurobank				7.3%	6.5%	-0.8%

Source: Company Reports and Citi Research; 1Q14 numbers pro-forma for capital increase; Eurobank excludes E950m preference shares; NBG numbers excludes 2.3% of BoG approved capital action

Figure 135. Quarterly CET1 Ratio (B3 Transitional) for Greek Banks

	2Q13	3Q13	4Q13	1Q14*	2Q14	QoQ
Alpha				15.6%	16.3%	0.7%
NBG				13.1%	13.9%	0.8%
Piraeus				14.4%	15.0%	0.6%
Eurobank				17.7%	17.8%	0.1%

Source: Company Reports and Citi Research; 1Q14 numbers pro-forma for capital increase; NBG numbers excludes 2.3% of BoG approved capital action

Company Focus

- Estimate Change
- Target Price Change
- Rating Change

Buy	**1**
from Neutral	
Price (08 Oct 14)	€0.61
Target price	€0.75
from €0.70	
Expected share price return	23.4%
Expected dividend yield	0.0%
Expected total return	**23.4%**
Market Cap	€7,764M
	US$9,836M

Price Performance
(RIC: ACBr.AT, BB: ALPHA GA)

Alpha Bank A E (ACBr.AT)

Valuation Attractive Post Recent Correction, Upgrade to Buy

- **Geared to Falling Greek Bad Debts** — Alpha bank has high gearing to the Greek banking market as a percentage of its overall business: about 85% of the assets, deposits and NPLs of Alpha are located in Greece, and the rest are largely in the neighbouring South East European markets. This is almost as high as Piraeus's gearing to Greece. It is the largest Greek corporate bank.
- **Asset Quality Improving, NPL Cover Highest —** Alpha's 90DPD ratio of 33.6% in 2Q14 is the second highest in Greece after Piraeus. The high NPL ratio is offset by the best coverage ratio in Greece of 58%. We expect asset quality to improve as NPL formation slows. 2Q14 NPL formation is €158m, down 31% qoq and 80% yoy, the lowest among Greek banks, driven by increased recoveries in mortgages (€63m in 2Q14 vs €31m in 1Q14) and smaller NPL formation in consumer credit (€43m 2Q14 vs €88m in 1Q14).
- **Funding Costs Drive NIM Improvement** — About two thirds of Alpha's Greek deposits are high cost time deposits. We expect term deposit repricing as the key driver for margin improvement. By 1Q15, Alpha expects its new time deposit to cost 1.5% and its total liabilities to cost sub 1%. We estimate its time deposit spread will decline from the current 213bps in 2Q to c100bps by 2017. Headwinds in the near term include (1) reduced net loans as provision cover rises and gross loans don't grow 2H14, (2) loan yields may drop in 2015.
- **Strong Capital Position, Near Term AQR/Stress Test Risk** — Alpha's reported 2Q14 FL B3 CET1 ratio of 12% is the highest among Greek banks. Post DTA to DTC conversion, the ratio could increase by another 380bps to 15.8%. We expect surplus capital to grow by more than €900m from 2016 and believe the company could start to return capital in 2017. The AQR/Stress test may be a short term overhang on the stock. Relative to ECB AQR/Stress Test minimum ratios, Alpha has an excess capital buffer of €4.5bn (base case) to €5.8bn (adverse scenario). What is uncertain yet is if the AQR process will lead to collateral and valuation adjustments that will reduce this capital buffer.
- **Rating and Valuation** — We upgrade Alpha to Buy with a new TP of €0.75. We have updated our estimates to reflect synergies from its recent consumer banking acquisition (EPS up 6% 2015-16E) and this feeds into our new TP. We value Alpha at the rounded average of the following DDM-derived scenarios: (1) €0.80 – key long-term variables: 15.4% ROE, 11% COE, 3% growth, surplus capital above 10% CET1 valued at 1x book (assuming capital return above 10% CET1 in 2018E) and (2) €0.70 assuming a €1bn capital increase in 2H14/1H15 with other assumptions unchanged.

Alpha Bank A E (EUR)

Year to 31 Dec	2012A	2013A	2014E	2015E	2016E
Net Income (€M)	-1,086.0	2,906.0	309.7	452.0	808.3
Diluted EPS (€)	-2.03	0.51	0.03	0.03	0.06
Diluted EPS (Old) (€)	-2.03	0.51	0.03	0.03	0.06
PE (x)	-0.3	1.2	23.3	17.5	9.9
P/BV (x)	-1.0	0.9	0.9	0.9	0.8
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 (%)	-1,444.1	82.5	3.8	5.0	8.3

Figure 136. Alpha Bank — Group Profit and Loss Account, 2013-18E (Euros in Millions)

	2013	% Chg	2014E	% Chg	2015E	% Chg	2016E	% Chg	2017E	% Chg	2018E	% Chg
Net Interest Income	**1,658**	**19%**	**1,945**	**17%**	**2,070**	**6%**	**2,183**	**5%**	**2,294**	**5%**	**2,395**	**4%**
Fees	370	36%	394	6%	415	5%	436	5%	459	5%	483	5%
Trading	257	-210%	106	-59%	102	-4%	103	1%	103	1%	104	1%
Other	60	-8%	62	3%	65	6%	65	0%	65	0%	65	0%
Total Revenues	**2,344**	**56%**	**2,507**	**7%**	**2,653**	**6%**	**2,787**	**5%**	**2,921**	**5%**	**3,047**	**4%**
Total Expenses	(1,426)	21%	(1,331)	-7%	(1,263)	-5%	(1,237)	-2%	(1,242)	0%	(1,254)	1%
Operating Income	**918**	**184%**	**1,176**	**28%**	**1,390**	**18%**	**1,550**	**12%**	**1,679**	**8%**	**1,793**	**7%**
Prov. Loan Losses (Net)	(1,923)	15%	(1,284)	-33%	(786)	-39%	(472)	-40%	(367)	-22%	(286)	-22%
PBT	**2,205**	**-264%**	**(109)**	**-105%**	**603**	**-655%**	**1,078**	**79%**	**1,311**	**22%**	**1,506**	**15%**
Taxes	701	171%	418	-40%	(151)	0%	(269)	0%	(328)	0%	(377)	0%
Net Income	**2,906**	**-368%**	**310**	**-89%**	**452**	**46%**	**808**	**79%**	**984**	**22%**	**1,130**	**15%**
Minorities	(0)	0%	(0)	0%	0	0%	0	0%	0	0%	0	0%
Hybrids / Other	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%
Attributable Profit	**2,906**	**-368%**	**310**	**-89%**	**452**	**46%**	**808**	**79%**	**984**	**22%**	**1,130**	**15%**
Underlying Profit	**(304)**	**0%**	**310**	**0%**	**452**	**0%**	**808**	**0%**	**984**	**0%**	**1,130**	**0%**
Per Share Data (€)												
EPS	**0.51**	**-125%**	**0.03**	**-95%**	**0.03**	**34%**	**0.06**	**77%**	**0.08**	**22%**	**0.09**	**15%**
DPS	0.00	nm	0.00	nm	0.00	nm	0.00	nm	0.02	nm	0.04	nm
BVPS	**0.67**	**-210%**	**0.70**	**3%**	**0.71**	**2%**	**0.77**	**9%**	**0.83**	**7%**	**0.88**	**6%**
TBVPS	**0.65**	**-174%**	**0.68**	**4%**	**0.69**	**2%**	**0.76**	**9%**	**0.81**	**7%**	**0.86**	**6%**
Shares in millions (Period end)	10,923	1944%	12,769	17%	13,110	3%	13,110	0%	13,110	0%	13,110	0%
Operating Ratios												
NIM (NII / ATA)	2.28%		2.71%		2.86%		2.95%		3.02%		3.06%	
Fees as % of ATA	0.51%		0.54%		0.57%		0.59%		0.61%		0.62%	
Cost / Income	**60.8%**		**53.1%**		**47.6%**		**44.4%**		**42.5%**		**41.2%**	
NPL Ratio	33%		34%		33%		31%		28%		25%	
Coverage Ratio (ex collateral)	54%		60%		61%		65%		70%		77%	
ROA	**NM**		0.43%		0.62%		1.09%		1.30%		1.44%	
Leverage (A/E)	NM		8		8		7		7		7	
ROE	**NM**		**NM**		**5%**		**8%**		**9%**		**10%**	
Underlying ROE	-9%		4%		5%		8%		9%		10%	
Underlying ROE (ex excess capital)	0%		4%		6%		11%		14%		16%	
Balance Sheet (€m)												
Total Assets	73,700	26%	71,790	-3%	73,085	2%	74,679	2%	77,043	3%	79,471	3%
Gross Customer Loans	**62,800**	**39%**	**62,290**	**-1%**	**63,413**	**2%**	**64,796**	**2%**	**66,847**	**3%**	**68,954**	**3%**
Customer Deposits	42,500	49%	43,287	2%	43,856	1%	44,709	2%	45,551	2%	46,408	2%
Loan to deposit ratio	122%		115%		115%		116%		118%		120%	
Equity ex State Capital	**7,372**	**NM**	**8,888**	**NM**	**9,340**	**5%**	**10,148**	**9%**	**10,870**	**7%**	**11,475**	**6%**
Capital Ratios												
Core Tier 1 (B3 from 2014)	**8,177**	**131%**	**6,536**	**-20%**	**7,138**	**9%**	**8,216**	**15%**	**9,265**	**13%**	**10,247**	**11%**
RWAs	51,500	24%	54,217	5%	55,236	2%	56,451	2%	58,162	3%	59,913	3%
Core Tier 1 Ratio (B3 from 2014)	**15.9%**		**12.1%**		**12.9%**		**14.6%**		**15.9%**		**17.1%**	

Source: Company Reports, Citi Research

Company Focus

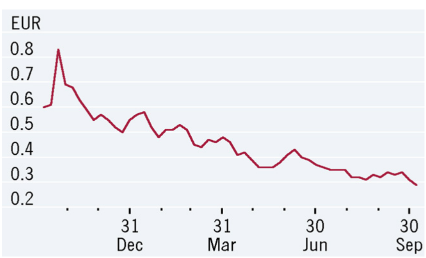
Eurobank (EURBr.AT)

High AQR/Stress Test Risks, Initiate With Neutral Rating

- Initiation of Coverage

Neutral/High Risk	2H
Price (08 Oct 14)	€0.30
Target price	€0.31
Expected share price return	4.4%
Expected dividend yield	0.0%
Expected total return	**4.4%**
Market Cap	€4,368M
	US$5,534M

Price Performance
(RIC: EURBr.AT, BB: EUROB GA)



- **Most Geared to Deposit Repricing** – In 1H14, Eurobank reported a NII/Asset of 2.0%, the lowest among Greek banks. Its domestic margin (NII/Loans) of 2.5% is in-line with Piraeus, but 50-120bps lower than Alpha and NBG. The lower margin is a combination of lower lending spread and higher funding cost. Eurobank's deposit spread in Greece is 170bps, 70bps higher than that of Alpha. Its lending spread is also slightly lower (450bps vs 480bps of Alpha). Due to its higher deposit cost, Eurobank is potentially the most geared to further margin expansion through deposit re-pricing.

- **High Credit Costs to Normalise** – Eurobank's reported 90DPD ratio in 2Q14 is 31.8% and domestic 90DPD ratio is 33.6%, better than Alpha and Piraeus and worse than NBG. Eurobank's P&L loan loss ratio is however higher than its peers as it is building its NPL coverage ratios. Domestic NPL formation for Eurobank halved in 2Q14 relative to 1Q14 driven by slower formation in mortgages and corporate lending. We expect Eurobank's NPL level to peak in 2015 and credit costs (as a percentage of average loans) to normalise from the current 350bps to 80bps in 2016.

- **Improving Capital Position** – Eurobank had a capital shortfall of €2.9bn in the base case €5.0bn in the adverse scenario in the Bank of Greece's stress test, highest of the big four Greek banks, mainly due to a low starting capital position. Post their €2.9bn capital raise, as of 2Q14, Eurobank's B3 transitional capital increased to 17.8%. But its fully loaded CET1 capital ratio is only 6.5% excluding €950m preference shares, the lowest among peripheral EA banks we cover. The DTA to DTC legislation passed by Greek parliament could add another 600bps to Eurobank's fully loaded CET1 capital ratio, significantly improving Eurobank's capital position if approved by the EU authorities.

- **AQR/Stress Test** – The AQR/Stress Test will give investors more visibility on Eurobank's asset quality but it also raises the risk of additional balance sheet strengthening requirements. The bad debt coverage ratio could fall to 42% from the current 51% based on EBA's NPE definition. Further loan loss provisions might be required. Also, even after mitigation undertaken during 9M14, such as its earlier capital increase, there is still a risk of a weak AQR/Stress Test result. In our updated version of the Bank of Greece Stress Test, Eurobank performs the weakest of the four Greek banks in the Adverse Scenario.

- **Valuation** –We initiate on Eurobank with Neutral (High Risk) rating and a target price of €0.31. See next page for details.

Eurobank (EUR)

Year to 31 Dec	2012A	2013A	2014E	2015E	2016E
Net Income (€M)	-1,453.7	-1,155.8	-515.6	220.5	527.7
Diluted EPS (€)	-2.63	-0.38	-0.05	0.01	0.04
Diluted EPS (Old) (€)	-2.63	-0.38	-0.05	0.01	0.04
PE (x)	-0.1	-0.8	-5.9	20.0	8.4
P/BV (x)	0.1	0.5	0.7	0.7	0.6
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 (%)	-56.5	-42.1	-10.6	3.5	7.8

Valuation −We initiate on Eurobank with Neutral (High Risk) rating and a target price of €0.31 based on the following three scenarios 1) DDM model produces a fair value of €0.29 assuming 11% COE, 3% growth rate and 9.4% 2018 ROE 2) price of €0.47 based on 10% CET1 and surplus capital valued at 1x book, assuming 14.6% ROE, 11% COE and 3% growth rate. 3) The average of scenario 1 and 2, deducting €0.07 to account for re-paying the preference shares of €1bn via a new equity issue. Eurobank has high share of DTAs in its core capital (c60%) compared to peers, we thus have assign a high risk rating to the stock.

Figure 137. Eurobank — Group Profit and Loss Account, 2013-18E (Euros in Millions)

Profit and Loss Account (€m)	2013	% Chg	2014E	% Chg	2015E	% Chg	2016E	% Chg	2017E	% Chg	2018E	% Chg
Net Interest Income	**1,293**	**-11%**	**1,537**	**19%**	**1,665**	**8%**	**1,732**	**4%**	**1,785**	**3%**	**1,834**	**3%**
Fees	215	7%	203	-5%	217	7%	221	2%	225	2%	230	2%
Insurance	36	20%	35	-3%	36	3%	37	3%	38	3%	39	3%
Non Banking Svcs	34	6%	42	24%	39	-7%	39	0%	49	26%	49	0%
Trading and Other Income	9	-72%	118	1173%	119	1%	118	-1%	118	-1%	117	-1%
Total Revenues	**1,587**	**-10%**	**1,936**	**22%**	**2,076**	**7%**	**2,147**	**3%**	**2,215**	**3%**	**2,269**	**2%**
Total Expenses	-1,071	2%	-1,046	-2%	-1,034	-1%	-1,024	-1%	-1,014	-1%	-1,005	-1%
Operating Income	**517**	**-27%**	**890**	**72%**	**1,042**	**17%**	**1,123**	**8%**	**1,200**	**7%**	**1,263**	**5%**
Prov. Loan Losses (Net)	-1,920	16%	-1,329	-31%	-721	-46%	-393	-45%	-296	-25%	-225	-24%
Extraordinary Income	-18											
PSI & Other Exceptionals	-519		-357									
PBT	**-1,940**	**8%**	**-796**	**-59%**	**321**	**NM**	**730**	**128%**	**904**	**24%**	**1,038**	**15%**
Taxes	787	136%	300	-62%	-80	NM	-183	128%	-226	24%	-259	15%
Tax Rate	*41%*		*38%*		*25%*		*25%*		*25%*		*25%*	
Net Income	**-1,153**	**-21%**	**-496**	**-57%**	**241**	**NM**	**548**	**128%**	**678**	**24%**	**778**	**15%**
Minorities / Hybrids	-3	NM	-20	NM	-20	0%	-20	0%	-20	0%	-20	0%
Attributable Profit	**-1,156**	**NM**	**-516**	**NM**	**221**	**NM**	**528**	**139%**	**658**	**25%**	**758**	**15%**
Per Share Data (€)												
EPS	-0.38	NM	-0.05	NM	0.01	NM	0.04	139%	0.04	25%	0.05	15%
DPS	0.00		0.00		0.00		0.00		0.00		0.00	
BVPS	0.64	NM	0.43	-33%	0.44	4%	0.48	8%	0.52	9%	0.57	10%
TBVPS	1.02		0.60		0.42		0.46		0.51		0.56	
Shares in Millions (Period end)	5,469		14,708		14,708		14,708		14,708		14,708	
Operating Ratios												
NII as a % of ATA	**1.78%**		**2.05%**		**2.32%**		**2.42%**		**2.46%**		**2.48%**	
Cost / Income	67.4%		54.0%		49.8%		47.7%		45.8%		44.3%	
Cost / ATA	1.47%		1.39%		1.44%		1.43%		1.40%		1.36%	
ROA	-1.59%		-0.69%		0.31%		0.74%		0.91%		1.03%	
ROE	**-42.1%**		**-10.6%**		**3.5%**		**7.8%**		**8.9%**		**9.4%**	
Underlying ROE (excl Excess Capital)	-12.0%		-4.1%		4.3%		10.5%		13.0%		14.8%	
LLP	3.79%		2.56%		1.44%		0.79%		0.58%		0.44%	
NPL Ratio	29.4%		33.5%		33.5%		32.2%		30.1%		27.7%	
Coverage	50%		51%		52%		55%		58%		62%	
Balance Sheet (€m)												
Total Assets	77,586	15%	72,547	-6%	71,096	-2%	71,807	1%	73,243	2%	74,708	2%
Gross Customer Loans	53,498	12%	50,243	-6%	49,741	-1%	50,238	1%	51,243	2%	52,268	2%
Net Customer Loans	45,650	5%	41,710	-9%	40,991	-2%	41,371	1%	42,287	2%	43,244	2%
Customer Deposits	41,535	35%	41,092	-1%	40,681	-1%	41,088	1%	41,909	2%	42,748	2%
Loan to Deposit Ratio	129%		122%		122%		122%		122%		122%	
Shareholders' Equity	3,496	75%	6,276	80%	6,497	4%	7,025	8%	7,683	9%	8,441	10%
Capital Ratios												
Equity Tier 1 Capital	4,183	2%	8,892	113%	9,113	2%	9,641	6%	10,299	7%	11,057	7%
Tier 1 Capital	4,260	-3%	8,892	109%	9,113	2%	9,641	6%	10,299	7%	11,057	7%
Tier 2 Capital	258	-11%	142	-45%	142	0%	142	0%	142	0%	142	0%
Total Capital	4,518	-4%	9,034	100%	9,255	2%	9,783	6%	10,441	7%	11,199	7%
RWAs	37,167	-2%	36,475	-2%	36,110	-1%	36,471	1%	37,201	2%	37,945	2%
B3 FL RWA	38,445		37,772		37,394		37,768		38,523		39,294	
B3 FL CET1 Capital (ex Pref)	1,210		4,823		5,044		5,572		6,230		6,988	
B3 FL CET1 Ratio (ex Pref)	**3.1%**		**12.8%**		**13.5%**		**14.8%**		**16.2%**		**17.8%**	

Source: Company Reports and Citi Research Estimates; B3 FL CET1 ratio includes DTC benefit

Management Biographies[1]

- **Christos I. Megalou, Chief Executive Officer:** From February 2013 until his appointment as CEO of Eurobank Group, he served as Vice Chairman of Investment Banking for Southern Europe (Spain, Italy, Portugal, Greece and Cyprus) at Credit Suisse Europe – London. From May 2010 until February 2013, he was Managing Director and co-Head of Investment Banking for Southern Europe. From 1997 until 2010, he served as Director and Managing Director for Greece and Cyprus. During 1989 – 1997, he served as Director at BZW (Barclays de Zoete Wedd), initially based in Athens and later relocating to the United Kingdom where he remained based until 2013. During 1986 – 1989, he worked for Agricultural Bank of Greece, while during 1984 – 1986 he worked for Arthur Andersen & Co in Greece. He holds a BSc in Economics from the National and Kapodistrian University of Athens and an MBA from the Aston University of Great Britain (1981 – 1982).
- **Fokion Ch. Karavias, Senior General Manager Head of Group Corporate and Investment Banking, Capital Markets and Wealth Management:** He has been General Manager and member of the Group Executive Committee in the period 2005 -2013 and Deputy General Manager and Treasurer in the period 2002-2005 at Eurobank. He started his career in banking in 1991, at JP Morgan, in New York, in the market risk management division. In 1994, he joined Citibank, in Athens, responsible for derivative and fixed income business in Greece. In 1997, he joined Eurobank, as head of fixed income and derivatives trading. He is the Chairman of the Board of Directors of Eurobank Equities Investment Firm S.A. and of Eurobank Asset Management Mutual Fund Management Co S.A. He holds a Diploma in Chemical Engineering from the National Technical University of Athens, a Master’s and Ph.D. in Chemical Engineering from the University of Pennsylvania, Philadelphia.
- **Stavros E. Ioannou, Senior General Manager – Group Chief Operating Officer & International Activities:** In 2003 he was elected Member of the Board of Directors of Millennium Bank, responsible for Retail, Private Banking & Business Banking. In 2005 he was appointed Chief Executive Officer at Eurobank A.D. Belgrade, which he was heading for three years, until 2008, since when he continues to be a Member of the Board of Directors. He has served as General Manager Retail Banking (2013 – 2014), Chairman of the Board of Directors of ERB IT Shared Services (2010-2014) and Member of the Board of Directors of SC Bancpost S.A., Romania (2012 – 2013. He holds a Degree in Business Administration from the University of Piraeus and a Masters Degree in Banking & Finance from the University of Wales, United Kingdom.
- **Theodoros Kalantonis, Senior General Manager Retail Banking:** Mr. Kalantonis has served as Executive General Manager, Head of Retail Banking Products and Non-Performing Loans at Alpha Bank in the period March 2013 - June 2014, whilst between 2000 and 2013 he held the position of General Manager / Member of the Executive Committee at Eurobank. He was also appointed as Head of the Mortgage Lending Business Unit and Managing Director of Eurobank Cards S.A., a subsidiary of the Eurobank Group. He commenced his career in 1987 as Management Consultant with Batelle Europe in London, and has since had a significant career in the banking sector, holding positions like Head of Retail Banking, American Express Bank (1998-1999), Manager Consumer Lending, ABN AMRO Bank (1994-1998), and founding member of the Department of Credit Cards, Ergasias Bank (1992-1994). He holds a Bachelor Degree in Chemical Engineering from the Technical University of Athens as well as an MBA from the Manchester Business School.

[1] Management biographies sourced from Eurobank website

- **Constantinos A. Vousvounis, Head of Troubled Assets Group and Member of the Board in various Group subsidiaries in Greece and in S.E. Europe:** He has served as Head of Group Corporate & Investment Banking of the Bank, Chairman of the Board of Directors of Eurobank Equities Investment Firm S.A., Managing Director of EFG Telesis Finance, Head of Corporate & Investment Banking responsible for Central Eastern Europe Middle-East and Africa (Bank of America, Athens & London), Country Manager for Greece and Cyprus (Bank of America, Athens), Relationship Manager (National Westminster Bank, Athens), member of the Special Assets Group (Continental Bank, Athens). He holds an MBA from Manchester Business School and a Bachelor Degree in Economics from the Athens University.

- **Christos N. Adam, Group Chief Risk Officer:** He has been Deputy General Manager since 2005 and Head of Group Credit Control since 1998. From November 1990 until March 1997 he was Senior Account Officer and Senior Manager in Corporate Department. From November 1987 until November 1990 he was Account officer in the Corporate Department of ANZ Grindlays S.A. and from January 1987 till October 1987 he worked in ERGOBANK S.A. at the Credit Division. He is a Member of the Board of Directors of Eurobank Factors S.A., Financial Planning Services S.A., Eurobank Remedial Services S.A., Eurobank Property Services S.A., Eurolife ERB Life Insurance S.A, Eurolife ERB General Insurance S.A., Eurobank Household Lending Services S.A., BANCPOST S.A., and Member of the Supervisory Board of Eurobank Bulgaria A.D. He has Master’s degree in Business Administration (MBA) with concentration in Finance, University of Michigan and Bachelor degree in Economics from the Economic School of the University of Athens.

- **Harris V. Kokologiannis**, **General Manager Group Finance & Control (Chief Financial Officer)**: He joined Eurobank in January 2008 as Deputy General Manager, Head of Group Finance and Control until his appointment as Group CFO in July 2013. He started his career as Audit Supervisor at Deloitte & Touche (Tax, Audit, Management Consultant), while he has served as Internal Audit Manager at AGET Heacles, Group Financial Manager (PLIAS Group), Director of Finance and Control (L'Oreal Hellas) and Group CFO (Lafarge Cement - Heracles General Cement Company). He is a Chartered Accountant in the UK, member of the Chartered Institute of Management Accountant (CIMA). He holds an MBA from the University of Warwick (UK) and a BA in Business Management and Organization from the School of Economics and Business Science (ASOEE).

- **Petros S. Katsoulas, General Manager Group Strategy.** From July 1993 to October 1996 he worked in the investment banking department of Barclays Bank (BZW) in Athens as a corporate finance analyst. From October 1996 to December 1997 he worked in the equities department of BZW (Barclays de Zoete Wedd) in London as an emerging markets equities research analyst. From January 1998 to April 2010 he worked in the equities department of the investment bank of Credit Suisse in London, where he was Research Director for European telecommunication companies and Greek Equities. From May 2010 until July 2013 he worked at NBG Securities. Since August 2013 he is General Manager, Group Strategy and Investments at Eurobank. He is Vice Chairman of the Board of the Directors of Eurobank Properties R.E.I.C. and also a non-executive Member of the Board of Korres S.A. Petros Katsoulas is a graduate of the Computer Sciences department of the University of Crete (1988). He also holds a M.Sc. in Software Engineering and MBA from Aston University, Birmingham, UK

Eurobank Business Mix Overview

Figure 138. Eurobank – Loan Split 2Q14

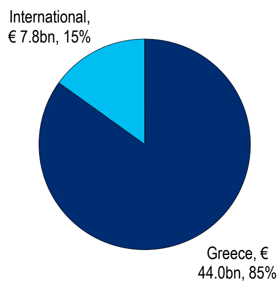


Figure 139. Eurobank – Deposit Split 2Q14

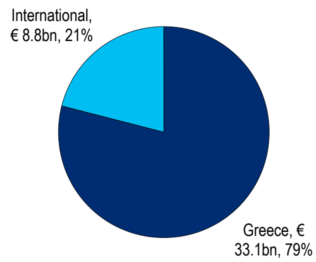


Figure 140. Eurobank – NPL Split 2Q14

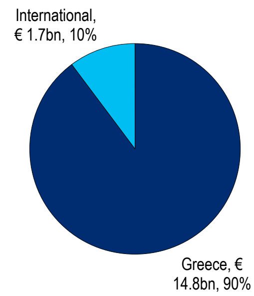


Figure 141. Eurobank Int'l Business – Assets (2Q14)

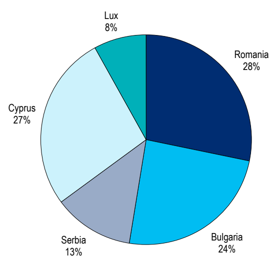


Figure 142. Eurobank Int'l Business – Gross Loans (2Q14)

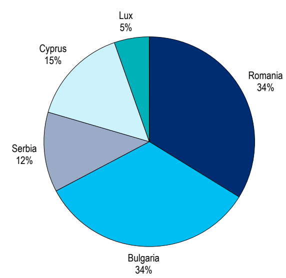


Figure 143. Eurobank Int'l Business – NPLs (2Q14)

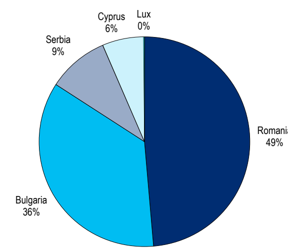


Figure 144. Eurobank Int'l Business – Deposits (2Q14)

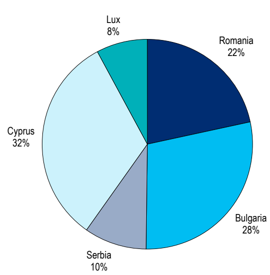


Figure 145. Eurobank Int'l Business – Revenues (2Q14)

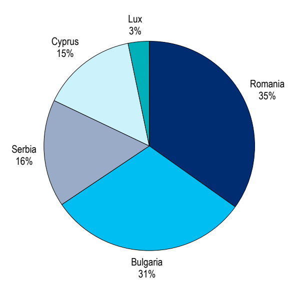
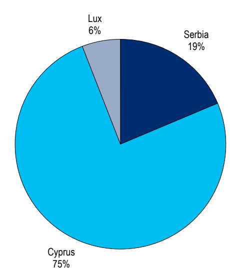


Figure 146. Eurobank Int'l Business – PBT (2Q14)



Source: Company Reports for all charts

Company Focus

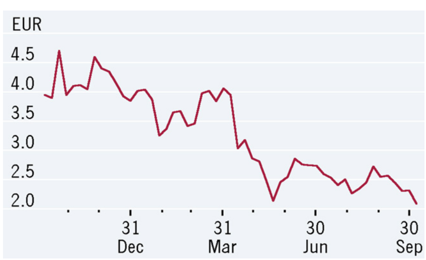
National Bank of Greece SA (NBGr.AT)

AQR/Stress Test Resilient, Citi Focus List

Buy	**1**
Price (08 Oct 14)	€2.06
Target price	€3.00
Expected share price return	45.6%
Expected dividend yield	0.0%
Expected total return	**45.6%**
Market Cap	€7,278M
	US$9,221M

Price Performance

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



- **Highest Profitability in Greece**— NBG is the only Greek bank that is making a positive return as of today. Its ROTE is expected to increase to 10.7%-11.7% in 2016-2018, excluding surplus capital (assuming 10% minimum CET1), ROTE reaches 17.7% in 2018.

- **Lowest NPL Ratio, High NPL Coverage** — NBG's group 90DPD ratio of 23.2% in 2Q14 is the lowest of Greek banks. Its domestic 90DPD ratio of 29.3% is also lower than peers. NPL formation continues to slow. Net NPL formation in Greece of €262m was down 16% qoq and -31% yoy. Group-wide net NPL flows of €304m were also down 20% qoq and -46% yoy. In Turkey, the NPL ratio was down 0.5%pt to 5.5%, driven by the sale of Turkish bad loans. The Group NPL coverage ratio of 56% is second highest after Alpha bank. We expect NPL to peak in late 2014 or early 2015.

- **Less Sensitive to Falling Rates** — NBG has relatively inexpensive Greek funding as time deposits account for only half of its total Greek deposits compared to two thirds at other banks. Its Greek total deposit spread is at 115bps as of 2Q14, the lowest of all Greek banks. We expect the deposit spread to decline further to c60bps in 2016 and to c40bps by 2018. While the Turkish NIMs also went up 12bps qoq to 532bps in 2Q14, driven by re-pricing of SME lending. We expect further NIM improvement in 3Q14 qoq, driven by lower deposit costs. TL term deposit costs up to 1100bps during 2Q14 and is now c900bps for new time deposits.

- **AQR/Stress Test Resilient** — NBG's transitional Basel III CET1 ratio was 13.9% end-2Q14 and FL B3 CET1 ratio is at 9.1%, excluding 2.3% BoG approved capital actions. Although the capital ratios are not the highest in Greece, NBG is relatively resilient to AQR/Stress test. It has the option to sell down Finansbank if there were any capital shortfall. Selling 40% of Finansbank could add €1bn to NBG core capital, assuming 1x carrying value would boost FL CET1 ratio in 2015 by c170bps to 12.2%.

- **Rating and Valuation** — We have a Buy rating on NBG with TP €3.00 valued based on the following long-term variables: 15.1% ROE, 12.2% COE, 3% growth rate, surplus capital above 10% CET1 valued at 1x book. due to improved balance sheet trends (TBVPS up 6-7% for end 2015-16E). NBG is trading at 0.8x 2015E TBVPS. NBG is on our Citi Focus List.

National Bank of Greece SA (EUR)

Year to 31 Dec	2012A	2013A	2014E	2015E	2016E
Net Income (€M)	-1,847.5	864.0	1,077.9	741.0	1,062.1
Diluted EPS (€)	-1.93	0.52	0.36	0.21	0.30
Diluted EPS (Old) (€)	-1.93	0.52	0.36	0.21	0.30
PE (x)	-1.1	4.0	5.7	9.8	6.9
P/BV (x)	-0.5	0.9	0.8	0.7	0.6
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 (%)	-346.2	91.4	14.0	7.4	9.7

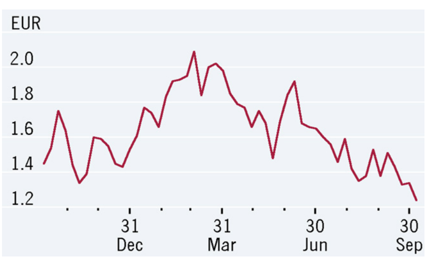
Company Focus

Piraeus Bank (BOPr.AT)

High Risk Play Geared to Greek Recovery

Buy	**1**
Price (08 Oct 14)	€1.24
Target price	€1.65
Expected share price return	33.1%
Expected dividend yield	0.0%
Expected total return	**33.1%**
Market Cap	€7,566M
	US$9,586M

Price Performance
(RIC: BOPr.AT, BB: TPEIR GA)



- **Highest Gearing to Greek Recovery** — With over 90% of assets, deposits and NPLs located in Greece, Piraeus has the greatest gearing to Greek economic recovery. Its group 90DPD ratio of 38.5% is the highest of all Greek banks, this provides upside from decline in Greek NPLs in late 2014 or early 2015. 2Q14 NPL formation of €500m is down 35% qoq and 60% yoy, second highest decline in Greece after Eurobank. We expect group NPL to decline to c33.1% by 2018. Consequently, credit cost is expected to drop from 265bps in 2014 to c40bps by 2018.
- **Benefit of Lower Funding Costs, Lower COE** — About two-thirds of Greek deposits and over half of total group deposits are high cost term deposits. Piraeus is thus most geared to falling term deposit cost. NIM was up 14bps qoq in 2Q, the best performance qoq of all Greek banks, also helped by a boost to corporate loan yields. We expect the term deposit rate to drop from the current 2.7% to 1.5% over time, inline with other Greek banks. Group NIM, calculated as NII/Assets, is expected increase from 231bps in 2014 to 306bps by 2018.
- **Significant Cost Cutting Potential** — Piraeus has the highest number of branch network and the highest number of employees in Greece. This provides significant upside for cost improvement. The number of branches in Greece is down 30% yoy and the company targets a further 10% decline to 800. We expect Piraeus' C/I ratio is expected to decline the most of peers to low 40s in 2016-18E due to these efficiency measures.
- **AQR/Stress Test Concerns** — Piraeus's Transitional B3 CET1 ratio of 15% and FL B3 CET1 ratio of 10.8% is only second to Alpha. However, due to low asset quality, Piraeus is most at risk from increased provisions post the AQR that will reduce Piraeus's capital buffer. Relative to ECB AQR/Stress Test minimum ratios, Piraeus had an excess capital buffer of €3.4bn (base case) to €4.9bn (adverse scenario) at end-2013 to absorb losses and marks to be taken as part of the ECB process, plus a net capital increase of €1.0bn ytd.
- **Rating and Valuation** — We rate Piraeus Buy with a TP of €1.65. Our valuation is the average of the following DDM-derived scenarios: (1) Key long-term variables: 14.4% ROE, 11% COE, 3% growth rate, surplus capital above 10% CET1 valued at 1x book) and (2) An €1.3bn equity increase to raise NPE coverage ratio, with our other assumptions unchanged. Piraeus trades at 0.84x 2015E TBVPS.

Piraeus Bank (EUR)

Year to 31 Dec	2012A	2013A	2014E	2015E	2016E
Net Income (€M)	-500.6	2,544.2	-394.4	253.4	839.6
Diluted EPS (€)	-0.44	0.50	-0.07	0.04	0.14
Diluted EPS (Old) (€)	-0.44	0.50	-0.07	0.04	0.14
PE (x)	-2.8	2.5	-18.7	29.9	9.0
P/BV (x)	-0.4	0.8	0.8	0.8	0.7
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 (%)	na	31.3	-4.4	2.8	8.6

Alpha Bank A E

Company description

Alpha Bank AE attracts deposits and provides retail and commercial banking services. It offers lease financing, corporate banking, asset management, private banking, investment banking and securities brokerage, venture capital, portfolio management, payment systems, consulting and real estate management services.

Investment strategy

We have a Buy rating on Alpha Bank. In Greece, the bank is a leading player in retail and corporate lending. The bank is also geared to falling Greek bad debts as the economic outlook improves. We expect asset quality to improve as NPL formation slows and for funding costs to drive NIM improvement.

Valuation

We have a target price of €0.75 based on the rounded average of the following DDM-derived scenarios: (1) €0.80 - key long-term variables: 15.4% ROE, 11% COE, 3% growth rate, surplus capital above 10% CET1 valued at 1x book (assuming capital return above 10% CET1 in 2018E) and (2) €0.70 - assuming a €1bn capital increase in 2H14/1H15, with our other assumptions unchanged.

Risks

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

1. Uncertainties around AQR result. It might cause further provisions or even capital increase.

2. Better or worse than expected revenue development trends, driven by margins, volume trends, ability to impose fees to clients.

3. Better or worse than expected asset quality.

4. Higher or lower than expected requirement for capital.

A meaningful part of the bank's activities are conducted in Greece, but also in Cyprus and in other countries in Southern Eastern Europe where we believe macro risks continue to be elevated. Such market concerns could affect the short-term and long-term performance of the shares relative to our target price.

Eurobank

Company description

Eurobank is the third largest bank in Greece by assets. It was established in 1990 and seen strong growth and international expansion in the 2000s. It offers a diverse

range of products including retail, corporate, private banking, asset management, insurance and capital markets.

The company was fully recapitalised by HFSF in 2013 after the merger with NBG was rejected. It subsequently acquired New TT Hellenic Postbank and New Proton Bank. Following the BoG stress test in spring 2014, Eurobank recapitalised through a €2.86bn capital increase.

Investment strategy

We rate Eurobank Neutral/High Risk. Eurobank has one of the highest funding cost in Greece as two thirds of its deposits are expensive term deposits. Due to its higher deposit cost Eurobank is potentially the most geared to margin expansion through deposit re-pricing. Eurobank's loan loss ratio is higher than its peers. We see slowing NPL formation in recent quarters and expect NPL to peak end 2014 and early 2015. Credit costs are also likely to normalise from current high levels. However, with the shares trading near our target price we see them as fairly valued.

Valuation

We have a target price of €0.31 based on the following three scenarios 1) DDM model produces a fair value of €0.29 assuming 11% COE, 3% growth rate and 9.4% 2018 ROE 2) price of €0.47 based on 10% CET1 and surplus capital valued at 1x book, assuming 14.6% ROE, 11% COE and 3% growth rate. 3) The average of scenario 1 and 2, deducting €0.07 to account for the re-paying the preference shares of €1bn via a new equity issue.

Risks

Given a high share of DTAs in its core capital (c60%) compared to peers, we have assign Eurobank a high risk rating. We identify the following risks to our target price.

Weak Capital Position: Eurobank had a capital shortfall of €2.9bn in bank of Greece's stress test, highest of the big four Greek banks. Post €2.9bn capital raise, Eurobank's B3 transitional capital increased to 17.8% in 2Q14. But its fully loaded CET1 capital ratio is only 6.5%, the lowest among peripheral EA banks we cover.

AQR/Stress Test: Further loan loss provisions might be required post AQR to increase coverage ratio. Also, even after mitigation undertaken during 9M14, there is still a risk of a weak AQR/Stress Test result. In our updated version of the Bank of Greece Stress Test, Eurobank performs the weakest of the four Greek banks in the Adverse Scenario.

If the impact from any of these factors proves to be more negative than we anticipate, the stock will likely have difficulty achieving our financial and price targets. However, if any of these factors proves to have less of an effect than we anticipate, the stock could materially outperform our target.

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 have a Buy rating on NBG with a €3.00 target price.

After recent share price correction, NBG's valuation looks to be in-line with other Greek banks, despite better earnings.

Its balance sheet quality also appears better than peers. Its 90D past due ratio is the lowest among peers. NBG owns the 7th largest bank in Turkey, Finansbank. Finansbank has contributed a valuable earnings stream to NBG during the crisis years, providing valuable earnings stability.

Valuation

We have a target price of €3.00 based on the following long term variables: 15.1% ROE, 12.2% COE, 3% growth rate, surplus capital above 10% CET1 valued at 1x book.

Risks

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

1. Unexpected surprise from ECB AQR and EBA Stress Test. NBG although has better asset quality than peers, it could still be negatively affected by increased provisions.

2. Better or worse than expected revenue development trends, driven by margins, volume trends, ability to impose fees to clients.

3. Better or worse than expected asset quality.

4. Higher or lower than expected requirement for capital.

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.

Piraeus Bank

Company description

Piraeus Bank offers retail and corporate banking services in Greece and overseas (primarily in the South Eastern European region). The Bank accepts deposits and offers loans, and investing and insurance services to corporate and household clients.

Investment strategy

We have a Buy rating on Piraeus. In Greece, the group is the largest player by most metrics, with close to 30% market share of loans & deposits. A large part of the bank's revenues derive from Greece, where we see significant gearing to falling bad debt levels. An improvement in Greek bank funding costs, especially term deposit costs, also benefits Piraeus more than most peers. As Piraeus moves from its current loss making status to profitability we believe the group will also generate a material amount of capital.

Valuation

We have a target price of €1.65 on Piraeus Bank. We value Piraeus at the rounded average of the following DDM-derived scenarios: (1) Key long-term variables: 14.4% ROE, 11% COE, 3% growth rate, surplus capital above 10% CET1 valued at 1x book) and (2) An €1.3bn equity increase to raise the NPE coverage ratio with our other assumptions unchanged.

Risks

A number of risks could prevent the shares achieving our target price:

1. Piraeus has the highest reported 90D past due ratio among Greek banks. It's subject risks around higher provisions from ECB AQR and EBA stress test.

2. Better or worse than expected margin & other revenue development trends, driven by the economy & regulation.

3. Better or worse than expected asset quality, leading to fewer or more loan losses.

4. A sharp change in the valuation of Greek government bonds.

5. Dilution from a further common equity injection, driven by one of the previous factors or by a change of regulation.

Additionally, 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 Piraeus’ share price.

Appendix A-1

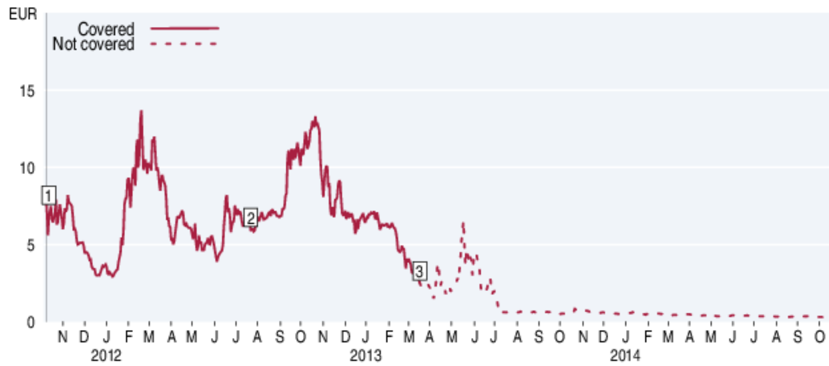
Analyst Certification

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

Eurobank (EURBr.AT)

Ratings and Target Price History
Fundamental Research



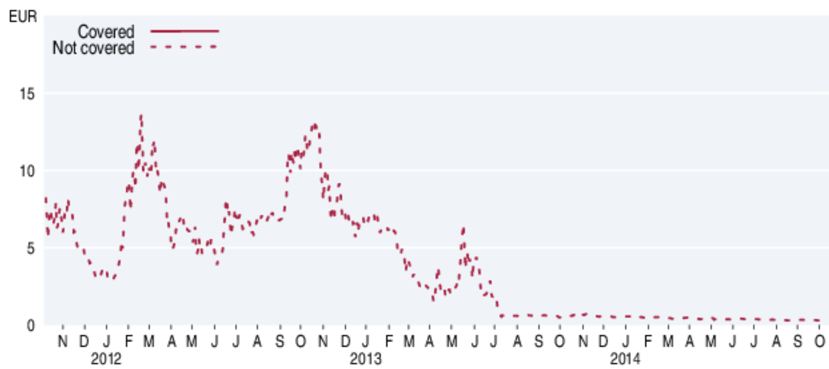
	Date	Rating	Target Price	Closing Price
1	7-Oct-11	Stock rating system changed		
2	23-Jul-12	*2	-	5.88
3	18-Mar-13	Coverage terminated		

* Indicates change

Rating/target price changes above reflect Eastern Standard Time

Eurobank (EURBr.AT)

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



* Indicates change

Rating/target price changes above reflect Eastern Standard Time

Alpha Bank A E (ACBr.AT)

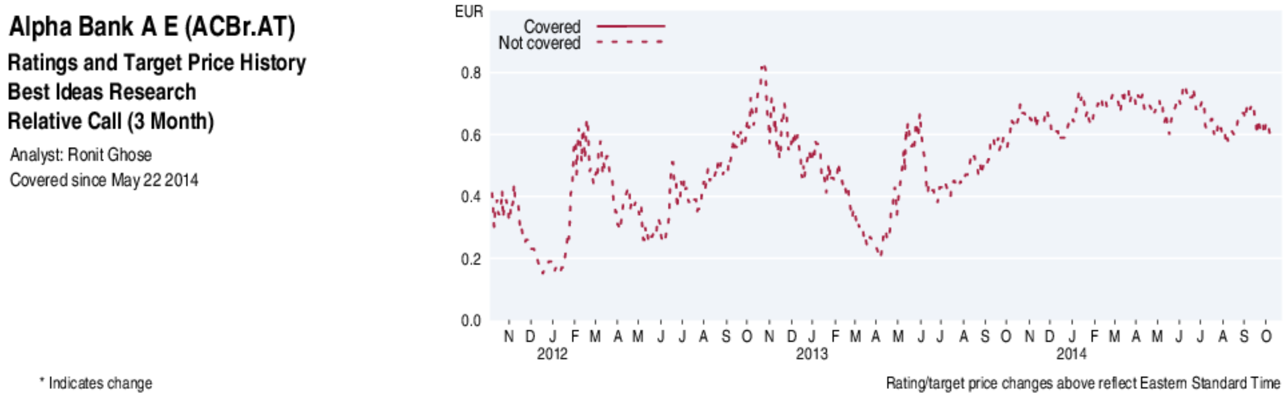
Ratings and Target Price History
Fundamental Research

Analyst: Ronit Ghose
Covered since May 22 2014

	Date	Rating	Target Price	Closing Price
1	7-Oct-11	Stock rating system changed		
2	2-Apr-13	*2	-	0.23
3	12-Aug-14	2	*0.65	0.60
4	3-Sep-14	2	*0.70	0.67

* Indicates change

Rating/target price changes above reflect Eastern Standard Time



Citigroup Global Markets Ltd acted as Co Global Co-ordinator and Joint Bookrunner on the announced rights offering for Banca Monte dei Paschi S.pA
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Citigroup Global Markets Limited is currently mandated as Joint Global Co-ordinator on Alpha Bank's recently announced capital increase.
Citigroup Global Markets Ltd is verbally mandated as advisor to Citibank Spain in relation to its exclusive talks with Banco Popular on the disposal of its Commercial Banking Operations in Spain.
Nicholas Herman, Associate, holds a long position in the securities of Bank of Ireland.
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Citi Research Equity Ratings Distribution

	12 Month Rating			Relative Rating		
Data current as of 30 Sep 2014	**Buy**	**Hold**	**Sell**	**Buy**	**Hold**	**Sell**
Citi Research Global Fundamental Coverage	48%	40%	12%	0%	100%	0%
% of companies in each rating category that are investment banking clients	66%	63%	56%	0%	64%	0%

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.

Prior to May 1, 2014 Citi Research may have also assigned 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 have highlighted a specific near-term catalyst or event impacting the company or the market that was anticipated to have a short-term price impact on the equity securities of the company. Absent any specific catalyst the analyst(s) may have indicated 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 have been different from and did not affect a stock's fundamental equity rating, which reflected a longer-term total absolute return expectation. For purposes of NASD/NYSE ratings-distribution-disclosure rules, most preferred calls corresponded to a buy recommendation and least preferred calls corresponded to a sell recommendation. Any stock not assigned to a most preferred or least preferred call was considered non-relative-rated (NRR). For purposes of NASD/NYSE ratings-distribution-disclosure rules we corresponded NRR to Hold in our ratings distribution table for our 3-month relative rating system. However, we reiterate that we did 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.

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