



- There are two possible responses to the Greek debt crisis: 'Plan A', continued official lending, for as long as needed, with possible voluntary private sector involvement, and 'Plan B', coercive pre-emptive or post-default restructuring with significant face value reduction in privately-held debt. Both options have risks, but it is necessary to move to Plan B sooner or later. The impact on Greece could be mitigated by foreign bank ownership and proper liquidity sup-



- The relatively small direct exposure of non-Greek euro-area banks suggests that direct spillover is a manageable risk. But contagion is a serious worry and there is a strong case for a thorough European Systemic Risk Board (ESRB) analysis. However, the Greek case is fundamentally different from the bankruptcy of Lehman Brothers. Also, other euro-area countries could well differentiate themselves from the three programme countries at a time when the probability of a Greek default is very high.
- There is a cautious case for delaying somewhat Plan B in order to prepare for it.
- Plan B is not an alternative to fiscal adjustment, structural reforms and proper reform or privatisation of state-owned enterprises, but a prerequisite for a successful fiscal consolidation.
- Plan B has no implication for an exit from the euro area.
- Restructurings in emerging countries during

1. Both Greece and Ireland have to implement very significant fiscal adjustments. But it is not only the size of the adjustment effort that matters. Our key indicator of solvency is the size of

consumption and investment;

- Confidence can plummet and amplify the output fall;
- Public-debt restructuring can lead to a collapse in the exchange rate, which adversely impacts all FX borrowers;
- Sovereign debt crises have coincided with banking and currency crises, amplifying the impact of each;
- The banking system has a crucial role. This involves several channels through which banks can be impacted and in turn impact economic activity:
 - Banks' assets suffer directly from public-debt restructuring;
 - There can be a bank run (deposit withdrawal) due to loss of confidence;
 - In the event of an exchange rate collapse, banks' unhedged FX positions can further compromise their balance sheets, as well as leading to losses on FX lending;
 - Shift from domestic currency to foreign currency deposits can fuel exchange rate depreciation;
 - The interbank market can freeze due to failing banks and lack of confidence;
 - Interest rate hikes, which typically accompany crises, can increase the cost of funding;
 - Flight to quality can impact weaker banks, as deposits can shift to healthier, often foreign-owned banks.

2. Quarterly data is more informative than annual data, which is exemplified by the case of Argentina. The default occurred in Q4 2001. A quarterly annual GDP was 11 percent lower in 2002 than in 2001, suggesting that there was a significant output fall, the default. But quarterly data clearly indicates that the dynamics were different (Figure 1): there was a sizeable output fall before the default and in the quarter of default, but after it there was a single quarter (Q1 2002) when GDP fell further. Note that the exchange rate collapsed in January 2002 with all the associated consequences for foreign currency borrowers and the banking system. GDP started to recover already in Q2 2002. According to Blejer (2011), stabilisation of the banking system played a crucial role in the quick recovery.

3. In answering this question I draw on IMF (2002) and Sturzenegger and Zettelmeyer (2006).



- the central banks, as governments have very limited resources in the midst of a crisis;
- Some sort of deposit freeze to prevent a further escalation of banking problems;
 - Some sort of restriction on capital outflows, in some cases even on current transactions, to keep money inside the country;
 - Giving up the fixed exchange rate in some countries. In six of the 12 cases the real effective exchange rate (REER) depreciated sharply either before or after restructuring (appendix Figure 1), which may have boosted exports. On average across the 12 cases, REER was 10 percent lower three years after the restructuring compared to two years before (with wide variations);
 - The direct wealth effect on households and non-financial corporations was limited: partly due to little direct holding of government papers, partly because certain groups of government-paper holders were excluded from the restructuring (eg households in Russia), and partly because pension systems were largely pay-as-you-go systems and therefore did not have significant government bond holdings;
 - Defaults and restructurings in several cases led

4. Analysing 106 episodes
of default and using a
stronger definition of default

The Greek situation is fundamentally different from these recent historical cases for the following reasons:

- Much higher debt level;
- Much more important role of banking in the economy;
- Being part of an integrated union;
- Lack of a stand-alone central bank;
- Lack of a stand-alone currency;
- EU regulations prevent the adoption of some measures (eg capital controls).

But there are nevertheless important lessons and implications for an eventual Greek restructuring.

First, the most important lesson from past crises is that the collapse of the banking system should be avoided. To this end, recapitalisation, continued access to liquidity and confidence will be needed to avoid bank runs. I argue in the next section that – after ensuring that Greek banks will have positive values after a restructuring – selling Greek banks to major euro-area banking groups would bring all of these elements and there are ways to support the Greek banks with liquidity.

Second, it is crucial to establish confidence. Concerning Greece, it is difficult to see how confidence can be restored in the absence of a sizeable debt reduction. Return of confidence in the event of debt reduction very much depends on the way the debt reduction is organised.

Third, while real exchange rate depreciation characterised six cases, in the other six cases (Dominican Republic, Moldova, Pakistan, Peru, Venezuela and the 2008 case of Ecuador) rapid economic growth was experienced after the restructuring without sizeable real exchange rate depreciation. Therefore, one cannot conclude that it is impossible to grow after a restructuring without real exchange rate depreciation. However, the non-depreciating countries had some special features (such as the reliance on oil revenues in the case of Venezuela) and the volumes of defaulted claims were generally smaller and quick solutions were found.

The risks of continued official lending without a significant debt reduction are numerous.

- 1 **Implementation risk:** domestic social and political developments, as well as resistance from the public sector, which fears the loss of privileges, may hinder the proper implementation of the programme, even if the prime minister is determined to push the programme through.
- 2 **Sufficiency risk:** even if the programme will be implemented in full and all planned privatisa-

- And it is uncertain if private-sector involvement, which is labelled voluntary, would not or would constitute a credit event: the ultimate decision rests on a committee (see Appendix 1), which may conclude that the rescheduling was partly forced.

Also, the interest rate to be applied to the rolled-over debt is in question: market rates would make the situation even more unsustainable (compared to the alternative of official lending), while the incentive for low (ie non-market) rates is zero, unless senior creditor status or collateral is provided, which are not justified by the situation.

Having said that Plan A, even with a 'voluntary' roll-over of banks' exposures, is unlikely to work, the implications of Plan B should be assessed. This is a very difficult and contentious task. Under Plan B, I envisage a sizeable reduction in the net present value of Greek public debt⁸. Therefore, I do not consider other alternatives, such as a partially coercive debt exchange with the same face value (Roubini, 2011a), because that would not solve the solvency problem and would just postpone the necessary debt reduction by some years; see also Pisani-Ferry (2011). Therefore, I judge that Plan B will constitute a credit event and its consequences should be assessed.

Before discussing Plan B, two important features should be highlighted.

- First, Plan B is not an alternative to fiscal adjustment, structural reform and proper

reform or privatisation of state-owned enterprises: these should continue. But Plan B is a necessary condition for achieving a successful fiscal adjustment.

- Second, the Greek government will need official financing after a restructuring or default, albeit at a reduced level compared to Plan A. This is because Greece still has (and is forecasted to have, see Table 1) a budget deficit, including a primary deficit. Market access may return once a sustainable situation has been achieved, but there will be an interim period and given the specific features of the Greek situation (see section 3.3), it is difficult to foresee the length of this period.

Plan B can be a coercive debt exchange before actually declaring a default, or a restructuring post-default. The impact of the second possibility would likely be more damaging. Worries about a Greek restructuring can be divided into two main categories:

- Possible impact on Greece, and
- Possible spillover/contagion effects for the rest of the euro area and even for countries outside the euro area.

With regard to the impact on Greece, the direct wealth effect on households and non-financial corporations from a haircut for government debt may not be too large. According to estimates by Barclays Capital (2011), €29 billion of the €284 bil-

residents other than banks, insurance companies, mutual funds, pension funds and monetary authorities. Altogether, these holdings constitute approximately 15 percent of GDP. Some of these holders may have already marked to market their holdings, implying that the additional impact of a haircut might not be large. The drag on economic growth (through reduced demand due to wealth effect) also depends on the distribution of these holdings among the various investor groups.

The main concern is the stability of the Greek banking system. For the banks, the crucial issues are new capital (as losses will likely wipe out current capital), access to liquidity (as the defaulted bonds will likely be not accepted as collateral by the EAa

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obligations, or when a major counterparty fails.

well below the government bond yields of their sovereigns. This is most likely a euro-area effect, since the private sectors in non-euro area countries pay rates above their sovereigns as the sovereign is typically considered the benchmark. But in the euro area another sovereign can also serve as the benchmark. Therefore, following an exit from the euro area, the Greek private sector would face much higher interest rates (in real terms as well) with negative implications for growth and welfare.

A Greek debt restructuring would directly impact the ECB through:

- The ECB's own Greek bond holdings, which were acquired through the Securities Market Programme (SMP), and
- The Greek bonds that banks placed as collateral for ECB liquidity.

The indirect channels may relate to:

- Financial stability of the euro area, and
- A change in the economic and inflationary outlook of the euro area.

The lack of proper transparency of the SMP makes it difficult to assess the impact of an eventual Greek debt restructuring on the ECB's balance sheet. Market estimates suggest that the ECB bought Greek government bonds for approximately €40 billion at market prices, which could be €50 billion at face value. I do not want to speculate about the required haircut in the event of a restructuring, but for illustration I can consider a 50 percent reduction in the net present value of debt, which is a typical estimate of some analysts. This would lead to an approximately €15 billion loss for the ECB, which should be borne by member states according to their capital share in the ECB. Yet in past restructurings, several countries excluded certain investor groups from losses. The ECB holdings of Greek debt may also be excluded.

The ECB's position of excluding defaulted bonds from eligible collateral is justified. However, the Eurosystem should prepare for an eventual Greek debt restructuring, and other ways to support

Greek banks with liquidity should be explored (section 4.2.1) and made instantly available in the event of a sudden disorderly default.

As discussed in the preceding sections, it is hard to predict the likely impact of a Greek public-debt restructuring on the euro area's financial stability. The ECB should stand ready to safeguard euro-area financial stability in the event of adverse effects, as it did during the financial crisis.

Finally, it is also difficult to predict the likely impact of a Greek public-debt restructuring on the economic and inflationary outlook of the euro area. However, a debt restructuring (or the lack of it) should not impact the conduct of monetary policy, which should consider euro-area aggregates.

There is a growing recognition that the Greek government will not be able to borrow from the market anytime soon, and there is an intense debate about possible responses. The so-called 'Plan A', continued official lending with perhaps voluntary private-sector involvement, is unlikely to work and has various risks, including the hoarding of all Greek debt by official creditors and the potential of a political crisis. The hoarding of all Greek public debt in the hands of euro-area partners ('debt socialisation') may not serve the best interests of Greek and other EU citizens, and would also require wide-ranging changes to the functioning and the institutional framework of the EU, which does not seem to be a political reality at present. A sufficiently large debt reduction is not pre-emptively negotiable without coercion. 'Plan B', which should entail a significant debt reduction in privately-held Greek sovereign debt, is therefore necessary. But it is also risky: it has the potential to create significant adverse effects within Greece and beyond its borders. But since it is necessary, European policymakers should prepare for a Greek debt restructuring, because an unplanned default would have more serious impacts.

Debt restructuring in Greece is not an alternative to fiscal adjustment, structural reforms and proper reform or privatisation of state-owned enterprises, but a prerequisite for a successful fiscal consoli-

dation. Debt restructuring does not have an implication for exit from the euro area.

There are various way in which a sovereign debt restructuring can undermine economic performance and there are serious domestic costs. Yet restructuring in emerging countries during the

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involves taking on an offsetting position rather than transferring the contract to another counterparty. The published calculated with reference to individual market participants, and are equal to the sum of net protection bought (or sold) by net buyers (or net sellers). As such, they represent the maximum possible net funds transfers between net sellers and net buyers. In practice, amounts transferred will be lower. The cash settlement procedure involves transferring only the difference between the notional value of an insured bond, for instance, and its market price/the recovery rate.

Statistics on the net positions of individual counterparties are not available. This hinders the evaluation of systemic risk.

Dave Manuel's website (<http://www.davemanuel.com/2010/02/12/the-last-13-major-sovereign-bond-defaults/>)

