



# GREECE MACRO MONITOR

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Focus notes: Greece

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## Greek PSI proposal: Main elements & evaluation of options offered to investors

On August 25<sup>th</sup>, the Hellenic Republic approached Ministers of Finance in various jurisdictions to request assistance in compiling aggregate ownership data of Greece's outstanding government securities maturing through the end of December 2020. The data relates to ownership information on outstanding securities held by regulated institutions within their jurisdictions as of June 30, 2011. The inquiry has been made as a preparation step for the implementation of a voluntary liability management transaction, as outlined in a financing proposal submitted on July 21 by representatives of Greece's private sector creditors.

The so-called private sector involvement (PSI) proposal includes four discrete options. Namely, a par bond exchange, a committed liability facility and two discount exchanges. (A description of these options and their potential implications for participating investors is provided below). Along with some €109bn in new official funding as well as lower interest rates and extended maturities on new official loans, the PSI scheme aims to provide significant cash flow relief to the State and to improve Greece's solvency outlook.

According to an official document that was made public on August 26, the relevant inquiry sent to private sector bond holders read that Greece "shall not be obliged" to proceed with the proposed transaction (or any portion of it), unless bondholders tender eligible securities having a principal amount equal to *not less than* 90% of all eligible GGBs maturing during the period from June 30, 2011 through August 31, 2014. If this threshold is not met, Greece shall not proceed with any portion of the PSI transaction if it determines, in consultation with official lenders, that the total private sector contribution is insufficient to permit the official sector to support the new multi-year adjustment program for Greece announced on July 21, 2011.

As to the time table for the implementation of the PSI scheme, a number of recent reports quoting official sources suggested that private sector creditors will need to respond by September 9 to the letter of inquiry sent to them by Greece's finance ministry. The letter requests private creditors to provide a first (non-binding) expression of interest for participating in the scheme, with a final binding commitment expected by early October.

One of the PSI issues that still remains open relates to a recent proposal for an extension of the plan to include bonds maturing by 2024 (vs. 2020 suggested initially) so as to help ensure fulfillment of the €135bn target for outstanding bonds to be swapped or rolled over under the plan. Such an extension would cover eligible bonds being tenders under the first three options of the proposed scheme. Only eligible bonds maturing till the end of 2013 can participate in the 4<sup>th</sup> option.

Greek banks are the biggest private holders of the country's outstanding debt stock, with an estimated total government bonds portfolio of ca €40bn. Most domestic banks have already

announced their intention to participate in the voluntary liability management transaction, though it still remains unclear whether the two state-controlled banks, Agricultural Bank of Greece and the Postal Savings Bank will also participate in the scheme.

### **Investor participation has reportedly reached 70 percent**

According to a recent International Institute of Finance (IIF) report, around 40 financial institutions including banks and insurance companies had indicated their willingness to participate in the Greek PSI scheme. These institutions are estimated to hold eligible bonds of a total principal amount of ca €70bn. The latter corresponded to a 50% participation rate, compared with a targeted rate of 90%, covering bonds of a total principal amount of €135bn.

According to a Bloomberg report quoting an IIF spokesman published mid-last week, the private sector participation rate in the Greek PSI scheme is likely to increase further in the following weeks as many institutions have already signaled their willingness to participate in the scheme, without having authorized the IIF to publish their names yet. Meanwhile, according to a number of press reports, the participation rate has already reached around 70%.

### **How many eligible bonds are out there?**

There is an official list of 81 Greek securities maturing up to 2020, which are eligible for exchange. These include Greek government bonds (GGBs), international bonds and Hellenic Republic Organization bonds. According to our estimates, eligible bonds maturing till July 2020 have a total face value of €199.5bn, some €97.9bn of which mature till August 2014. Assuming then that the ECB holds ca €50bn of GGBs maturing till 2020, the respective face value of private-sector held bonds eligible for participation in the PSI scheme is ca €134.5bn (=  $0.9 * (\text{€}199.5\text{bn} - \text{€}50\text{bn})$ ). For bonds maturing till August 2014, the respective estimated amount is ca €63bn. These amounts do not deviate much from the €135bn and €54bn participation targets (for bonds maturing up to mid 2014 and by 2020, respectively) envisioned in the initial financing proposal submitted by the representatives of Greece's private sector creditors.

### **A quick description of the four options**

#### ***Option 1 - Exchange into a 30 Year Instrument at Par: New Par Bonds***

Under this option, existing private-sector bond holders will be requested to voluntarily exchange 100% of the principal amount of their eligible GGB holdings (old bonds) with new 30-year bullet bonds, carrying a *step up* coupon rate.

The latter will be determined at (or about) the time of the launch of the liability management transaction so as to result in a net present value of 79% of the face value of the eligible GGBs tendered. The coupon of the new 30-year bond will increase by 0.50% per annum for years 6 to 10 and by a further 0.50% per annum for years 11 to 30.

According to *Option 1*, on the issue day the aggregate principal amount of the new par bonds will be defeased by the delivery on or before the issue date of *New Par Bond Defeasance Assets* to (or to the order of) a trustee.

The defeasance assets will constitute AAA-rated 30-year fixed coupon bonds issued by one or more sovereigns, supranational entities, sovereign entities and/or sovereign-back agencies. At time of issuance, these assets will have an initial face value such that on the maturity date of the new par bonds their redemption amount will equal the notional principal amount of the new par bonds.

As to the trading restrictions applied to the new 30-year par bonds, tendering holders will be entitled to select between freely tradable ones (i.e., bonds that could effectively be sold in the secondary market immediately after the exchange) and bonds subject to a 10-year trading restriction following the issue date.

In the event of sovereign default and acceleration of the new par bonds, holders would have a claim against the Hellenic Republic, with the default payment amount being determined as the difference between the notional principal amount of the new par bonds (including all unpaid interest accrued through the day of acceleration) and the *accrued* amount of the new par bonds defeasance assets on the day of acceleration of the new par bonds

The new par bonds issued under *Option 1* (and, all new bonds issued under the other three options to be discussed below) will include collective action clauses. The new bonds will be governed by the English law and they will also constitute ECB eligible collateral.

#### NPV of the new par bonds

At or about the time of the launch of the transaction, the net present value of the new par bond would be equal to 79% of the face value of the old bonds being tendered. The above specifications effectively suggest that the principal amount of the new instruments will be fully guaranteed by the defeasance assets and thus, in valuing the new par bond one should discount the full principal payment by the AAA curve. On the other hand, the stream of coupon payments will effectively carry Greek risk.

In *Option 1*, the coupons stream of the new par bond is discounted by a fixed annual rate of 9.00%. Assuming the latter discount rate and the pricing of the euro mid-swap curve on September 2, 2011, the initial coupon rate of the new par bond is estimated at 3.68%. Consequently, the coupon rates in years 6-10 and 11-30 are estimated at 4.18% (=3.68% + 0.50%) and 4.68% (=3.68% + 1.00%), respectively (Table 1.i).

#### **Option 3 - Exchange into a 30 Year Instrument at Discount: New Discount Bonds**

The structure of *Option 3* is basically very similar to that of *Option 1* with the main difference being that the principal amount of the new bond is lower than that of the old instrument tendered for exchange (i.e., 80% of the eligible GGBs offered) . Naturally then, the new discount bonds would carry a higher coupon than the new par bonds, so as to ensure that the proposed structure retains a net present value equal to 79% of the face value of the eligible GGBs tendered.

As in *Option 1*, the NPV of the new discount bonds under *Option 3* is calculated as the stream of coupon payments discounted by a flat annual rate of 9.00% plus the purchase price of defeasance assets.

**Table 1i – Valuation of Options 1 & 3**

|  | Option 1<br>2041 New Par Bond | Option 3<br>2041 New Discount Bond |
|--|-------------------------------|------------------------------------|
| Notional amount of old eligible bond   | 100.00                        | 100.00                             |
| Principal amount of New bond           | 100.00                        | 80.00                              |
| Assumed 30-year mid-swap rate          | 3.16%                         | 3.16%                              |
| Defeasance assets credit spread        | 0.30%                         | 0.30%                              |
| <b>New bond coupon rate 1-5years</b>   | <b>3.68%</b>                  | <b>5.68%</b>                       |
| <b>New bond coupon rate 6-10years</b>  | <b>4.18%</b>                  | <b>6.18%</b>                       |
| <b>New bond coupon rate 11-30years</b> | <b>4.68%</b>                  | <b>6.48%</b>                       |
| PV of coupon stream                    | 42.96                         | 50.16                              |
| PV of principal amount                 | 36.04                         | 28.84                              |
| <b>PV of new bond</b>                  | <b>79.00</b>                  | <b>79.00</b>                       |

Source: MoF, Eurobank EFG Research

Using similar calculations with those utilized in valuing *Option 1*, we estimate that the initial coupon rate of the new discount bonds is 5.68%. Consequently, the coupon rates for years 6 to 10 and 11 to 30 are estimated at 6.18% (=5.68% + 0.50%) and 6.48% (=5.68% + 0.80%), respectively (Table 1.i).

As we noted above, the principal amount of the new discount bonds (*Option 3*) is lower than the principal amount of the old securities tendered for exchange and thus, lower than the principal amount of the new par bonds (*Option 1*). This suggests that the total amount of defeasance assets placed with the trustee (per old bond tendered) will be lower than in *Option 1*, with the corresponding difference growing to 20 points in 30 years time.

### Option 2 – Committed Financing Facility

*Option 2* is structured in broadly similar terms as *Option 1* with the key exception being that the transaction involves the rollover into a new 30-year *par* bond at the maturity of the old bonds than a debt exchange at the date of the launch of the liability management exercise.

For eligible bonds maturing until 31 August 2014, the coupon rates of the new *par* bonds will be determined at the time of the launch of the liability management transaction. For bonds maturing after August 2014, the coupon will be determined at the maturing of the tendered old bonds, effectively allowing for the possibility of different coupons on the new 30 year securities participating in the transaction.

The coupon rate of *Rollover Par Bonds* issued prior to the end of September 2014 will be determined at or about the time of the launch of liability management transaction so as to result in an NPV of 79% of the face value of the relevant eligible GGBs (old bonds) on the respective funding date.

This NPV would be calculated as the sum of the stream of coupon payments of the new instrument discounted at a (fixed) rate of 9.00% per annum and the principal amount of the rollover *par* bonds discounted at the 30-year forward EUR mid-swaps rate plus a certain margin to compensate for the credit spread of the issuer of the rollover *par* bonds defeasance assets. The initially estimated coupon rate will be applicable to years 1-5, increasing by 0.50% p.a. for years 6-10 and a by further 0.50% p.a. for years 11-30.

For rollover bonds issued after the end of September 2014, the coupon and net present value will be determined at the date of issuance of these bonds to result in a NPV of 79% of the face value of the tendered old bonds. The difference here is that the purchase price of the rollover *par* bonds defeasance assets will be determined using the 30-year mid swap rate *at or about* the date of their issue and the credit spread for the issuer of the rollover *par* bonds defeasance assets applicable at the time for the issuance of bonds of similar maturity. This effectively implies that the coupon of the new 30-year bonds will vary with the maturity date of the old bonds.

Notably, bond holders participating in *Option 2* would be allowed to offload their bond holdings in the intermediate period between the date of the exchange and the maturity of their old bond. Such a decision, however, would not relieve existing investors (who pledged to participate in *Option 2*) of their obligation to rollover into the new securities upon the expiry of the old GGBs.

Table 1ii- Valuation of Option 2

| Option 2                                |              |              |              |              |              |              |
|---|--------------|--------------|--------------|--------------|--------------|--------------|
| Eligible bonds maturing till Sept 2014  |              |              |              |              |              |              |
| Notional amount of old eligible bond    | 100.00       | 100.00       | 100.00       | 100.00       | 100.00       | 100.00       |
| Principal amount of New bond            | 100.00       | 100.00       | 100.00       | 100.00       | 100.00       | 100.00       |
| Assumed defeasance assets credit spread | 0.30%        | 0.30%        | 0.30%        | 0.30%        | 0.30%        | 0.30%        |
| New bond issue date                     | 3-Oct-11     | 2-Jan-12     | 2-Apr-12     | 2-Jul-12     | 1-Oct-12     | 2-Jan-13     |
| New bond maturity date                  | 3-Oct-41     | 2-Jan-42     | 2-Apr-42     | 2-Jul-42     | 3-Oct-42     | 2-Jan-43     |
| <b>New bond coupon rate 1-5years</b>    | <b>3.69%</b> | <b>3.71%</b> | <b>3.73%</b> | <b>3.75%</b> | <b>3.77%</b> | <b>3.79%</b> |
| <b>New bond coupon rate 6-10years</b>   | <b>4.19%</b> | <b>4.21%</b> | <b>4.23%</b> | <b>4.25%</b> | <b>4.27%</b> | <b>4.29%</b> |
| <b>New bond coupon rate 11-30years</b>  | <b>4.69%</b> | <b>4.71%</b> | <b>4.73%</b> | <b>4.75%</b> | <b>4.77%</b> | <b>4.79%</b> |
| PV of coupon stream                     | 43           | 43           | 43           | 44           | 44           | 44           |
| PV of principal amount                  | 36           | 36           | 36           | 35           | 35           | 35           |
| <b>PV of new bond</b>                   | <b>79.00</b> | <b>79.00</b> | <b>79.00</b> | <b>79.00</b> | <b>79.00</b> | <b>79.00</b> |
| Notional amount of old eligible bond    | 100.00       | 100.00       | 100.00       | 100.00       | 100.00       | 100.00       |
| Principal amount of New bond            | 100.00       | 100.00       | 100.00       | 100.00       | 100.00       | 100.00       |
| Assumed defeasance assets credit spread | 0.30%        | 0.30%        | 0.30%        | 0.30%        | 0.30%        | 0.30%        |
| New bond issue date                     | 1-Apr-13     | 1-Jul-13     | 1-Oct-13     | 2-Jan-14     | 1-Apr-14     | 1-Jul-14     |
| New bond maturity date                  | 1-Apr-43     | 1-Jul-43     | 1-Oct-43     | 4-Jan-44     | 1-Apr-44     | 1-Jul-44     |
| <b>New bond coupon rate 1-5years</b>    | <b>3.81%</b> | <b>3.82%</b> | <b>3.84%</b> | <b>3.85%</b> | <b>3.87%</b> | <b>3.88%</b> |
| <b>New bond coupon rate 6-10years</b>   | <b>4.31%</b> | <b>4.32%</b> | <b>4.34%</b> | <b>4.35%</b> | <b>4.37%</b> | <b>4.38%</b> |
| <b>New bond coupon rate 11-30years</b>  | <b>4.81%</b> | <b>4.82%</b> | <b>4.84%</b> | <b>4.85%</b> | <b>4.87%</b> | <b>4.88%</b> |
| PV of coupon stream                     | 44           | 44           | 45           | 45           | 45           | 45           |
| PV of principal amount                  | 35           | 35           | 34           | 34           | 34           | 34           |
| <b>PV of new bond</b>                   | <b>79.00</b> | <b>79.00</b> | <b>79.00</b> | <b>79.00</b> | <b>79.00</b> | <b>79.00</b> |

Source: MoF, Eurobank EFG Research

**Option 4 - Exchange into New 15 Year Average Life Bonds at Discount: New Discount Amortizing Bonds**

Investors who choose *Option 4* will be able to exchange their eligible GGBs with a new government security, which will have a notional equal to 80% of the tendered (old) par bond and a maturity of 17 years, amortizing in five equal installments (i.e., by 20% per annum). Amortization of the notional amount will commence in year 13.

Under this option, 40% of the aggregate principal amount of the new discount amortizing bonds will be defeased by the payment on or before the issue date of an amount equal to 40% of the aggregate principal amount of the new discount amortizing bonds to or to the order of a trustee. The latter will purchase AAA-rated defeasance bonds paying, on a quarterly basis, a floating interest rate equal to the 3-month EURIBOR plus a spread determined by reference to the market cost of funding for such bonds. These bonds will have the same maturity and amortization payment schedule as the new discount amortizing bonds.

The coupon on the new bonds will be determined so as to result in a net present value of 79% of the face value of the eligible (old) bonds being tendered. The NPV of the new structure will be calculated as the sum of probability weighted cumulative amounts receivable by the investor discounted at a rate equal to the zero-coupon discounted rate, with a maturity date equal to the respective interest and principal amount payment date.

Cumulative amounts are calculated as the sum of:

- i) all interest and principal payments received from the Hellenic Republic to such date
- ii) 40% of the outstanding principal amount of the new discount amortizing bonds (being the assumed market value of the trust assets on such date), and
- iii) in the case of an *Early Release Trigger Event* (i.e. *sovereign default*), the sum of 60% of the outstanding principal amount

of the new discount amortizing bonds plus 1 year of accrued interest, in each case multiplied by the recovery rate assumption of 40%.

Probability weighting is calculated as year-on-year default probability derived from the assumed credit spread (i.e., the difference between 9.00% and the 15-year EUR swap rate) along with a 40% recovery assumption. More technical details for *Option 4* related e.g. to the scheduled release of trust assets and other relevant issues can be found in Greek MoF's web page [www.psiinfo.gr](http://www.psiinfo.gr)

### A relative value analysis

In this section we present the results of a relative valuation analysis we conducted in an effort to compare some of the quantitative aspects of the options proposed to investors under the Greek voluntary liability management transaction. Since the purpose of our analysis is primarily expositional, we choose here to present our results for the first three of the proposed options, skipping *Option 4* given its higher technical complexity. (From an accounting-treatment perspective, *Option 4* appears to be mainly suitable for insurance companies)

In Table 2.i below we summarize some of the key aspects of the options under consideration. Here, the initial coupon rates of *Options 1-3* are calculated based on the Euro 30 year mid-swap rate prevailing on 5 September 2011 and an assumed credit spread for the defeasance assets of 30bps. The coupon rates are such so as to result in a NPV of each of the structures examined, which is equal to 79% of the face value of the eligible GGBs tendered. Note that in the last line of Table 2, we present the calculated NPV of each of the structures, assuming that the stream of coupon payments is discounted by the current Greek bond yield curve instead of the flat 9.00% rate assumed in the proposed liability management exercise. Under this assumption, *Option 1* appears to be superior to *Options 2 & 3* in pure financial terms.

**Table 2.i – key aspects of Options 1-3**

|   | Option 1<br>Exchange into a<br>new 30-year <u>par</u><br>bond | Option 2 (*), (**)<br>Committed Financing<br>Facility | Option 3<br>Exchange into a new<br>30-year <u>discount</u><br>bond |
|---|---|---|--|
| NPV of proposed structure at the time of the launch of the liability management transaction (% of the face value of eligible GGBs tendered) | 79.0  | 79.0  | 79.0   |
| NPV of proposed structure estimated by discounting the coupon payments by the <u>current</u> Greek sovereign bond curve                     | 69.0  | 58.8  | 67.0   |

Source: IIF, Greek MoF, Eurobank EFG Research

(\*) In *Option 2*, the coupon and NPV of rollover bonds issued after Sept. 2014 will be determined at the date of issuance of these bonds

(\*\*) Calculation based on the 6.1% 20/08/2015 GGB (calculated coupon rates: 3.22% in years 1-5; 3.72% in years 6-10, 4.22% in years 11-30)

Table 2.ii below compares the estimated NPV values of *Options 1-3*, assuming that the coupon streams of the new bonds offered to investors are discounted by an assumed Greek bond yield curve that, post-exchange, undergoes a parallel shift (e.g. a downward one upon a successful transaction) from to its current position. Under most scenarios examined in Table 2.ii, *Option 1* again appears to be the most preferred one in pure financial terms.

**Table 2.ii – Scenario analysis: Parallel shifts in GGBs curve following the launch of the Greek voluntary liability management transaction**

|   | Option 1<br>Exchange into a<br>new 30-year <u>par</u><br>bond | Option 2 (*)<br>Committed Financing<br>Facility | Option 3<br>Exchange into a new<br>30-year <u>discount</u><br>bond |
|---|---|---|--|
| <i>Parallel shift in the GGBs curve by:</i> |   |   |  |
| - 750bps                                    | 97.8  | 88.8  | 99.8   |
| - 500bps                                    | 84.7  | 74.6  | 84.9   |
| -250bps                                     | 75.5  | 65.2  | 74.4   |
| 0 bps                                       | 69.0  | 58.8  | 67.0   |
| +250bps                                     | 64.1  | 54.1  | 61.4   |
| +500bps                                     | 60.5  | 50.8  | 57.2   |
| +750bps                                     | 57.5  | 48.2  | 53.9   |

Source: IIF, Greek MoF, Eurobank EFG Research

(\*) Calculation based on the 6.1% 20/08/2015 GGB

In a similar spirit to the scenario analysis presented in Table 2ii, the following table presents our NPV calculations for the three structures under examination, assuming now that the coupon payment streams are now discounted by a number of different (flat) exit yields.

**Table 2.iii – Scenario analysis: Different flat exit yields following the launch of the Greek voluntary liability management transaction**

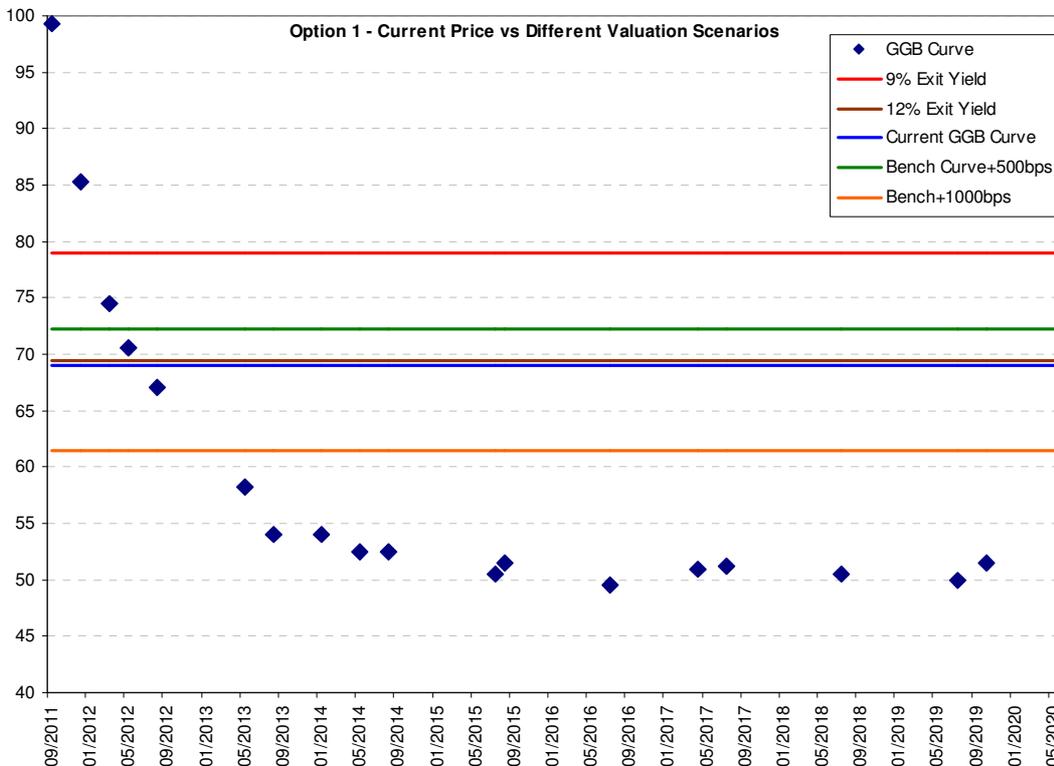
|                                       | Option 1<br>Exchange into a<br>new 30-year <u>par</u><br>bond | Option 2(*)<br>Committed Financing<br>Facility | Option 3<br>Exchange into a new<br>30-year <u>discount</u><br>bond |
|---------------------------------------|---|--|--|
| <i>Flat discount rate assumptions</i> |   |  |  |
| 6.00%                                 | 94.0  | 88.3   | 96.1   |
| 9.00%                                 | 79.0  | 74.3   | 79.0   |
| 12.00%                                | 69.5  | 65.5   | 65.3   |
| 15.00%                                | 63.2  | 59.6   | 60.8   |

Source: IIF, Greek MoF, Eurobank EFG Research

(\*) Calculation based on the 6.1% 20/08/2015 GGB

Further to the results presented above, the following diagram visualizes the NPV pickup to investors choosing *Option 1*, under different scenarios for *exit* (i.e., post-transaction) yields. The dots in Graph 1 present the current market valuation of the GGB curve and the lines the calculated NPV of the 1<sup>st</sup> option under five different assumptions for exit yields. Namely, a flat exit yield of 9.00%, a flat exit yield of 12.00%, a zero percent shift in the GGB curve, a benchmark (i.e., Spanish) curve + 500bps and a benchmark (Spanish) curve + 1,000bps scenario. As it is clearly demonstrated in the graph, assuming no sovereign default (and even under the assumption of a zero shift in the GGB curve post-exchange), investors choosing to participate in *Option 1* would realize a positive NPV pickup relative to old bonds maturing after 2012. That is, by choosing to extend their exposure to the Hellenic Republic.

Graph 1



Source: IIF, Greek MoF, Bloomberg, Eurobank EFG Research

As an additional exercise to compare *Options 1* through *3*, we estimate the value of the claim against Greece that private investors participating in the PSI scheme would have been entitled to in the case of sovereign default. As we clarified earlier the value of that claim would be determined as the difference between: **a)** the notional principal amount of the new (par or discount) bonds including all unpaid interest accrued through the day of acceleration and **b)** the accreted amount of the new par bonds defeasance assets on the day of acceleration of the new par bonds. For demonstration purposes Table 2.iv below assumes that a default occurs in  $t$  years after the date of the exchange (in our example we examine three scenarios, with  $t = 1.5$  years, 2.5 years and 4.5 years), with the respective recovery rate being  $x\%$  (where,  $x = 60\%$ , 50% and 40%). In the table below we skip the corresponding calculations for *Option 2*. (For new roll over par bonds issued immediately after the launch of the PSI transaction, the latter option becomes very similar to *Option 1*). As indicated in the Table 2.iv, the total value of the proposed structure on the date of default is generally higher for *Option 1* relative to *Option 3*, with the corresponding different declining over time and becoming zero at the maturity date of the new 30-year instruments.

Table 2.iv – total value of structure to investors on the date of default, under different default scenarios

|  | Option 1<br>Exchange into a new<br>30-year <u>par</u> bond | Option 3<br>Exchange into a new 30-<br>year <u>discount</u> bond |
|--|--|--|
| <b>Scenario 1</b>  |  |  |
| <i>(Number of years to default since day of launch of liability management exercise = 1.5 years ;<br/>Recovery rate = 60%)</i> |  |  |
| Accrued unpaid interest on notional principal<br>ammount   | 1.84   | 2.84   |
| Defeasance accreted ammount  | 38.05  | 31.34  |
| Private investor Claim against Greece  | 63.79  | 51.5   |
| <b>Total value of structure on date of<br/>default</b>   | <b>76.3</b>  | <b>62.24</b>   |
| <b>Scenario 2</b>  |  |  |
| <i>(Number of years to default since day of launch of liability management exercise = 2.5 years ;<br/>Recovery rate = 50%)</i> |  |  |
| Accrued unpaid interest on notional principal<br>ammount   | 1.84   | 2.84   |
| Defeasance accreted ammount  | 39.45  | 33.12  |
| Private investor Claim against Greece  | 62.39  | 49.72  |
| <b>Total value of structure on date of<br/>default</b>   | <b>70.65</b>   | <b>57.98</b>   |
| <b>Scenario 3</b>  |  |  |
| <i>(Number of years to default since day of launch of liability management exercise = 4.5 years ;<br/>Recovery rate = 40%)</i> |  |  |
| Accrued unpaid interest on notional principal<br>ammount   | 1.84   | 2.84   |
| Defeasance accreted ammount  | 42.41  | 36.99  |
| Private investor Claim against Greece  | 59.43  | 45.85  |
| <b>Total value of structure on date of<br/>default</b>   | <b>66.18</b>   | <b>55.33</b>   |

Source: IIF, Greek MoF, Eurobank EFG Research

**Concluding remark**

Notwithstanding accounting-treatment considerations (not touched upon in the present note), we believe that, from a pure financial perspective, it does make sense for a private-sector holder of eligible GGBs to participate in the proposed PSI scheme, in view of the positive NPV pickup he is likely to realize. In addition, following a successful liability management transaction, old GGBs would likely trade with even wider bid/offer spreads as they would become largely illiquid relative to the new instruments. Thanks to large principal amounts outstanding, the new bonds will become significantly more liquid, especially those corresponding to *Option 1*, in our view.

On the other hand, the new bonds will have longer maturities than the old GGBs, thereby given a longer-dated exposure to Greece. Furthermore, new GGBs will have much larger exposure to interest rate movements than the old ones, due to their longer maturity and AAA collateralization.

Needless to say that the benefits of a successful PSI would be significant to both private-sector creditors and the sovereign borrower. The latter would stand to enjoy a significant cash-flow relief and an improved solvency outlook due to the PSI. A more thorough analysis on the implications of the July 21 EU Council announcements for the evolution of Greece's borrowing requirement and public debt ratio can be found in our Greece Macro Monitor, 2 August 2011.

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