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**CONSTRUCTING A FINANCIAL RISKINESS INDEX
ACROSS COUNTRIES**

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CONSTRUCTING A FINANCIAL RISKINESS INDEX ACROSS COUNTRIES[§]

Lino Briguglio*

Abstract:

The paper attempts to construct an index of financial riskiness across countries, and to find out whether this index is correlated with the stage of economic development, with political governance and with country size. The paper also addresses the question as to why the 2008 financial crisis was mostly associated with developed countries, which tend to have relatively high good governance scores, when compared to developing countries in general. The financial riskiness index (FRI) is made up of two components namely a Financial Imprudence Index (FII) weighted by a Financial Depth Index (FDPI). The paper finds that the FII tends to be negatively correlated with economic development, measured by GDP per capita while the FDPI was found to be positively correlated with GDP per capita. The same tendencies were found to exist with good political governance. These two indices were not found to be correlated with country size. The results would seem to suggest that the reason why the 2008 financial crisis was mostly associated with developed countries, could be that although developed countries tend to be more prudent in their financial markets, when compared to developing countries, they also tend to have larger financial sectors in relative terms, and therefore financial imprudence, though not as widespread as is the case in developing countries, tends to have a higher effect in developed countries due to their relatively high dependence on the financial sector.

1. INTRODUCTION

Free and unregulated markets are associated with flexibility and fast adjustment of demand and supply to their equilibrium levels. Briguglio et al. (2009) argued that if markets adjust rapidly to achieve equilibrium following an external shock, the risk of being negatively affected by such a shock will be lower than if market disequilibria persist. Indeed, the science of economics predicts that with very slow or non-existent market adjustment, resources will not be efficiently allocated in the economy, resulting in welfare losses associated with shortages, unemployed resources and unutilised capacity. For this reason, markets and their effective operation, through the price mechanism, are viewed as the best system for allocating resources and achieving economic growth. However, government regulation is also considered necessary in certain conditions, particularly to reduce downsides associated with abusive behaviour and excessive risk taking, such as, for example by enacting anti-trust laws in the goods market and putting into place regulatory frameworks in the financial market.

In the case of the financial market, abusive behaviour in the financial sector is particularly dangerous, a factor often associated with the liberalisation of this market. As Ocampo (2008) argues, appropriate regulatory frameworks are important in this regard, given the possibility of excessive risk-taking, particularly in times of business cycle upswings, as evidenced in the

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financial crisis of 2007-2008.¹ An unregulated or badly regulated market is therefore likely to lead to what in this paper is termed as “financial riskiness”.

In this paper an attempt will be made to construct an index of such riskiness across countries, and to find out whether this index is correlated with the stage of economic development and with political governance, across countries. The paper will also try to address the question as to why the 2008 financial crisis was mostly associated with developed countries, which tend to have relatively high good governance scores.

The paper is organized in four sections. Following this brief introduction, Section 2 discusses the construction of the Financial Riskiness Index (RFI) across countries, and presents the results of computing such an index. Section 3 correlates the RFI with the stage of development, with political governance and with country size. Section 4 concludes the paper with a number of implications derived from the results presented in the previous sections.

2. CONSTRUCTING A FINANCIAL RISKINESS INDEX

Financial risk is generally associated with the uncertainty of the outcome of a financial investment, possibly due to insolvency of the borrower arising from an inadequate level of liquidity to meet financial obligations or other matters which could lead to default of repayment of for example, deposits or loans. Very often measurements of such risk are based on ratios, such as the debt-to-capital ratio or the capital expenditure ratio, aimed at assessing the possibility of success or otherwise of a financial investment.

In this study we will not use such ratios, and this for two main reasons. Firstly, this paper deals with riskiness for the economy as a whole across countries, and data on such financial ratios are not generally available for meaningful comparisons across countries. Secondly, risk refers to multiple forms of uncertainties associated with financial investment, and different types of ratios can be used for different types of risks.² For these reasons this study utilizes a risk perception index, given that risk is often perceived, even when information on financial ratios is not available.³

The Financial Riskiness Index which is proposed in this paper consists of two components, namely (a) “financial imprudence” weighted by (b) the “importance of the financial sector”. The assumption here is that if we take two countries with an equally high “financial imprudence” score but the first has a relatively larger financial sector than the second, the problem will be higher in the first country when compared to the second.

2.1 Measuring financial imprudence

¹ On this issue see also Group of 30 (2010) and Cecchetti (2009).

² The IMF also produces a list of Financial Soundness Indicators (FSI) but informs users that different countries compile FSI data on the basis of different approaches, and this may not permit cross-country comparisons. Information about FSI is available at: <https://www.imf.org/external/np/sta/fsi/eng/fsi.htm>.

³ On the importance of perceptions in the financial markets see Diacon and Ennew (2001).

To measure “financial imprudence” it was deemed appropriate to derive the information from two indices utilised in the Global Competitiveness Report (Schwab, 2016) titled “soundness of banks”⁴ and “regulation of securities exchanges”⁵. The data was derived from the Executive Opinion Survey of the World Economic Forum.⁶ These two indices are thought to capture two major facets of financial soundness, namely prudential and regulatory aspects.

The indicators included in the Global Competitiveness Indicators (GCI) are measured along a 7-point scale, with 7 indicating the highest level of prudence. Given that the indicators used in this study convey an opposite conditions, a given score on the “soundness of banks” indicator was subtracted from 7. For example a score of 5 on the “soundness of bank” index was assigned a score of 2 on the “unsoundness of banks” index. The same applies to the “lack of regulation of securities exchanges” index. The financial imprudence index (IFI) is the average of two indices namely the “Unsoundness of Banks Index” and the “Weak Regulation of Securities Exchanges Index”.

Figure 1a shows that financial imprudence, as measured by the IFI, tends to decrease with economic development where the stage of economic development is measured by the log of GDP per capita.⁷ The correlation coefficient is somewhat low, indicating that there are many exceptions to this tendency.

Figure 1b shows that IFI tends to decrease as governance improves where governance is measured by two components of the Worldwide Governance Indicators, namely the Government Effectiveness indicator and the Rule of Law indicator.⁸ These two indicators were selected because they were thought to have a direct bearing on financial sector regulation. However, each one of the two components of the governance indicators was negatively correlated with the financial imprudence index.

Figures 1a and 1b would seem to suggest that developing countries tend to be more fiscally imprudent than developed countries, in general. The question than arises, as to why, the 2008 financial crisis was mostly associated with developed countries, which also have relative high good governance scores, when compared to developing countries in general.

⁴ The indicator is constructed on the basis of the responses to this question: “In your country, how do you assess the soundness of banks? [1 = extremely low—banks may require recapitalization; 7 = extremely high—banks are generally healthy with sound balance sheets].

⁵ The indicator is constructed on the basis of the responses to this question: In your country, to what extent do regulators ensure the stability of the financial sector? [1 = not at all; 7 = to a great extent.

⁶ The data is available at <http://reports.weforum.org/global-competitiveness-index/downloads/>. The GCI indicators did not cover all countries of the world, and many small states were left out. There were 132 countries which were included in both the GCI database as well as in the World Bank Financial Depth Indicators, and the analysis included in this paper relates to these 132 countries, as listed in Appendix 1.

⁷ The use of logs implies that the relation of GDP per capita to IFI occurs at a diminishing rate.

⁸ Data on the Worldwide Governance Indicators is available at: <http://info.worldbank.org/governance/wgi/index.aspx#home>. Government effectiveness captures perceptions of the quality of public services, the quality of the civil service and the degree of its independence from political pressures, the quality of policy formulation and implementation, and the credibility of the government's commitment to such policies. Rule of law captures perceptions of the extent to which agents have confidence in and abide by the rules of society, and in particular the quality of contract enforcement, property rights, the police, and the courts, as well as the likelihood of crime and violence

The answer proposed in this paper is that although developed countries in general tend to be more prudent in their financial markets (although not fully prudent)⁹ when compared to developing countries in general, the former tend to have larger financial sectors for a given size of the a country’s economy, and therefore the impact of a given level of imprudence is felt more in developed countries than in developing ones, in general. The term “in general” needs to be emphasized here, as it is likely that there are many exceptions to this tendency.

Figure 1a: FII and GDP Per Capita

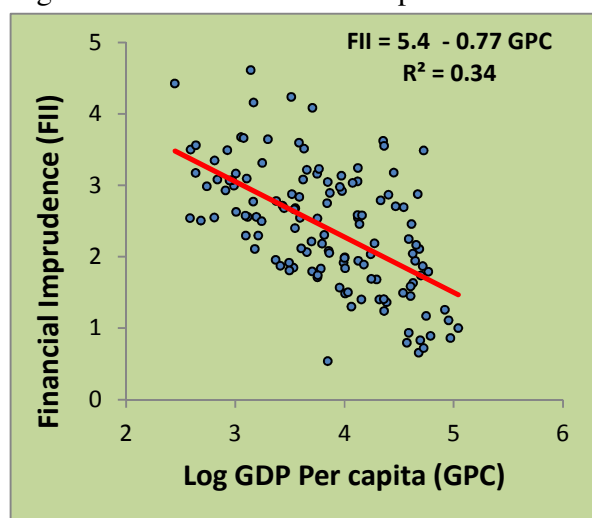
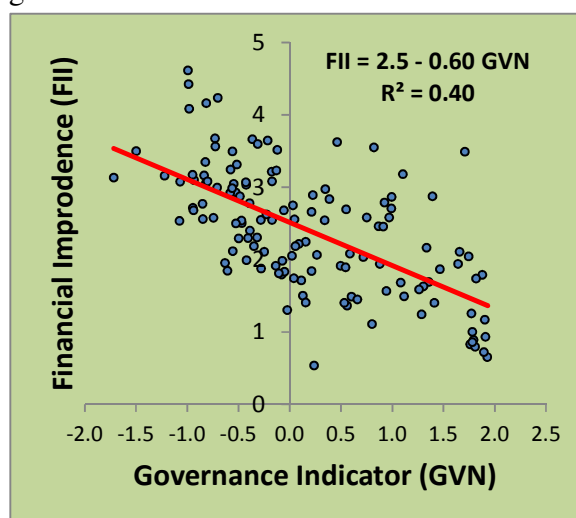


Figure 1b: FII and Good Governance



Sources: See data appendix

2.2 Measuring the dependence on the financial services sector

The next step is therefore to test whether rich countries have a higher dependence on financial services. Such dependence is measured by “bank private credit to GDP (%)” index.¹⁰ The data was averaged over 5 years from 2010 to 2014. According to the World Bank (2012: 23), this index provides a good estimate of the depth of the financial sector.

As can be seen from Figure 2a financial depth and the log of GDP per capita are positively correlated, suggesting that the stage of development could be a determinant of the extent to which countries tend to depend on the financial sector. GDP per capita measured in US\$, is sourced from the IMF economic outlook database.¹¹

⁹ As a matter of fact “over the counter derivatives” (OTCs) such as “collateralized debt obligations” (CDOs) and “credit default swaps” (CDSs), often considered as having contributed to the 2008 crisis, and which were at the time not formally regulated, were usually designed in developed countries (Grima 2012).

¹⁰ Data on this index are available at: <http://data.worldbank.org/data-catalog/global-financial-development>.

¹¹ The data is available at: <http://www.imf.org/external/pubs/ft/weo/2016/02/weodata/weoselgr.aspx>.

Figure 2a: FDPI and GDP Per Capita

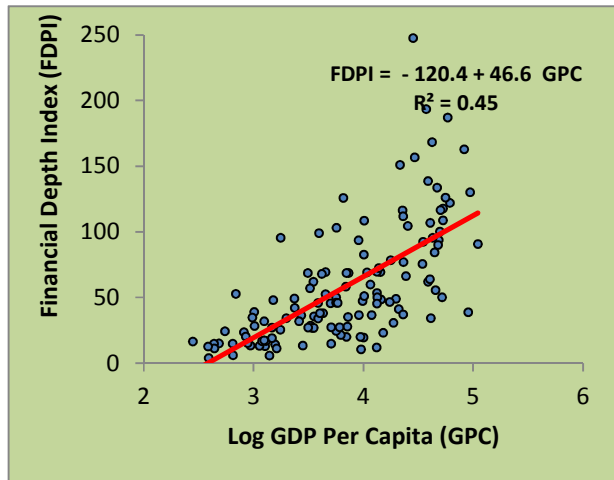
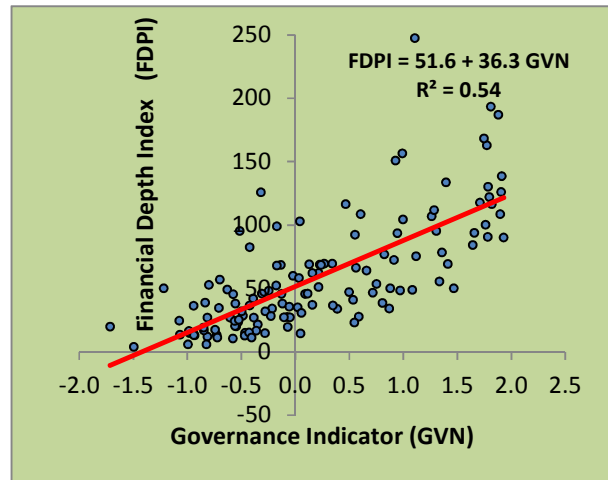


Figure 2b: FDPI and Good Governance



Sources: See data appendix

Financial depth is also positively correlated with political governance. It so happens that GDP per capita and political governance are highly correlated, and hence the positive correlation of financial depth with both variables.

2.3 Constructing a Financial Riskiness Index

The “financial imprudence” and the “financial depth” indices were combined to construct a “financial riskiness” index (FRI) across countries. As already stated, if two countries have equal “financial imprudence” score but the first has a relatively larger financial sector than the second, the risk is assumed to be higher in the first country when compared to the second.

The method adopted in this paper to combine the two indices was to multiply one by the other, suggesting that that financial imprudence is weighted by financial depth, so that the $FRI = FII \times FDPI$.¹²

3. FACTORS AFFECTING FINANCIAL RISKINESS

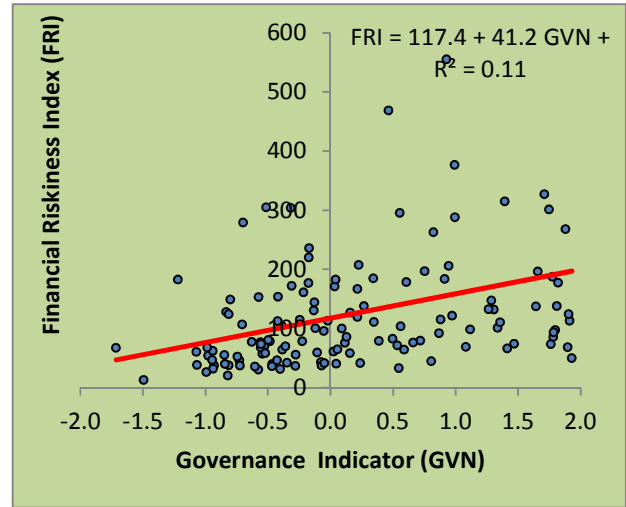
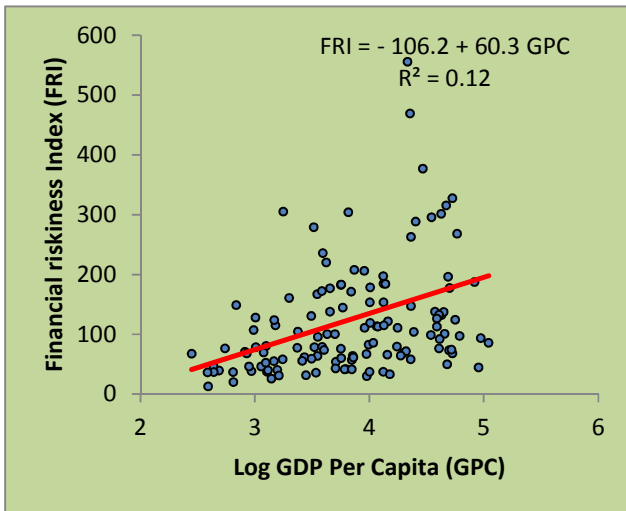
3.1 Correlation of FRI with GDP per capita and with governance

Figures 3a and 3b show, respectively, the correlation between the FRI and the log of GDP per capita and between FRI and governance. The fitted lines exhibit a positive slope in both cases, indicating that richer countries and better governed ones tend to face a higher degree of riskiness, even though they are better regulated.

Figure 3a: Financial Riskiness and GDP Per Capita

Figure 3b: Financial Riskiness and Good Governance

¹² An alternative approach was to rescale both indices using the Max/Min formula and take a simple or geometric average of the two rescaled indices. This method of combining the two indices were also applied but the results did vary considerably.



Sources: See data appendix

The correlation coefficient, however, is very low, and therefore there are many exceptions to this tendency. The reason for this positive relationship is, according to our argument, that richer and better governed countries tend to have a lower degree of financial imprudence but higher degree of financial depth, when compared to poorer and worse governed countries. However there are wide variations around the trend, and individual countries within each group have their particular circumstances.

A closer examination of the financial riskiness index shows that the European Countries which were, and to an extent still are, at risk of default registered the highest ranks on the riskiness index produced in this study, which covered 132 countries. The countries with the highest FRI were the following in the order indicated: Cyprus, Spain, Greece, Portugal, Ireland, and Iceland. Italy also registered a high riskiness index but placed number 14 among the countries with the highest FRI rank.

It would be interesting to assess the extent to which financial riskiness, as measured by the FRI is related to financial imprudence, as measured by the FII, and to the stage of development, as measured by the log of GDP per capita (GDC) as per the following specification:

$$FRI_i = \alpha_0 + \alpha_1 FII_i + \alpha_2 GPC_i.$$

The coefficients α_1 and α_2 are both expected to be positive. The equation was tested, using multiple regression method, for the 132 countries included in this study, with the following results:

$$FRI_i = -492.9 + 68.3 FII_i + 118.3 GPC_i \quad R^2 = 0.35$$

t-statistics 6.3 8.3 $i = 1, 2, \dots, 132.$

It can be seen that α_1 and α_2 are both positive as expected and statistically different from zero at the 95% level of significance.¹³ The results would seem to confirm the hypothesis that financial riskiness is indeed associated with financial imprudence and the stage of development.¹⁴

3.2 The financial sector in small states

Many small states have become increasingly dependent of financial services. Among the sovereign countries included in the financial depth index, described above, about one third of the quartile with the highest financial depth are small states with a population of less than 1 million - obviously a ratio higher than the ratio of small to all countries. This ratio excludes small island jurisdictions, like the Cayman Islands, the Virgin Islands and Bermuda, which are not included in the list of sovereign states.

The correlation between country size (measured in terms of population)¹⁵, financial imprudence and financial depth indicates that smaller states tend to be more financially prudent and to have a higher dependence on the financial sector, than larger states, but the correlation is very low, as can be seen in shown in Figure 4a and 4b.

Figure 4a: FII and Country Size. Figure 4b: FDPI and Country Size. Figure 4c: FRI and Country Size

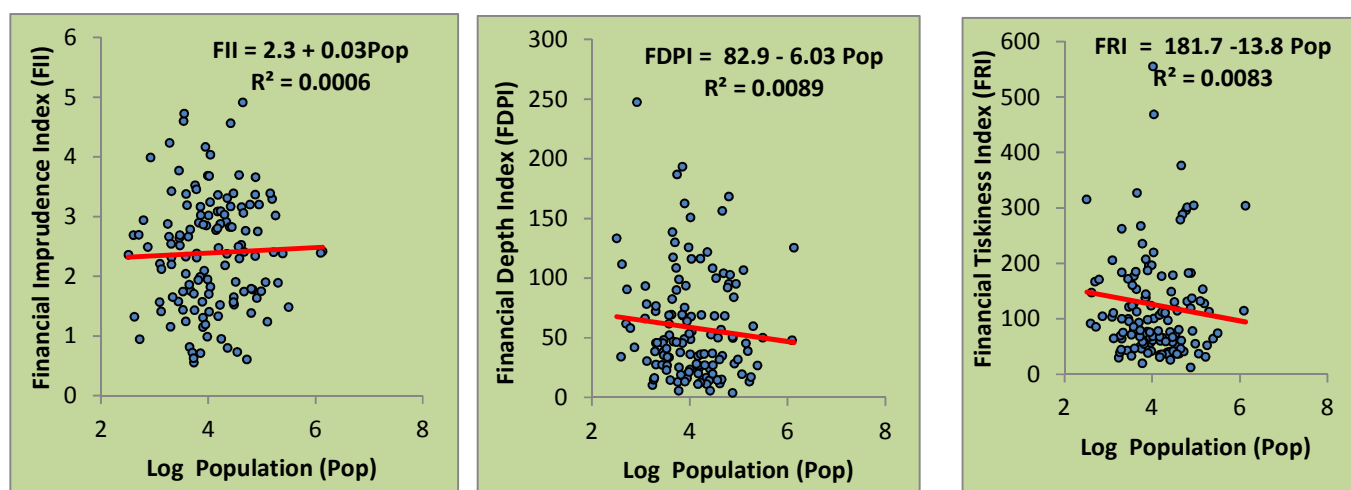


Figure 4c shows that financial riskiness is negatively associated with country size, possibly due to the fact financial depth indicator of small states is often relatively large. However, one can

¹³ A similar result was obtained when GPC was replaced by the governance indicator (GVN) with the estimate of the coefficients of FII and GVN being statistically different from zero and a correlation coefficient (R^2) = 0.4.

¹⁴ There is a degree of circular argumentation in the equation for FRI, given that it was derived by multiplying FII by FDPI, where FII is one of the dependent variables, and GPC is correlated with FDPI. This specification therefore raises issues of simultaneous equation bias. Clearly, further work is need in this relationship./ However the results shown here could shed light on the question as to why the financial crises of 2008 was mostly associated with developed countries.

¹⁵ The population data is available at: <http://www.imf.org/external/pubs/ft/weo/2016/02/weodata/weoselgr.aspx> .

conclude that, judging by the low degree of the correlation coefficient in Figure 4c, that small states do not exhibit a systematic difference when compared to large states in terms of the financial riskiness.

4. CONCLUSION

The main finding of this paper is that financial imprudence, as measured by Financial Imprudence Index (FII), tends to be negatively correlated with economic development, measured by GDP per capita (which variable is often considered to capture the stage of development). The FII was also found to be negatively correlated with good political governance. Indeed, GDP per capita and political governance are themselves highly correlated.

This paper tried to address the question as to why the 2008 financial crisis was mostly associated with developed countries, which have a higher GDP per capita and are generally better governed, when compared to developing countries in general. The answer proposed in this paper is that although developed countries tend to be more prudent in their financial markets, they also tend to have larger financial sectors in relative terms, and therefore the impact of imprudence is felt more than in these countries than is the case with less developed countries. As a result, the Financial Riskiness Index (FRI) tended to register higher scores for higher income and better governed countries. It was however emphasised that correlation between FRI with income per capita and with governance was very low, indicating that there are other factors at play. The positive relation just described is just a trend, and as emphasised above, individual countries may have their own specific circumstances.

REFERENCES

- Briguglio, L., Cordina, G., Farrugia, N., & Vella, S. (2009). "Economic vulnerability and resilience: Concepts and measurements," *Oxford Development Studies*, Vol.37(3): 229-247. Retrieved from http://econpapers.repec.org/article/tafoxdevs/v_3a37_3ay_3a2009_3ai_3a3_3ap_3a229-247.htm .
- Cecchetti, S.G. (2009). "Financial system and macroeconomic resilience revisited". Opening remarks at the Eighth BIS Annual Conference Basel, 25 June 2009. Retrieved from <http://www.bis.org/events/conf090625/cecchetti.pdf> .
- Diacon, S. and Ennew, c. (2001). "Consumer Perceptions of Financial Risk,,: The Geneva Papers on Risk and Insurance, Vol. 26 (3):389-409. Available at: [https://www.genevaassociation.org/media/237394/ga2002_gp26\(3\)_diaconennew.pdf](https://www.genevaassociation.org/media/237394/ga2002_gp26(3)_diaconennew.pdf) .
- Grima, S. (2012). "The Current Financial Crisis and Derivative Misuse," *Journal of Social Sciences Research*, Vol. 1(8): 265-276; Available at: <http://onlineresearchjournals.org/JSS/pdf/2012/nov/Grima.pdf> .
- Group of 30 (2010). *Enhancing financial stability and resilience macroprudential policy, tools, and systems for the future*. Retrieved from http://group30.org/images/uploads/publications/G30_EnhancingFinancialStabilityResilienc e.pdf .

- Kaufmann, D., Kry, A., & Mastrui, M. (2010). *The worldwide governance indicators: Methodology and analytical issues*. World Bank Policy Research Working Paper No. 5430. Retrieved from http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1682130 .
- Ocampo, J.A. (2008). Macroeconomic vulnerability and reform: Managing pro-cyclical capital flows. Paper presented at the international symposium 'Financial Globalization and Emerging Market Economies'. Bangkok, Bank of Thailand. Retrieved from http://www.bot.or.th/English/EconomicConditions/Semina/Documents/08_Paper_Ocampo.pdf .
- San Jose, A. and Georgiou, A. (2009). "Financial soundness indicators (FSIs): framework and implementation". *IFC Bulletin No 31* . Available at: <http://www.bis.org/ifc/publ/ifcb31v.pdf>
- Schwab, K. (2016). *The global competitiveness report 2016–2017*. Switzerland: World Economic Forum. Retrieved from <https://www.weforum.org/reports/the-global-competitiveness-report-2016-2017-1> .
- World Bank (2012). *Global Financial Development Report(2013): Rethinking the Role of the State in Finance*. Washington: IBRD. Retrieved from: http://siteresources.worldbank.org/EXTGLOBALFINREPORT/Resources/8816096-1346865433023/8827078-1346865457422/GDF_2013_Report.pdf .
- World Bank (2015). *Global Financial Development Report (2015-16): Long Term Finance*. Washington: IBRD. Retrieved from: http://siteresources.worldbank.org/EXTGLOBALFINREPORT/Resources/8816096-1346865433023/8827078-1346865457422/GDF_2013_Report.pdf .

DATA APPENDIX

Country	FII	FDPI	FRI	GDPPC	POP	WGI
Albania	3.51	37.95	133.35	4.29	2.90	-0.12
Algeria	4.08	14.64	59.75	5.10	37.93	-0.98
Argentina	3.06	11.81	36.08	13.23	41.96	-0.81
Armenia	2.68	35.56	95.29	3.55	2.97	-0.05
Australia	0.89	121.94	108.44	61.36	23.08	1.80
Austria	2.11	93.73	197.42	48.59	8.47	1.66
Azerbaijan	3.05	19.96	60.84	7.03	9.23	-0.55
Bahrain	1.36	66.16	90.22	24.44	1.24	0.56
Bangladesh	3.16	38.77	122.61	1.01	155.56	-0.83
Belgium	2.16	55.40	119.84	45.38	11.09	1.34
Benin	2.93	23.36	68.42	0.82	10.18	-0.53
Bhutan	2.78	41.89	116.41	2.38	0.75	-0.39
Bolivia	2.71	36.13	98.05	2.71	10.32	-0.94
Bosnia and Herzegovina	3.21	52.30	168.12	4.54	3.88	-0.18
Botswana	2.08	27.66	57.64	7.17	2.07	0.59
Brazil	1.30	59.80	77.86	11.62	200.07	-0.02
Brunei Darussalam	2.46	34.09	83.81	41.21	0.40	0.87
Bulgaria	2.89	68.52	198.15	7.36	7.28	0.23
Burundi	4.42	16.22	71.74	0.28	8.89	-0.98
Cambodia	2.99	34.58	103.50	0.98	14.96	-0.71
Cameroon	3.10	12.74	39.43	1.28	21.74	-0.93
Canada	0.83	100.00	83.14	49.68	34.90	1.76
Cape Verde	2.66	61.93	164.75	3.50	0.51	0.22
Chile	1.40	69.24	96.97	14.34	17.54	1.41
China	2.30	125.62	289.51	6.56	1357.39	-0.32
Colombia	2.05	35.03	71.82	7.27	46.85	0.02
Congo Dem. Rep.	3.50	3.76	13.16	0.39	75.96	-1.49
Costa Rica	1.92	47.05	90.10	9.86	4.69	0.50
Côte d'Ivoire	2.56	16.68	42.69	1.30	22.26	-0.84
Croatia	2.54	69.37	176.49	13.32	4.28	0.34
Cyprus	3.18	247.37	786.01	28.31	0.85	1.11
Czech Republic	1.68	48.83	82.08	19.75	10.50	1.08
Denmark	1.79	186.92	334.26	58.60	5.59	1.88
Dominican Republic	2.18	21.40	46.74	6.25	9.73	-0.35
Ecuador	2.53	24.39	61.80	5.67	15.65	-1.07
Egypt	2.87	28.41	81.69	3.32	83.67	-0.48
El Salvador	2.55	98.95	251.84	3.93	6.08	-0.17
Estonia	1.69	78.27	132.38	17.69	1.32	1.36

Country	FII	FDPI	FRI	GDPPC	POP	WGI
Finland	0.65	89.95	58.86	47.86	5.41	1.93
France	1.63	95.19	155.26	42.70	63.53	1.31
Gabon	2.92	10.41	30.39	9.52	1.75	-0.58
Gambia	2.50	14.85	37.18	0.49	1.85	-0.47
Georgia	2.83	33.76	95.68	3.87	3.82	0.39
Germany	1.94	84.11	163.31	44.67	81.12	1.64
Ghana	2.56	14.26	36.45	1.57	25.27	0.05
Greece	3.62	116.22	420.86	22.73	11.02	0.47
Guatemala	1.84	26.77	49.37	3.42	15.31	-0.60
Honduras	1.95	49.03	95.79	2.35	7.79	-0.63
Hong Kong SAR	0.79	193.34	153.35	37.42	7.19	1.81
Hungary	2.58	53.40	137.85	13.27	9.93	0.75
Iceland	2.87	133.40	383.53	46.92	0.32	1.39
India	2.11	47.96	101.06	1.51	1247.25	-0.25
Indonesia	2.40	26.84	64.40	3.53	246.92	-0.39
Iran	3.16	49.88	157.63	5.65	76.95	-1.22
Ireland	3.49	117.53	409.87	53.22	4.59	1.71
Israel	1.49	75.29	112.44	34.45	7.99	1.12
Italy	2.69	92.26	248.48	35.01	59.87	0.55
Jamaica	1.80	27.26	48.93	5.08	2.78	-0.08
Japan	1.59	106.77	169.25	40.53	127.40	1.26
Jordan	2.06	69.31	143.05	4.53	7.08	0.27
Kazakhstan	3.03	36.38	110.36	11.91	17.05	-0.42
Kenya	2.29	31.81	72.98	1.25	41.28	-0.50
Korea	2.87	104.26	298.91	25.33	50.08	1.00
Kuwait	2.25	61.89	139.10	38.88	3.84	0.16
Kyrgyz Republic	3.67	13.10	48.09	1.13	5.72	-0.73
Lao P.D.R.	2.77	18.90	52.40	1.47	6.71	-0.85
Latvia	2.46	72.23	177.35	13.79	2.04	0.91
Lebanon	1.99	82.53	164.22	10.12	4.45	-0.42
Lesotho	3.66	16.43	60.18	1.19	1.92	-0.36
Liberia	3.17	14.67	46.53	0.44	4.03	-0.95
Lithuania	2.58	48.27	124.58	14.52	2.98	0.97
Luxembourg	1.00	90.51	90.67	110.33	0.53	1.78
Macedonia	2.21	45.56	100.89	5.01	2.06	0.09
Madagascar	3.56	11.12	39.62	0.44	22.63	-0.72
Malawi	2.54	12.53	31.81	0.39	16.89	-0.47
Malaysia	1.49	108.40	161.11	10.17	29.88	0.61
Mali	3.49	20.14	70.32	0.85	15.11	-0.56
Malta	1.24	111.60	138.50	23.10	0.42	1.29

Country	FII	FDPI	FRI	GDPPC	POP	WGI
Mauritania	4.16	26.93	111.98	1.47	3.50	-0.81
Mauritius	1.57	93.35	146.11	9.04	1.26	0.95
Mexico	1.98	19.49	38.65	10.07	117.68	-0.07
Moldova	3.64	34.02	123.94	1.99	3.56	-0.21
Mongolia	3.60	45.68	164.25	3.86	2.86	-0.31
Montenegro	2.75	58.09	159.59	6.93	0.62	0.03
Morocco	1.92	68.41	131.08	3.11	32.68	-0.13
Mozambique	2.99	24.07	71.85	0.55	26.12	-0.56
Namibia	1.71	45.88	78.52	5.65	2.18	0.11
Nepal	3.08	52.64	162.23	0.69	27.68	-0.80
Netherlands	1.74	116.42	202.05	50.28	16.78	1.82
New Zealand	0.93	138.50	129.40	38.83	4.48	1.91
Nicaragua	2.50	25.20	62.94	1.75	6.10	-0.52
Nigeria	2.68	13.14	35.22	2.80	167.18	-0.94
Norway	0.86	130.00	111.85	93.81	5.06	1.78
Oman	1.40	40.94	57.40	20.95	3.39	0.53
Pakistan	2.58	17.31	44.57	1.25	181.52	-0.74
Panama	1.50	68.92	103.35	10.81	3.83	0.13
Paraguay	2.12	37.91	80.23	4.02	6.51	-0.55
Peru	1.83	27.19	49.83	6.09	30.31	-0.05
Philippines	1.87	31.68	59.36	2.60	97.40	-0.28
Poland	1.94	50.06	97.21	13.37	38.04	0.88
Portugal	2.79	150.84	420.53	21.55	10.49	0.93
Qatar	1.11	38.54	42.80	90.18	1.98	0.81
Romania	2.97	36.45	108.42	9.09	20.07	0.35
Russia	3.24	45.26	146.76	13.29	143.32	-0.57
Saudi Arabia	1.41	37.03	52.06	22.96	29.55	0.16
Senegal	2.63	28.19	74.01	1.02	13.94	-0.23
Serbia	3.23	45.61	147.36	5.85	7.19	-0.13
Sierra Leone	3.35	5.78	19.35	0.65	6.04	-0.82
Singapore	0.72	108.55	78.43	53.11	5.33	1.90
Slovak Republic	2.03	46.43	94.46	17.42	5.41	0.72
Slovenia	3.55	76.72	272.49	23.17	2.06	0.82
South Africa	0.54	68.38	36.76	7.03	52.81	0.24
Spain	2.71	156.44	423.52	29.39	46.59	0.99
Sri Lanka	1.81	27.04	48.91	3.14	20.75	-0.11
Sweden	1.17	125.89	147.20	56.14	9.62	1.90
Switzerland	1.26	162.71	204.48	83.12	8.00	1.77
Tajikistan	3.07	13.30	40.89	0.94	8.05	-1.07
Tanzania	3.07	15.10	46.28	0.89	45.32	-0.43

Country	FII	FDPI	FRI	GDPPC	POP	WGI
Thailand	1.74	102.90	179.16	5.69	68.12	0.04
Trinidad and Tobago	2.19	30.47	66.63	18.83	1.34	0.06
Tunisia	3.08	67.88	208.96	4.19	10.83	-0.17
Turkey	1.84	50.91	93.65	10.17	76.01	0.22
Uganda	2.55	14.70	37.44	0.65	36.94	-0.28
Ukraine	4.24	56.76	240.41	3.27	44.50	-0.70
United Arab Emirates	1.45	63.86	92.49	40.51	8.91	0.66
United Kingdom	2.04	168.25	343.41	42.42	63.93	1.75
United States	1.87	50.04	93.45	52.12	315.61	1.47
Uruguay	1.89	23.01	43.52	15.12	3.39	0.55
Venezuela	3.13	19.78	61.99	9.40	29.57	-1.72
Vietnam	3.31	95.21	315.50	1.77	89.27	-0.51
Yemen	4.61	5.65	26.05	1.39	26.30	-0.99
Zambia	2.30	11.06	25.39	1.62	15.04	-0.40

LEGEND AND SOURCES:

FII = Financial Imprudence Index:

The average of two indicators namely (1) “Soundness of Banks” and (2) “Regulation of Securities Exchanges”, measured by an index with values of 1 to 7, and adjusted so that 7 indicates the highest level of imprudence and 1 the highest level of prudence. Average for data available in the Global Competitiveness reports of 2011-12 to 2016-17 (mostly referring to 2010 to 2015).

Source: Global Competitiveness Report 2016-2017.

Available at: <http://reports.weforum.org/global-competitiveness-index/downloads/>

FDPI= Financial Depth Index

Measured by: Bank Private Credit as a ratio of GDP (%). Average for 2010 to 2014

Source: World Bank Global Financial Development Database

Available at: <http://data.worldbank.org/data-catalog/global-financial-development>

FRI = Financial Riskiness Index

The product of FII and DDPI

Source: Workings by author

GDP PC = GDP per Capita:

Measured by GDP per capita in US\$. Average for 2010 to 2015.

Source: IMF World Economic Outlook Database, October 2016

Available at: <http://www.imf.org/external/pubs/ft/weo/2016/02/weodata/weoselgr.aspx> .

POP = Population:

Measured in thousand persons. Average for 2010 to 2015.

Source: IMF World Economic Outlook Database, October 2016

Available at: <http://www.imf.org/external/pubs/ft/weo/2016/02/weodata/weoselgr.aspx> .

GVN = Good Governance:

The average of two indicators, namely (1) Government Effectiveness Indicator and (2) Rule of Law indicator of the sourced from the Worldwide Governance Indicators. The data was averaged for 2010 to 2014.

Source: World Bank Worldwide Governance Indicators

Available at: <http://info.worldbank.org/governance/wgi/index.aspx#home> .