

30 NOVEMBER 2012

Greece: Buy back...first look

- The required level of debt reduction agreed in this week's Eurogroup has to generate a 20pp of GDP effect at a minimum to lower the debt ratio from 144% of GDP in 2020 without interventions down to 124% of GDP.
- **The debt reduction agreed to is around 17pp of GDP by 2020** from the measures that have already been identified plus 3pp of additional measures contingent on Greece's performance. Roughly speaking, we can split the euro area contributions agreed to now to 7pp of GDP, leaving 11pp for the buyback and 3pp for contingent (but yet undefined) euro area help.
- **Given that the buyback provides more than half of the debt relief in the agreement, an important risk factor** is that a non-successful buyback by 12 December could create new problems, as the IMF would request that foregone debt relief is compensated with by other means. Furthermore, both the IMF and the euro area might not authorise the next disbursement at that point. We believe that, the euro area governments are probably squeezed out on politically acceptable OSI options at this point. The next step then will probably involve more delays for decisions to be made, that would eventually lead to a more coercive debt exchange.
- **Price: Using the 11pp of GDP required effect**, we can estimate the combinations of participation levels and price. A rule of thumb to get the desired effect is that at least €19bn of debt relief needs to be provided upfront (9.7% of GDP) and the remaining 1-1.5% may come from the debt servicing effect, while Greece will also probably pay about €0.5bn for accrued interest. Therefore, if participation is €28bn then the price required would be $(28-19.5)/28 = 30\%$. For a price of 35% the participation would have to be a bit above 30bn $(30-19.5)/30 = 35\%$.
- **Participation:** The potential participants in the €62.4bn GGB market include the Greek banks that hold close to €15bn in GGBs, and which the Greek government will probably convince to participate in full. EU state banks (e.g. FMS/EAA/DEXIA), could have a bit less than €4bn and we also assume a very high participation rate for them. Greek Social security funds hold €7bn, but as their holdings are already consolidated to general government, **there would be no debt relief effect from their participation**. Consequently, we think it is better to ignore them. EU non-state banks probably have a very small position now, taking the total of captive participants a bit below €20bn.
- The most important remaining holders are **hedge funds**, which hold close to €20-22bn of the total. The vast majority of them are holders that bought GGBs after the exchange or bought GGBs just before the exchange at a very low price. We assume that around 30%+ of them will tender, either to book in gains or reduce their holdings from a risk management perspective, because of their large positions in a smaller GGB market after the buyback. Furthermore, we assume that most of them will try to tender at above current market prices.
- **Bottom line:** A more likely participation of €25-26bn would bring a less than 11pp of GDP effect at 30%. Furthermore, if the clearing price is higher, closer to 32% the debt relief effect will be less than 10pp as well. Therefore, at this point we believe that the buyback will go through, but it won't be a resounding success as it will have less than an 11pp of GDP impact. We also have placed a considerable probability (30%) that the buyback option fails and plan B is required.

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In this note, we look at the debt buyback as it contributes more than 50% of the debt relief from the measures agreed in this week's Eurogroup. We summarise in more detail what was agreed at the Eurogroup.

Private sector Buyback

What's the goal of the operation?

According to the Eurogroup statement from 26 November, the intention for the upcoming debt buyback is that *"any tender or exchange prices are expected to be no higher than those at the close on Friday, 23 November 2012"*. This implies a strip price close to 28c, although the range of individual bond prices was between 25.7c for the 2042 bond to 34.8c for the 2023 bond. However, the whole point of this operation from the Greek perspective is to achieve a ~11p debt reduction effect by 2020, which implies, in our opinion, that many price/participation rate combinations may be possible in order to achieve this outcome.

For the purposes of our analysis we assume that a reverse Dutch auction will be used for the buyback, in which Greece can pick one "offer" it likes, e.g., 30%, and buy back all offers lower than 30% at 30%, but not buy back any offers above 30%. We think the tender will likely be open for at least 5-7 days. If the required participation/price mix is not delivered in the first week, we would assume that the Eurogroup/IMF might turn a bit more aggressive in their rhetoric and the tender offer will be extended further.

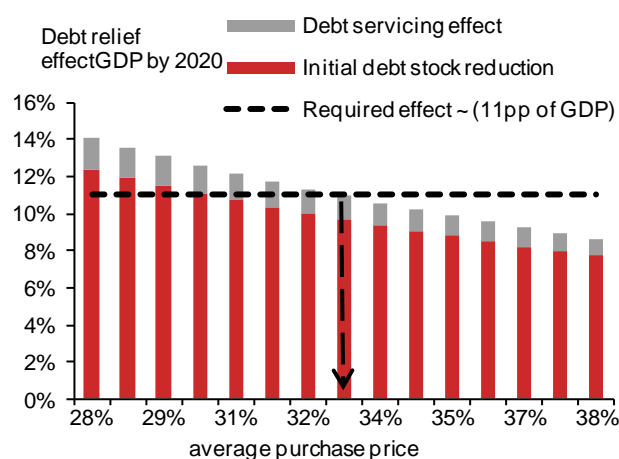
What combinations of price and participation achieve the goal?

It is key to note that there are three effects from the buyback: 1) the principal debt reduction by buying debt at a discounted price, and 2) the lower annual debt servicing of the lower notional EFSF debt (even if that interest is deferred in cash terms it will still accrue) vs. servicing a higher notional GGB debt. Finally, 3) according to EWG there is a -0.5% effect from buying close to €1bn of holdouts at a 50% price, which we assume corresponds to the well-known large holdouts from one (or a few) north Europe financial institutions, an effect we will not analyse further here.

A first order estimate of such an exchange for a buyback funded, let's say by €10bn, is as follows: buying bonds at 33% average clean price plus 1.6% for accrued interest, will buy €28.9bn (10/34.6%) of face value debt and reduce debt outstanding by €28.9bn - €10bn = €18.9bn (i.e. 9.7pp of GDP). In addition, Greece will be servicing €10bn of debt at EFSF interest cost (which conservatively here we assume on average at 3.5%), which implies a cumulative cost of €2.9bn until 2020, but will not have to service the €28.9bn of GGBs it bought back (thus saving €5.6bn until 2020). Those two debt servicing effects save another 1.3 pp of GDP by 2020, taking the total to a bit below 11.0 pp of GDP, i.e., the required effect. However this analysis assumes that there will be a €28.9bn participation at a price of 33%, which might not be the case.

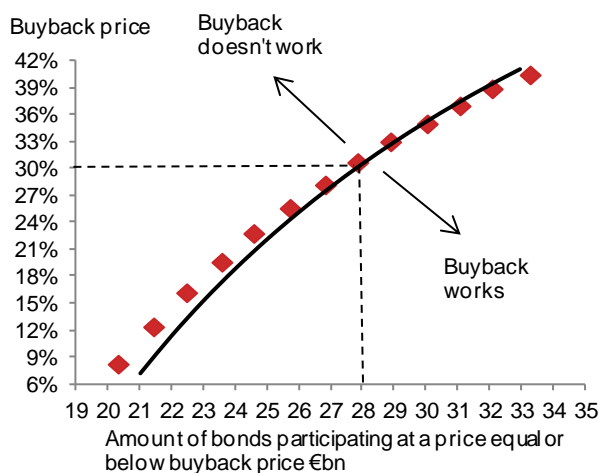
In Figure 2 we try to estimate this relationship for different participation levels. **The point**

Figure 1. Debt relief effect of 10bn buyback at diff. prices



Source: Nomura Global Economics

Figure 2. Price vs. Participation that achieve target of 11pp



Source: Nomura Global Economics

here is that at a price of 30.5%, Greece would require close to €28bn of holders participating at that price or below. If €28bn of participation could only be achieved at 35% price then the 11pp debt effect would not be achievable (but that said it won't be that far at 10.3pp). However, the balance is fragile, since if at 35% only 25bn of bonds were offered the debt relief effect would be even lower at around 9pp).

In general for a participation of €27-28bn then Greece can't pay much more than 28-30.6% (clean price) to have the desired effect of 11pp of GDP, while if participation is €28-30bn then the clearing price could be higher between 31-35%. Therefore, the idea that Greece has up to €14bn to spend for the buyback probably does more harm than good as some participants might believe that an equilibrium exists at a very high price (close to 40%) if Greece can spend all €14bn. Furthermore that would be a dangerous outcome as it would require a very high participation (above €33bn) and that might not be even be possible.

How high is the “certain” participation rate?

The potential participants from the €62.4bn GGB market include:

Greek banks: Greek banks hold close to €15bn GGBs and the Greek government is trying to convince them into participating. Some (including the Greek Finance Minister) make reference to “patriotic duty” some to the more important issue of bank recapitalisation terms and tax deferral incentives, (e.g., see [Euro2day](#) and [To Vima](#), today about discussions of banks with ministry of finance on “sweeteners”). Our assumption is that around €15bn will participate in the end.

EU state banks (e.g. FMS/EAA/DEXIA): Based on their pre-PSI holdings and assuming inertia in selling their new GGBs post exchange they could have a bit below €4bn (e.g., FMS alone had €8.3bn GGBs pre-PSI that amounts to €2.6bn new GGBs). Although their participation can't be taken for granted, we would also assume a high participation rate here as well, i.e., close to €3.5-4bn.

Greek Social security funds: They hold about €7bn of new GGBs, but given that their holdings are already consolidated to general government, there would be no debt relief effect by their participation. Consequently, their participation is irrelevant in terms of achieving the 11pp of GDP effect.

Remaining non-Hedge Funds: This includes EU non-state banks that have a very small position (according to July 2012 EBA results) and we don't consider them here, although some large German and French banks will probably contribute a small amount. Greek mutual funds have close to €1.6bn at this point, which they might consider participating with a very small share, while other holders like Chinese state funds (that supposedly had close to €10bn old GGBs so €3.1bn of new GGBs) or Retail are not likely to participate in our view.

Bottom line: A participation of close to €19-20bn from domestic banks and EU state banks should be considered safe, but obviously that number will not be enough. **The success of the buyback depends primarily on the participation rate of Hedge funds.**

How high can the Hedge Fund participation rate be?

Admittedly, we use the term in a bit of a catch-all sense for holders of close to €20-22bn of the total. The vast majority of them are holders who bought GGBs post the exchange or bought GGBs just before the exchange at a very low price. To gauge the potential for Hedge Fund participation we need to review the incentives for and against participation that such investors face, starting with the incentives to holdout.

The typical argument in favour of holding out in a co-ordination problem derives from a “prisoner's dilemma” type of reasoning, namely that holding-out is the rational choice no matter what other investors do. Arguably, if the buyback is successful then the Greek strip will trade higher, and, in fact, it may prove impossible to benefit from this post-buyback rally if one is not already a holder of GGBs. On the contrary, if the buyback is unsuccessful and/or does not happen after all, then tendering one's bonds carries with it no advantage whatsoever, especially since Greece and the Eurogroup have insisted that this is a voluntary offer and no threat of default has been made (yet). Consequently, faced with one more instance of a standard co-ordination problem, the rational investor will hold out.

The counter-argument to this line of reasoning comprises of several rebuttals of the premise that the Greek buyback is just another instance of a prisoner's dilemma in risk/reward terms. We consider a number of arguments to the effect that a) even if the buyback is successful, the upside for GGBs is not as great as would-be holdouts may think, b) that there is value in tendering one's bonds even partially irrespective of whether the buyback succeeds or not.

Starting from (a), it is indeed not trivial at all to assume that after the buyback the limit for GGB prices is the sky. The reason for this has to do both with technicals as well as fundamentals. First of all, to a large extent the recent rally in GGBs was due to the very expectation that a buyback operation was forthcoming which would offer sufficient incentives to bondholders to participate. This led to an 8-10 point rally in the strip from a very low starting point precisely because it was thought that at levels close to 30 the strip would be sufficiently distressed to allow for significant debt relief while at the same time offering a decent exit option for GGB investors. **Consequently, the expectation of a successful buyback is already in the price to a large extent, meaning that its realisation should not impact prices as much as it is regularly hoped.**

In addition, the buyback operation does not change in any way the challenging macroeconomic and political fundamentals. Firstly, debt to GDP in 2013 would be around or above 190% of GDP without the buyback and around 180% of GDP with the buyback, Greek creditworthiness would hardly improve. Secondly, irrespective of what happens at the operation, the timing of the Greek economic recovery remains a big unknown (but unlikely within the next 18 months), social cohesion could be tested further as the government attempts to implement the €9.4bn package of austerity measures next year while the probability of a government collapse and a new period of instability remain ever-present.

Despite the fact that the recent Eurogroup decision has been an unequivocally positive development, it alone does not suffice to eliminate a number of risks that may take Greece yet again close to a Euro exit. Furthermore, if OSI is assumed to take place in 2015, it is by no means clear that the holdout GGBs will not be asked to participate in the context of a comparable treatment with the official sector as per the Paris club's practices. Consequently, with much of the improvement already in the price, the scope for further appreciation post buyback may well be limited.

Another way to make this point is to estimate the yield that a high strip price would imply as against the background of those risks. Given the GGBs' very long maturity and low coupon structure, a rally to prices close to 50-60% that some target posts a successful buyback would require very low yield levels compared to better credits like Portugal. I.e., the 2037 GGB at a price of 50 would have a yield of 8.2% compared to 7% of PGB 4.1 2037 and at a price of 60% it would be trading at a lower yield than Portugal (although you might argue that a successful buyback will help Portuguese yields as well). We think such a rally is unreasonable for a country that apart from a worse political climate and macro fundamentals it will still have 180%+ of GDP (more than 50pp of GDP higher than Portugal) and would necessarily require another haircut in the next years to regain market access (while Portugal might achieve this in 2013 with the help of ECB's OMT). **That said a rally towards 40% in case of a very successful buyback is not unreasonable (but a very successful buyback is not our modal outcome for next week).**

Moving on to the ex-ante rationality of tendering, for holders of large positions of GGBs exiting the trade is an important puzzle per se. Assuming that domestic holders of GGBs will get rid of all their holdings, the **liquidity** in the GGB market will deteriorate significantly in our view, making it even harder to exit large positions than it is now. Roughly the GGB market would move from a €62.4bn with a considerable amount of hold-to-maturity participants (Greek social security fund, Retail, Asian Central banks), to a €30bn market with almost majority of it being these participants and the rest being hedge funds. Consequently, even if the strip trades higher post the exchange, it remains unknown to what extent large holders of GGBs can actually monetise this largely theoretical upside in an environment of low liquidity. **In effect, large holders of GGBs already have an incentive to book at least part of their profits in a non-market moving way through the buyback as part of their normal risk management practice.**

Finally, it is worth considering what happens if the buyback fails. Finance Minister Y. Stournaras said that there is a plan B, which he refused to unveil, but which we think will involve the prospect of a coercive exchange (of the old holdouts and the new GGBs). In the past we have mentioned we place a low probability on a coercive debt exchange like Anglo-Irish, however, a slightly punitive version of such an exchange offer might have to be tried in case of a failure of the debt buyback. Although such a consideration does not enter the simplistic prisoner's dilemma framework, we think it may well influence the thinking of a hedge-fund investor who is offered not only the opportunity to book profits at a decent price but also to re-enter the trade post the buyback for additional upside. **Again, from a risk management perspective the decision to tender at least part of the portfolio looks like a perfectly rational option.**

Our view is that apart from the 19-20bn from holders like Greek and state EU banks, Hedge funds could at best participate with 5-8bn but at relatively high prices. As such our baseline is that the buyback will go through but it will not be a resounding success (i.e., achieving more than 11pp of GDP effect). Nonetheless the Eurogroup would still allow the buyback to go through assuming that its effect is close enough to around 10pp of GDP.

Euro area member states contributions

(For an executive summary version of the Eurogroup decisions, see Figure 3 for reducing debt to GDP measures and Figure 4 for financing need measures. Note that Euro Working Group figures come from those published in The Financial Times on 29 November 2012. Also, we have made our own adjustments and the figures are not final.)

Bilateral (GLF) loans

- **Interest rate margin reduced by 100bps** (excluding full programme countries i.e., Cyprus/Ireland/Portugal): This means that the cost to Greece will drop to 3m Euribor + 50bps for €51.3bn out of the €52.9bn bilateral loans. This will have a -2pp effect on the debt ratio by 2020.

- **Extension of maturities of bilateral loans by 15 years:** This measure removes the repayment hump in 2020-2025, which also overlaps the 2023-2025 GGB redemptions and mostly affects the debt ratio from 2030 onwards (EWG had estimated its effect to be -4pp of GDP in 2030).

EFSF

- **Interest rate deferral over the next 10 years:** Provides close to €44bn in financing for the next 10 years. To our understanding this measure only applies to the non-PSI related EFSF loans (i.e., excluding the €30bn co-financing structure), while the €44bn figure includes the additional funding cost of EFSF over the next few years that will be required to cover the

Figure 3. Debt reduction interventions agreed at the Eurogroup

% or pp GDP	2020	2021	2022	2030
Baseline scenario (including +9bn T-bills)	145	139	134	114
Targets	124	116	<110	<90
From Euro area member states				
Reduction of GLF by 100bps	-2.0	-2.2	-2.4	-3
Cancellation of EFSF Guarantee Commitment fee	-0.5	-0.6	-0.6	-1.0
Return of SMP income	-4.8	-4.8	-4.8	-5.0
Extension of GLF maturities	0.0	0.0	0.0	-4
Extensions of EFSF maturities	0.0	0.0	0.0	-5
Debt to GDP after Euro area interventions	138	131	126	96
From Private Creditors				
Debt buybacks	-10.7	-10.9	-11.0	-12
Debt to GDP after buybacks	127	120	115	84
Remaining undefined/contingent measures	-3	-4	-5	

Source: EWG, Nomura Global Economics

funding gap created to EFSF itself from the deferral (i.e., Greece will have to pay interest charges on the deferred interest). In the end this will have no debt-to-GDP effect, since Greece will ultimately have to repay the interest on the deferred payments as well. In essence, then, this arrangement is like a new EFSF loan to Greece of around €14bn until 2016.

- Extension of maturities of EFSF loans by 15 years: This will mostly affect Greece's debt ratio from 2030 onwards (EWG has estimated a -5pp of GDP effect in 2030). Currently, EFSF maturities range between a minimum of 15 years and up to 30 years, with a grace period of 10 years.

- A cancellation of the guarantee fee costs paid by Greece on its EFSF loans: this amounts Greece which will save a total of €2.7 bn over the entire period of EFSF –and have an impact of 0.6pp of GDP by 2020.

SMP

A commitment to pass on to Greece an amount equivalent to the income on the SMP portfolio accruing to their NCB from 2013 (again excluding full programme countries):

This is about €10bn in total and has an effect of close to 4.6pp of GDP on the debt ratio by 2020. The wording on the statement is nicely articulated, making reference to “*an amount equivalent to the income on the SMP portfolio accruing to their national central bank as from budget year 2013.*” We interpret this as meaning that even if an NCB does not pay the full income to its Ministry of Finance (e.g., because of provisions), the Ministry is still supposed to pay the full (“equivalent”) amount to a segregated account for Greece. All in all this is a positive for Greece since the last EWG draft had the effect of the return of SMP profits generating only a -2.3pp effect on the debt ratio by 2020. It seems that this version includes both coupons and capital gains taking the effect to more than double by 2020.

On the negative side income from 2010-2012 has been excluded (only the income for 2012 was close to €3bn) while various finance ministries (other than from the countries in full EFSF/ESM programme) might still refuse to pass on the full profits, if their own NCB is not willing to pass on the profits to its national finance ministry. An example highlighted in the German press is that out of the total €10bn that should be paid to Greece, Germany's share is €2.7bn, with €599 million due in 2013. However the Bundesbank (according to *Die Zeit*, 28 November) intends to withhold a portion of the SMP profits to cover for future risks.

Contingent interventions = -3pp by 2020

The Eurogroup statement also informed us that “*Euro area Member States will consider further measures and assistance ... for achieving a further credible and sustainable*

Figure 4. Financing needs agreed at the Eurogroup

€ bn	2012-14	2015-16	2012-16
Troika baseline estimate	14	18	32
Greece	-13	2	-11
Foregoing T-bill stock reduction	-9	0	-9
Postponing cash buffer	-4	2	-2
Other measures	-1	0	-1
Euro area member states	-13	-16	-29
Reduction of GLF by 100bps	-1	-1	-2
Cancellation of EFSF Guarantee Com. fee	0	0	0
Deferral of EFSF interest rate payments	-4	-10	-14
Return of SMP profits	-4	-3	-7
Roll-over of ANFA holdings*	-4	-2	-6
Buybacks	10	-1	9
Financing needs	-2	4	1

*Not officially agreed

Source: EWG, Nomura Global Economics

reduction of Greek debt-to-GDP ratio, when Greece reaches an annual primary surplus, as envisaged in the current MoU, conditional on full implementation of all conditions contained in the programme” Such contingent interventions are supposed to contribute an additional 3pp of debt relief by 2020 but have been left largely unspecified at this stage.

The Eurogroup statement itself makes explicit reference only to two further possibilities. First, further interest rate reductions of the Greek Loan Facility, where the most obvious choice here would be reducing the bilateral loan margin to 0bps. Still, this would only bring about another 1.7pp in debt relief in the very optimistic case where it's done retroactively from 2010. Secondly, the statement mentions the option of “lower co-financing in structural funds.” Note that on the 12th of December 2011 Greece (along with other crisis countries) received an increase in the co-financing rate to 95% retroactively from May 2010 and until 31 December 2013. Therefore, we assume that the proposal would include the same or a similar co-financing rate in the 2014-20 EU budget. Commissioner Rehn said in the European Parliament (28 November) that the EC estimates the benefit of continuing the current state of the 95% co-financing rate to be around €4-5bn by 2020, or 2.5pp of GDP.

Financing until 2016

The original baseline had an estimated €14bn financing gap in 2013-14 and €18bn in 2015-16. Adding the funds necessary for the buyback operation (see below), the funding gap gets closer to €42bn. Nonetheless, it seems to us that there will not be a problem for 2013-14 as regards programme financing since the euro area contributions mentioned above have a €13bn positive financing effect in 2013-14. Furthermore, more can be achieved by foregoing the planned T-bill stock reduction (€9bn) and postponing the build-up of a treasury cash buffer (€5bn). Finally, an additional measure could be to roll-over the redemptions of old GGB held in the investment portfolios of the Eurosystem's NCBs, which would save €4bn until 2014 and another €2bn between 2015-2016. This last option, however, although contemplated by the Eurogroup, has not been officially agreed upon yet. All the above considered, however, a small financing gap remains for 2015-16 in official calculations. We provide a more detailed breakdown in Figure 2.

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