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Was the Cyprus crisis banking or sovereign debt?

Abstract

The complexity of the Cyprus crisis makes answering the question posed in the title difficult, while the policy implications make the question important. However, the answer to this question unavoidably points the finger to those responsible, and as a result the quest for an answer is clouted by politics. In this paper the authors use a systematic analysis of the data to find answers. Relying on literature of Early Warning Systems a model is built to determine: (1) When did it become apparent that the Cyprus economy was headed for a crisis, and (2) Could the crisis have been averted if either public finances or banking sector balance sheets were managed differently? The results show, first, that there were early warning signals for an impending crisis, coming as early as 2009-2010, and much before the Cyprus sovereign was cut off from international markets. Second, there were signals for a banking crisis starting in 2009-2010, and signals for a sovereign debt crisis starting in 2010-2011. Both sovereign and banks were headed for a crisis, independently of each other, although, of course confounding factors were also present.

Keywords: financial crisis, sovereign debt, banking crisis, early warning systems, Eurozone, Cyprus.
JEL Classification: E32, E44, E63, F32, F34, G33.

Introduction

Cyprus was the fourth Eurozone country to request international assistance in dealing with the Great Recession, following Greece, Ireland, Spain and Portugal. While the amounts involved are small in absolute numbers – the assistance package was EUR10 bil – the intensity of the crisis and the measures adopted have been unusual. Cyprus economy shrunk by 11% during the period 2011-2014 and unemployment peaked to just below 17%. Bank un-insured depositors were bailed-in, a first in Eurozone countries. The bail-in tool has, since, become official bank resolution policy for the EU[1]. Unusual have also been the conditions leading to the crisis. Banking sector assets, financed mostly by foreign depositors, reached almost 800% of the country's GDP and calls were repeatedly made for re-thinking the business model (Stephanou, 2011). Exposure to the Greek government PSI was about 24% of GDP, a real estate bubble was formed the years preceding the international financial crisis, and government deficit spending accelerated as the international crisis was developing. All these factors contributed to the collapse of the Cyprus economy in a combination characterized as a *perfect crisis* by Zenios (2013b), a term also used by the head of the IMF Cyprus mission in statements to the press upon the end of her assignment[2]. This reference provides a descriptive narrative of the country's road to the crisis, emphasizing the rate of increase of sovereign debt, high private indebtedness and declining competitiveness, in addition to "banking hubris". Several papers analyze the critical period 2011-2013, (Apostolides, 2013; Michaelides, 2014; Zenios, 2014).

A question that is repeatedly raised is whether the Cyprus crisis was a banking crisis or a sovereign debt crisis. An Investigation Commission appointed by the President failed to shed light on the issue as a majority of the Commission member judges blocked any investigation into the failed bank (Laiki aka Cyprus Popular Bank), and (also by majority) limited its investigation into the role of the Central Bank to depositions by the two Governors at the crucial period. A report prepared by one of us, as an expert advisor to the Commission, based on the study of CBC and ECB documents and analysis of data, was not adopted by the majority and was classified as confidential. However an analysis based on publicly available information published by Zenios (2014) reveals Central Bank failures.

The above references describe different aspects of the crisis, thus highlighting that fact that complex systems fail in complex ways and one cannot easily disentangle the factors. Zenios (2013b) bypassed the banking-or-sovereign question by adopting the "joined at the hip" argument between sovereigns and banks of (Mody and Sandri, 2011). Clerides (2014) argues that this is the wrong question to ask, and makes an important point that "property bubbles are not just good for bankers and developers, they are also good for governments". While Clerides' point is valid we, obviously, disagree that this is the wrong question as we learn much by answering it.

On the other hand Orphanides (2014) argues that the "main cause of the collapse is identified with the

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[1] The Directive for recovery and resolution of credit institutions was in proposal form to the European Parliament at the time when decisions were made about Cyprus and issued a year later on 17 May 2014; available at: EUR-Lex http://eur-lex.europa.eu/legal-content/EN/TXT/?uri=celex:32014L0059.

[2] Delia Velculescu on SIGMA TV program 60 Minutes, available at: http://www.sigmalive.com/news/oikonomia/100560/velkouleskou-sta-60-lepta-ftiaksate-tin-teleia-kataigida.

election of a communist government in February 2008, within two months of the introduction of the euro, and its subsequent choices for action and inaction on economic policy matters". Orphanides was the Governor of the Central Bank of Cyprus during the period 2006-2011, and he has been vilified by the government, as "negligent in arresting the catastrophic practice of casino banking"[1]. A report prepared in 2014 for Cyprus' newly elected President Nikos Anastasiades by his staff lays the blame squarely on the previous Government and the two previous Central Bank Governors[2]. In our opinion, this (anonymous) report is the best source to understand the *intensity of the controversy*, although it does not settle it as it mixes verified data and (leaked) ECB documents, with unverified sources, mis-interpretation of EU Treaties and a hefty dose of exaggeration.

In this paper we search for an answer to this question. Among the Eurozone crisis countries, the Greek crisis started as sovereign debt and spilled over to banking with the PSI (Private Sector Involvement in restructuring Greek sovereign debt). The Irish banking crisis became a sovereign crisis once the government decided to guarantee all bank depositors and bail them out using taxpayer money. The answer for Cyprus is more nuanced and we employ an Early Warning System (EWS) to investigate systematically if, and when, warnings could have been issued for an impending crisis. An EWS allow us to answer two questions:

a) When did it become obvious that a crisis was impending?
b) Which factors contributed to the crisis?

The results show that there were early warning signals, only if someone was watching. It also turns out, as anticipated by the literature cited above, that the country reached crisis situations though a confluence of factors relating to both the banks and the sovereign. It faced neither a pure Irish-style banking crisis, nor a pure Greek-style sovereign debt crisis. Therefore both sides of the debate – bankers and their regulators, and the custodians of public finance – bear responsibility. And this raises another question that can be addressed by an EWS:

c) If either one of the two parties had managed its balance sheet differently, could the crisis have been averted, or each party was doomed due to the mistakes of the other?

This question is settled using EWS under alternative scenarios.

The paper is organized as follows. Section 1 discusses early warning systems, presents the time series of crisis-driving factors for the 10-year period leading to the crisis and identifies the signals emitted by the data. Section 2 discusses the EWS system we use, based on Manasse and Roubini (2009) and applies it to the Cyprus data to identify early warnings about the impending crisis and the contributing factors. Finally, Section 3 carries out scenario analysis to answer the question of the title. Conclusions are drawn in the final section.

1. Crisis driving variables and warning signals

Since the collapse of the European Exchange Rate Mechanism in 1992-1993, the Mexican peso crisis of 1994, and the currency crises of Asia in 1997-1998 there has been intense research interest in developing early warning systems for impending crises. For overviews see Reinhart and Rogoff (2009), Gramlich et al. (2010).

Early warning systems are functional, data-driven models that aim to establish a causal relationship between observed variables and past crises. Identifying relevant variables and establishing the link with past crises could, potentially, alert policy makers of the risks for future crises. EWS are grounded in economic theories of financial crisis and provide warnings on an objective, systematic basis.

Development of an EWS is fraught with pitfalls. As Gramlich et al. (2010) point out in their critical review, EWS are built on two fundamental assumptions: (1) stability of relations between crises and crisis-driving factors, and (2) crisis-driving factors can be identified *ex ante*. However, crises are caused by a variety of reasons and it is hard to identify a few variables that could predict any crisis. Furthermore, such predictive models suffer two types of errors: failing to give a warning signal when a crisis is forthcoming, or giving a false alarm. An assessment of their predictive power is based on the noise-to-signal ratio and given data limitations – past observations are limited to a few hundreds of crises for a few dozen countries-definitive conclusions are elusive.

For instance, the oft-cited paper (Kaminsky and Reinhart, 1999) finds "only one variable – the size of the equity market run-up prior to the crisis – that is a robust predictor of crisis severity", while recent research from the European Central Bank (Babecky et al., 2014) finds "the ratio of domestic private

[1] See the press release by the Cyprus left party AKEL http://www.akel.org.cy/?p=4314 of Nov. 26, 2014 and the written statement issued by ex-President Dimitri Christofias on Nov. 20, 2014, http://www.sigmalive.com/news/politics/182286/xristofias-tragikoi-kyvernisi-kataskevazei-themata.

[2] Landon Thomas Jr., Nov. 18, 2014, *Cyprus government report points fingers on bank collapse,* NY Times, available at: dealbook.nytimes.com/2014/11/18/cyprus-government-report-points-fingers-on-bank-collapse.

credit to GDP represents the most consistent early warning indicator of banking crises". These papers use different data sets and hence their differences. The first uses a sample of 20 countries for the 1970-1995 for 26 banking crises and 76 currency crises, the second uses quarterly data from 40 countries for a period that encompasses 1,047 quarters of banking crises, 343 quarters of currency crises, and 90 quarters of debt crises. As Rose and Spiegel (2009) point out "if the causes of the crises differ across countries, there is little hope of finding a common statistical model to predict them".

Limitations aside, the above literature provides an extensive list of variables that warn for impending crises. Gramlich et al. (2010) summarize 17 variables that have been used by twelve studies in explaining systemic crises. Ten of the variables refer to the national and international economies, while seven refer to the financial system. Recent work at ECB starts with 100 variables, narrows them down to 30 and carries out extensive analysis to identify the ratio of domestic private credit to GDP as the most consistent early warning indicator (Babecky et al., 2014). It also finds that rising domestic private credit precedes banking crises, while rising money market rates, FDI inflows, world GDP and inflation are also leading indicators, and point out that "a combination of several early warning indicators delivers a better-performing early warning model compared to a single early warning predictor".

1.1. Indicators for the Cyprus crisis. An EWS that combines several indicators to build a "rules-of-thumb" tree is given by (Manasse and Roubini (2009). We use this work, together with the findings from the ECB study (Babecky et al., 2014), to select crisis-driving variables for Cyprus. We use these two studies as they include variables warning for both banking and sovereign crises. In the next section we combine all indicators using the rules-of-thumb tree.

From these two studies we arrive to the following indicators:

1. Domestic private credit to GDP.
2. External debt to GDP.
3. Short-term debt to reserves.
4. Public external debt to fiscal revenues.
5. Real GDP growth.
6. CPI inflation.
7. External financing requirements.
8. Number of years to the next presidential election.

The first one is chosen as the robust indicator from the ECB report for predicting banking crisis. The other seven are the indicators used in the rules-of-thumb tree for predicting sovereign crises. The tree was built using thresholds established from empirical analysis of a dataset containing annual observations for 54 crises in 47 emerging market economies during the period 1970-2002; see Table 1. When a variable exceeds the thresholds then the risk for a crisis increases. In Section 3 we use the tree to combine multiple indicators, but first we look at each indicator separately.

Table 1. Thresholds for entering the crisis zone (Data from Manasse and Roubini, 2009)

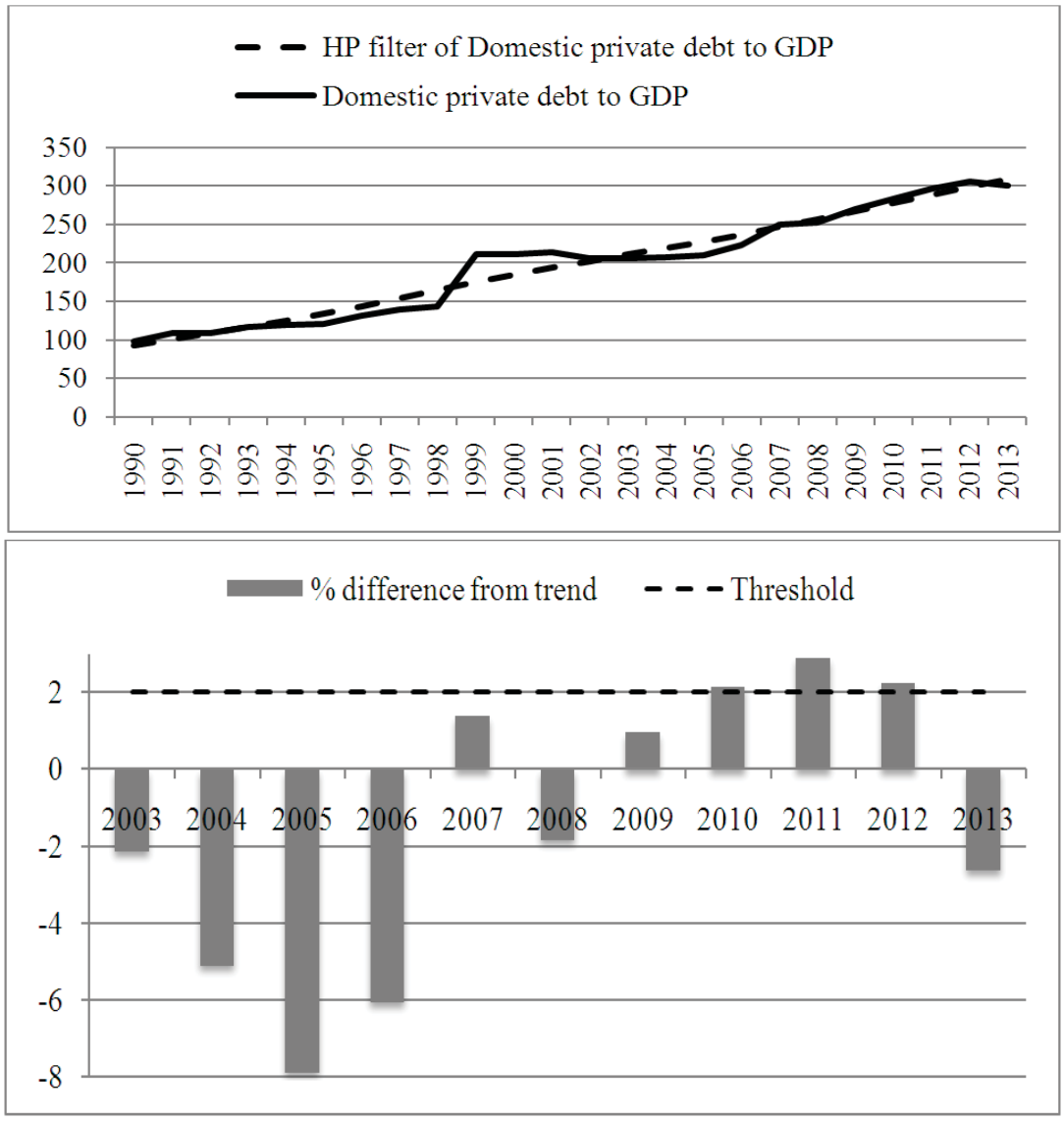
External debt to GDP	>50%
Short term debt to reserves	>134%
Public external debt to revenue	>215%
Growth	<-5.5%
Inflation	>10.5%
External financing requirement	>1.44

1.2. Times series and warning signals from the Cyprus indicators. We provide here the time series of crisis-driving factors for the 10-year period leading to the crisis, and look at their signals.

1.2.1. Domestic private credit to GDP. Domestic credit to private sector refers to financial resources provided to the private sector by financial corporations. According to the ECB study, if the ratio of domestic private credit to GDP deviates by more than 2% from its trend value, this would be a warning signal that the risk of future banking crisis has increased. We use data from the World Development Indicators of the World Bank and the Hodrick-Prescott (HP) filer to determine the trend. Results are shown in Figure 1. This indicator was giving warning signals since 2010. This indicator is considered robust, and hence these warnings should have been heeded.

A weaker warning is also given, according to the ECB study, "if the ratio of domestic private credit to GDP just exceeds its trend trajectory". According to the authors "a policy maker who considers missed crises to be as costly as false alarms should take it as a warning signal that the risk of future banking turmoil has increased." With this condition we notice a warning at 2007 but the country adjusted by 2008 in preparation for joining the Euro. A potential risk was also identified in 2009 and by 2010 the warning signal was clear. Ignoring these warnings was catastrophic as argued by Michaelides (2014) and Zenios (2014).

Fig. 1. Domestic private debt to GDP and its long-term trend (top) and deviations from the trend for the period 2008-2013 (bottom)

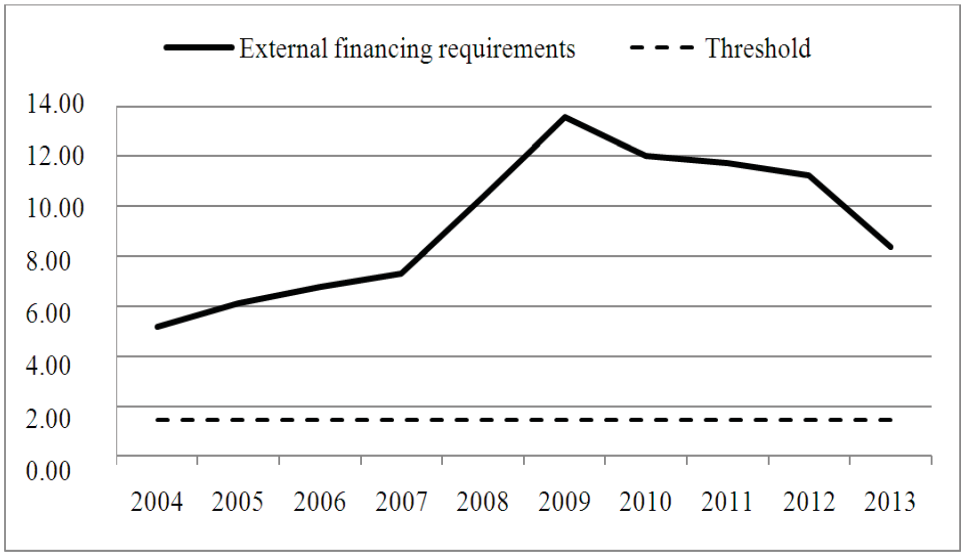


Source: WDI and authors' calculations.

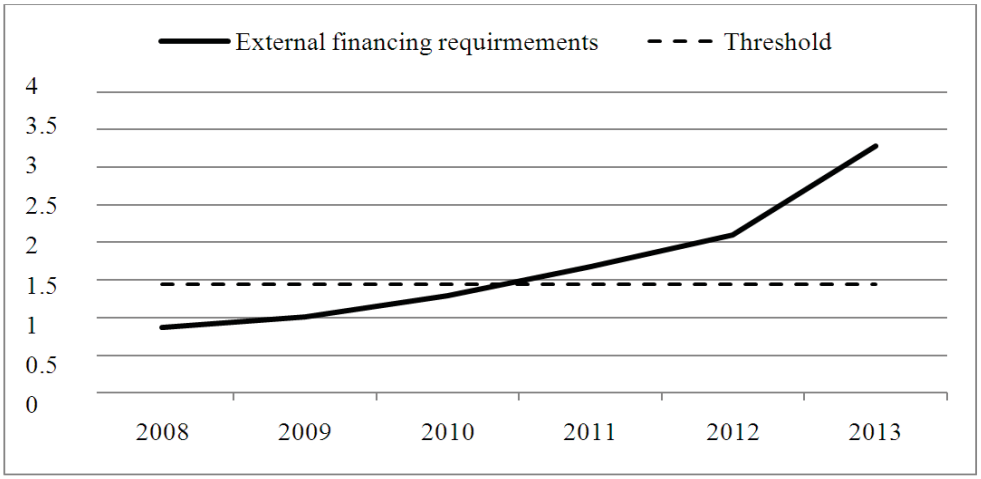
1.2.2. External debt to GDP. The country's external debt to GDP ratio is shown in Figure 2 (top) where it is observed that throughout the period of observation it exceeds significantly the 50% threshold. The country was potentially in a crisis zone, although this indicator, by itself, is not sufficient.

There is a special feature of this indicator for Cyprus that makes its signals dubious. According to the Central Bank, the external debt figures include, among other things, non-resident deposits and other capital (intercompany lending which is included in foreign direct investment). As non-resident deposits are covered by strict macro-prudential regulations issued by the Central Bank, requiring banks to maintain a substantial part of their non-resident deposits in liquid assets, this indicator should presumably be safer for Cyprus than for other countries in the samples used to extract this indicator. Regulations regarding foreign currency deposits are very strict in the case of Cyprus imposing a minimum liquidity ratio of 70%. Hence, in assessing the information content of this indicator we would need to adjust for the above factors. For instance, if 70% of deposits is maintained in liquid reserves, then the net external debt can be downward adjusted by this factor. Figure 2 (bottom) shows the external debt net of liabilities of monetary authorities and financial institutions, and we see that it crosses the threshold by 2010. We test alternative modes of managing external debt in the next section, when we integrate this variable in the rules-of-thumb tree.

Fig. 2. External debt to GDP (top: total; bottom: excluding monetary authorities and financial institutions)



Source: Central Bank of Cyprus.



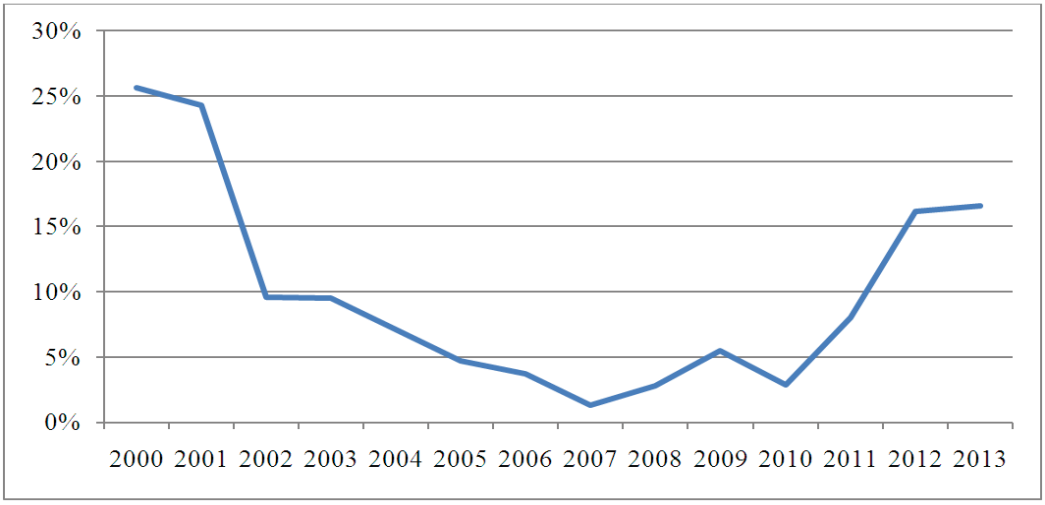
Source: Central Bank of Cyprus and authors' calculations.

1.2.3. Short-term debt to reserves. The short-term debt of the general government is shown in Figure 3. The country was following a policy of reducing short-term debt from 2000 to 2007, but there is a tendency to reverse this policy during 2008-2010, and short-term borrowing accelerates from 2010.

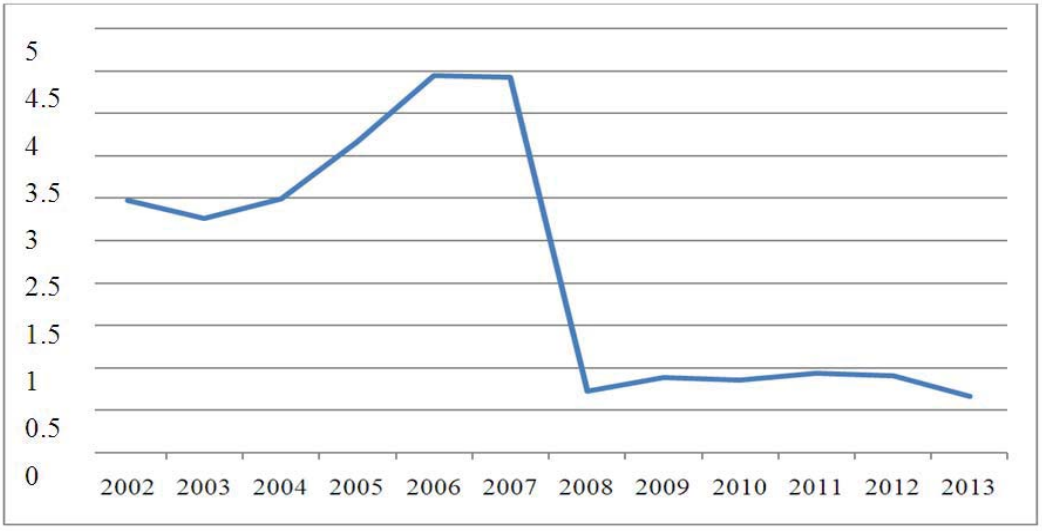
It is worth noting that in 2010 the Public Debt Management Office moved from the Central Bank to the Ministry of Finance. The Ministry engaged in short-term borrowing as a means of reducing the cost of debt, a policy articulated by the Minister at the time, Charilaos Stavrakis, in his deposition to the Investigation Commission: *"we changed part of public debt to floating rate and took advantage of market opportunities, and this brought about profits of EUR 29 mil. for the Republic. It was one more indication of how much better public debt was managed"* (Zenios, 2013a, p. 26, translation ours). Another argument can be made here – and has been made in the public debates – that the government resorted to short-term debt as it could not obtain long-term funding because of the risks of the large banking sector. That is, foreign investors would not lend long-term to a sovereign that could not credibly guarantee its large and fragile banking system. This argument is plausible, however data for the period up to 2010 show very small spreads between long and short-term borrowing (average 50 bp.), and therefore long-term borrowing was possible. In any event, this was not the argument in the mind of the key policymaker at the time, Minister Stavrakis.

During this period the country's reserves were reduced upon joining the euro. Reserves are shown in the same figure (bottom), where a significant drop is noted in 2008. The crisis indicator ratio of short-term debt to reserves, is shown in Fig. 4. Since 2011 it exceeds the threshold and the country is entering a crisis zone, although this indicator, by itself, is not sufficient.

Fig. 3. Short-term debt (top) and reserves (bottom)

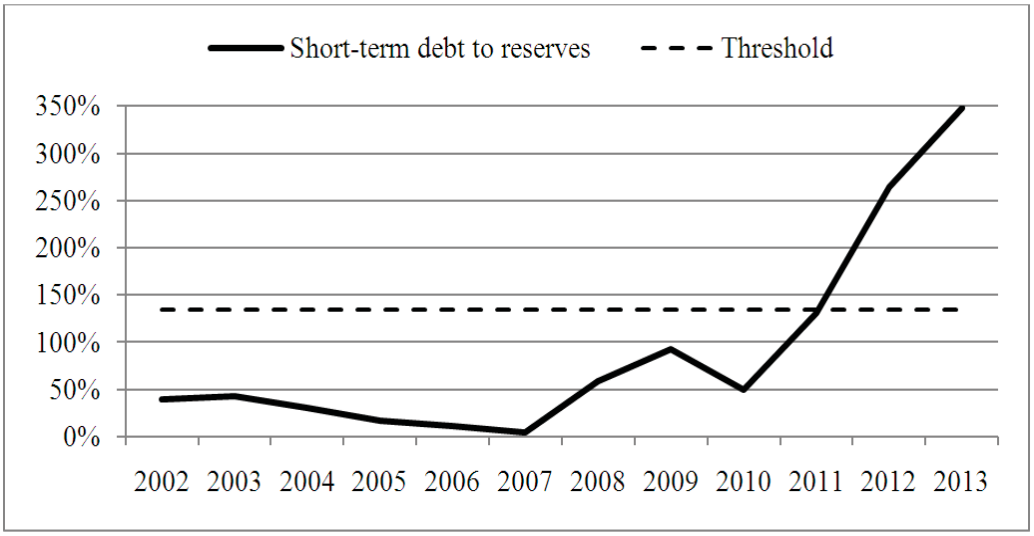


Source: ECB.



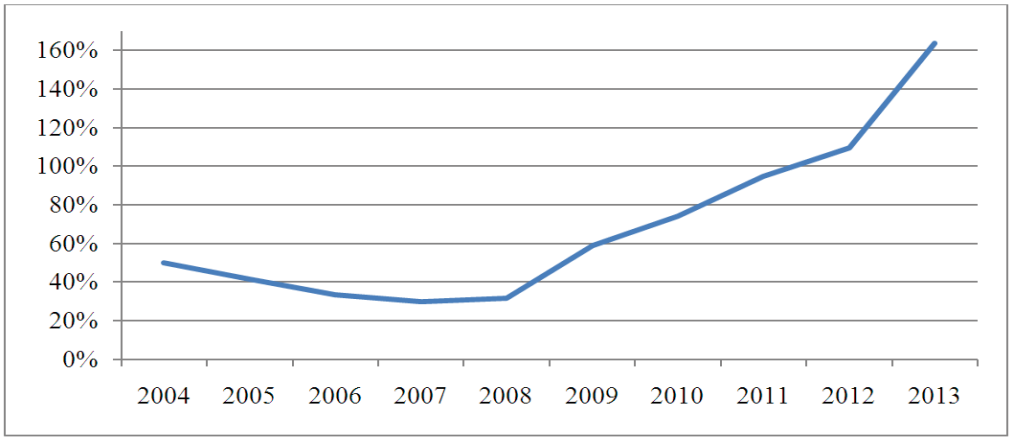
Source: ECB.

Fig. 4. Short-term debt to reserves



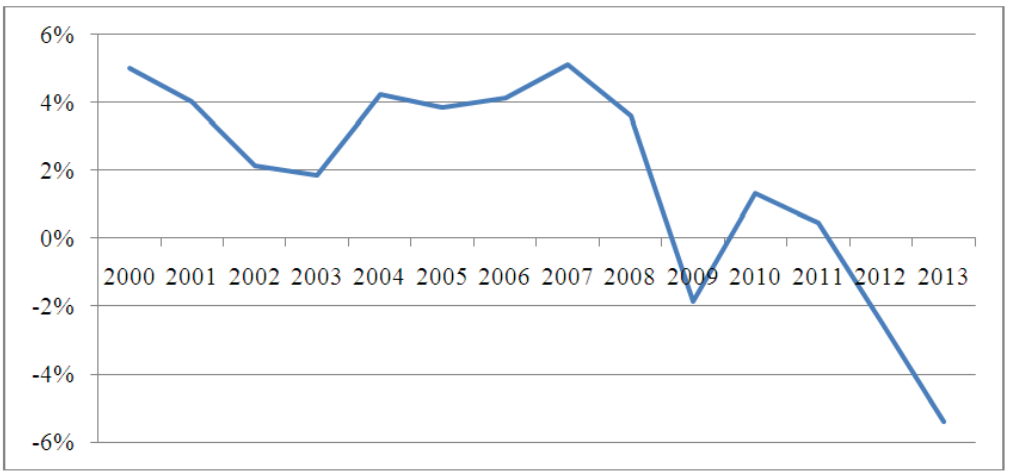
Source: ECB, Central Bank of Cyprus and authors' calculations.

Fig. 5. Public external debt to revenues

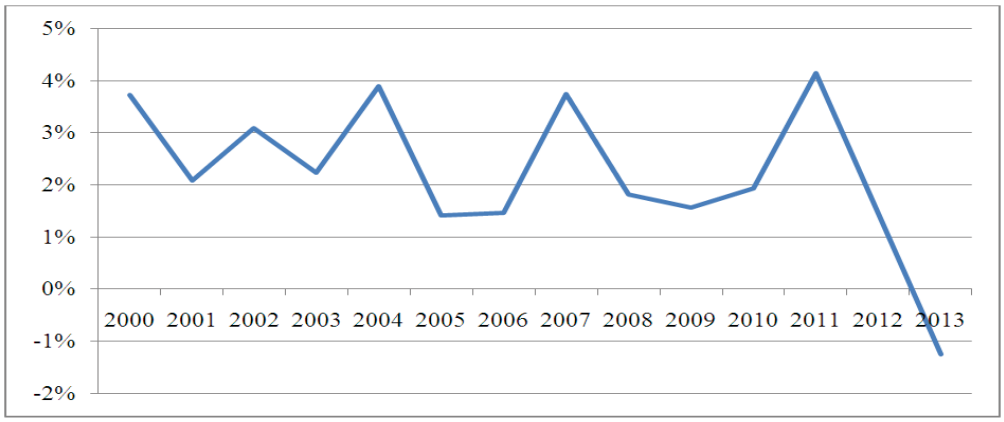


Source: IMF, Central Bank of Cyprus and authors' calculations.

Fig. 6. Real GDP growth (top) and CPI inflation (bottom) for the Cyprus economy



Source: IMF.



Source: CyStat.

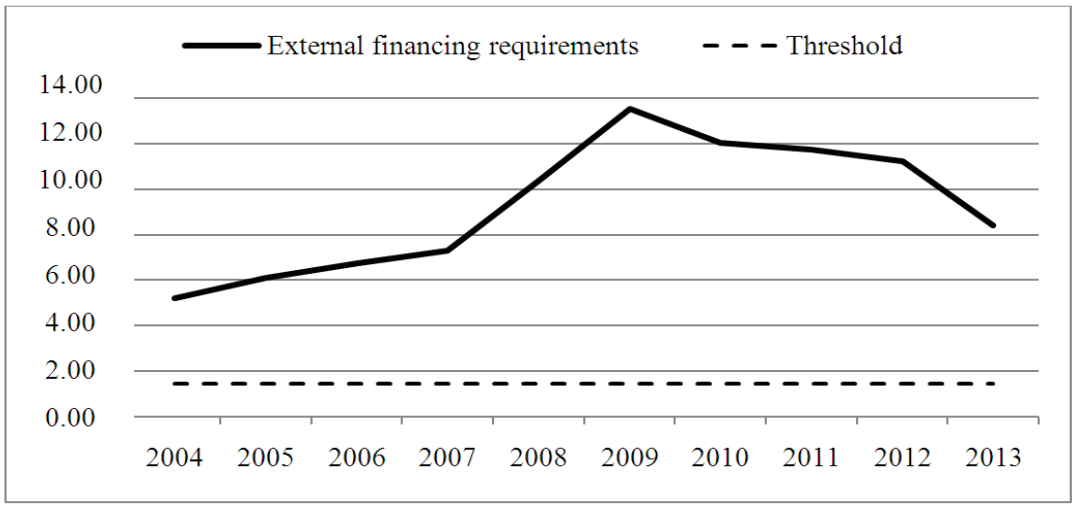
1.2.4. Public external debt to fiscal revenues. This indicator is shown in Figure 5 and we note that it is well below the 215% threshold value. Although it was accelerating rapidly after 2008, this indicator did not give any warning signals.

1.2.5. Real GDP growth and inflation. None of these indicators gave any warning signals; data are in Figure 6.

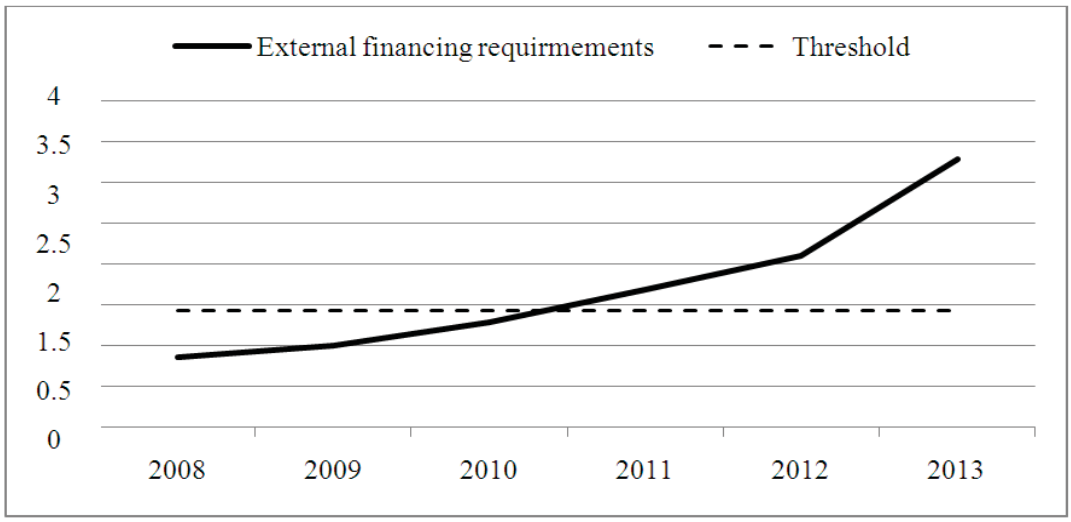
1.2.6. External financing requirements. This indicator is the ratio of external debt to government revenues, see Figure 7 (top). We observe that it exceeds the threshold throughout the period, warning that the country was potentially in a crisis zone, although, by itself, this indicator is not sufficient. Furthermore, the comments made earlier on the particularity of external debt for Cyprus apply to this indicator too and we plot in the

same Figure (bottom) the indicator excluding external debt of the monetary authorities and financial institutions. The threshold is exceeded some time between 2010 and 2011.

Fig. 7. Requirements for external financing.
Total (top); Excluding monetary authorities and financial institutions (bottom)



Source: IMF, Central Bank of Cyprus and authors' calculations.



Source: IMF, Central Bank of Cyprus and authors' calculations.

1.3. Preliminary conclusions from separate indicators. The following conclusions are drawn from the separate indicators:

1. Unequivocally since 2010, and tenuously in 2009, there was a warning signal for *banking crisis* due to excessive domestic debt relative to GDP. This would be a pure banking crisis independent of the state of public finances. The indicator leading to this conclusion is robust.
2. Since 2011 the country had entered a crisis zone due to excessive short-term sovereign debt. The risk of a pure sovereign debt crisis increases, independently of the banking sector. This indicator, by itself, is not sufficient; nevertheless, it gives a warning that public finances increased the risk of a future crisis.
3. The other indicators examined either did not give any signals or their sign do not help us disentangle the drivers of the crisis, since external debt aggregates the debts of government, financial institutions, monetary authorities and private debt holders.

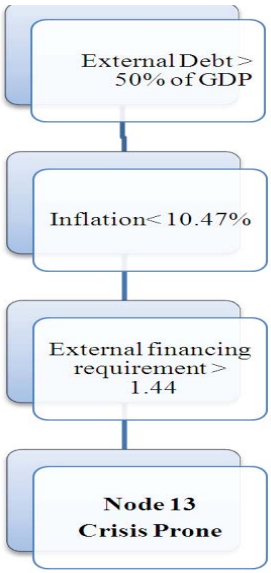
2. Early warning system analysis for the Cyprus crisis

We proceed now to integrate all indicators in the EWS of (Manasse and Roubini, 2009). This particular EWS purports to identify sovereign crises. However, it makes the important point that "not all crises are equal but they differ depending on whether the government faced insolvency, illiquidity, or various macroeconomic weaknesses and risks". Hence, the authors derive rules-of-thumb to identify the typical characteristics of defaulters, and by applying these rules to specific situations we identify the type of crisis.

The rules-of-thumb are illustrated in the tree of the Appendix. Following the tree for a given set of indicator values we arrive at different end nodes. Each node is either characterized as safe, i.e., low probability of crisis, or it represents a crisis with specific characteristics.

We use the values of the Cyprus indicators from the previous section to identify the terminal node of the economy at different times. Thus we identify those years when the data lead to a crisis node.

The indicators for Cyprus are summarized in Table 2, and by applying these data to the tree of the Appendix we arrive to Node 13, with probability of crisis .47, as shown in the path below:



This conclusion is paradoxical. As the country's ratio of total external debt to GDP exceeds 50%, we end up in crisis Node 13 for all years since 2004, and it is hard to accept that while the country was preparing to join the euro (2004-2008) it was, at the same time, facing a crisis. On the other hand, as pointed out in (Zenios, 2013b), the country managed to satisfy the Maastricht criteria only for the three-year window prior to joining the euro, and never before or since. Nevertheless during preparation for euro entry very stringent criteria were followed so some more explanation is needed for the situation deduced from the tree.

Table 2. Key indicators for applying the early warning system to the Cyprus economy

Year	Total external debt to GDP	Inflation	External financing requirement
2004	194%	2.30%	5.19
2005	252%	2.60%	6.10
2006	294%	2.50%	6.76
2007	354%	2.40%	7.29
2008	505%	4.70%	10.39
2009	615%	0.30%	13.56
2010	567%	2.40%	12.03
2011	552%	3.30%	11.73
2012	537%	2.40%	11.22
2013	413%	-0.40%	8.39

This paradox can be explained away if we recognize that not all of Cyprus "external debt" is either "external" or "debt". For instance, the liabilities of monetary authorities to the eurosystem are not considered external post 2008. Similarly, liabilities of financial institutions that are kept in cash reserves, net out debt. We analyze now the Cyprus economy making these distinctions on external debt. Nevertheless, we should not miss the big picture that significant deposit inflows to Cyprus' banking sector played an important role in bringing about the crisis. This was not unavoidable, however. Countries like Malta, Luxembourg and Singapore have comparable or larger banking sectors than Cyprus did before the crisis without facing a major crisis. Malta and Singapore even belong to the group of "happy six" countries that never suffered a banking crisis, (see Calomiris, 2013).

2.1. The situation up to 2009. We first apply the rules-of-thumb, calculating total external debt to GDP, excluding debt of financial institutions and monetary authorities. The ratio now stays below the 50% threshold until 2009. Up to this year the left branch of the tree applies and the country is in Node 3 (non-crisis node with probability of crisis 0.02).

2.2. The situation in 2010. By 2010 the ratio reaches 61% and the rules-of-thumb lead to Node 11, which again is a non-crisis node with probability of crisis 0.02.

2.3. The situation since 2011. By 2011 the ratio of short-term debt to reserves also exceeds the threshold, and the rules-of-thumb lead to Node 13, which is a crisis node with probability 47. Hence, preliminary conclusion (2) from subsection 1.3 still holds true when the short-term debt indicator, is integrated within a complete EWS.

Hence, so far, our analysis supports the following unqualified conclusions:

1. Early signals were given for a banking crisis tenuously in 2009 and unequivocally since 2010.
2. Since 2011 the country had entered a crisis zone due to excessive short-term sovereign debt. The risk of a pure sovereign debt crisis increases, independently of the banking sector.

A feature of the rules-of-thumb tree is that it gives for each node a description of the kind of crisis it represents, or when it is a non-crisis node it explains why a crisis was averted. We use next this information to draw additional conclusions from our analysis.

3. Did the banks or the sovereign cause the crisis?

The robust indicator of private credit to GDP, warns of a banking crisis tenuously since 2009 and, unequivo-

cally, since 2010. This was a signal for a banking crisis and data support the critics of the banking industry and its supervisors. Cyprus was facing a banking crisis, independently of any sovereign shortcomings.

Under very favorable assumptions for the banking sector – assuming away the risk of external debt to financial institutions because of the high liquidity requirements – we end up in Node 11. Only 2% of the countries that were in this node had a crisis, although external debt appears to be high. According to Manasse and Roubini (2009) "*what makes node 11 safe is monetary stability, a large current account surplus, and relatively large fiscal revenues that guaranteed solvency on public debt*". But these are precisely the conditions that the Cyprus sovereign was violating since 2011. This was the criticism of the Government at the time by Central Bank governor (Orphanides, 2014). The data support his criticism, although not his overall conclusion that it was all the government's fault. Cyprus did face a sovereign crisis, but this was not independent of the high external debt financed by the banking industry.

And what if monetary authorities had managed to contain external debt expansion and keep it below the 50% threshold? That is, what if the banking industry and its supervisors had managed to avoid the mistakes for which they are criticized? In this case the left branch of the tree would apply. Some time in 2010-2011 the economy would reach Node 7. Countries in this node have a probability .42 of facing a crisis brought about by high short-term debt and high total external debt. Therefore, Cyprus was headed for a sovereign crisis, even if the banking sector had avoided the danger zone.

Hence, the EWS analysis of data supports the following:

1) There were clear warning signals about a crisis, starting as far back as 2009, but most clearly in 2010 and 2011.
2) Cyprus was facing an increased risk for a pure banking crisis starting some time in 2009-2010. It was facing an increased risk for a pure sovereign crisis some time between 2010-2011.

Conclusions

The systematic analysis of data using early warning systems helps us settle the question posed in the title of this paper.

It is important to point out that our analysis does not say how a crisis could come about. Arguments have been made that (1) if the Greek haircut had been avoided, or (2) if Cyprus banks were capitalized directly by the ESM following the haircut, or (3) if Cyprus banks were not engaged in heavy carry trade, as documented in Acharya and Steffen (2015) then the Cyprus economy would not face a crisis. These arguments are speculative. Sound public finances since 2011 could have also prevented a crisis, but this statement is speculative as well. It is well known that debt is *fragile* and the warning signals tell us that debt had entered a crisis zone. What event will bring about the crisis is anyone's guess. Finger pointing is understandable, and maybe useful if institutional failures are to be addressed and those responsible for negligence brought to justice. However, the most important policy implications from our analysis are that:

1) Cyprus needs to improve its capacity for macroprudential supervision, and in this respect the Central Bank needs to review its practices.
2) Cyprus needs to improve its capacity for sovereign debt management and the Public Debt Management Office can not remain under the control of the Ministry of Finance. The establishment of the Fiscal Council in 2014 has been a step in the right direction, but limiting debt levels is only one constraint for avoiding crises. Risk management of sovereign debt is a critical policy.

The analysis also provides some interesting insights about the current state of the Cyprus economy. The economy has been in Node 13 since 2011, and we can get insights from the characteristics of other countries that faced crisis in this node. From Mannase-Roubini we learn that crisis episodes in this node can be interpreted as "cases where a country is not necessarily "insolven" but rather has an unsustainable – and non-financeable – debt path given large stocks of debt and illiquidity measured by large financing needs". Other countries that found their economies in Node 13 include Argentina in 2001, which did default, Indonesia in 1997, which defaulted on many private external debts, and Thailand in 1997 that did not default on most external debt but only on some private claims, but faced severe debt servicing problems. Cyprus managed to raise debt from the international markets in April 2015. The interest rate on 1 bilt on the 7-year bond was 3.875% which is the most favorable the Cyprus sovereign has received for almost five years. However, given the current international conditions with negative interest rate offered by major sovereigns one needs to look at the spreads. The spreads on the Cyprus debt are at about the same level as they were in summer 2011 when the country was cutoff from the markets. So, the satisfaction for the country's achievement in regaining access to the market is warranted, but the optimism should be moderated. Cyprus is still in crisis Node 13.

In conclusion, leaving aside the joined-at-the-hip arguments articulated in the literature, and the criticism about mismanagement by the authorities during the critical period, it appears that the Cyprus "perfect crisis" had two not-so-unusual crises embedded in it. Both the banking sector and the sovereign were in crisis zone and would have failed on their own with

high probability, even without assistance from their Siamese twin. This should be another lesson: thatif you are trying to manage a crisis, then it is already too late.

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Appendix
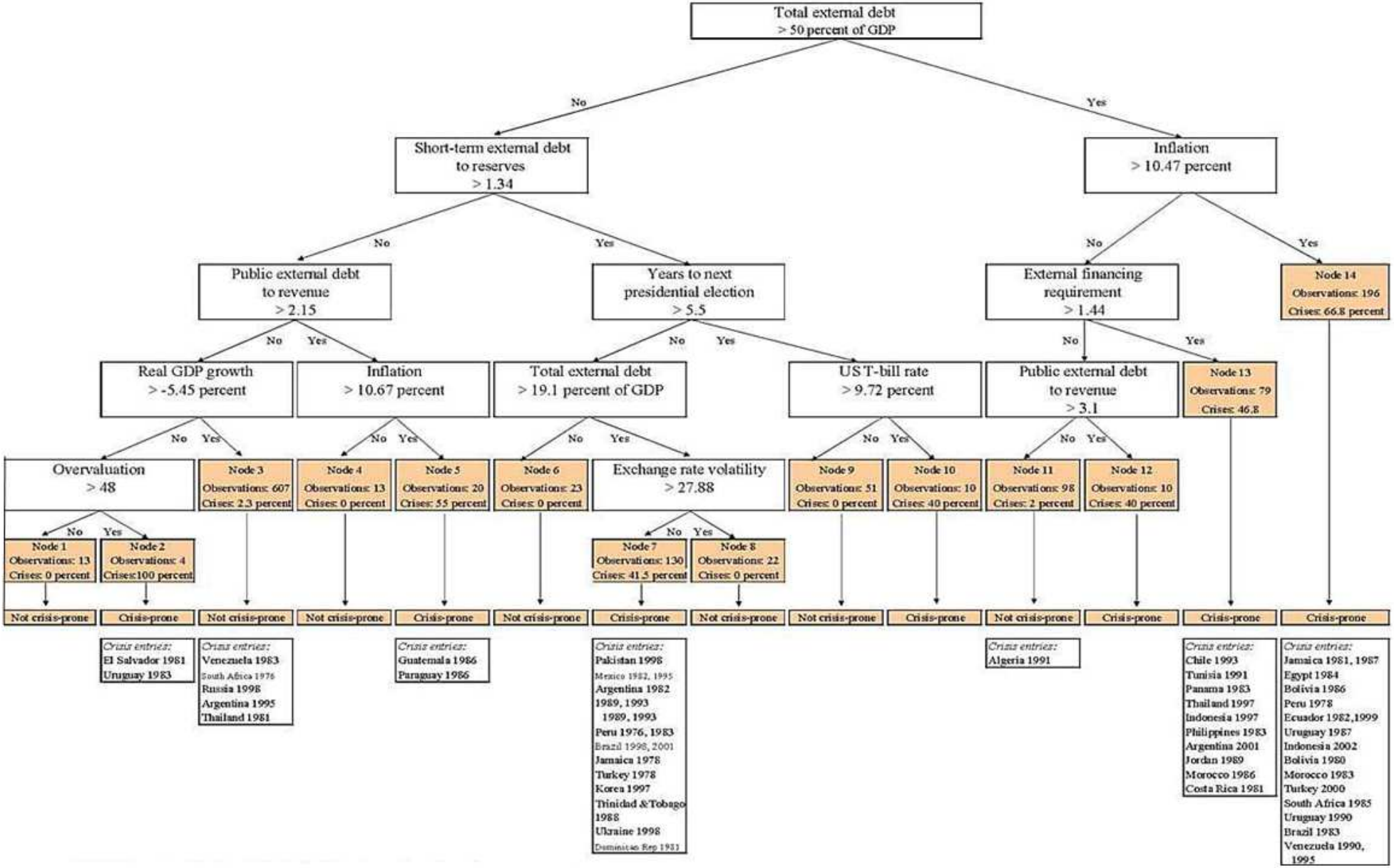
Table. 1A Rules-of-thumb of Mannasse and Roubini (2009)