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SuperIndex IBL
Update n.2

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Politics, as is well known, has the tendency to appropriate all good news, and it is thus not surprising that it ended up taking up all the credit for the QE of the European Central Bank, for the depreciation of the euro and for the Juncker Plan (not yet for the collapse of crude oil price, but let's not put limits to Providence). We should therefore no wonder if, among other things, politicians are also trying to take credit for those small harbingers of economic recovery, which all deem to be already underway. However, whoever really wishes to make a useful service to our country should try to distinguish merits and responsibility: in particular, understanding whether and to what extent the reforms recently implemented in Italy have affected and will affect the country's economic performance is the best way to support their effectiveness and urgency and, at the same time, to recognize—why not?—any contributions of the Italian government to such reforms.

Obviously, it is not hard to find different assessments of the potential impact of these reforms. According to the Italian Ministry of Economy and Finance,[1] the government reform program could lead—if approved and implemented—to an additional growth of 3.6% over the next five years. More than one third of such increase will be achieved through the reform of the Public Administration and reforming the Italian judicial apparatus. Measures related to the labor market should have a minor, but still significant impact. Of course these judgements are interesting but—as well as those from OECD—they are indications about trends whose reliability is in reverse proportion to the heroic assumptions on which they stand.

A more solid and interesting gauge, however, seems to come from the indirect evaluation of the impact of these reforms based on the estimated effect on a number of particularly interesting (from a macro-economic performance perspective) variables. To better understand this point we can look at the Economic Bulletin of the European Central Bank:[2] it focuses on the exports performance, thus on wages and prices flexibility as inferred from the greater or lesser reactivity of inflation on the economic performance. The "ex-post

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[1] Ministero dell'Economia e delle Finanze, *Relevant Factors Influencing Recent Debt Developments in Italy* (September 2014, http://www.mef.gov.it/inevidenza/documenti/Note_on_relevant_factors_Italy.pdf). The evaluations included on the *Documento di economia e finanza 2015-2019* are clearly more limited (http://www.dt.tesoro.it/it/analisi_programmazione_economico_finanziaria/documenti_programmatici/sezione3/def_assistenza.html).

[2] European Central Bank, *Bollettino economico* (no. 2, 2015; https://www.bancaditalia.it/pubblicazioni/bollettino-eco-bce/2015/bol-eco-2-2015/index.html)

performance" of properly selected indicators appears to be a far more reliable (and immediately understandable) way to appraise the impact of the reforms.

The IBL Superindex is an "ex-post performance indicator" and it is based on the assumption that the lack of reforms is the main reason why Italy is still far from its European partners (in the Eurozone as well as in the European Union). It follows that a properly designed and communicated reforms program, promptly (and without distortions) translated into legislation and then swiftly and effectively implemented should, first of all, enable Italy to bridge the gap—in all the different ways in which this gap is manifested—with its European partners. Otherwise, convincing the Italian public that these policy reforms are needed and urgent might be a very hard endeavor.

It is not an easy exercise to identify what contributes most to the gap between Italy and its European partners and to do that it is of essence to clarify as much as possible the main goal of such venture.

First, then, it must be clarified what is meant by "European partners": in particular, the IBL Superindex separately gauges the gap between Italy and the EU average (in the current configuration: 28 members) and that between Italy and the Eurozone (again, in the current configuration: 19 members). In both cases, it can be legitimately expected that the reforms would allow Italy to get closer to the average behavior of the Union and the Monetary Union respectively. What you notice, however, it is an important difference between the two cases: the relative convergence of the economic dynamics and structures among the member countries is, in the latter case (and especially in the current circumstances, namely in the absence of a fiscal and political union), an important prerequisite for the proper functioning of the single European currency.

Second, it is crucial to identify the nature of each individual factor that make up the gap indicator. In this respect, the IBL Superindex exclusively refers to the macroeconomic dimension of such gap and, in particular, to those essential aspects of the macroeconomic performance that are presumably affected by the implementation of structural reforms. They are: a) the GDP growth rate in real terms [Y]: an indicator of the performance of the market for goods and service; b) the unemployment rate [U]: an indicator of the labor market performance; c) the public deficit to GDP ratio [G] and d) the public debt to GDP ratio [D]: two indicators of the status of the public finances, explicitly referring to the tax rules in place in Europe (the stability and growth pact, and then the fiscal compact); and finally, the current accounts to GDP ratio [C]:[3] an indicator that—alongside others already mentioned—is already under the attention of the European surveillance mechanism related to macroeconomic imbalances. It is worth emphasizing that in identifying the features of the gap (between Italy and European partners), none of the indicators whose impact is presumably implicit in the dynamics mentioned above, have been used (as, for instance, the several indicators of competitiveness).

[3] See, for instance, *Report from the Commission to the European Parliament, the Council, the European Central Bank and the European Economic and Social Committee, Alert Mechanism Report 2015*, (Brussels, November 28, 2014), (http://ec.europa.eu/europe2020/pdf/2015/amr2015_en.pdf).

In this framework, therefore, the IBL Superindex yields (i) a synthetic measure which (ii) allows an easy calculation of the multidimensional[4] distance between Italy and its European partners; (iii) takes into consideration relatively easy-to-measure developments;[5] (iv) is based on freely accessible information[6] and; (v) is regularly updated from official, third sources; (vi) makes possible an easy, regular and independent monitoring of the political reforms impact.[7][8]

That said, it is clear that the strengths of the IBL Superindex can also be seen as its limits. For this reason, we should not ask the Superindex what it cannot yield. For instance, as far as the impact of reforms on the IBL Superindex performance is concerned, it should be noted that two main factors are equally important: the timing of the implementation of such reforms (when and if approved), and their correct formulation. This index does not distinguish between a good, but never- or poorly-implemented reform and a bad, clumsy one: for our purposes, these are basically the same. The index merely looks at their effects, that, undoubtedly, will be the same in both cases: quite irrelevant.

Before addressing the IBL Superindex trend analysis, it is appropriate to appreciate how the different dimensions of the gap that we have just listed have evolved over time. The following "radar" graphs (Figure 1) summarize the available information respectively related to 1997 (when the decision to enter the monetary union has been made), 1999[9] (start of Monetary Union), 2002 (end of the "lira-euro" dual circulation), 2008 (financial crisis), 2011 (sovereign debt crisis), 2014 and, forecasted, 2015. Incidentally, some of the just mentioned dates

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[4] Given two statistic units that can be described by a given number of attributes, the distance measures compare the two units' profiles (so described by the single attributes) summarizing relevant information in a unique measure. A distance measure must be (a) non negative, (b) equal to zero when we are comparing identical statistic units, (c) symmetric, and (d) such that satisfies the criterion of the so-called triangular distance (the distance between two statistic units must be smaller or equal to the sum of the distances between the two statistic units and a third one). We can then leave aside the measurement scale of the single attributes by standardizing all the measures.

[5] To make one of the many possible examples, GDP growth rate is among the attributes, instead of the potential product growth rate (which, compared to the GDP growth rate, raises very serious measurement problems).

[6] In this case, data are from the annual database of the Directorate General for Economic and Financial Affairs of the European Commission (http://ec.europa.eu/economy_finance/db_indicators/ameco/index_en.htm).

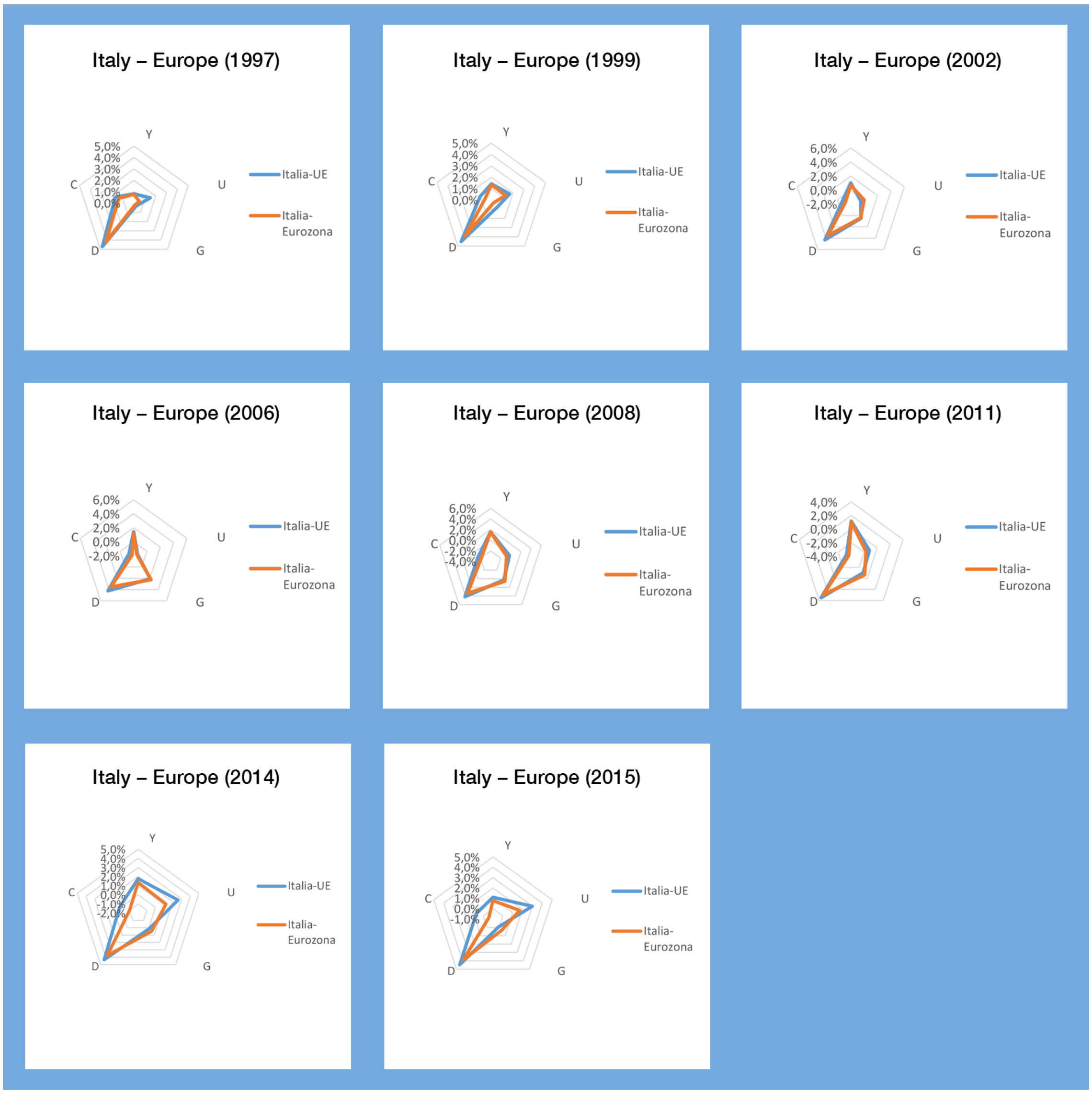
[7] In this case, the update comes with the EU economic forecasts (February, May, and December) and the *Quarterly Report on the Euro Area* (March, June, October, December).

[8] Someone could argue that, focusing on the distance between Italy and other European countries, implies taking for granted a high degree of synchronization between the economies of the European Union and the Euro Area, respectively. It is reasonable, but not relevant, since we can assume that the degree of synchronization between the European economies has increased a lot starting from the Euro introduction, and that cyclical trends of Euro Area, in particular, are now characterized by common features among all member states. See, for instance: S. Degiannakis, D. Duffy, G. Filis, "Time-Varying Business Cycle Syncronization in Europe," MPRA Paper no. 52925, Ottobre 2013 (http://mpra.ub.uni-muenchen.de/52925/); F. Ferroni e B. Klaus, "Euro Area Business in Turbulent Times: Convergence or Decoupling?," Banque de France, Document de travail no. 522, Novembre 2014 (https://ideas.repec.org/p/bfr/banfra/522.html).

[9] The Euro was introduced starting from 1999 January 1. A discreet presence, in the beginning. Explicit and exclusive starting from 2002 January 1.

precisely coincide, or nearly so, with crucial moments of our country political life in the last 15 years.

Figure 1



To get a better idea of the variables involved, it may be useful to notice that the average Italian GDP growth rate between 1999 and 2014 has stood below the European average by 1.2% if we consider the EU; by 1.0% if we consider the Eurozone. The Unemployment Rate was 0.2% lower than the European average (0.5% if we consider the Eurozone). The Public Deficit to GDP ratio has been 0.3% higher the European average (0.4% if we consider the Eurozone), while the Public Debt to GDP ratio was 41 percentage points higher than the European average (34 if we consider the Eurozone). Finally, if we look at the current accounts to GDP ratio, the Italian average was 1% and 1.5% lower than the European and Eurozone average, respectively.

The sequence of radar charts is easy to interpret. Net of the anomaly of public debt (D), which acts as a constant throughout the whole fifteen years period, it is clear that an effort toward convergence was made due to the imminent Italy's entry in the Monetary Union.

However, this effort was offset starting from 2002 until the next decade by the impact of the budget of the public sector (G). This decade also shows a retreat in terms of competition and growth (Y) and the current accounts balance (C). Since 2008, with the financial crisis, rigidity and segmentation in the job market had a negative impact on the unemployment rate (U), while public accounts suffered fiscal policy choices triggered by the crisis.

In 2011 a reality check—at least as to public finances—became unavoidable. It is worth noticing that in a country where a number of markets are struggling, where there is still a relative lack of mobility for production factors, where geographical dualism is deep-rooted, where dynamism is missing, it is hard to take a comprehensive measure for all these issues. It comes with no surprise that in 2014 Italy's economic outlook does not appear any better than that at the time of the public debt crisis. It is reasonable to think that in 2015 Italy's circumstances will be substantially unchanged (even though it will take some time for new reforms to show their effects).[10]

It goes without saying that the previous graphics do not provide us with a single numerical gauge of the gap between Italy and her European partners, let alone do they provide any indications on future trends. This said, are we getting closer to Europe despite the weak reform process we have undertaken so far?

As we have noted, to answer this question we need to translate all the information related to every single component of the gap between Italy and Europe into a synthetic and specific measure: the IBL Superindex. Shown below are the graphs related to the first set of results: the first chart highlights the gap between Italy and the European Union average while the second shows the gap between Italy and the Eurozone average. It is important to note that the adopted index (the "Weighted Euclidean Distance") does not depend on the dimensional scale of the single attributes.[11],[12]

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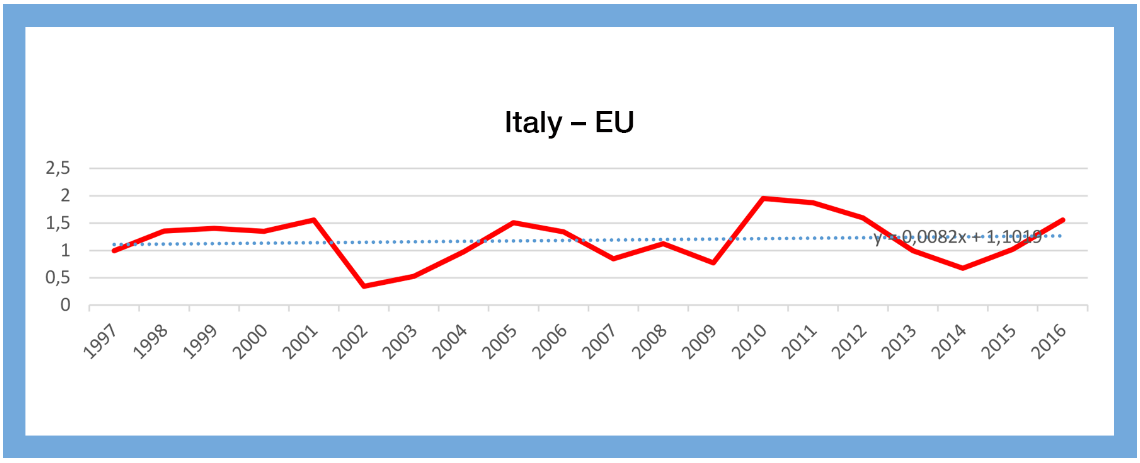
[10] These assessments rely on quantitative information based on 2015 November 5 updating.

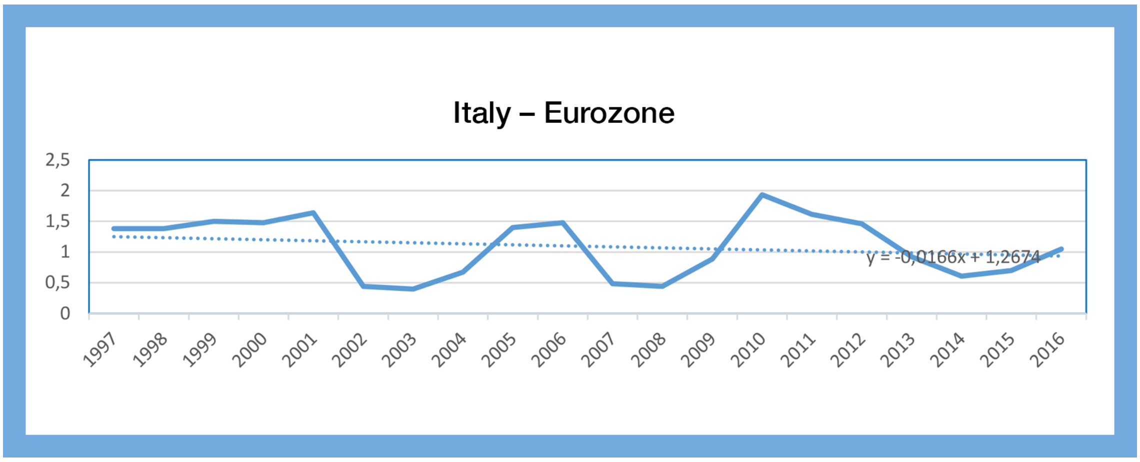
[11] The concern about the dimension of the attribute comes out for the Public Debt to GDP ratio, in which the dimensional scale is a multiple of the others. On radar charts the problem is solved—pragmatically but even arbitrarily—by dividing by ten the ratio itself so taking the variable to a dimensional scale comparable to the others. On the synthetic index—the "weighted Euclidean distance"—there is no problem, since the index itself (contemplating the "standardization" of the attributes) does not depend on the dimensional scale of the attributes (still contemplating a recalculation of all the values for each updating).

[12] See the Appedix for other selected member states of the European Union and the Euro Area (in particular, those to which we commonly refer to as "Mediterranean countries").

The Superindex (weighted euclidean distance)—AMECO Database—Updated to 05.11.2015



The Superindex (weighted euclidean distance)—AMECO Database—Updated to 05.11.2015



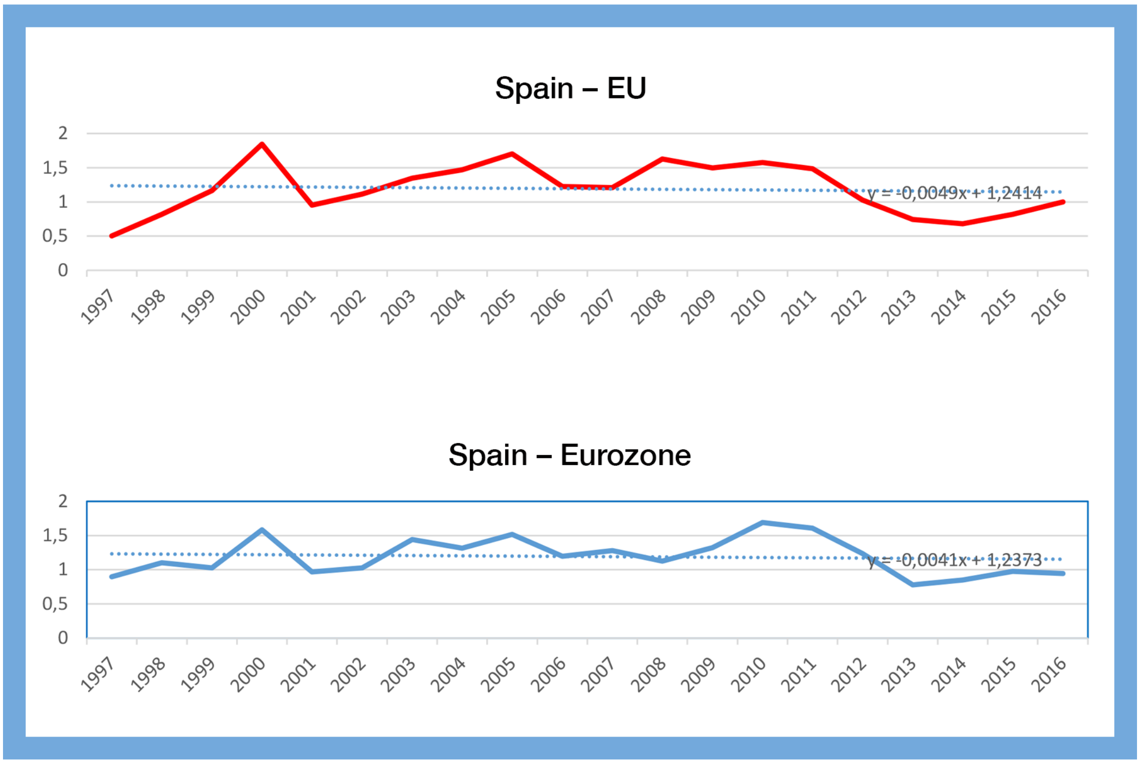
Obviously, a different starting point would produce a different slope of the line indicating the medium- to long-run trend. For instance, starting from 2010 would yield a decreasing, but steeper trend, whereas setting 2002 as a starting point go as far as yielding an inverse (increasing) trend. This, however, is a relatively immaterial consideration, as the whole point of this graph is to emphasize the slowness of the Italian adjustment, in which the few efforts, mostly concentrated in time, are outweighed by longer periods when Italy takes her collective eyes from the goal.

Under this respect, it is interesting to notice that the IBL Superindex is anything but a "passive" tool. The slight convergence that we can see up to 2001 comes from the reform efforts of the mid-90's (not sufficient, and most of the time even wrongheaded). The increasing trend of the Superindex starting from 2002 clearly shows the effects of the choices about public budget issues and the gradual loss of competitiveness in the following decade. Besides, what happened since 2011 seems to impact the IBL Superindex: the convergence effort to Europe is apparent (we just have to hope that the turnaround we observe in 2014 be the harbinger of a new divergence). We can therefore say that the IBL Superindex seems to fit the data. Delays depend on what we are observing; a loss of competitiveness is not as immediate as a shock on public finance. What we wish to stress is the fact that there is a great advantage on linking a particular outcome to a multidimensional approach: when reforms only address one dimension, the rigidity and the inefficiencies of the other problematic issues can be immediately felt, possibly vanquishing the reform effort.

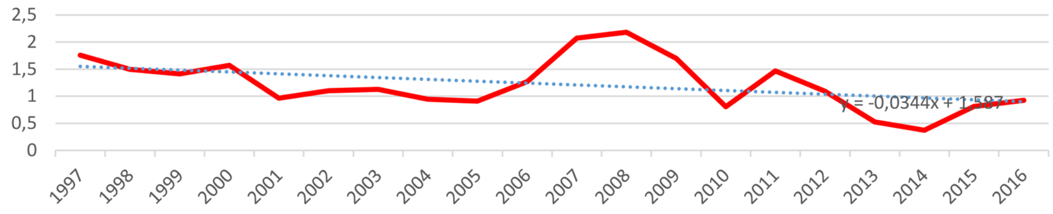
This said, the bottom line of the IBL Superindex matches the widespread feeling about the fact that, from at least two decades, the country was stuck and and the reform agenda went mainly unfulfilled. Moreover, a point of grave concern is that EU forecasts seem to point that Italy's circumstances will likely be the same for 2015, 2016 and 2017. This course should be immediately reversed, as we clearly need a turnaround before the second half of 2016, when the impact of the current positive macroeconomic configuration will be probably over. We can only hope a turnaround will occur, but doubts clearly linger.

Our chief concern is the relationship between politics and the Italian public. The IBL Superindex was devised to force politics to confront the outcomes of its choices and take responsibility so that, when time will come, citizens could freely assess and decide. "Numbers speak for us" is a recent quote by the Prime Minister: we take his word for it.

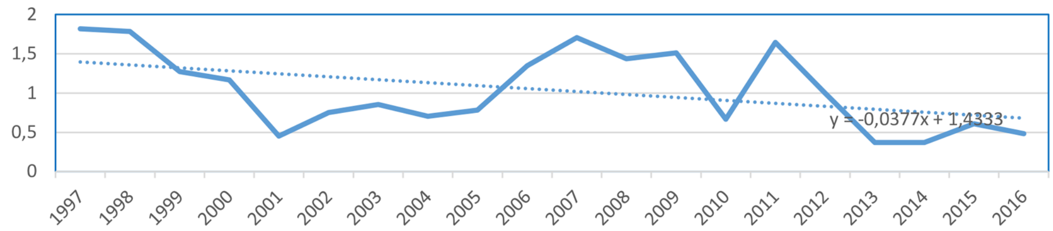
APPENDIX



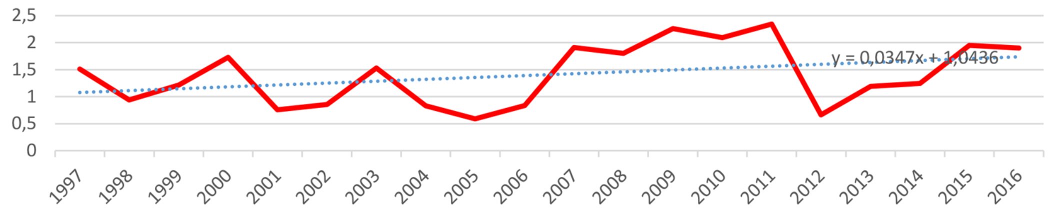
Portugal – EU



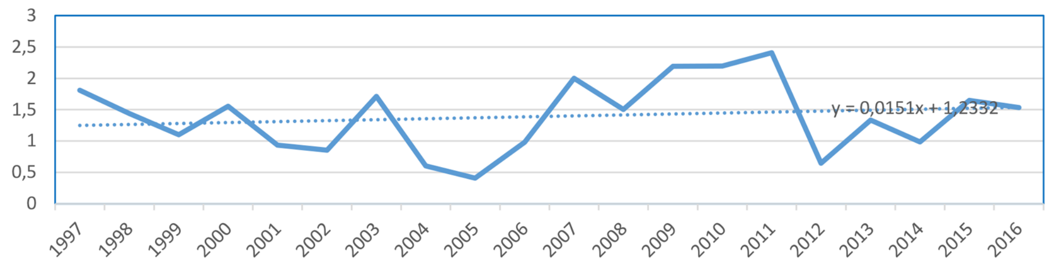
Portugal – Eurozone

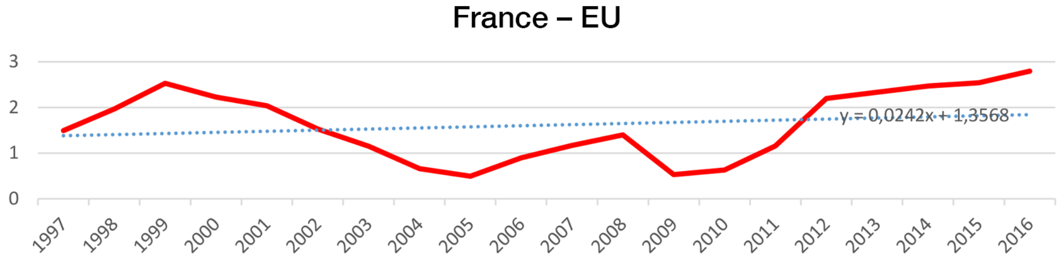


Greece – EU



Greece – Eurozone




France – EU
3
2
1
0
y = 0,0242x + 1,3568
1997
1998
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2000
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2004
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2006
2007
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2012
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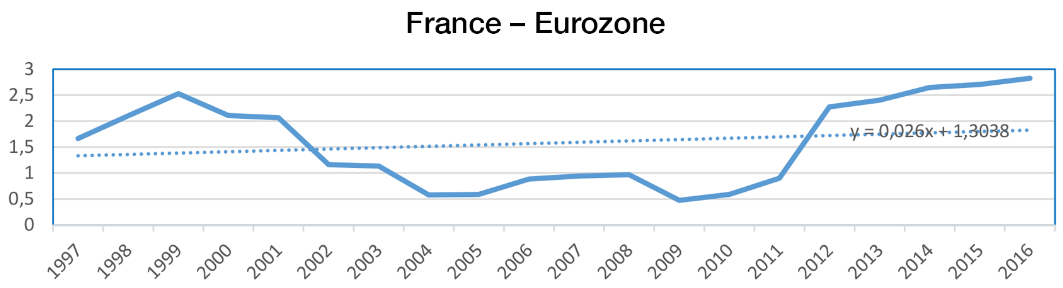
2014
2015
2016


France – Eurozone
3
2,5
2
1,5
1
0,5
0
y = 0,026x + 1,3038
1997
1998
1999
2000
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2002
2003
2004
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2016