# PROPOSAL OF A COUNTRY RISK INDEX BASED ON A FACTORIAL ANALYSIS: AN APPLICATION TO SOUTH MEDITERRANEAN AND CENTRAL-EAST EUROPEAN COUNTRIES*

## 1. Introduction

The Country Risk is the set of risks emerging when domestic agents trade with foreign countries or make financial or productive investments abroad. The Country Risk assessment is very difficult: a great amount of selected information is needed and the subjective opinion of the economist cannot be negligible.

Country Risk can be defined as a set of risks which are unsustainable and have arisen in transactions in the domestic market, but which then only emerge when commercial or financial trade flows are created or investments are made in a foreign country.

This definition presents a wide range of connotations, adapting to the differing investment methods and including all those areas of risk which become evident when an investment is made external to one's own country. Country Risk assessment is in itself extremely complicated: as such, a widely encompassing set of information, quantitative data and indices must therefore be combined, where 'subjective' judgement can be of significant importance.

Parallel to the studies on country crises at differing points in history, several methods have been applied. We can mention, between others, the methodology of variables selection via principal component analysis (allowing the reduction of variables in a new, smaller set of analytic 'latent' variables) proposed in the literature by Levy and Yoon (1996); the construction of a Country Risk index on a macro-geographical scale (Carment, 2001); the MHDIS (Multi-group Hierarchical Discrimination) analysis, which allows the

* We wish to thank professor Giovanni D'Alauro for his comments and dott. Alessia Di Gennaro for the help in collecting data. Usual *caveats* are applied.

comparison of different methodologies of analysis within the context of developing countries, built up by Doumpos and Zopounidis (2002); the proposal by Hammer *et al*. (2004) of two different models, the first one econometric (linear multiple reversion) and the second one that uses the technique of *logical analysis of data* (LAD).

Whilst the literature in the 60s and 70s was based mainly on qualitative studies intended to analyse political risk, since the beginning of the 80s a lot of quantitave studies have thrived, which aimed at foreseeing situations of default or financial crises in the countries under scrutiny.

However, even the more sophisticated pure quantitative approach is incapable to convey information about phenomena not expressed by numbers. Indeed the Country Risk should be calculated through a multidimensional approach, which takes into account macroeconomic vulnerability as well as factors concerning regulatory framework, market competitiveness and geopolitical and financial risks (Meldrum, 2000).

The FCRI here proposed considers not only quantitative variables, but also a qualititative one. In this study a new index has been proposed for mixed calculation of the Country Risk, in as far as, as we shall see, besides the quantitative nature of variables, it also considers a qualitative type.

In order to validate it, we have applied the FCRI to a few North African and European countries that are classified by Coface in a quite similar ranking (from A3 to D). We have calculated the index using the last available data (2009); however, further reflections have been added, due to the dramatic evolution of Northern Africa after 2009.

Specifically, in order to determine a concrete parameter of validation, it was decided to apply this index to North African countries and to certain middle and Eastern European countries, related by a Country Risk perspective, as classified by the Coface[1] Company as being between class A3 and class D, and to calculate

[1] Established in 1946, Coface is a global expert in credit management especially valued for its risk assessment. It organises annually a meeting of the best international experts addressing the issue of Country Risk to define the economic framework of the markets and the relative considerations of risk assessment, publishing annually a Guide to Country Risk which rates the countries on a scale, which, starting from the most reliable level, is then divided into seven classes: A1, A2, A3, A4, B, C & D.

the index using the most recent data available (until 2009). Indeed, the rapid changes in particular situations in different countries have made a number of additional considerations appropriate with regard to the current year.

## 2. Methodology

The index is based on data continually provided and easily available, commonly considered as highly correlated with the level of risk. Preference has been given to certified data, coming from official sources and not requiring *ad hoc* research: thus additional costs for users are avoided, and, at the same time, the updating of the index is easy, cheap and quick (Jarman, 1983; Gordon and Pantazis, 1997).

Generally speaking, in order to simplify the interpretation of an index, one can group the elements into a small number of dimensions according to their fundamental characteristics, by means of the analysis of empirical data, or even on the basis of subjective criteria. In our case, we have chosen the first method, using factorial analysis, a statistical technique which represents a set of variables identified in terms of a lower number of underlying variables and aims at simplifying complex data. Factorial analysis conveys information in the variance/co-variance matrix, trying to identify the latent dimensions of the phenomenon (Stevens, 2002). Indeed, when two variables have a strong correlation with the same factor, a significant part of the correlation between them is explained by the fact that they have in common such a factor (Dillon and Goldstein, 1984). Hence, by providing a principle of identification of the common factors, factorial analysis draws quite simply the complex network of interpolation that exists in the set of associated variables. This description allows the definition, within the correlation matrix, of a little number of independent components; they are just the factors which explain the maximum possible variance of the variables included in the original information matrix. Thus we obtain a set of new variables through a linear transformation of the original ones, thereby reducing the number of variables needed to describe the phenomenon.

If we have, for example, $p$ variables $X_1, X_2, \ldots, X_p$ measured on a sample of $n$ subjects, the *j-th* variable may be written as the linear combination of $m$ factors $F_1, F_2, \ldots, F_m$ where $m < p$ (Härdle and Simar, 2003). Then

$$X_j = k_{j1}F_1 + k_{j2}F_2 + \ldots + k_{jm}F_m + e$$

where:

$k_{jk}$ are the factorial scores for the variable $j$ ($j$=1, 2, 3 ,…, n)

$e$ is the part of the variable $X_i$ not explained by the factors.

Since the variables can be saturated in almost the same way by differing factors, we must cope with the problem of the rotation of factors. The rotation brings about the reduction of the weight of the factors that were comparatively 'lighter' in the first step of the analysis (Krzanowski and Marriott, 1995), along with the increase of the weight of the factors that were comparatively 'heavier' (note that here the absolute value is concerned). Indeed in a non-rotation solution, in fact, any variable is explained by two or more common factors, whereas in a rotation solution any variable is explained by a single common factor (McKay and Collard, 2003; Johnson and Wichern, 2002; Guilford and Hoepfner, 1971).

With reference to this case study, subsequent tests, using differing algorithms for extraction and rotation, have shown the real stability of the factors extracted (see on this point Kaiser, 1958). The Quartimax rotation criterion, which maximises the variance of the saturations row by row, has been applied. So for every variable one can concentrate the most possible of variance in the first factor, thus obtaining the minimum number of elements where the variable has significant weight (Neuhaus and Wrigley, 1954).

The selection of the variables is conditioned both by the availability of data and by the scope of the index. Therefore we have conducted a preliminary test on the data provided by the most relevant international research bodies. The analysis focused on a set of variables consistent with the choice of the literature (Hammer *et al*., 2004; Doumpos and Zopounidis, 2002; Doumpos *et al*., 2001; Carment, 2001; Levy and Yoon, 1996); as a result, about twenty indices appeared significantly influential on the country risk. Then those inhomogeneous, or with incomplete series of data, were excluded and thirteen suitable variables were identified (Table 1). On their basis, factorial analysis was performed and those present in the first factor were singled out, using a methodology common in the literature, even though found in other contexts (Testi and Ivaldi, 2009; Ivaldi, 2006; Michelozzi *et al*., 1999).

After having selected and standardised the variables, we have aggregated them to obtain the Factorial Country Risk Index (FCRI). Therefore the index is made up of the factorial scores of the matrix of coefficients [$c_{hj}$]; the equation of the factor ($F_h$), expressed as the

TABLE 1 - *The 13 Variables Identified for Country Risk Assessment*

| |
|---|
| 1. Annual average rate of change in harmonized indexes of consumer prices |
| 2. Government deficit/surplus/GDP |
| 3. Central government debt per capita |
| 4. Export of goods and services (% GDP) |
| 5. Gini coefficient[2] |
| 6. Net migration rate |
| 7. Population ages 15-64 (% of total) |
| 8. Employment rate (% of labour force) |
| 9. Population growth rate |
| 10. Real GDP growth rate |
| 11. Human Development Index (HDI)[3] |
| 12. Political risk country[4] |
| 13. Total reserves (% GDP) |

*Sources of variables:* World Bank (2009), CIA World Factbook (2009), AON (2009).

[2] With the aim of including within the index a measure of inequality, it was decided to use the Gini coefficients, which, as is known, assumes values close to 0 in the case of equal distribution and values close to the unit for the high levels of inequality.

[3] The Human Development Index (HDI), used since 1993 to evaluate the quality of life in State members of the United Nations, contains three different dimensions: birth survival expectancy, average years of education and Gross National Income (GNI) *per capita* (in terms of parity on spending power in US dollars).

It is seen how this variable summarises the three elements indicated in the literature as being fundamental to an index of Country Risk and contributes to overcoming some of the not homogenous elements often present in the rating regarding education.

[4] The variable related to political and economical risk follows the Aon Corporation rating, a leader in the insurance broker business for 209 countries and territories, measuring risk linked to strikes, riots and civil unrest, war, terrorism and political instability. The risks in each country were interpreted by means of a qualitative variable and as such are rated as Low, Medium-Low, Medium, Medium-High, High or Very High. For the purposes of this study, variables with a numerical value from 1 to 6 were assigned.

linear combination of the original variables (Härdle and Simar, 2003), shows:

$$F_h = c_{j1}x_1 + c_{j2}x_2 + \ldots + c_{jn}x_n + e$$

Thus the factorial score maintains and summarises the information from all the partial indexes (Michelozzi *et al.*, 1999; Johnson and Wichern, 2002; Hogan and Tchernis, 2004).

The index can have positive or negative values: where negative, the index presents higher country risk, if positive, the opposite is the case.

Then the index obtained has been tested by the Correlation Coefficient of *Rho* Ranks of Spearman, in the same way as may be seen in Soliani *et al.* (2011, 2012) and Testi and Ivaldi (2009), comparing it to the Country Risk index established by Coface. *Rho* can vary between 0 (no correlation exists between the relative ranks) and 1 (perfect correlation exists between the ranks).

The final step consists of grouping the index obtained into classes, identifying various areas of risk. To rank the classes, the literature suggests dividing the distribution based on its parameters (Carstairs, 2000; Carstairs and Morris, 1991), in order to maintain the discriminatory characteristics of the distribution.

## 3. Findings

Starting from the exploratory factorial analysis performed on the thirteen variables tested, and with reference to the findings in Table 2, we have singled out the group of variables with the higher score (in absolute value) on the first factor, compared to the second (Chart 1). This technique is similar to the application in Ivaldi and Testi (2010). The variables are:

1) political country risk
2) central government debt *per capita*
3) annual average rate of change in harmonized indexes of consumer prices
4) export of goods and services (% GDP)
5) Human Development Index (HDI)

As explained in Section 2, the index has been calculated for a group of countries in the Southern Mediterranean and Central and Eastern Europe, which represent an important reference point for a large number of European operators.

CHART 1 - *Variable Factorial Scores on the First Factor*

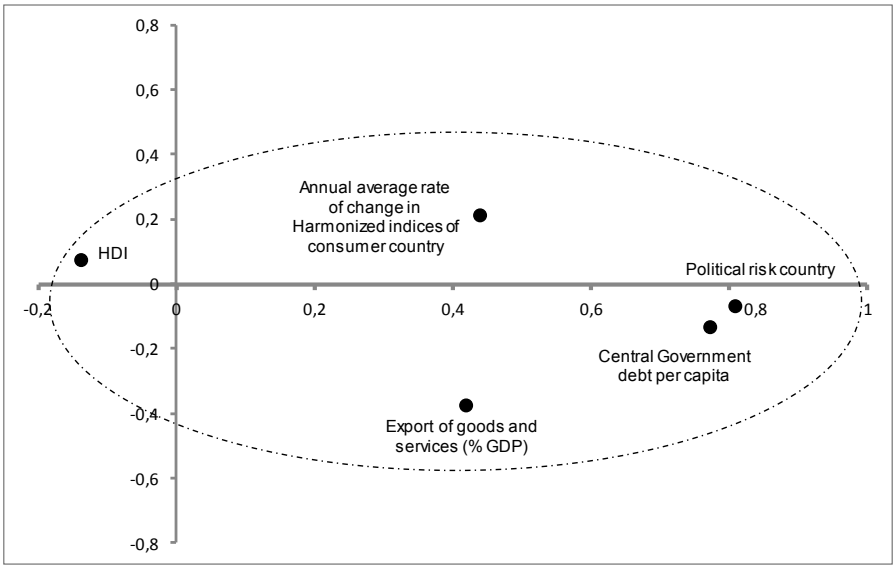



TABLE 2 - *Selected Variables and Related Factorial Scores*

| Variables | Factor 1 | Factor 2 |
|---|---|---|
| Political country risk | .811 | -.073 |
| Central government debt per capita | .775 | -.135 |
| Annual average rate of change in harmonized indexes of consumer prices | .441 | .208 |
| Export of goods and services (% GDP) | .420 | -.379 |
| Human Development Index (HDI) | -.136 | .072 |
| Population growth rate | .004 | .929 |
| Population ages 15-64 (% of total) | -.195 | -.839 |
| Real GDP growth rate | -.118 | .513 |
| Government deficit/surplus/GDP | -.013 | .469 |
| Gini coefficient | .223 | -.382 |
| Net migration rate | .005 | -.245 |
| Employment rate (% of labour force) | .195 | .198 |
| Total reserves (% GDP) | -.190 | .191 |

Rotated Component Matrix (a) Extraction Method: Principal Component Analysis. Rotation Method: Quartimax with Kaiser Normalization.

Table 3 shows the twenty-six countries chosen and the factorial scores (FCRI) calculated for each country.

TABLE 3 - *Factorial Country Risk Index (FCRI)*

| Country | FCRI |
|---|---|
| Estonia | 2.01 |
| Hungary | 1.90 |
| Slovakia | 1.57 |
| Israel | 1.45 |
| Croatia | 0.87 |
| Latvia | 0.78 |
| Lebanon | 0.65 |
| Lithuania | 0.53 |
| Poland | 0.39 |
| Bulgaria | 0.23 |
| Tunisia | 0.12 |
| Rumania | 0.00 |
| Macedonia | -0.20 |
| Morocco | -0.25 |
| Algeria | -0.29 |
| Libya | -0.39 |
| Albania | -0.50 |
| Syria | -0.52 |
| Serbia | -0.68 |
| Russia | -0.72 |
| Turkey | -0.85 |
| Bosnia and Herzegovina | -0.88 |
| Egypt | -1.00 |
| Moldova | -1.03 |
| Belarus | -1.60 |
| Ukraine | -1.60 |

The index spans from 2.01 in Estonia, which bears the lowest Country Risk, to -1.60 in Ukraine and Belarus, which show the highest Country Risk.

As mentioned above, in order to provide a measure of validation of the proposed index, we have compared it with the rating periodically proposed by Coface[5], using the coefficient of correlation of Spearman, to compare the distribution of ranks of the FCRI index with the Country Risk index of Coface. The coefficient of Spearman between the two indexes has the value of 0.765; this demonstrates the validity of the proposed index.

Then we have formed homogeneous families of countries: a small number of classes which identify decrising levels of the index, that is increasing risk. On the basis of a division into six classes, the first indicating the lowest level of risk, the countries were inserted into the four higher level classes, with reference to the average deviation of the distribution of the index, using the values $\pm\sigma$ and 0 as a *cut off* of the classes (Carstairs, 2000). Thus class 3 identifies the countries with the lowest level of Country risk, while class 6 those with the higher one (see Chart 2 and Table 4).

To achieve a visual comparison between the two ranks, in Chart 3 we show the FCRI classification on the x axis and the Coface classification on the y axis (Coface Guide to Country Risk, 2009).

The two indexes nearly coincide for several countries – highlighted by the encircled areas. Only in the case of Egypt the two indices deviate from more than one class: FCRI places it in class 6, whereas Coface places it in class 4. The other countries show a minimum deviation of class between the two indices: the FCRI assigns Lebanon, Bosnia and Herzegovina, Serbia, Albania, Macedonia and Libya a better performance, while Coface gives better placement to Bulgaria, Lithuania, Poland, Algeria, Morocco and Rumania.

Estonia, Hungary, Slovakia and Israel are placed in class 3. Interestingly, all countries in class 3 are rated in the same way by Coface.

Class 4 includes the Baltic republics of Lithuania and Latvia, Bulgaria, Poland, Croatia, Lebanon and Tunisia. In relation to Latvia, Croatia and Tunisia, the index confirms the same class as Coface, but in the cases of Bulgaria, Lithuania and Lebanon the index shows a worse performance than in the first two cases and better than in the third.

[5] Coface, a global company expert in credit management, rates, as stated, Country Risk from A1 to D. For comparison with the proposed index was assigned to class A3 the value of 3, to A4 the value of 4, to B the value of 5 and to C and D the value of 6.

TABLE 4 - *Countries Divided by Classes of Country Risk According to the FCRI*

| Classes | Country |
|---|---|
| 3 | Estonia, Hungary, Israel, Slovakia |
| 4 | Bulgaria, Croatia, Latvia, Lebanon, Lithuania, Poland, Tunisia |
| 5 | Albania, Algeria, Bosnia and Herzegovina, Libya, Macedonia, Morocco, Rumania, Russia, Serbia, Syria, Turkey |
| 6 | Belarus, Egypt, Moldova, Ukraine |

Class 5 is the most numerous, including Albania, Algeria, Bosnia and Herzegovina, Libya, Macedonia, Morocco, Rumania, Russia, Serbia, Syria and Turkey. Finally the last class is observed, comprising Belarus, Ukraine, Moldova and Egypt which, apart from the case of the last country, which is placed by Coface a good two classes better than FCRI, the other three countries are all in the same class.

## 4. EVOLUTION OF THE INDEX AFTER THE 'ARAB SPRING'

In the analysis performed, based on data which stopped at the beginning of 2010, it can be seen how the North African countries are almost exclusively placed in class 5, with the exclusion of Tunisia and Lebanon (class 4) and Egypt (class 6), above all due to the rather unstable social-political conditions, with fragile institutions and the potential risk of civil war, which is mirrored by the indicator. These elements of uncertainty and risk have up made a considerable impact on the economies of the region until 2010, also thanks to the so-called 'Mediterranean Policy', implemented by the European Union.

Indeed, especially starting from the Declaration of Barcelona of 1994, the European Union has engaged in a close Euro-Mediterranean policy, with substantial amounts of funding, contained in the MEDA 1 and MEDA 2 programmes, geared towards partnership and activities which should promote, above all, peace and political stability, human rights and liberty. Moreover, the pre-figured objective of the creation of an area of free trade was proposed to support economic development of the southern shores countries. Then a new European policy of neighbourliness has been developed from 2003, with the creation of the FEMIP *(Facility for Euro-Mediterranean Investment*

CHART 2 - *Map of Countries Divided by Classes of Risk*

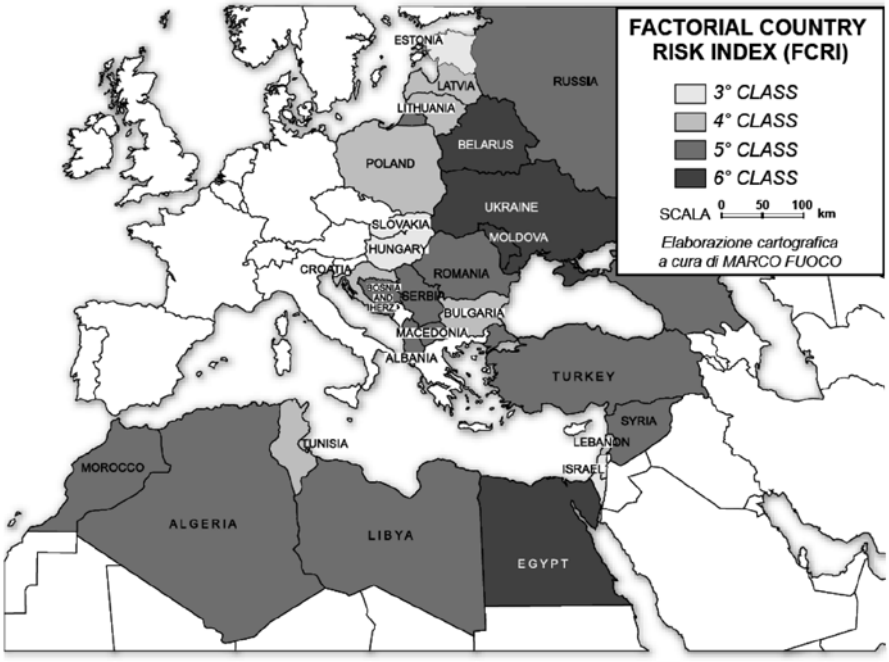
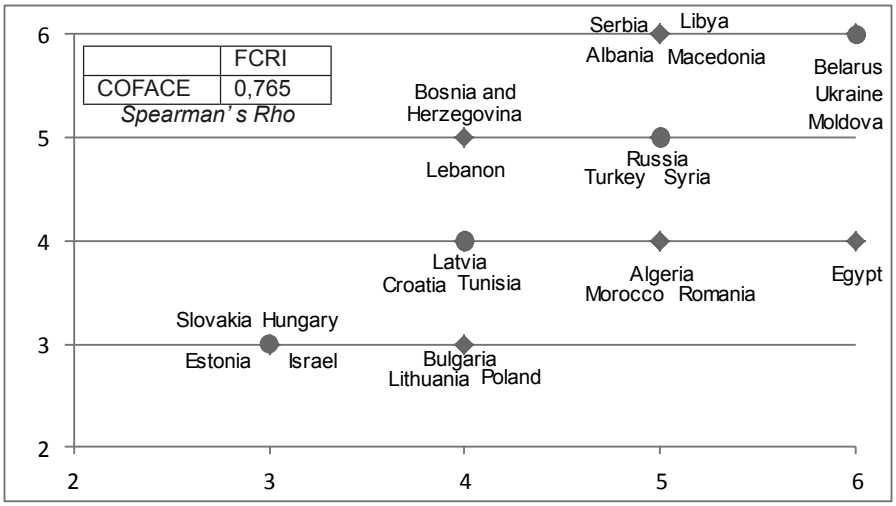



Chart 3: *Comparison between the Ranks of Coface 2009 and those of FCRI*



*and Partnership)*, an EIB tool that aims at promoting support for development in the private sector and stimulating new investments from European Union countries in the Afro-Mediterranean region.

The hope is that this policy may soon regain momentum; however, as is well known, in the first few months of 2011 the Arab world, and in particular North Africa, was hit by uprisings and war-like events which caused great upheaval in the region. In the short

TABLE 5 - *Factorial Country Risk Index 2012 (FCRI 2012)*

| Country | FCRI 2012 | Class |
|---|---|---|
| Estonia | 1.97 | 3 |
| Slovakia | 1.58 | 3 |
| Israel | 1.45 | 3 |
| Croatia | 0.85 | 4 |
| Hungary | 0.84 | 4 |
| Latvia | 0.8 | 4 |
| Lithuania | 0.61 | 4 |
| Poland | 0.38 | 4 |
| Tunisia | 0.34 | 4 |
| Algeria | 0.25 | 4 |
| Rumania | 0.01 | 4 |
| Morocco | -0.01 | 5 |
| Macedonia | -0.05 | 5 |
| Lebanon | -0.06 | 5 |
| Bulgaria | -0.27 | 5 |
| Ukraine | -0.35 | 5 |
| Bosnia and Herzegovina | -0.5 | 5 |
| Russia | -0.6 | 5 |
| Albania | -0.62 | 5 |
| Turkey | -0.63 | 5 |
| Libya | -0.73 | 5 |
| Serbia | -0.8 | 5 |
| Syria | -0.8 | 5 |
| Moldova | -1.18 | 6 |
| Egypt | -1.39 | 6 |
| Belarus | -2.09 | 6 |

term, the so-called 'Arab Spring' has contributed to increasing the factors of instability and to clouding the trajectory for future policies in the countries involved, as well as heightening, as in the case of Tunisia and Egypt, the social and economic problems underpinning the protests. Yet, in the long term a new political phase is opening up in these countries, which may be able to offer opportunities for real economical and political change, even though the various countries involved have differing agendas (Paciello, 2011).

In light of the critical situations emerged from the international economic crisis and the development of the 'Arab Spring', which brought about a downturn in the economies of the countries affected by this phenomenon, we deemed it appropriate to calculate a new index, despite the absence of completion of the data. However the factorial model, taking into account the new data, indicates the inclusion therein of the 'employment' variable. From the updated results, a loss of position in the ranking by Arab countries emerges, above all to the advantage of Ukraine and Russia (Table 5).

The new index has a correlation with the Coface index weaker than before (Guide Coface Risque Pays 2011). Indeed, the correlation has reduced, since the Coface index has not included yet the events of 2011: the coefficient of Spearman drops below the value of 0.675. After its updating, the correlation should rise.

## 5. Conclusions

Factorial analysis, which the index proposed here is hinged upon, conveys easily available information into a matrix of correlation. Thus it can identify the latent dimensions not immediately observable, in the presence of a high correlation with one and the same factor. The capacity of capturing the 'latent dimensions' can enable the operators to foresee potential risks, allowing them to better formulate, over a short period, a quantitative and qualitative estimate of the ongoing events. Undoubtedly, such prompt insight plays a paramount role, especially concerning the events currently taking place and evolving on the shores of the African Mediterranean. Indeed early perception represents added value; however, further analysis is requested to compare it with the opinions emerging from the procedure of 'consensus-building' established by experts of the main agencies and risk assessment bodies. Generally speaking, one should consider that the risks emerging from trading exchange can find partial protection in various forms of insurance; but others do exist, which

are barely safeguarded or even have no protection at all, such as the risks dependent on geopolitical events, on insolvency at the level of sovereign debt, on financial restrictions and constraints, on excessive variation in prices, rates of interest and exchange rates.

Undoubtedly, the risks associated with political-financial crises especially affect less developed countries, which are just the specific focus of our research. In an increasingly globalised economy, they are hit by the effects of imported crises to a greater extent, although difficult to estimate. Regarding the countries on the Southern coast of the Mediterranean, there are two different types of country: Tunisia, Algeria, Morocco, Lebanon, which even after the 'Arab Spring' continue to get satisfactory values in the index, and are placed very closely beside each other in central positions; Libya, Syria and Egypt, which show, on the contrary, a more critical situation, with their index values placed at the bottom of the ranking.

In conclusion, it must be underlined again the difficulty in identifying the level of risk adequately and the interconnection between the risks, so that the system of country risk assessment can only be a constant *work in progress*.

However it could be useful to single out timely those sorts of risk, and the proposed index can just do it promptly, mainly thanks to the 'hidden' correlations with the index of political risk (*political risk country*) and with the human development index (HDI). With regard to the operative decisions, the FCRI index provides significant informative advantages about investment decision and localisation choice.

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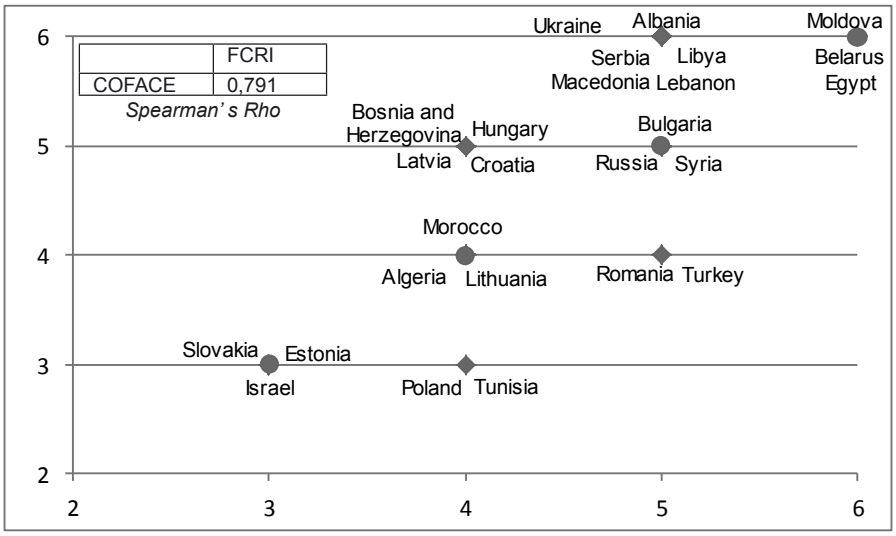
## ADDENDUM

This paper draws largely from our Discussion paper – DIEM, no. 43, December 2011 (Ivaldi, 2011). Now in Section 4 we have included the most recent available data, so that the coefficient of correlation by Spearman among the data of the factorial model and the estimates of Coface has decreased. The reduction is due to the lack of incorporation of the 'Arab Spring' in the Coface's analysis at the end of 2011. Then in February 2012 Coface has presented on its own site (www.coface.fr) new indices that take into account the events already considered in our model. Thus it is possible to compare the indices on the basis of homogenous time span, to find more coherent correspondence in their correlation.

From the comparison between the data of Table 5 and the more recent analysis of Coface, a level 0.791 of the Spearman index emerges (see Chart 4). According to our expectation, it is higher than the previous coefficient (0.675) and even than the index calculated for the period before the 'Arab Spring' (0.765).

CHART 4 - *Comparison between the Ranking of Coface 2012 and that of FCRI 2012*



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## ABSTRACT

The present paper puts forward a method of calculation of Country Risk based on Factor Analysis and applies it to Southern Mediterranean and Central-Eastern European countries. In this work we propose a method for estimating Country Risk using factorial analysis (Factorial Country Risk Index – FCRI) and apply it to southern Mediterranean countries and a number of countries of central and Eastern Europe.

The index provided periodically by Coface (a French company leader in export credit insurance) has been chosen as the benchmark for validating the FCRI. in order to provide a validation parameter for the index, the classification of the Country Risk is the chosen benchmark With the objective of providing a validation parameter for the proposed index, classification of Country Risk is used as a benchmark presented periodically by Coface, a leading French company in export credit insurance on.

Finally, the reckoned indexes have been updated taking into account the evolution engendered by the 'Arab Spring'.

The analysis was completed through certain updates of the indices which in particular reflect the rich developments of critical situations stemming from the so-called 'Arab Spring' in the southern Mediterranean countries.

The FCRI is established starting from a quite small set of variables and is correlated very well with the benchmark. It can be quickly revised and fits new scenaries easily. Last but least, the FCRI is able to single out in advance those 'latent dimensions' that are going to increase the risk.

The index proposed here, even if only based on a number relatively small of variables, corresponds well to the classification testing, allows for a rapid and satisfactory review and has adequate capacity to adapt to new scenarios, but above all, seems to be able to give substance to the pre-figurative 'latent dimensions' of risks in relatively brief periods.


Keywords: Risk Country, Factorial Analysis, Arab Spring

JEL Classification: C40, C81, F5


## RIASSUNTO

### *Una proposta di indice di rischio paese basato sull'analisi fattoriale: una applicazione ai paesi del sud del Mediterraneo e ai paesi del centro-est Europa*

Scopo di questo lavoro è la predisposizione di una metodologia per il calcolo del Rischio Paese attraverso l'utilizzo dell'analisi fattoriale (Factorial Country Risk Index – FCRI), e la sua applicazione ai Paesi del sud del Mediterraneo e ad alcuni Paesi facenti parte dell'Europa centrale ed orientale.

Al fine di fornire un parametro di validazione dell'indice proposto, si utilizza come misura di confronto la classificazione di Rischio Paese proposta periodicamente da Coface, azienda francese leader nell'assicurazione del credito alle esportazioni. L'analisi è completata da alcune considerazioni

relative alle criticità introdotte dalla cosiddetta "Primavera araba" nei Paesi del sud del Mediterraneo.

L'indicatore proposto, pur se ottenuto con un numero di indici relativamente limitato, mostra una buona corrispondenza con la variabile test, permette una soddisfacente rapidità di revisione e un'adeguata capacità di adattamento a nuovi scenari, ma soprattutto sembra avere la capacità di dar corpo alle "dimensioni latenti" prefigurative dei rischi in tempi relativamente brevi.