

# Preserving the Greek financial sector: options for recap and assistance

*Regaining the stability of the Greek financial sector is key, as a meltdown could lead to Grexit. The stability of the Greek financial system currently relies on the provision of ECB liquidity, which in turn is only available to solvent banks.*

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## **In short:**

- Regaining the stability of the Greek financial sector is key, as a meltdown could lead to Grexit. The stability of the Greek financial system currently relies on the provision of ECB liquidity, which in turn is only available to solvent banks.
- While Greek banks were found to be solvent and well capitalised in the AQR, the deterioration of the economic situation over these months has been such that this assumption may now be questionable. The quality of capital is also put at risk by the heavy reliance of Greek banks on Deferred Tax Assets instruments.

- **The draft text discussed in the Eurogroup yesterday suggests that the potential package for Greece would include 10 to 25bn for the banking sector in order to address potential recapitalisation needs.** Rumours this morning suggest the banks would then become part of a new asset fund and sold off to pay down debt. Recapitalisation can be done in different ways, with different consequences. Here, I compare four possible scenarios to recapitalise the Greek banks.
- Europe disposes of an instrument to recapitalise the Greek banks limiting impact on the Greek debt, while at the same time awarding the ESM more control on the banking system. This instrument is the ESM tool for direct recapitalization, born with the initial aim to break the sovereign-bank vicious cycle and never used as of today.
- The back of the envelope calculations included here will show that the problem with the instrument as it currently stands is that it would require, before the ESM can step in, a very significant bail-in of 8% of total liabilities. Given the structure of Greek banks' liabilities, meeting this requirement would need a 100% haircut on junior and senior (non-government-guarantee) bonds plus very high haircut on uninsured deposits (up to 39% in one bank).
- On the basis of the exercise performed here, the best solution to recapitalize the Greek banks would be to make use of the ESM direct recap but in a way that allows it to make an actual difference, i.e. limiting bail-in to what is currently mandatory under the amended State aid requirement.

### **Greek banks: illiquidity or insolvency?**

Time is the scarcest commodity in Greece, at the moment. **Stabilising the Greek financial system is vital at this**

**junction.** Without the ECB liquidity provision, Greek banks are unable to convert their assets into the cash that their depositors are demanding to withdraw. At present, with a cap on ELA and a consequent limit on cash withdrawals and transactions, Greece is already in a limbo. The euros held in Greek deposits are entirely fungible with the euro held elsewhere only up to 60euro per day. If the ELA were to be terminated – as likely in the absence of a deal – the banks would effectively run out of cash and collapse. A significant part of their assets – which is currently pledged as collateral for the ELA – would be seized, as the banks would have no cash left and would certainly not be in a position to repay the ELA funds. At that point, the banks would need to be heavily restructured, as their asset side would have collapsed. In the absence of financial assistance coming through rapidly, this would entail either massive bail-in or recapitalisation from the government. But since the government is cash strapped and cannot inject euros into the banks, a banking sector melt down would probably force a redenomination of asset and liabilities, thus automatically leading to exit.

**The stability of the financial sector hinges on the ECB liquidity provision, which in turn requires the solvency of Greek banks.** The AQR's results – showing that Greek banks were adequately capitalized last year – have allowed justifying ELA until now. But since then the economy has deteriorated and the level of NPLs has increased markedly. Walsh and Wolff (2015) show that the four major Greek banks have been under severe stress following the market turbulences caused by political uncertainty, with their market value plummeting. Using 2014 balance sheet data they show that the existing book equity would be significantly reduced in all four banks by a large loss on non-performing exposure. The resulting book value would be relatively close to the actual market value of these four

banks – suggesting that further losses may be priced in (and therefore considered likely) by the markets.

The **quality of capital is also called into question due to the high share of Deferred Tax Assets (DTAs)/Deferred Tax Credits (DTCs) included the Core capital calculations and the specifics of the Greek DTC conversion law.** The Greek law initially required that if a bank calling on the DTC as capital failed to produce profits in the future, the government should provide the equivalent of the tax refund in government bonds. However, the EBA asked Athens to amend the law, so that the government contribution would need to be in cash. In light of the developments over the past few weeks, Greek banks are unlikely to post profits, and the Greek government is cash-strapped. Therefore, the dependence of capital ratios on DTAs is especially problematic and the features of the Greek conversion law suggest that an important part of capital could be de facto wiped out by the circumstances, if not by supervisory action. DTAs in fact amount to 42% to 57% of CET1 in Greek banks (Table 1).

**Table 1 – DTAs and capital of Greek banks**

	Alpha	Piraeus	Eurobank	NBG
Total asses (euro bn)	68.3	88.5	77.5	119.3
Government bonds	3.545	2.403	4.117	3.506
RWA (euro bn)	54.7	56.7	39.6	64.5
CET1 %	13.1%	11.9%	14.2%	12.1%
CET1 (eur bn)	7.2	6.7	5.6	7.8
CET1 excl DTA (eur bn)	3.7	3.2	2.4	4.5
DTAs as % CET1	48%	53%	57%	42%
DTAs	3.5	3.5	3.2	3.3

*Source: RBS and other market research; author's calculations*

**A default of the Greek government on the ECB-held bonds – which is growing in likelihood – would negatively affect banks' balance sheets and potentially undermine all government-guaranteed debt.** As of May 2015, government

bonds accounted for 3% to 5% of total assets of the four banks considered here. A default of the Greek government would render meaningless the guarantee on government guaranteed instruments, including government guaranteed bank bonds, which represent a significant part of senior debt issued by Greek banks (table 3). A default would further negatively affect the Greek economy, which has suffered from payment delays by the Greek finance ministry during the last 6 months. This would in turn affect the NPL numbers. Such an event would certainly increase further the ECB haircut on ELA collateral, thus tightening the liquidity constraint.

**The draft text discussed in the Eurogroup today suggests that the potential package for Greece would include 10 to 25bn euros for the banking sector, in order to address potential recapitalisation needs.**

In this piece I look at potential scenarios for recapitalising the Greek banking system, starting from a hypothetical loss assumption. As highlighted above, recapitalisation would give a strong backing to the continuance or even extension of full ELA provision by the ECB. My idea is to compare the implications of different recapitalisation options, with a special focus on the ESM direct recapitalisation instrument. Summary results are as follows:

- **Scenario 1: no public money; restructuring without sovereign default.** A capital shortfall would remain even after a full bail-in of subordinated/other bonds as well as of the senior bonds that are not government guaranteed. Under the more conservative assumption to exclude DTAs from capital, then a haircut of uninsured deposits between 7% and 38% would be needed, depending on the bank. Even if DTAs were counted in, Piraeus and Eurobank would need at least an 11% haircut on uninsured deposits.
- **Scenario 2: no public money; restructuring with sovereign default.** Sovereign default implies that the government-

guaranteed bonds can undergo a haircut and increases the pool of bondholders on whom losses can be imposed. After a full bail-in of subordinated/other bonds, the remaining shortfall could be met with a haircut of 15% to 41% on senior debt, without touching depositors, even under the most conservative assumption of excluding DTAs from capital. Default has however very significant impact on the asset side and on liquidity, which make it very undesirable (the reason why scenarios 3 and 4 are examined).

- **Scenario 3: ESM direct recap with bail-in of 8% of total Liabilities (as per ESM direct recap guidelines).** Bail-in would require full haircut of subordinated/other bonds, full haircut of senior non-guaranteed bonds and still a haircut of uninsured deposits ranging between 13% and 39% for three out of four banks. This would already bring all banks above the 4.5% CET1 threshold and two of the banks above 8% CET1. The remaining capital shortfall would be covered by the ESM and Greece together, but the Greek contribution could be suspended. The ESM would effectively play only a very limited role.

- **Scenario 4: ESM direct recapitalisation with bail-in as in the amended State-Aid guidelines.** The amended State aid guidelines require only bail-in of junior debt in the transition to the Bank Recovery and Resolution Directive (BRRD). After a 100% haircut on subordinated/other non-senior debt, the banks' CET1 would still be below 4.5% in some cases. Under the ESM direct recap's priority ranking, Greece needs to bring the banks to 4.5% CET1 before the ESM steps in and take them to 8%. With a conservative DTAs assumption, the contribution to reach 4.5% could be substantially bigger than the ESM contribution for those banks that are less capitalised and that do not have much bail-in-able junior debt. However, this contribution could be suspended by mutual

agreement in light of the fiscal situation of Greece. If so, the ESM would play a more meaningful role.

### The underlying shock assumptions

All the scenarios presented here start from the same assumption as far as the potential capital shortfall is concerned. I start from the assumption made in a recent report by RBS (RBS Credit, The Silver Bullet 7 July 2015), which estimated the impact on CET1 of an increase in NPL by 20 percentage points, at 50% recovery rate. NPL are already very high as a proportion of total loans in Greek banks, and the recent developments – with restrictions on payments and capital controls – will certainly result into an increase. **Under this assumption, CET1 losses range between 5.3bn and 7.4bn.** This loss almost completely wipes out CET1 and results into an aggregate shortfall of €16bn for the four banks to be restored at a CET1 ratio of 8%. If we were to exclude DTAs from capital – for the reasons previously highlighted – the impact would be even more dramatic, bringing CET1 into negative territory. Under this assumption, the aggregate shortfall to CET1 of 8% generated by the shock considered would be €29.5bn for the four banks considered.

**Table 2 – capital ratios and assumptions**

	Alpha	Piraeus	Eurobank	NBG
CET1 %	13.1%	11.9%	14.2%	12.1%
CET1 (eur bn)	7.2	6.7	5.6	7.8
CET1 excl. DTA (eur bn)	3.7	3.2	2.4	4.5
NPL % total loans	34.0%	39.0%	34.0%	24.0%
NPL (eur bn)	21.3	27.8	18	18
<b>CET1 losses</b> if NPL% increases by 20pp (assuming 50% recovery rate) (eur bn) - from RBS	-6.3	-7.2	-5.3	-7.4
<b>New CET1</b> , after NPL increase of 20pp (eur bn)	0.9	-0.5	0.3	0.4
<b>New CET1 excluding DTA</b> , after NPL increase of 20pp (eur bn)	-2.6	-3.9	-2.9	-2.9

*Source: RBS and author calculations*

Given this shock, I look here at four potential scenarios: (1) restructuring with bail-in, no public money and no sovereign default; (2) restructuring with bail-in, no public money and sovereign default; (3) ESM direct recapitalisation following the current guidelines; (4) ESM direct recapitalisation with a lighter version of bail-in than the one currently prescribed (the reason for this will be explained later)[1]. Notice that we do not consider a rescue option “à la Spain”, i.e. with a traditional ESM loan, as this would further increase the Greek debt.

**Table 3 – composition of liabilities**

	<b>Alpha</b>	<b>Piraeus</b>	<b>Eurobank</b>	<b>NBG</b>
<b>Eurosystem funding (€bn)</b>	25	33	35	25
<b>Total bond composition (€bn)</b>	11.5	10.4	17.4	21.4
Senior (€bn)	11.3	9.9	17	15.5
<i>of which government guaranteed (€bn)</i>	9.8	9.4	16.5	14.8
Subordinated (€bn)	0.2	0.5	0.3	1.1
Other (€bn)			0.1	4.8
<b>deposits (€bn)</b>	36.3	46.5	34.3	60.4
deposits >100k (€bn) – assumed 40%	14.5	18.6	13.7	24.2

*Source: RBS and other market research*

**The impact of bail-in depends very much on the composition of banks’ liabilities** (Table 3). A significant share of banks’ liabilities is currently made up of ELA funds, which cannot be haircut. At the aggregate level, central bank liquidity accounted for about 30% of total liabilities the Greek banking system, as of May 2015. At the level of individual institutions, **ECB lending** was equivalent to 21% of assets in NBG, 37% in both Alpha and Piraeus and 39% in Eurobank. At the system level, household deposits account for 29% of total liabilities and non-financial corporation

deposits for 5%. RBS estimates suggest that at least 60% of **deposits** is below the 100 000-euros threshold. These qualify for depositor protection and should not be touched. Deposits above that threshold could be haircut, although the “depositor preference” introduced in the DGS directive after the Cypriot crisis foresees that uninsured deposits have a higher ranking than claims of other creditors in both insolvency and resolution proceedings. As far as **bank debt** is concerned, Table 3 show that Greek banks have a very small portion of subordinated debt, whereas the bulk of debt is senior, mostly due to the existence of government guarantees.

### **Scenario 1: no public money; restructuring without sovereign default**

This is a baseline scenario and it allows us to assess how much bail-in would be required to recapitalise the Greek banks under the shock assumption highlighted above, without putting new public money on the table and assuming that the government does not default on its obligations. The latter assumption means that the value of government-guaranteed bonds is preserved, reducing the pool of bondholders over which losses can be spread.

**Table 4 – Scenario 1**

	<b>Alpha</b>	<b>Piraeus</b>	<b>Eurobank</b>	<b>NBG</b>
bail-in: 100% haircut of all non-gvt guaranteed bonds (€ bn)	1.7	1	0.9	6.6
CET1 after 100% haircut of all non-gvt guaranteed bonds (€bn)	2.57	0.55	1.22	7.00
CET1 exc. DTAs after 100% haircut of all non-gvt guaranteed bonds (€ bn)	-0.9	-2.9	-2	3.7
CET1 %	5%	1%	3%	11%
CET1 exc.DTA %	-2%	-5%	-5%	6%
CET1 - Shortfall to 8% (€ bn)	1.8	4.0	1.9	-1.8
CET1 excl. DTAs - Shortfall to 8% (€bn)	5.3	7.4	5.2	1.5
<b>Haircut needed on deposits &gt;100k if no new money</b>				
based on CET1	12%	21%	14%	..
based on CET1 exc. DTAs	36%	40%	38%	6%

*Source: author's calculations based on RBS data*

The Greek government is cash-strapped, so without financial assistance it would not be able to inject all this capital in the banks. The shortfall would need to be covered by bailing-in private investors. Table 4 shows that with no new public money, a capital shortfall would remain even after a full bail-in of subordinated/other bonds as well as of the senior bonds that are not government guaranteed. Under the more conservative assumption that excludes DTAs from capital, a haircut of uninsured deposits between 6% and 40% would be needed, depending on the bank. Even if DTAs were counted in, Alpha, Piraeus and Eurobank would need at least a 12% haircut on uninsured deposits. The haircut would obviously increase if senior non-guaranteed bonds were not bailed in fully.

### **Scenario 2: no public money; restructuring; sovereign default**

Scenario 2 includes the assumption of no public money but sovereign default. Sovereign default has an impact on the assets side, reducing assets and consequently affecting risk-weighted asset (RWA), which is not considered here for simplicity. On the liability side, sovereign default implies that the government-guaranteed bonds can be haircut. This increases the pool of bondholders on which losses can be spread and makes it possible to fill the capital hole without resorting to bail-in of depositors. In particular, Table 5 shows that after a full bail-in of subordinated/other bonds, the remaining shortfall could be met without touching depositors, even under the most conservative assumption of excluding DTAs from capital. This would require a haircut between 14% and 80% on senior debt, under the most conservative assumption.

**Table 5 – scenario 2**

	Alpha	Piraeus	<u>Eurobank</u>	NBG
bail-in: 100% haircut on sub and other	0.2	0.5	0.4	5.9
CET1 after 100% haircut of sub and other	1.1	0.0	0.7	6.3
CET1 exc. DTAs after 100% haircut on sub and other	-2.4	-3.4	-2.5	3.0
CET1 %	2%	0%	2%	10%
CET1 <u>exc. DTA</u> %	-4%	-6%	-6%	5%
CET1 - Shortfall to 8%	3.3	4.5	2.4	-1.1
CET1 excl. DTAs - Shortfall to 8%	6.8	7.9	5.7	2.2
haircut on senior bonds needed				
based on CET1	29%	45%	14%	..
based on CET1 exc. DTAs	60%	80%	33%	14%

*Source: author's calculations based on RBS data*

This scenario shows that restructuring would in a way be “easier” under the assumption of sovereign default, because the capital shortfall could be covered without having to haircut the depositors. Default has however very significant direct impact on the asset side and indirect impact on liquidity provision, which could easily result in exit, so it is a very undesirable outcome. Scenario 3 and 4 thus look

at whether the shortfall could be filled without default and limiting the haircut need on depositors.

### **Scenario 3 and 4: ESM direct recapitalisation**

**ESM direct recapitalisation instrument** was created specifically in order to deal with problems in the banking system without passing through the government's books. This therefore avoids the increase in government debt that would occur with a normal ESM loan (c.f. the Spanish case) and aims to break the sovereign/banking cycle. The instrument has also the great merit of allowing control by the ESM of a large part of the banking system and thereby facilitating the ECB's secondary mandate of promoting the smooth functioning of the payment system.

There are however **two sets of eligibility condition for the banks as well as for the Member States**. The requesting ESM Member would have to be unable to provide financial assistance to the beneficiary bank without very serious effects on its own fiscal sustainability. The financial institutions to be recapitalised "*are (or are likely to be in the near future) in breach of the capital requirements established by the ECB in its capacity as supervisor and deemed unable to attract sufficient capital from private sources to resolve its capital problems, including via new market investors, shareholders, or an appropriate level of writing-down or conversion of debt*" And "*the institution is of systemic relevance or poses a serious threat to the financial stability of the euro area as a whole or of its Member States*". Greece is in such bad fiscal position that it is certainly unable to provide financial assistance to its banks without serious effects on its fiscal sustainability. As far as the systemic relevance is concerned, the four banks are systemic for Greece (as they represent about 90% of the total Greek banking

sector). Letting them fail would also be systemic to the euro area, as it could be the prelude to Grexit, an event that is unprecedented and whose systemic implications (in particular those linked to signalling that the Euro is not irreversible) cannot be foreseen.

In addition, the given **Member State is usually expected to contribute to the recapitalisation apart from exceptional cases** in which the ESM Member is not able to contribute up-front due to its fiscal position. Invoking this flexibility clause would require mutual agreement.

The **Member State contribution can take one of two forms**, depending on the situation in the bank:

1. If the institution has insufficient equity to reach the legal minimum Common Equity Tier 1 (CET1) ratio of 4.5%, as established in the Basel III framework/CRD IV/CRR, the requesting ESM Member will be required to make a capital-injection to reach this level before the ESM enters into the capital of the institution.
2. If the institution already meets the above-mentioned capital ratio, the requesting ESM Member will be required to make a capital contribution alongside the ESM, equivalent to 20% of the total amount of the public contribution. In exchange for its own contribution, the ESM would get shares in the bank which it should ideally be able to sell with an upside later on.

Finally, **direct recap requires a preliminary bail-in** (*"Direct recapitalisation by the ESM will only be considered if private capital resources are engaged first"*). **Until 31 December 2015, a bail-in equal to 8% of total liabilities, including own funds** of the beneficiary institution, will be applied. In addition, a contribution

from the ESM Member's national resolution fund will be made up to the 2015 target level. From 1 January 2016, BRRD rules would apply.

### **Scenario 3: ESM direct recapitalisation with bail-in as in the current guidelines; no default**

The current guidelines foresee a required bail-in of 8% of total liabilities including own funds, which would need to be carried out before the ESM can intervene. Table 6 show that meeting this requirement in the case of the Greek banks would require a full haircut on subordinated/other bonds, a full haircut on senior non-guaranteed bonds and still a haircut on uninsured deposit ranging between 12% and 39% for three out of four banks. It is a very tough bail in request, which in fact would already bring all banks above the 4.5% CET1 threshold explained earlier and two of the banks above 8% CET1.

The remaining capital shortfall to reach 8% CET1 would be covered 80% by the ESM and 20% by Greece. The ESM would therefore effectively play a very limited role in this operation, even assuming that the Greek contribution can be waived due to its fiscal situation, as explained above.

### **Table 6 – Scenario 3**

	Alpha	Piraeus	Eurobank	NBG
Preliminary bail-in required: 8% of total liabilities including own funds	5.5	7.1	6.2	9.5
sub and other bonds	0.2	0.5	0.4	5.9
Senior non-gvt guaranteed	1.5	0.5	0.5	0.7
remaining bail in needed	3.8	6.1	5.3	2.9
haircut on uninsured deposits needed	26%	33%	39%	12%
CET1 after 8% bail in	6.3	6.6	6.5	9.9
CET1 exc. DTAs after 8% bail in	2.9	3.2	3.3	6.6
CET1 %	12%	12%	16%	15%
CET1 exc. DTA %	5%	6%	8%	10%
<b>Shortfall to 8%</b>				
CET1 after 8% bail in	..	..	..	..
CET1 exc. DTAs after 8% bail in	1.5	1.4	..	..
Amount injected by Greece (bn)	0.3	0.27		
Amount injected by ESM (bn)	1.2	1.08		

*Source: author's calculations based on RBS data*

Scenario 3 shows that the bail-in requirement currently applicable in the context of direct recapitalisation would be very tough. This requirement is problematic for two reasons.

First, it imposes targets similar to those that will apply under BRRD, without the flexibility that exists in BRRD and outside of the general framework that will prevail after 2016. A BRRD bail-in will take place in a context in which banks will be required to maintain (subject to on-going verification by authorities), a percentage of their liabilities in the form of shares, contingent capital and other unsecured liabilities not explicitly excluded from bail-in. In the Greek banks at the moment, a bail-in of 8% of total liabilities would require a very significant haircut on uninsured deposits in a country where a bank run is already happening. It is worth pointing out that the implied haircuts presented in these scenarios are based on an assumptions that 40% of all the outstanding Greek deposits is uninsured.

Considering the situation of Greece now and the fact that deposits have been leaking out for months, the remaining pool of uninsured deposits could be smaller and the impact of bail-in on deposits might end up being even larger.

Second, BRRD foresees some exemptions concerning bail-in, which the ESM direct recap does not have at the moment. Article 44(3) of the BRRD directive provides four exceptions, stating that in those cases the resolution authority may exclude or partially exclude certain liabilities from the application of the write-down or conversion powers. One of these exemption is when “the exclusion is strictly necessary and proportionate to avoid giving rise to widespread contagion, in particular as regards eligible deposits held by natural persons and micro, small and medium sized enterprises, which would severely disrupt the functioning of financial markets, including of financial market infrastructures, in a manner that could cause a serious disturbance to the economy of a Member State or of the Union”. This is evidently happening at the moment in Greece, where a full-fledged bank run is being kept contained only because of capital controls (which should unquestionably qualify as a “severe disruption of the functioning of financial markets”).

On top of that, the bail-in requirement currently applicable in an ESM direct recapitalisation is significantly higher than the one set by the European Commission in the amended state aid guidelines (2013), which constitute the official transition framework to BRRD. This framework states that before 2016, only the bail in of junior debt is mandatory before state aid can be granted. ESM direct recap would be akin to an operation of state aid in which part of the injection is done by the ESM directly rather than by the Member States with previously borrowed ESM money. In exchange for this additional

risk, the ESM gets more control on the banks (including the possibility to add more institution-specific conditions). It is therefore hard to see why the bail-in requirement in this instance should be higher than it is for a normal State aid operation with an ESM loan.

#### **Scenario 4: ESM direct recapitalisation with bail-in as in the amended State-Aid guidelines**

Scenario 3 is really not very different from the case in which the banks are restructured and recapitalised with full bail-in, because the amount of bail-in required in the ESM direct recap guidelines is such that the ESM would play only a minor role. The requirement implies the need for high haircut on deposits, which could have unpredictable consequences in a country where a bank run is underway.

Here I present a scenario in which ESM direct recap is carried out with the bail-in requirement in the amended state aid guidelines, showing that in such a case the ESM intervention makes a more significant difference.

Table 7 shows that after a 100% haircut on subordinated/other non-senior debt, the banks' CET1 is still below 4.5% under the most conservative assumption of excluding DTAs. Even when DTAs are counted in, Alpha, Piraeus and Eurobank remain undercapitalised. Under the ESM direct recap's pecking order, Greece needs to bring the banks to 4.5% CET1 before the ESM steps in and take them to 8%.

Under the conservative DTAs assumption, the contribution to reach 4.5% could be substantially bigger than the ESM contribution, for those banks that are less capitalised and that do not have much bail-in-able junior debt. The last rows of Table 7 show the relative share of

private sector, ESM and Greece in the recapitalisation of the four banks, highlighting that the requirement to bring the banks at 4.5% CET1 is a heavy one, in absence of much bail-in-able debt. The current construction of ESM direct recapitalisation is such that Greece would effectively end up bearing the largest chunk of the intervention, which shows that this instrument is in fact unfit for fulfilling its original aim of breaking the link between banks and sovereigns. The silver lining is that this contribution could be suspended – by mutual agreement – in light of the fiscal situation of Greece and that compared to a normal recapitalisation operation the impact of Greek debt would be smaller.

#### **Table7 – Scenario 4**

	Alpha	Piraeus	<del>Eurobank</del>	NBG
Bail-in: 100% haircut on sub and other	0.2	0.5	0.4	5.9
CET1 after 100% haircut of sub and other	1.1	0.0	0.7	6.3
CET1 exc. DTAs after 100% haircut on sub and other	-2.4	-3.4	-2.5	3
CET1 %	2%	0%	2%	10%
CET1 <del>exc.DTA</del> %	-4%	-6%	-6%	5%
Shortfall to 4.5% CET1 (this is what Greece needs to pay)				
CET1 after 100% haircut of sub and other	1.4	2.5	1.1	..
CET1 exc. DTAs after 100% haircut on sub and other	4.9	6.0	4.3	-0.1
Shortfall to 8% CET1 (this is what ESM will contribute)				
including DTAs	1.9	2.0	1.4	..
excluding DTAs	1.9	2.0	1.4	2.3
<i>potential effect of bail in of senior bond holders (non GG guaranteed)</i>				
	1.5	0.5	0.5	0.7
Shares in the recap (based on CET1 exc. DTAs and no senior bail in)				
Greece	70%	71%	71%	15%
ESM	27%	24%	23%	27%
private sector	3%	6%	7%	57%
total	7.0	8.4	6.1	8.1
Shares in the recap (based on CET1 exc. DTAs and bail in of senior non <del>govt.</del> guaranteed)				
Greece	48%	65%	62%	15%
ESM	49%	29%	31%	27%
private sector	3%	6%	7%	57%
total (bn)	7.0	8.4	6.1	8.1

## Conclusion

Regaining the stability of the Greek financial sector is key at the moment, as a meltdown could lead to Grexit. This may require actions to recapitalise the banks. Europe disposes of an instrument that could allow recapitalisation of the Greek banks with a more limited impact on the Greek debt while at the same time awarding the ESM control over the banking system. This would be crucial to separate banks' troubles from those of the sovereign and ensure that the banks can be kept alive.

This instrument is the ESM tool for direct recapitalisation, born with the initial aim to break the sovereign-bank vicious cycle and never used as of today. As it currently stands, however, this instrument would require a very significant bail-in of 8% of total liabilities, before the ESM can step in. This requirement has some incongruences and inconsistencies that have been pointed out under Scenario 3.

Meeting this target would imply significant haircut on uninsured deposits, in a country where a depositors' run is currently underway. The scenarios presented here suggest that the best solution to recapitalise the Greek banks would be to make use of the ESM direct recapitalisation instrument, but limit bail-in to what is currently mandatory under the amended state aid requirement and suspend Greece's contribution. This would allow the ESM direct recap to make a greater difference. Nevertheless, this example shows how the current design of the ESM direct recapitalisation instrument is unfit for its original purpose of credibly breaking the link between banks and sovereign.