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Did emergency liquidity assistance (ELA) of the ECB delay the bankruptcy of Greek banks?

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Agenda

1. Introduction

The European Central Bank (ECB) increased the emergency liquidity assistance (ELA) for Greek banks from €50 billion in February 2015 to approximately €90 billion in June 2015. Its actions were accompanied by a discussion among academics, politicians and practitioners regarding the legitimacy of the ELA. Some have even accused the ECB of deliberately delaying the bankruptcy filing of already insolvent Greek banks.

We take the claim regarding insolvency delay as an opportunity to highlight the underlying economics of the ELA program and discuss its legitimacy in the current situation. We start by characterizing the complex interrelationship of the European Union, the ECB and the Greek banks through the lens of financial economics, with a particular focus on the political economy of a monetary union with incomplete fiscal union (or fiscal consolidation). Combining these two issues, we examine the decision of the ECB to continue the provision of ELA to Greek banks. Our conclusions, drawn from the analysis, do not support the claim that the ECB's actions are consistent with a delayed filing for insolvency.

2. The economics of bank runs and lender of last resort financing

Researchers distinguish between bank runs which are due to a worsening of bank fundamentals ("efficient run") and those which are due to unsubstantiated worries about a bank's health but occur because of a coordination failure among depositors ("sunspot run").

Sunspot runs are considered to be inefficient as they threaten the solvency of otherwise healthy banks. If a greater than expected share of depositors withdraws its deposits, the bank faces liquidity problems. If no liquidity help is granted from other financial institutions, then this will threaten the solvency of the bank. Even a bank with a sound business model will experience financial distress, if it is suddenly forced to fire-sell its assets. A bridge loan granted, for instance, by a central bank can resolve the sunspot run: the provision of liquidity convinces depositors that the bank can pay back its deposits.

To avoid bank failures that occur because banks are (temporarily) illiquid, Bagehot (1873) calls for a so-called *lender of last resort* (LOLR), standing ready to provide funds to illiquid but solvent banks. Central banks have typically assumed this role, as they are best suited to credibly offer liquidity to banks in today's financial system.

The Eurosystem provides LOLR facilities to distressed banks via the national central banks (NCBs). A tool for extraordinary times of financial turmoil is the provision of central bank credit through ELA, which is the provision of central bank money or other assistance to solvent but illiquid institutions in a country by its NCB. Responsibilities lie with the NCB, but the ECB's Governing Council may restrict the provision of ELA if it "considers that these operations [i.e. the provision of ELA] interfere with the objectives and tasks of the Eurosystem."[6] According to the "ELA guidelines", the ECB, as the central bank in the Eurosystem that governs monetary creation, can object ELA with a two-third majority vote cast.

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[6]https://www.ecb.europa.eu/pub/pdf/other/201402_elaprocedures.en.pdf?e716d1d560392b10142724f50c6bf66a

3. Political economy of a currency union with missing fiscal union

The question of liquidity assistance and bank solvency needs further examination if a bank operates in an environment that renders the viability of its business model and solvency considerations contingent on political decisions at a higher level outside the bank's scope.

Clearly, the solvency of a bank depends on the solvency of its borrowers. As became obvious during the recent European sovereign crisis, problems tend to arise if a major borrower of a bank is also its sovereign. Worse, the problems amplify if the sovereigns' solvency depends on decisions regarding the provision of funds on a supranational level. The euro zone is a currency union without a fiscal union and thus the decision to provide additional funding to a country of the currency union, in times of financial distress, depends on a consesus among European policy makers. This became apparent during the financial crisis and additional funding for the distressed Greek government depends on the Troika and/or the euro zone finance ministers.

Everything else constant, a bank with outstanding loans to its national government will be considered solvent if this government is itself solvent (i.e., runs a viable fiscal policy) or receives sufficient financial assistance in case of financial troubles from third parties, such as loans from the ESM, IMF or other institutions. By this link, the higher level decision of supranational political bodies, whether or not to grant assistance to troubled countries, also bears on the solvency of a (national) bank.

Depositors will reasonably condition their behavior, (and whether to run on a bank), on the outcome of the decision-making process at the supranational level and this "politically-induced fundamental bank run" is based on a rational consideration about whether or not the political bodies will take a bail-out decision at a later date. Note that this is an important insight: the assessment of a national bank's solvency is intertwined with the decision at the higher level. Political and/or fiscal decisions leading to a financial rescue of a sovereign indirectly also lead to the maintained solvency of its banks. By the same line of argument, if a needed rescue package is denied at the supranational level, then the country's banks are likely to become insolvent, and ELA has to be rejected.

4. Putting the pieces together: Greece 2015 – a case of delayed filing of insolvency?

Since the onset of the Global Financial Crisis, the Greek banking sector has been recapitalized twice. The first recapitalization of Greek banks happened in November 2008 and was organized by the Greek government.[7] The second recapitalization program was part of the second economic adjustment program for Greece organized by euro area institutions and the IMF.[8]

Clearly, a comprehensive and detailed analysis of the current solvency of the Greek banking sector requires bank-specific portfolio data, as well as information obtained from ongoing supervision and monitoring of Greek banks. Since these data are not publicly available, we provide a short assessment of the Greek banking sector based on publicly available data and

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[7] See European Commission (2008).
[8] See European Commission (2013).

information obtained from the recent (October 2014) ECB's Asset Quality Review (AQR) as well as the stress test.

The most recent book capital and regulatory capital ratios (before Syriza took power) suggest that Greek banks are sufficiently capitalized (by international standards) and may therefore be considered to be *solvent*:

- equity-to-asset ratio (as per Dec. 31, 2014; weighted average across 4 SSM banks): 9 percent
- CET1 ratio (as per Dec. 31, 2014; weighted average across 4 SSM banks): 13.96 percent

Similarly, data provided by SSM (ECB) and information from the most recent stress test suggest that capital shortfalls in a severe downturn would be small relative to banks' book equity or relative to Greek GDP. We use two shortfall measures:

- Regulatory shortfall measure (the ECB's official assessment): The stress scenario is the adverse scenario. The regulatory benchmark is the Common Equity Tier 1 (CET1) ratio that is defined as CET1 capital divided by risk-weighted assets (RWA). The ECB applies a hurdle rate of 5.5 percent in the adverse scenario. The calculated capital shortfall in this scenario is €8.7 billion, which is about 30 percent of the Common Equity Tier 1 (CET1) capital of these banks at this time.
- SRISK: The stress scenario is a systemic financial crisis with a global stock market decline of 40 percent. SRISK is our measure for a bank's capital shortfall in this scenario, assuming a 5.5 percent prudential capital ratio with losses approximated using the VLAB methodology to estimate the downside risk of bank stock returns. The calculated capital shortfall in this scenario is €4.4 billion or about 17 percent of the banks' CET1 capital.[9]

Figure 1: Aggregate banking sector deposits and repos of non MFIs
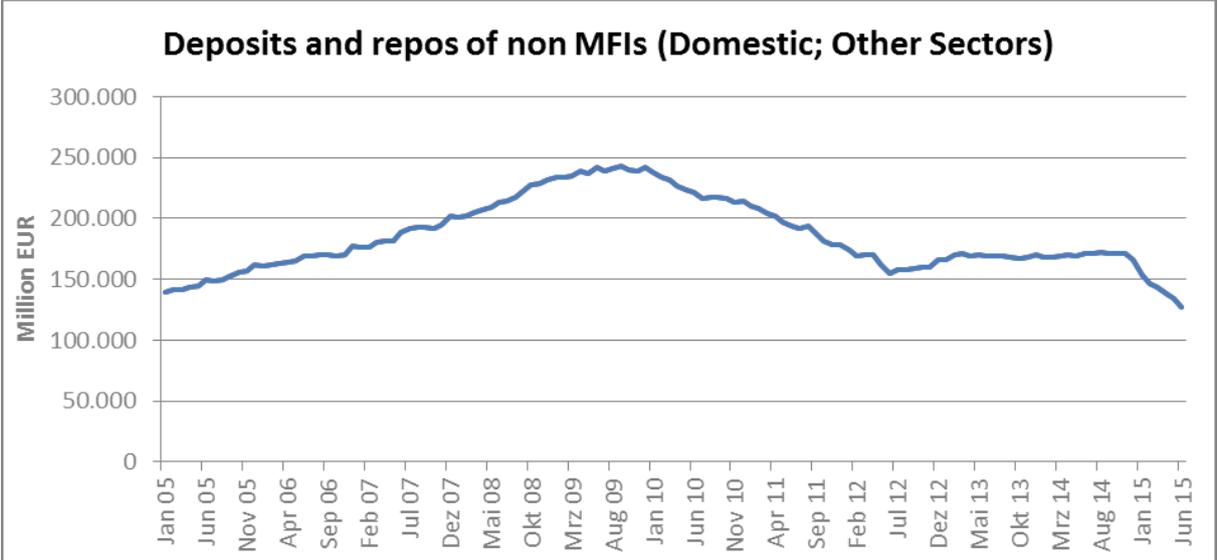
Data Source: Greek central bank

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[9] This capital shortfall measure has been implemented based on Acharya at al. (2012) and Brownlees and Engle (2015). The data are provided by New York University's VLAB (http://vlab.stern.nyu.edu/welcome/risk/). The theoretical motivation for the measure can be found in Acharya et al. (2010). Acharya and Steffen (2014a,b) use this methodology as benchmark test to investigate potential weaknesses of the AQR.

Since the stability of the Greek banking sector was indicated by the ECB's AQR and stress test results, concerns regarding the solvency of Greek banks probably did not enter the discussion regarding the magnitude of the ELA to Greek banks, which were already in place by late 2014. Moreover, after 2012, the depositors' run on Greek banks did not occur until the new Syriza government took power and the risk that Greece might leave the euro area increased. As shown in Figure 1, the withdrawals of deposits considerably accelerated, following the change in government.

An interpretation of the rationale behind the ELA decision

In its lender of last resort role, the ECB shall evaluate the solvency of national banks based on the status quo and not take into consideration how its actions will affect the decision making progress at a higher level. Political decisions need to be left to the democratically legitimized decision-makers. The lender of last resort, in contrast, shall base his decision to provide liquidity only on the current solvency of banks in the spirit of Bagehot. A dilution of the lender of last resort responsibilities would undermine the ECB's credibility and its ability to avoid banking crises triggered by bank runs in the future.

Let's turn to the decision of ELA financing in the case of Greece, where the agreement of higher-order policymakers, concerning the support for the troubled sovereign, became central. If ELA is extended, Greek banks will continue to operate until the higher-order decision process is completed. Conversely, if ELA is terminated, Greek banks are immediately illiquid, leading to a depositor run, possibly rendering the entire banking system instable. Most likely the functioning of the real economy would be severely inhibited, putting further constraints on the decision regarding a Greek rescue package.

A termination of ELA by the ECB would have preempted the higher-order decision-making process of policy makers at the supra-national level. Hence, there is no alternative route for the ECB Governing Council in the current setting – where the health of sovereigns and the banking sector are so intertwined – than to prolong and extend the ELA credit line, until a decision at the supra-national level is found. As a result, we conclude that the ECB's course of action is commensurate with its role of a lender of last resort. From an economic point of view, it cannot be classified as delaying the filing for insolvency.

5. Conclusions and recommendations

Our analysis comes to the conclusion that the ECB's ELA decision can be justified on the grounds of the stand-alone AQR data for Greek banks from October 2014, or other suitable valuations of the banks' businesses. We conclude by highlighting two supplementary issues relevant for policy considerations surrounding the ELA instrument and bank solvency assessments:

First, the evaluation of stand-alone bank solvency by market participants, required to assess the motives for and against an "efficient" bank run as well as the soundness of banks' business models, is greatly impeded by a lack of data. As a result, discussions among market participants and commentators in the public domain seem to be based primarily on speculation as opposed to factual evidence. We therefore ask for greater transparency, e.g. relating to stress test results.

Second, transparency regarding the central bank's actions as the lender of last resort would help to better understand its actions in times of crises. This is particularly relevant for the current institutional setup of the euro zone, which may push the central bank in a corner, where its actions can be interpreted as pre-empting the political decision-making process. Hence, we encourage the ECB to be less opaque in explaining its motivation for providing ELA and to disseminate more detailed data on the size and composition of outstanding ELA positions.

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