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Financial development and macroeconomic performance: a panel data approach

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Abstract

Using panel fixed and random effects estimations as well as panel dynamic GMM estimations this paper analyses the contribution of the financial development, measured through the nine IMF financial development indices, to five macro performance indicators. The paper considers a panel with 46 developed countries, and a panel including only the sub-sample of the 28 EU countries, both over the interval 1990-2017. There are no remarkable differences between the results obtained for the two panels, and despite the lack of full convergence regarding the sign and strength of all estimation results, it is still possible to conclude that the IMF financial development indices have a dynamic and robust influence on all the five macro performance indicators. Overall, these indices contribute positively to the real GDP and negatively to the deflator, to the unemployment rate, to the current account, as well as to the net international investment position. There is also evidence that the results regarding the indices related to the different aspects of the financial institutions (access, depth, and efficiency) are statistically more robust than the results regarding the indices addressing the same aspects of the financial institutions.

Keywords: Financial development; IMF financial development indices; macroeconomic performance; panel estimations; fixed and random effects estimations; panel dynamic GMM estimations.

JEL Classification: C33; E02; E44, G20; O43.

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1. Introduction

The relevance of the financial sector development to economic performance has been the subject of intense theoretical debates and empirical studies, but it is still far from consensual. Many of these studies, namely those following the King and Levine (1993-a, 1993-b) contributions, concluded that financial development promotes economic growth, while others support the view of Bencivenga et al (1995) suggesting that sometimes financial intermediaries constrain productive growth.

There are also authors (such as Khan and Senhadji, 2000) supporting that financial development contributes to economic growth but also underlying that the size of the effects depends on the considered functional forms, estimation methods, data frequency, and very particularly on the variables chosen as financial development indicators. More recently, Sahay et al (2015) and Svirydzenka (2016) underlined the relevance of the indicators chosen to represent financial development, presenting a new very encompassing financial index, that is nowadays provided by the International Monetary Fund (IMF). This new IMF financial development index includes nine indices reflecting three relevant dimensions of the financial development: the depth, the access, and the efficiency of the financial markets and institutions.

This paper contributes to the literature by using panel estimations to test the influence of the nine IMF financial development indices to the macroeconomic performance, represented not only by the real Gross domestic product (GDP), but also by the inflation (proxied by the GDP deflator), the unemployment rate, the current account, and the net international investment position, over a relatively large interval: 1990-2017. The paper compares the results

considering a panel with 46 developed countries, spread by all continents, with the results obtained considering only the sub-sample of the 28 European Union (EU) countries.

The results obtained with panel fixed and random effects estimations and particularly those obtained with dynamic one-step GMM estimations demonstrate that the IMF financial development indices have a dynamic and robust influence on the five macro performance indicators considered in this paper. Overall, the results regarding the indices related to the different aspects of the financial institutions (access, depth, and efficiency) are statistically more robust than the results regarding the indices addressing the same aspects of the financial institutions.

There are no remarkable differences between the results obtained for Panel 1 and Panel 2, as in both panels there is evidence of the complexity of relationships and the influence of the different aspects of financial development to macroeconomic performance, namely because there is no total convergence regarding the sign and strength of all estimation results. Nevertheless, it is still possible to conclude that the IMF financial development indices overall contribute positively to the real GDP and negatively to the deflator, to the unemployment rate, to the current account, as well as to the net international investment position.

This paper is organised as follows: Section 2 provides a brief literature review; Section 3 describes the methodological aspects; Section 4 presents the used data and the results obtained; Section 5 concludes.

2. Brief literature review

During the last decades, the importance of the banking sector performance to economic growth has been subject of intense theoretical debates and empirical studies, particularly, after the

publication of the renowned King and Levine papers (1993-a, 1993-b), demonstrating that financial development promoted economic growth.

Good examples of this strand of literature are Levine and Zervos (1998), who used data for 49 countries for the time interval 1976-1990, concluding that there was a strong correlation between the rates of real per-capita output growth and stock market liquidity. Also, Demirgüç-Kunt and Levine (1999), with data for 150 countries spanning the 1990s, demonstrated that wealthy countries had better-developed financial systems, and defined this development in terms of the size and efficiency of the financial sector, measured by the assets, liabilities, overhead costs, and interest rate margins.

Beck et al (2004) considered the ratio between credits from financial intermediaries to the private sector divided by GDP as a proxy of financial intermediation in a panel of 52 countries during the period 1960 to 1999, concluding that financial development was clearly pro-growth as well as pro-poor.

Greenwood et al (2010, 2013) empirically analysed the effects of financial development on economic growth, deploying a state cost verification model and concluded that as financial sector efficiency increased, financial resources got redirected from the less productive firms to their more productive peers. This analytical approach was applied to both U.S. and cross-country data (more precisely, to a sample of 45 countries, that was first applied in Beck et al 2000) and one of the key findings pointed to the conclusion that world output could increase by 53 per cent if all countries adopted the best global financial practices.

Cecchetti and Kharroubi (2012) considered a sample of developed and emerging economies and analysed how financial development contributed to aggregate productivity growth and concluded in favour of an inverted U-shaped financial development effect, meaning that this development exerted a positive influence on productivity growth but only up to a certain point and after that point the influence on growth turned negative. Moreover, these authors focussed

on advanced economies showing that a fast-growing financial sector could be detrimental to aggregate productivity growth. Corroborating these conclusions, Aizenman et al (2015), examining sector-level data in 41 economies found that finance increased economic growth, but only up to a point, concluding also that there were heterogeneous effects across sectors. Several other studies, for example, Stiglitz (1985), Bhide (1993) and Bencivenga et al (1995), had already underlined the existence of relevant costs associated with the role of financial intermediaries and that sometimes these intermediaries could be subject to adverse selection and moral hazard problems which would constrain real economic growth-enhancing resource allocation, exaggerating the increase in interest rates, or contributing to the decrease in the saving rates. Simultaneously, De Gregorio and Guidotti (1995) considered that high-income countries had reached a point at which financial depth could no longer contribute to increasing the efficiency of the investment.

Loayza and Rancière (2006) focused on the importance of the time horizon, supporting that, in the long term, the studies on economic growth found a positive relationship between financial development and real growth; however, in the short term, the literature, and very particularly the one concerning bank crises, provided evidence of a negative relationship, revealing that monetary aggregates could represent good predictors of economic crisis.

More recently, Laeven and Valencia (2013) confirmed the important role of credit market frictions to the performance of the real economic activity during the last global financial crisis, using a sample including a large cross section of firms from 50 countries in both advanced and emerging market economies. Dabla-Norris et al (2015) analysed the sector-level productivity developments in the most advanced economies, considering the period from 1970 to 2007, concluding that before the recent crisis, the financial sector of the advanced economies was not orienting the resources towards the most productive economic sectors.

Prochniak and Wasiak (2016) considered a sample of 28 EU and 34 OECD economies in the period of 1993–2013, taking into consideration the impact of the global financial crisis on the relationship between finance and growth and concluding that an excessively large size of the financial system did not lead to more rapid economic growth, but on the contrary, it had surely affected negatively GDP growth.

Bijlsma et al (2018) performed a meta-analysis on 551 estimates from 68 empirical studies that took private credit to GDP as a measure for financial development, confirming that the analysed empirical studies on the finance-growth relationship showed a wide range of estimated effects. They also concluded that overall, there was evidence of a positive but decreasing effect of financial development on growth, underlying that the pre-crisis estimates of the sizeable positive effect of more developed financial markets on economic growth were overly optimistic.

The provided examples clearly demonstrate that the contribution of the financial intermediaries to economic growth is far from consensual. Khan and Senhadji (2000) had already underlined that while the general effects of financial development on the real outputs might be considered positive, the size of these effects varied not only with the estimation methods, data frequency or the defined functional forms of the relationships but also with the considered variables, particularly with the chosen financial development indicators.

Corroborating these statements, Gaytan and Rancière (2004) concluded that, on the one hand credit to the private sector and bank deposits contribute negatively to growth, but on the other hand stock market size, liquidity and investment contribute positively to economic development. The same kind of conclusions were obtained by Ayadi et al (2013) using a sample of northern and southern Mediterranean countries over the interval 1985-2009, these authors confirmed the existence of deficiencies in bank credit allocation in the considered countries as credit to the private sector and bank deposits were negatively associated to economic growth;

however, on the stock market side their results indicated that stock market size and liquidity did contribute to growth. Cournède and Denk (2015) focussed on advanced countries, more precisely on OECD countries and G20 countries, between 1970 and 2011, and also found that intermediated credit had a negative link with GDP growth while stock market size had a positive one.

The relevance of the indicators chosen to represent financial development is very clearly highlighted by Sahay et al (2015). Underlying that most of the empirical literature approximates financial development by the ratio of private credit to GDP, and to a lesser extent by the stock market capitalization, also as a ratio of GDP, this study develops a financial index encompassing the banking and non-banking financial institutions as well as the financial markets across three relevant dimensions: depth (size and liquidity), access (ability of individuals and companies to access financial services) and efficiency (ability of institutions to provide financial services at low costs and with sustainable revenues and the level of activities of financial markets).

The Financial Development Index is also very clearly presented and well discussed in Svirydzenka (2016). This index is nowadays provided by the International Monetary Fund, the available database includes nine indices over 180 countries, with annual frequency from 1980 onwards (although not all the indices are available for all countries since 1980).

3. Methodology

This paper tests the potential influence of financial development on economic performance using panel data techniques which have the advantages of providing more informative data, more degrees of freedom and more efficient estimations as well as less collinearity among the

considered variables (having also in consideration that panel data have some recognised disadvantages, as well explained, for example in Baltagi, 2008; Wooldridge, 2010).

The paper uses panel fixed and random effect estimations, as well as dynamic one-step system GMM (Generalized Method of Moments) estimations, following Arellano and Bond (1991) and Blundell and Bond (1998).

Before proceeding with panel estimations, the paper analyses the stationarity of the series using two widely recommended panel unit root tests: Levin-Lin-Chu test (Levin et al, 2002), and Hadri Lagrange multiplier tests (Hadri, 2000).

3.1. Panel unit root tests

The paper analyses the stationarity of the series considering as starting point a simple panel-data model with a first-order autoregressive (AR) component:

$$y_{it} = \rho_i y_{i,t-1} + \delta_i Z_{it} + u_{it} \quad (1)$$

where $i = 1, \dots, N$ indexes the cross units; $t = 1, \dots, T$ indexes the time periods; y_{it} is the variable being tested; ρ_i is the autoregressive coefficient; and u_{it} is the error term, assumed to be independent and identically distributed. The Z_{it} term represents individual constant deterministic effects specified for each unit root test, such as panel-specific means or panel-specific means and a time trend.

Most of the panel unit-root tests are used to test the null hypothesis $H_0: \rho_i = 1$ for all i versus the alternative $H_a: \rho_i < 1$. Depending on the specific test, H_a may hold for all the cross units, i , or just for part of them.

The test proposed by Levin et al (2002) is indicated for heterogeneous panels of moderate size, such as the panels considered in this paper. This test may be viewed as a pooled Dickey Fuller test, or as an Augmented Dickey Fuller test, including lags of the tested variable:

$$\Delta y_{it} = \alpha y_{i,t-1} + \sum_{j=1}^p \beta_{ij} \Delta y_{i,t-j} + \delta_i Z_{it} + u_{it} \quad (2)$$

With this test H_0 : panels contain unit root and H_a : panels are stationary.

The Hadri (2000) panel unit root test is recommended mostly for moderate panels. It uses the residuals from individual OLS regressions of the tested variable, y_{it} , on the deterministic components, constant and trend, to compute Lagrange-multiplier statistics. Contrary to the Levin-Lin-Chu test, this is a stationary test, considering H_0 : all panels are stationary, and H_a : some panels contain unit roots.

3.2 Panel regression estimations

Panel data regression estimations allow great flexibility in modelling the differences regarding the individual cross units' behaviours. A basic static panel regression model can be represented with the following equation:

$$y_{it} = \alpha_t + \beta X_{it} + \gamma Z_i + v_i + u_{it} \quad (3)$$

where y_{it} is the variable being tested; $i = 1, \dots, N$ are the cross units; $t = 1, \dots, T$ the time periods; α_t is the intercept (here, varying with t but independent of i); X_{it} are the independent variables that can vary both with i and t ; Z_i are the time-invariant independent variables that vary only with i ; β and γ are the coefficients associated to the X_{it} and Z_i variables; v_i is an error term that is assumed to vary with i but not with t ; u_{it} is another error term but this one is assumed to vary both with i and t .

Among the possible methods to estimate this kind of equations the paper focusses first on fixed and random effects panel estimations and, secondly, on system dynamic panel estimations.

Fixed effect estimations are particularly appropriate when the interest is in analysing the impact of variables that vary over the time. Fixed effects explore the relationship between the explaining variables and the outcome within each cross unit, considering that each cross unit

has its own characteristics, ν_i , that may (or not) influence the explaining variables. Therefore, it is possible to use fixed effects estimations if ν_i is considered as correlated with the time-varying variables X_{it} but it is not possible to estimate the coefficients, γ , representing the effects of the time invariant variables Z_i . On the other hand, considering that ν_i is random and uncorrelated with the time-varying X_{it} it is appropriate to use random effects estimations.

As well explained in Green (2018) the main distinction between fixed and random effects is whether the unobserved individual effect embodies elements that are correlated with the regressors in the model, not whether these effects are stochastic or not.

The decision between fixed or random effects is supported by the results obtained with Hausman (1978), which essentially tests if there is correlation between the unique errors and the regressors in the model. The null hypothesis is that the preferred model is random effects; the alternate hypothesis is that the model is fixed effects test.

However, neither fixed nor random effects models can deal with endogenous regressors, which may be an important concern in the context of the considered model. To deal with this limitation, the paper uses dynamic panel estimations, developed by Arellano and Bover (1995) and Blundell and Bond (1998), which can not only address the endogeneity problems (although only for weak endogeneity and not for full endogeneity, as explained by Bond, 2002) but also reduce the potential bias of the estimated coefficients.

The paper applies the dynamic one-step system GMM (Generalized Method of Moments) estimations. The system GMM method uses cross-country information and jointly estimates the equations in first difference and in levels, with first differences instrumented by lagged levels of the dependent and independent variables and levels instrumented by first differences of the regressors. The validity of the instruments is tested through the Sargan-Hansen statistic, which is supposed to be robust to heteroskedasticity and autocorrelation.

4. Data and empirical results

4.1. Data

All the data used in this paper are sourced from the IMF databases. It includes all the nine IMF financial development indices that are very well explained in Sahay et al (2015) and in Svirydzenka (2016) and are presented here in Annex I. It also considers five macroeconomic performance indicators: Gross Domestic Product (GDP), deflator, unemployment rate, current account, and net international investment position, as described in Annex II.

The paper includes data for 46 countries covering all continents: Argentina, Australia, Austria, Belgium, Brazil, Bulgaria, Canada, China, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, India, Indonesia, Ireland, Italy, Japan, Republic of Korea, Latvia, Lithuania, Luxembourg, Malta, Mexico, Netherlands, New Zealand, Norway, Poland, Portugal, Romania, Russian Federation, Slovak Republic, Slovenia, South Africa, Spain, Sweden, Switzerland, Turkey, United Kingdom, United States.

The estimations are performed for two panels: Panel 1 includes the whole sample of 46 countries, and Panel 2 includes only the sub-sample of the 28 EU countries, both panels are over the interval 1990-2017.

4.2. Results obtained with panel unit root tests

The results obtained with the mentioned panel unit root tests are presented in Table 1 and do not reveal significant differences between the results obtained with the Levin-Lin-Chu test (Levin et al, 2002), and those obtained with the Hadri Lagrange multiplier tests (Hadri, 2000). The results obtained show that some of the considered variables are not stationary at their levels, but all of them are stationary at their first differences.

Overall, Table 1 does not present significant differences between the results obtained for Panel 1 (which includes the whole sample of 46 developed countries) and the results obtained for Panel 2 (including only the sub-sample of the 28 EU countries).

Table 1 – Results obtained with panel unit root tests (p-values)

Variables	PANEL 1				PANEL 2			
	Levin Li		Hadri		Levin Li		Hadri	
	levels	Differences	levels	Differences	Levels	differences	levels	differences
Financial Development Index	0.0000	0.0000	0.0000	0.7997	0.0000	0.0000	0.0000	0.8571
Financial Institutions Access Index	0.5006	0.0000	0.0000	0.0000	0.0593	0.0000	0.0000	0.0004
Financial Institutions Depth Index	0.0039	0.0000	0.0000	0.0058	0.0043	0.0000	0.0000	0.0104
Financial Institutions Efficiency Index	0.0000	0.0000	0.0000	0.9996	0.0000	0.0000	0.0000	0.9808
Financial Institutions Index	0.0000	0.0000	0.0000	0.3044	0.0000	0.0000	0.0000	0.1661
Markets Access Index	0.0000	0.0000	0.0000	1.0000	0.0000	0.0000	0.0000	1.0000
Financial Markets Depth Index	0.0000	0.0000	0.0000	0.9786	0.0002	0.0000	0.0000	0.8677
Financial Markets Efficiency Index	0.0000	0.0000	0.0000	0.9963	0.0000	0.0000	0.0000	0.9961
Financial Markets Index	0.0000	0.0000	0.0000	0.9372	0.0000	0.0000	0.0000	0.9740
Gross Domestic Product	0.0000	0.0000	0.0000	1.0000	0.0000	0.0000	0.0000	1.0000
Deflator	0.0000	0.0000	0.0000	1.0000	0.0000	0.0000	0.0000	1.0000
Unemployment Rate	0.2330	0.0000	0.0000	0.0000	0.6353	0.0000	0.0000	0.0000
Current account	0.3240	0.0000	0.0000	0.0133	0.9972	0.0000	0.0000	0.0000
Net international investment position	1.0000	0.0000	0.0000	0.9999	1.0000	0.0000	0.0000	0.8367

Source: Author's calculations using STATA statistical software package.

4.3. Results obtained with panel regression estimations

The paper provides the results obtained with panel regression estimations, considering the general equation

$$y_{it} = \alpha + \beta X_{it} + \gamma Z_{it} + e_{it} \quad (4)$$

where y is one of the five macroeconomic performance indicators; $i = 1, \dots, N$ are the countries included in the panel (N=46 in Panel 1 and N=28 in Panel 2); $t =$ year over the interval 1990-2017; α is the intercept; X_{it} are each of the nine IMF financial development indices included as independent variables; Z_{it} are the control variables included in each of the equations; and e_{it} is the error term. For each of the five dependent variables, that is, the five macroeconomic performance indicators, nine equations are estimated, each of them including as explanatory variable one of the nine IMF financial development indices.

The results obtained with panel fixed or random estimations (following the indications of the Hausman tests) for Panel 1 and Panel 2 are presented in Annex III. In all situations the values of the F-tests or of the Wald tests indicate that the estimations are robust. Moreover, in both panels, the results obtained for the control variables are overall in line with the theoretical background and they do not change seriously with the inclusion of the different financial development indicators in the estimated equations.

The robustness of these findings is tested with the use of dynamic panel-data system GMM estimations which reduce the potential bias in the estimated coefficients and control for the potential endogeneity of all explanatory variables. The results of these estimations are presented in Annex IV. In both panels, and particularly in Panel 1, the Wald tests confirm the overall fit of the considered models as well as the expected results of the control variables. Furthermore, the quality of these one-step estimations is corroborated by the results obtained with the Arellano and Bond (1991) tests as they most of the times reject the null hypothesis of no

autocorrelation of the first order and do not reject the hypothesis of no autocorrelation of the second order.

Table 2 summarises the results obtained with panel fixed (or random) effects estimations and with dynamic one-step GMM estimations, showing the influence and the statistical robustness of the nine IMF financial development indices on the five macro performance indicators considered in this paper.

Table 2 – Summary of the results obtained with panel fixed or random effects estimations and with dynamic one-step system GMM estimations

	Gross Domestic Product		Deflator		Unemployment Rate		Current account		Net international investment position	
	Panel 1	Panel 2	Panel 1	Panel 2	Panel 1	Panel 2	Panel 1	Panel 2	Panel 1	Panel 2
Financial Development Index										
FE/RE	+ ***	+	+	- ***	+	- **	- *	-	- ***	- ***
GMM	-	+	- ***	- ***	- ***	- ***	- ***	-	- ***	- ***
Financial Institutions Access Index										
FE/RE	+ **	-	+ *	- ***	-	- ***	- *	- ***	- ***	- ***
GMM	- ***	- *	- ***	-	- ***	- ***	- ***	- ***	- ***	- ***
Financial Institutions Depth Index										
FE/RE	+ **	-	-	- ***	+ ***	- **	- **	- **	-	- ***
GMM	+	+	- ***	- ***	- ***	- ***	- ***	+ ***	- ***	- ***
Financial Institutions Efficiency Index										
FE/RE	+ ***	+ ***	+	- ***	+	+	- *	-	- ***	-
GMM	+ ***	+	- ***	- ***	- ***	- ***	+ ***	- ***	- ***	- ***
Financial Institutions Index										
FE/RE	+ ***	-	+	- ***	+ **	- **	- *	- ***	- ***	- ***
GMM	-	+	- ***	- ***	- ***	- ***	+ ***	- ***	+ ***	- ***
Financial Markets Access Index										
FE/RE	+ ***	-	+	- *	-	- ***	-	+	- **	- ***
GMM	+ ***	+ ***	- ***	- ***	- ***	- ***	- ***	+	- ***	- ***
Financial Markets Depth Index										
FE/RE	+ ***	+	-	- ***	+ *	-	+	+ **	-	- ***
GMM	+	+ ***	- ***	- ***	- ***	- ***	- ***	- *	- ***	- ***
Financial Markets Efficiency Index										
FE/RE	+	+	-	+	-	-	- ***	-	-	- ***
GMM	- ***	+	- ***	- **	- ***	- ***	- ***	+ ***	- ***	- ***
Financial Markets Index										
FE/RE	+ ***	+	-	-	+	- *	-	+	- **	- ***
GMM	+	+ ***	- ***	- ***	- ***	- ***	- ***	+	- ***	- ***

FE/RE: Results obtained using panel fixed or random effects estimations; GMM; Results obtained using panel dynamic one-step system GMM estimations.

+ Positive effect; - negative effect; * Statistically significant at 10%; ** statistically significant at 5%; *** statistically significant at 1%. Panel 1 includes all the considered 46 countries; Panel 2 includes only the sub-sample of the 28 EU countries.

Source: Estimation results reported in Annex III and Annex IV of this paper.

Overall, the results presented in Table 2 for both panels provide robust evidence of the relevance of financial development to macroeconomic performance of the considered countries. More precisely, and despite the non-unanimity of all results, it is possible to conclude that the IMF financial development indices contribute positively to the real GDP and negatively to the deflator, the unemployment rate, the current account, and the net international investment position. With few exceptions, the results obtained with dynamic one-step GMM estimations are in line with the results obtained with panel fixed (or random) effects estimations, but they are statistically more robust, providing evidence of the dynamic character of the relationships between financial development and macroeconomic performance.

In what regards to the results obtained for the different financial development indices, there is evidence that the overall Financial Development Index represents well the joint contribution of the financial institutions and financial markets; the relevance of the access, the depth and the efficiency of these institutions and markets is also well represented. Nevertheless, the results show a higher statistical robustness of the results obtained for the indices related to the different aspects of the financial institutions (access, depth, and efficiency) in comparison with the results obtained for the indices regarding the same aspects of the financial institutions.

The comparison of the results obtained for Panel 1 and for Panel 2 does not reveal significant contradictions between the results. However, there is no total unanimity, namely in what regards to the statistical robustness of the results. Overall, the results regarding the influence of the financial development indices on the real GDP and on the current account are statistically much more robust on Panel 1 (including the whole sample of 46 countries) than on Panel 2 (including only the sub-sample of the 27 EU countries). On the other hand, there is evidence of higher statistical robustness of the results regarding the influence of the financial development indices on the

deflator, the unemployment rate, and on the net international investment position on Panel 2 than on Panel 1.

5. Concluding remarks

This paper contributes to the literature by confirming the robust relevance of the nine IMF financial development indices to the macroeconomic performance of two panels of developed countries, one including 46 countries spread by all continents, and another with the sub-sample of the 28 EU countries, both panels over the interval 1990-2017.

The results obtained with panel estimations point to the following conclusions:

- There is evidence that the nine IMF financial development indices have a dynamic and robust influence on the five macro performance indicators considered in this paper.
- The paper corroborates the conclusions obtained, among others, by Aizenman et al (2015) and Bijlsma et al (2018) in what regards to the heterogeneous and very wide range of estimated effects of the empirical studies on the finance-growth relationship. Nevertheless, it is still possible to conclude that the IMF financial development indices overall contribute positively to the real GDP and negatively to the deflator, to the unemployment rate, to the current account, as well as to the net international investment position.
- The performed estimations allow the comparison of the contribution to macroeconomic performance of the financial institutions with the contribution of the financial markets. The results obtained are not fully in line with the conclusions of Gaytan and Rancièrè (2004), Ayadi et al (2013), or Cournède and Denk (2015), as in this paper there are no evident contradictions between the results obtained for financial institutions and those obtained for financial markets. Nevertheless, the results involving the indices

addressing the different aspects of the financial institutions (access, depth, and efficiency) are statistically more robust than the results regarding the indices addressing the same aspects of the financial markets.

- Overall, it is possible to conclude that the Financial Development Index represents well the joint contribution of the financial institutions and financial markets.

Further research is still needed in this field, namely taking into consideration the diversity of the financial systems across countries with different levels of development, as well as the potential enlargement of the analysis considering the contribution of the financial systems to other dimensions of the human development and not only to macroeconomic performance.

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Annex I – Construction of the Financial Development Index

	FINANCIAL INSTITUTIONS	FINANCIAL MARKETS
DEPTH	<ol style="list-style-type: none"> 1. Private-sector credit (% of GDP) 2. Pension fund assets (% of GDP) 3. Mutual fund assets (% of GDP) 4. Insurance premiums, life and non-life (% of GDP) 	<ol style="list-style-type: none"> 1. Stock market capitalization to GDP 2. Stocks traded to GDP 3. International debt securities government (% of GDP) 4. Total debt securities of nonfinancial corporations (% of GDP) 5. Total debt securities of financial corporations (% of GDP)
ACCESS	<ol style="list-style-type: none"> 1. Branches (commercial banks) per 100,000 adults 2. ATMs per 100,000 adults 	<ol style="list-style-type: none"> 1. Percent of market capitalization outside of top 10 largest companies 2. Total number of issuers of debt (domestic and external, nonfinancial corporations, and financial corporations)
EFFICIENCY	<ol style="list-style-type: none"> 1. Net interest margin 2. Lending-deposits spread 3. Non-interest income to total income 4. Overhead costs to total assets 5. Return on assets 6. Return on equity 	<ol style="list-style-type: none"> 1. Stock market turnover ratio (stocks traded/capitalization)

Source: Sahay, R., Cihak, M., N'Diaye, P., Barajas, A., Bi, R., Ayala, D., Gao, Y., Kyobe, A., Nguyen, L., Saborowski, C., Svirydzenka, K. and Yousefi, S.R. (2015) Rethinking Financial Deepening: Stability and Growth in Emerging Markets, IMF Staff Discussion Note, SDN/15/08, pp. 34.

Annex II – Macroeconomic performance indicators

Indicator	Specification	Source
Gross Domestic Product	Gross Domestic Product, Volume, Seasonally Adjusted (2010=100)	National Accounts of the International Financial Statistics (IFS)
Deflator	Gross Domestic Product, Deflator, Seasonally Adjusted (2010=100)	National Accounts of the International Financial Statistics (IFS)
Unemployment rate	Labour Markets, Unemployment Rate, Percent	Prices, Production and Labour sel indicators of the International Fin Statistics (IFS)
Current account	Flows of goods, services, primary income, and seconda income between residents and non-residents	Balance of Payments, Standard Presentation
Net international investment position	Value of the financial assets of the residents of an econ that are claims on non-residents or are gold bullion held as reserve assets; and the liabilities of the residents of an economy to non-residen	IMF Data Warehouse

Source: IMF datasets

Annex III – Results obtained with fixed effects (FE) or random effects (RE) panel estimations

PANEL 1

Dependent Variable: Gross Domestic Product (FE)									
	Financial Development Index	Financial Institutions Access Index	Financial Institutions Depth Index	Financial Institutions Efficiency Index	Financial Institutions Index	Markets Access Index	Financial Markets Depth Index	Financial Markets Efficiency Index	Financial Markets Index
FI: Coef.	3.442166	1.264736	2.179986	2.917563	2.694469	1.777788	2.347404	.5398109	2.292658
t	4.25	1.94	2.25	4.07	3.17	2.86	5.05	1.45	3.94
P> t	0.000	0.052	0.024	0.000	0.002	0.004	0.000	0.146	0.000
Deflator Coef.	.0106869	.0089048	.0110727	.0105592	.0092244	.010634	.0111996	.011914	.0121208
t	0.77	0.64	0.79	0.76	0.66	0.76	0.81	0.85	0.87
P> t	0.441	0.525	0.427	0.447	0.508	0.445	0.418	0.394	0.383
Unemployment Rate Coef.	-.1376701	-.1341265	-.1394031	-.1441884	-.1388147	-.133140	-.1397236	-.1347922	-.135550
t	-5.22	-5.06	-5.25	-5.45	-5.24	-5.03	-5.31	-5.08	-5.14
P> t	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Current account Coef.	4.43e-06	4.25e-06	4.34e-06	4.47e-06	4.43e-06	4.10e-06	3.81e-06	4.31e-06	4.25e-06
t	2.54	2.43	2.48	2.57	2.54	2.35	2.20	2.46	2.45
P> t	0.011	0.015	0.013	0.010	0.011	0.019	0.028	0.014	0.015
Const. : Coef.	1.539328	2.629969	2.33776	1.394495	1.725657	2.569016	2.442814	3.095184	2.352246
t	3.16	5.95	4.58	2.60	3.05	7.10	8.29	10.44	6.80
P> t	0.002	0.000	0.000	0.009	0.002	0.000	0.000	0.000	0.000
F(4,1238)	12.71	9.04	9.37	12.33	10.65	10.17	14.61	8.61	12.06
Prob > F	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	.0000	0.0000	0.0000
Number of obs	1288	1288	1288	1288	1288	1288	1288	1288	1288
Hausman test									
chi2(4)	27.71	18.82	12.42	13.16	23.07	14.41	26.21	7.41	20.01
Prob>chi2	0.0000	0.0003	0.0061	0.0043	0.0000	0.0024	0.0000	0.0600	0.0002

Dependent Variable: Deflator (FE)									
	Financial Development Index	Financial Institutions Access Index	Financial Institutions Depth Index	Financial Institutions Efficiency Index	Financial Institutions Index	Markets Access Index	Financial Markets Depth Index	Financial Markets Efficiency Index	Financial Markets Index
FI: Coef.	-.1382742	3.501365	-.2981952	-.2572855	2.324344	.3117424	-.215166	-1.241542	-.986033
t	0.08	2.65	-0.15	0.17	1.34	0.25	-0.22	-1.65	-0.82
P> t	0.934	0.008	0.880	0.862	0.182	0.806	0.824	0.100	0.410
Gross Domestic Product Coef.	.0448384	.0367269	.045975	.0442493	.0383996	.0442629	.047265	.0492436	.0507235
t	0.77	0.64	0.79	0.76	0.66	0.76	0.81	0.85	0.87
P> t	0.441	0.525	0.427	0.447	0.508	0.445	0.418	0.394	0.383
Unemployment Rate Coef.	-.205428	-.2022584	-.2045974	-.206197	-.2090142	-.205036	-.2045787	-.2052104	-.204268
t	-3.78	-3.74	-3.76	-3.78	-3.85	-3.78	-3.77	-3.79	-3.77
P> t	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Current account Coef.	-2.94e-06	-2.53e-06	-2.99e-06	-2.92e-06	-2.65e-06	-2.95e-06	-2.93e-06	-3.42e-06	-3.04e-06
t	-0.82	-0.71	-0.84	-0.82	-0.74	0.06	-0.82	-0.96	0.06
P> t	0.411	0.477	0.403	0.414	0.459	-0.83	0.411	0.338	-0.85
Const. : Coef.	4.604601	2.658787	4.813548	4.506336	3.283249	4.54087	4.753386	5.259631	5.088396
t	4.64	2.93	4.63	4.13	2.84	6.12	7.83	8.61	7.21
P> t	0.000	0.003	0.000	0.000	0.005	0.000	0.000	0.000	0.000
F(4,1238)	4.26	6.05	4.27	4.27	4.71	4.27	4.27	4.95	4.43
Prob > F	0.0020	0.0001	0.0020	0.0020	0.0009	0.0019	0.0019	0.0006	0.0015
Number of obs	1288	1288	1288	1288	1288	1288	1288	1288	1288
Hausman test									
chi2(4)	13.97	30.20	10.04	21.65	27.90	8.10	13.53	7.06	7.91
Prob>chi2	0.0029	0.0000	0.0184	0.0001	0.0000	0.0440	0.0036	0.0699	0.0479

Dependent Variable: Unemployment Rate (FE)									
	Financial Development Index	Financial Institutions Access Index	Financial Institutions Depth Index	Financial Institutions Efficiency Index	Financial Institutions Index	Markets Access Index	Financial Markets Depth Index	Financial Markets Efficiency Index	Financial Markets Index
FI: Coef.	1.200275	-.3091262	2.8428	2.676032	1.773953	-.358152	.9633989	-.0629213	.4256944
t	1.38	-0.45	2.78	3.52	1.96	-0.54	1.92	-0.16	0.68
P> t	0.167	0.655	0.006	0.000	0.050	0.589	0.055	0.873	0.495
Gross Domestic Product Coef.	-.1565178	-.1509602	-.1561138	-.1623655	-.1565654	-.150370	-.159559	-.1515272	-.153974
t	-5.22	-5.06	-5.25	-5.45	-5.24	-5.03	-5.31	-5.08	-5.14
P> t	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Deflator Coef.	-.0556653	-.0551943	-.0551822	-.0554078	-.05663	-.055634	-.0553574	-.0558126	-.055446
t	-3.78	-3.74	-3.76	-3.78	-3.85	-3.78	-3.77	-3.79	-3.77
P> t	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

Current account									
Coef.	3.22e-06	3.06e-06	3.40e-06	3.44e-06	3.31e-06	3.09e-06	3.00e-06	3.07e-06	3.13e-06
t	1.73	1.64	1.83	1.86	1.79	1.66	1.62	1.65	1.68
P> t	0.083	0.100	0.067	0.063	0.074	0.096	0.106	0.100	0.092
Const. : Coef.	7.856997	8.662155	7.12103	6.642589	7.403846	8.640529	8.114248	8.51772	8.305357
t	16.67	21.28	14.09	12.35	13.10	28.25	35.75	38.53	28.45
P> t	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
F(4,1238)	11.48	11.03	12.98	14.18	11.98	11.06	11.94	10.99	11.10
Prob > F	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Number of obs	1288	1288	1288	1288	1288	1288	1288	1288	1288
Hausman test									
chi2(4)	10.20	2.74	31.95	6.60	9.16	11.17	10.37	6.07	12.05
Prob>chi2	0.0169	0.4329	0.0000	0.0858	0.0272	0.0108	0.0156	0.1084	0.0072
Dependent Variable: Current account (RE)									
FI: Coef.	-24049.65	-17657.68	-32349	-19132.83	-30027.69	-2226.74	4754.851	-16635.13	-10431.0
t	-1.87	-1.73	-2.24	-1.65	-2.25	-0.23	0.63	-2.82	-1.12
P> t	0.061	0.084	0.025	0.099	0.024	0.820	0.527	0.005	0.264
Gross Domestic Product Coef.	1164.689	1106.961	1121.354	1153.299	1151.26	1079.652	1031.439	1115.765	1125.15
t	2.53	2.41	2.45	2.50	2.51	2.35	2.23	2.44	2.44
P> t	0.011	0.016	0.014	0.013	0.012	0.019	0.026	0.015	0.015
Deflator Coef.	-196.9296	-168.8583	-203.2006	-195.581	-180.7099	-194.151	-192.6358	-223.811	-201.475
t	-0.87	-0.75	-0.90	-0.87	-0.80	-0.86	-0.85	-0.99	-0.89
P> t	0.382	0.455	0.367	0.386	0.422	0.389	0.393	0.320	0.372
Unemployment Rate Coef.	678.7204	644.4813	713.3003	714.7148	700.8088	658.3631	646.1407	645.4104	663.0631
t	1.59	1.50	1.66	1.66	1.64	1.54	1.51	1.51	1.55
P> t	0.113	0.132	0.096	0.097	0.102	0.125	0.132	0.131	0.122
Const. : Coef.	3962.36	1573.899	6599.442	4201.302	9496.438	-7579.31	-10272.82	-482.1891	-4090.70
t	0.32	0.13	0.52	0.33	0.71	-0.66	-0.95	-0.04	-0.36
P> t	0.751	0.896	0.600	0.739	0.476	0.509	0.341	0.965	0.717
Wald chi2(4) Prob > chi2	11.39 0.0225	10.87 0.0281	12.94 0.0116	10.51 0.0326	12.99 0.0113	7.93 0.0941	8.25 0.0827	15.90 0.0032	9.12 0.0581
Number of obs	1288	1288	1288	1288	1288	1288	1288	1288	1288
Hausman test									
chi2(4)	1.55	1.96	1.42	-1.13	1.20	1.39	3.87	1.01	1.90
Prob>chi2	0.8170	0.7427	0.8404	-----	0.8778	0.8462	0.4240	0.9078	0.7538
Dependent Variable: Net international investment position (RE)									
	Financial Development Index	Financial Institutions Access Index	Financial Institutions Depth Index	Financial Institutions Efficiency Index	Financial Institutions Index	Markets Access Index	Financial Markets Depth Index	Financial Markets Efficiency Index	Financial Markets Index
FI: Coef.	-351100.8	-254286.6	-191681	-322578.3	-361771.8	-204613	-105364.7	-84239.31	-187292
t	-2.92	-2.66	-1.44	-2.95	-2.90	-2.23	-1.49	-1.51	-2.13
P> t	0.004	0.008	0.151	0.003	0.004	0.026	0.136	0.131	0.033
Gross Domestic Product Coef.	4594.096	3747.55	3543.613	4627.452	4196.912	3964.217	4137.825	3483.303	4205.177
t	1.06	0.86	0.82	1.06	0.97	0.91	0.94	0.80	0.96
P> t	0.291	0.387	0.415	0.289	0.333	0.362	0.345	0.422	0.335
Deflator Coef.	-130.7424	280.721	-140.4859	-104.4021	68.59957	-61.4988	-128.9444	-224.8815	-210.960
t	-0.06	0.13	-0.07	-0.05	0.03	-0.03	-0.06	-0.11	-0.10
P> t	0.951	0.895	0.948	0.961	0.974	0.977	0.952	0.916	0.921
Unemployment Rate Coef.	-4833.045	-5277.664	-4757.108	-4102.486	-4596.651	-5356.25	-4808.651	-5131.262	-5043.54
t	-1.20	-1.31	-1.18	-1.01	-1.14	-1.33	-1.19	-1.27	-1.25
P> t	0.231	0.191	0.240	0.311	0.255	0.185	0.235	0.204	0.212
Const. : Coef.	161093	123776	67933.22	192685.2	195723.7	67905.31	16873.49	18839.21	58358.61
t	1.49	1.20	0.63	1.74	1.68	0.70	0.19	0.20	0.61
P> t	0.136	0.232	0.531	0.081	0.092	0.483	0.852	0.839	0.539
Wald chi2(4) Prob > chi2	10.96 0.0270	9.52 0.0492	4.50 0.3420	11.21 0.0243	10.86 0.0282	7.43 0.1147	4.67 0.3224	4.72 0.3171	7.01 0.1356
Number of obs	1288	1288	1288	1288	1288	1288	1288	1288	1288
Hausman test									
chi2(4)	1.94	1.58	1.44	-0.39	1.91	1.59	2.69	1.13	2.32
Prob>chi2	0.7463	0.8126	0.8375	-----	0.7523	0.8097	0.6116	0.8899	0.6764

PANEL 2

Dependent Variable: Gross Domestic Product (FE)									
	Financial Development Index	Financial Institutions Access Index	Financial Institutions Depth Index	Financial Institutions Efficiency Index	Financial Institutions Index	Markets Access Index	Financial Markets Depth Index	Financial Markets Efficiency Index	Financial Markets Index
FI_i : Coef. t P> t	.3607147 0.32 0.745	-1.250806 -1.55 0.122	-1.575017 -1.22 0.222	2.194194 2.59 0.010	-241997 -0.23 0.817	-.557711 -0.62 0.535	.4678283 0.73 0.463	.532179 1.08 0.279	.5764928 0.72 0.471
Deflator Coef. t P> t	.1443751 3.03 0.003	.127631 2.67 0.008	.1266715 2.61 0.009	.1656662 3.48 0.001	.1389733 2.87 0.004	.139744 2.97 0.003	.1458235 3.08 0.002	.139697 2.97 0.003	.1435663 3.05 0.002
Unemployment Rate Coef. t P> t	-.1906421 -5.52 0.000	-.1968992 -5.69 0.000	-.1918313 -5.57 0.000	-.1932599 -5.63 0.000	-.1917374 -5.56 0.000	-.193226 -5.59 0.000	-.190322 -5.52 0.000	-.19071 -5.54 0.000	-.190066 -5.51 0.000
Current account Coef. t P> t	4.10e-06 1.13 0.261	3.27e-06 0.89 0.372	3.57e-06 0.98 0.330	4.58e-06 1.26 0.208	3.94e-06 1.07 0.283	4.16e-06 1.14 0.254	3.85e-06 1.06 0.292	4.3e-06 1.18 0.240	4.00e-06 1.10 0.273
Const. : Coef. t P> t	3.295419 4.60 0.000	4.3393 6.61 0.000	4.292486 5.74 0.000	1.865042 2.57 0.011	3.660185 4.57 0.000	3.734646 7.03 0.000	3.303656 7.34 0.000	3.27678 7.83 0.000	3.254869 6.57 0.000
F(4,752) Prob > F	12.93 0.0000	13.54 0.0000	13.30 0.0000	14.69 0.0000	12.91 0.0000	13.00 0.0000	13.04 0.0000	13.21 0.0000	13.04 0.0000
Number of obs	784	784	784	784	784	784	784	784	784
Hausman test chi2(4) Prob>chi2	10.19 0.0170	10.75 0.0132	11.48 0.0094	14.87 0.0019	10.06 0.0181	11.83 0.0080	11.51 0.0093	23.78 0.0000	12.32 0.0064

Dependent Variable: Deflator (FE)									
	Financial Development Index	Financial Institutions Access Index	Financial Institutions Depth Index	Financial Institutions Efficiency Index	Financial Institutions Index	Markets Access Index	Financial Markets Depth Index	Financial Markets Efficiency Index	Financial Markets Index
FI_i : Coef. t P> t	-3.966742 -4.77 0.000	-3.102669 -5.13 0.000	-6.569903 -7.03 0.000	-3.595118 -5.69 0.000	-5.23443 -6.88 0.000	-1.23127 -1.78 0.075	-1.61082 -3.32 0.001	.36821 0.97 0.332	-962752 -1.56 0.118
Gross Domestic Product Coef. t P> t	.083468 3.03 0.003	.0736717 2.67 0.008	.0709311 2.61 0.009	.0954339 3.48 0.001	.0778647 2.87 0.004	.0829161 2.97 0.003	.0856497 3.08 0.002	.08322 2.97 0.003	.0852821 3.05 0.002
Unemployment Rate Coef. t P> t	-.163374 -6.26 0.000	-.17045 -6.53 0.000	-.1543092 -6.01 0.000	-.1480723 -5.69 0.000	-.1597822 -6.22 0.000	-.164296 -6.20 0.000	-.161352 -6.14 0.000	-.16017 -6.05 0.000	-.162013 -6.12 0.000
Current account Coef. t P> t	-3.36e-06 -1.21 0.225	-4.52e-06 -1.62 0.105	-4.51e-06 -1.65 0.099	-3.57e-06 -1.30 0.195	-4.78e-06 -1.74 0.081	-2.47e-06 -0.88 0.380	-2.06e-06 -0.74 0.462	-2.57e-06 -0.91 0.362	-2.67e-06 -0.95 0.342
Const. : Coef. t P> t	5.812817 11.39 0.000	5.720505 12.20 0.000	6.849629 13.32 0.000	6.193303 12.24 0.000	7.070677 12.84 0.000	4.242265 10.79 0.000	4.324642 13.50 0.000	3.57396 5 11.55 0.000	4.112188 11.32 0.000
F(4,752) Prob > F	20.84 0.0000	21.80 0.0000	28.01 0.0000	23.43 0.0000	27.48 0.0000	15.56 0.0000	17.68 0.0000	14.96 0.0000	15.36 0.0000
Number of obs	784	784	784	784	784	784	784	784	784
Hausman test chi2(4) Prob>chi2	6.91 0.0750	13.04 0.0045	9.56 0.0227	44.79 0.0000	6.34 0.0964	11.85 0.0079	12.94 0.0048	11.83 0.0080	14.91 0.0019

Dependent Variable: Unemployment Rate (RE)									
	Financial Development Index	Financial Institutions Access Index	Financial Institutions Depth Index	Financial Institutions Efficiency Index	Financial Institutions Index	Markets Access Index	Financial Markets Depth Index	Financial Markets Efficiency Index	Financial Markets Index
FI_i : Coef. t P> t	-2.4096 -2.22 0.027	-2.534741 -3.15 0.002	-2.382321 -2.07 0.038	.7153271 0.81 0.416	-2.032163 -1.95 0.051	-2.63795 -3.12 0.002	-.8695901 -1.37 0.172	-.15241 -0.31 0.760	-1.338391 -1.68 0.093
Gross Domestic Product, Coef. t P> t	-.2029815 -5.49 0.000	-.2087654 -5.67 0.000	-.207002 -5.58 0.000	-.2071557 -5.57 0.000	-.204499 -5.53 0.000	-.2048209 -5.56 0.000	-.2030795 -5.49 0.000	-.20424 -5.51 0.000	-.2027163 -5.48 0.000
Deflator Coef. t P> t	-.302924 -6.27 0.000	-.3102134 -6.46 0.000	-.3085626 -6.25 0.000	-.2750906 -5.62 0.000	-.3077933 -6.26 0.000	-.2926943 -6.16 0.000	-.2927844 -6.09 0.000	-.28402 -5.95 0.000	-.2893668 -6.07 0.000
Current account Coef. t P> t	4.33e-06 1.16 0.245	3.18e-06 0.85 0.395	3.96e-06 1.06 0.289	4.86e-06 1.30 0.193	3.85e-06 1.03 0.305	5.19e-06 1.40 0.162	5.10e-06 1.37 0.172	4.7e-06 1.26 0.208	4.87e-06 1.31 0.191

Const. : Coef.	11.26618	11.58477	11.17985	9.436972	11.32602	11.02242	10.31068	10.0329	10.50232
t	13.33	14.22	13.85	10.60	12.37	16.06	15.41	15.30	15.04
P> t	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Wald chi2(4)	85.94	91.92	84.07	81.01	84.45	91.01	82.74	80.84	83.82
Prob > chi2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Number of obs	784	784	784	784	784	784	784	784	784
Hausman test									
chi2(4)	2.18	1.72	0.49	5.18	4.96	1.71	2.17	2.92	1.99
Prob>chi2	0.5364	0.6326	0.9203	0.1588	0.1744	0.6337	0.5374	0.4035	0.5744
Dependent Variable: Current account (RE)									
FI: Coef.	-12418.62	-28371.62	-22183.53	-13572.46	-30426.47	10798.63	11845.14	-	4668.663
t	-1.20	-3.72	-2.01	-1.61	-3.09	1.33	1.96	6652.59	0.61
P> t	0.231	0.000	0.044	0.108	0.002	0.182	0.051	-1.40	0.540
Gross Domestic Product Coef.	373.9549	291.0257	336.5918	424.8316	352.7217	384.5419	358.6893	386.388	370.2051
t	1.03	0.81	0.93	1.17	0.98	1.06	0.99	6	1.02
P> t	0.303	0.420	0.353	0.243	0.329	0.289	0.322	1.06	0.308
Deflator Coef.	-639.3843	-855.7785	-781.4694	-696.5903	-911.995	-477.8833	-400.5546	-515.58	-508.3445
t	-1.34	-1.81	-1.62	-1.45	-1.89	-1.02	-0.85	-1.10	-1.08
P> t	0.180	0.070	0.106	0.146	0.058	0.309	0.397	0.271	0.280
Unemployment Rate Coef.	379.2852	263.2834	362.8154	425.7199	329.7388	465.7594	447.7527	403.757	428.6602
t	1.10	0.77	1.06	1.24	0.96	1.35	1.31	1.18	1.25
P> t	0.270	0.442	0.290	0.214	0.335	0.177	0.191	0.238	0.212
Const. : Coef.	5856.272	18349.02	10613.72	8848.151	19948.6	-5994.223	-6136.623	1581.21	-3164.558
t	0.68	2.26	1.23	1.01	9236.869	-0.83	-0.91	0.24	-0.45
P> t	0.496	0.024	0.218	0.315	2.16 0.031	0.408	0.365	0.808	0.655
Wald chi2(4)	5.26	17.74	7.91	6.41	13.38	5.61	7.66	5.77	4.20
Prob > chi2	0.2614	0.0014	0.0949	0.1704	0.0096	0.2304	0.1048	0.2169	0.3791
Number of obs	784	784	784	784	784	784	784	784	784
Hausman test									
chi2(4)	3.10	3.05	7.07	3.08	5.34	2.95	2.23	5.11	1.88
Prob>chi2	0.5405	0.5494	0.1321	0.5443	0.2541	0.5661	0.6933	0.2759	0.7574
Dependent Variable: Net international investment position (RE)									
	Financial Development Index	Financial Institutions Access Index	Financial Institutions Depth Index	Financial Institutions Efficiency Index	Financial Institutions Index	Markets Access Index	Financial Markets Depth Index	Financial Markets Efficiency Index	Financial Markets Index
FI: Coef.	-461425.8	-325757.2	-346598.6	-80105.35	-346031.1	-204615.9	-219867.5	-123898	-286162.9
t	-7.50	-7.13	-5.14	-1.55	-5.82	-4.15	-6.04	-4.30	-6.28
P> t	0.000	0.000	0.000	0.120	0.000	0.000	0.000	0.000	0.000
Gross Domestic Product Coef.	1039.821	96.66445	466.0585	1318.159	786.5548	823.446	1325.642	1318.27	1276.653
t	0.49	0.04	0.21	0.59	0.36	0.38	0.61	0.60	0.59
P> t	0.627	0.964	0.831	0.554	0.718	0.707	0.541	0.547	0.555
Deflator Coef.	1240.228	1554.364	1412.386	4223.977	901.75	4220.989	2849.167	5613.05	3880.71
t	0.44	0.55	0.49	1.44	0.31	1.49	1.01	1.98	1.39
P> t	0.660	0.582	0.627	0.149	0.756	0.138	0.313	0.047	0.166
Unemployment Rate Coef.	-8390.553	-8774.222	-7788.188	-7082.92	-8076.516	-8051.57	-7650.852	-7138.9	-7873.565
t	-4.13	-4.29	-3.77	-3.38	-3.92	-3.86	-3.73	-3.44	-3.84
P> t	0.000	0.000	0.000	0.001	0.000	0.000	0.000	0.001	0.000
Const. : Coef.	259653.4	222252.6	181635.5	58520.24	239139.4	90119.95	90340.04	48313.5	120156.2
t	5.04	4.45	3.39	1.08	4.27	2.00	2.15	1.15	2.77
P> t	0.000	0.000	0.001	0.279	0.000	0.045	0.032	0.251	0.006
Wald chi2(4)	78.42	72.70	47.55	23.24	55.50	38.25	57.94	39.38	61.00
Prob > chi2	0.0000	0.0000	0.0000	0.0001	0.0000	0.0000	0.0000	0.0000	0.0000
Number of obs	784	784	784	784	784	784	784	784	784
Hausman test									
chi2(4)	9.78	4.25	16.72	2.54	5.71	6.62	12.15	3.72	10.38
Prob>chi2	0.0443	0.3734	0.0022	0.6383	0.2222	0.1572	0.0163	0.4457	0.0345

Source: Author's calculations using STATA statistical software.

Annex IV – Results obtained with dynamic panel-data estimations, one-step system GMM

PANEL 1

Dependent Variable: Gross Domestic Product									
	Financial Development Index	Financial Institutions Access Index	Financial Institutions Depth Index	Financial Institutions Efficiency Index	Financial Institutions Index	Markets Access Index	Financial Markets Depth Index	Financial Markets Efficiency Index	Financial Markets Index
FI: Coef.	-1.1302594	-5.984715	1.562204	6.78079	-47245	2.648546	1.062137	-2.83669	-1473285
t	-0.09	-4.53	1.29	4.15	-0.32	2.45	1.09	-3.00	0.13
P> t	0.925	0.000	0.197	0.000	0.750	0.014	0.276	0.003	0.895
Deflator Coef.	.165543	.1271257	.1839978	.1842288	.1629225	.1892217	.178469	.1652232	.1675777
t	5.27	4.12	5.65	6.10	5.14	6.08	5.66	5.43	5.46
P> t	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Unemployment Rate Coef.	-.8047009	-.8124733	-.7786322	-.8168183	-.805452	-.756705	-.7768609	-.898084	-.798998
t	-14.06	-15.34	-13.86	-15.24	-15.00	-13.42	-13.40	-14.25	-13.33
P> t	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Current account Coef.	1.67e-06	-4.13e-06	2.44e-06	7.17e-06	1.38e-06	5.02e-06	2.13e-06	1.66e-06	1.83e-06
t	0.24	-0.58	0.35	1.00	0.19	0.70	0.31	0.23	0.26
P> t	0.813	0.561	0.728	0.318	0.846	0.482	0.760	0.818	0.794
Year : Coef.	.0771972	.1096511	.0719635	.0351895	.0789359	.0612707	.0661915	.0725702	.0757715
t	5.46	7.73	5.67	2.22	5.51	4.47	4.29	5.77	5.63
P> t	0.000	0.000	0.000	0.026	0.000	0.000	0.000	0.000	0.000
Const. : Coef.	-146.3992	-207.8733	-137.0035	-66.99772	-149.6459	-116.166	-125.1109	-135.098	-143.729
t	-5.24	-7.40	-5.42	-2.16	-5.30	-4.26	-4.09	-5.33	-5.38
P> t	0.000	0.000	0.000	0.031	0.000	0.000	0.000	0.000	0.000
Wald chi2(5)	380.87	402.46	382.17	390.78	381.18	384.28	383.29	369.76	381.24
Prob > chi2	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Number of obs	1288	1288	1288	1288	1288	1288	1288	1288	1288
AR(1): z	-8.40	-8.39	-8.61	-8.44	-8.42	-8.63	-8.70	-8.17	-8.45
Pr > z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
AR(2): z	-2.92	-3.32	-2.83	-2.52	-2.98	-2.72	-2.74	-2.84	-2.89
Pr > z	0.003	0.001	0.005	0.000	0.003	0.007	0.006	0.005	0.004

Dependent Variable: Deflator									
	Financial Development Index	Financial Institutions Access Index	Financial Institutions Depth Index	Financial Institutions Efficiency Index	Financial Institutions Index	Markets Access Index	Financial Markets Depth Index	Financial Markets Efficiency Index	Financial Markets Index
FI: Coef.	-65.02602	-40.26709	-50.91154	-71.4074	-75.74185	-21.1621	-43.13951	-18.0510	-43.1159
t	-21.15	-16.06	-19.26	-14.34	-21.37	-8.51	-21.93	-11.79	-17.89
P> t	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Gross Domestic Product Coef.	-.6675654	-.936568	-.9176995	-.2523501	-.6247588	-1.07871	-.6764637	-.891209	-.797317
t	-6.11	-9.84	-8.25	-1.83	-5.65	-9.82	-6.08	-8.84	-7.28
P> t	0.000	0.000	0.000	0.068	0.000	0.000	0.000	0.000	0.000
Unemployment Rate Coef.	-.5987965	-.8803068	-.7726211	-.2239536	-.7098856	-.677390	-.692216	-.553018	-.564265
t	-4.79	-7.96	-6.00	-1.49	-5.64	-5.31	-5.43	-4.75	-4.47
P> t	0.000	0.000	0.000	0.135	0.000	0.000	0.000	0.000	0.000
Current account Coef.	-.0001886	-.0001237	-.0002046	-.0001986	-.0001872	-.000186	-.0001926	-.000111	-.000176
t	-10.96	-8.26	-11.42	-9.73	-10.80	-10.04	-10.97	-6.99	-10.15
P> t	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Year : Coef.	.985624	.8894181	.7126843	.889724	1.028002	.7333474	1.019097	.4887603	.8387929
t	28.01	26.39	24.01	21.52	28.15	19.06	28.25	19.67	25.51
P> t	0.00	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Const. : Coef.	-1930.73	-1746.643	-1392.096	-1727.446	-2002.728	-1449.27	-2014.33	-961.145	-1652.36
t	-27.90	-26.38	-23.75	-21.46	-28.03	-19.05	-28.18	-14.41	-25.41
P> t	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Wald chi2(5)	853.00	780.52	752.84	502.29	855.44	461.96	870.53	611.75	719.38
Prob > chi2	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Number of obs	1288	1288	1288	1288	1288	1288	1288	1288	1288
AR(1): z	-2.69	-4.22	-2.88	-4.60	-2.88	-3.90	-1.91	-4.94	-2.76
Pr > z	0.007	0.000	0.004	0.000	0.004	0.000	0.057	0.000	0.006
AR(2): z	-0.62	-1.55	-1.17	0.85	0.08	-1.40	-0.87	-3.22	-1.72
Pr > z	0.537	0.122	0.242	0.396	0.937	0.161	0.383	0.001	0.085

Dependent Variable: Unemployment Rate									
	Financial Development Index	Financial Institutions Access Index	Financial Institutions Depth Index	Financial Institutions Efficiency Index	Financial Institutions Index	Markets Access Index	Financial Markets Depth Index	Financial Markets Efficiency Index	Financial Markets Index
FI: Coef.	-17.97965	-12.59265	-15.90355	-8.379744	-18.86946	-13.02808	-12.7325	-10.16493	-13.4635
t	-28.98	-11.97	-29.64	-7.69	-19.67	-28.33	-30.41	-22.57	-31.64
P> t	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Gross Domestic Product, Coef.	-.1043034	-.1671823	-.1245325	-.0804334	-.1273999	-.1058626	.0775817	-.0964881	-.0879603
t	-4.64	-5.81	-5.72	-3.42	-4.74	-4.94	-3.54	-3.81	-4.23
P> t	0.000	0.000	0.000	0.001	0.000	0.000	0.000	0.000	0.000
Deflator Coef.	-.3184049	-.5277405	-.2828951	-.3814909	-.4645515	-.242961	-.2808225	-.1635752	-.2165453
t	-12.77	-14.72	-11.70	-14.31	-15.16	-10.15	-11.57	-5.65	-9.31
P> t	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Current account Coef.	-.0000169	-.0000358	-.0000178	-.0000153	-.0000302	-5.91e-06	-.0000113	-4.15e-06	-6.47e-06
t	-4.67	-7.20	-5.07	-4.10	-6.84	3.45e-06	-3.23	-1.01	-1.94
P> t	0.000	0.000	0.000	0.000	0.000	1.71 0.087	0.001	0.310	0.053
Year : Coef.	.2558769	.232416	.2011397	.1577989	.2623797	.198555	.291937	.1143312	.215241
t	33.09	17.74	31.59	16.73	24.78	31.35	35.15	18.18	34.24
P> t	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

Const. : Coef.	-493.8559	-448.4468	-386.1762	-300.9729	-504.3219	-383.1674	-570.7307	-215.5122	-416.4919
t	-32.39	-17.47	-30.63	-16.47	-24.33	-30.48	-34.58	-17.16	-33.37
P> t	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Wald chi2(5)	1301.47	431.56	1371.18	497.36	710.52	1311.35	1413.56	873.45	1543.63
Prob > chi2	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Number of obs	1288	1288	1288	1288	1288	1288	1288	1288	1288
AR(1): z	4.52	0.01	6.12	3.10	1.17	4.12	4.92	3.14	7.01
Pr > z	0.000	0.991	0.000	0.002	0.242	0.000	0.000	0.002	0.000
AR(2): z	1.94	3.30	1.60	4.22	2.91	1.48	1.10	-1.25	0.75
Pr > z	0.053	0.001	0.109	0.000	0.004	0.140	0.273	0.211	0.455

Dependent Variable: Current account

	Financial Development Index	Financial Institutions Access Index	Financial Institutions Depth Index	Financial Institutions Efficiency Index	Financial Institutions Index	Markets Access Index	Financial Markets Depth Index	Financial Markets Efficiency Index	Financial Markets Index
FI: Coef.	-1198108	-872285.1	-1283676	1319514	-1258382	-805500.5	-861472.8	-328634.8	-869225.2
t	-19.88	-26.86	-18.93	16.36	-18.45	-15.64	-19.27	-6.89	-15.36
P> t	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Gross Domestic Product Coef.	6933.583	-14198.02	-11255.69	26180.99	-7544.745	13098.54	17706.31	39469.06	24255.18
t	1.64	-3.76	-2.14	5.13	-1.64	3.62	3.72	6.87	5.08
P> t	0.102	0.000	0.033	0.000	0.102	0.000	0.000	0.000	0.000
Deflator Coef.	-24511.31	-17637.91	-30545.07	-3089.294	-25337.97	-11483.19	-26685.19	-18115.88	-21240.04
t	-10.65	-9.52	-11.06	-1.06	-10.92	-6.12	-9.86	-5.55	-7.89
P> t	0.000	0.000	0.000	0.290	0.000	0.000	0.000	0.000	0.000
Unemployment Rate Coef.	-25874.78	-16121.3	-28026.11	-10223.72	-18610.95	-15765.16	-23992.21	-17840.77	-25494.01
t	-7.67	-6.00	-7.11	-2.49	-5.66	-5.71	-6.17	-3.63	-6.34
P> t	0.000	0.000	0.000	0.013	0.000	0.000	0.000	0.000	0.000
Year : Coef.	5501.968	5425.313	-4858.868	-392.1135	1223.136	2672.419	4329.31	5429.129	7068.874
t	2.38	2.84	-1.80	-0.13	0.53	1.38	1.60	1.60	2.56
P> t	0.017	0.004	0.072	0.893	0.594	0.166	0.109	0.109	0.011
Const. : Coef.	-1.01e+07	-1.02e+07	1.07e+07	-107029.6	-1427444	-4873175	-8092016	-1.06e+07	-1.36e+07
t	-2.18	-2.66	1.98	-0.02	-0.31	-1.26	-1.49	-1.56	-2.45
P> t	0.029	0.008	0.048	0.985	0.756	0.207	0.135	0.118	0.014
Wald chi2(5)	521.41	906.70	450.80	345.64	466.97	425.22	463.23	109.01	325.80
Prob > chi2	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Number of obs	1288	1288	1288	1288	1288	1288	1288	1288	1288
AR(1): z	-3.10	-3.71	-2.90	-3.84	-3.95	-4.47	-4.11	-4.58	-3.74
Pr > z	0.002	0.000	0.004	0.000	0.000	0.000	0.000	0.000	0.000
AR(2): z	4.01	-1.01	1.04	-3.17	1.49	0.57	4.35	-1.25	1.81
Pr > z	0.000	0.311	0.298	0.002	0.136	0.566	0.000	0.211	0.071

Dependent Variable: Net international investment position

	Financial Development Index	Financial Institutions Access Index	Financial Institutions Depth Index	Financial Institutions Efficiency Index	Financial Institutions Index	Markets Access Index	Financial Markets Depth Index	Financial Markets Efficiency Index	Financial Markets Index
FI: Coef.	-8916224	-8186900	-7772573	1.13e+07	-1.04e+07	-9262225	-5349408	-4593852	-6699857
t	-16.08	-30.02	-11.90	17.38	-14.07	-13.93	-14.73	-12.33	-15.96
P> t	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Gross Domestic Product Coef.	79752.96	-20462.57	75886.66	70465.39	35932.98	41048.55	144165.3	110637.9	112617.4
t	1.73	-0.71	1.31	1.52	0.77	0.95	2.89	2.07	2.47
P> t	0.083	0.476	0.189	0.129	0.444	0.342	0.004	0.039	0.014
Deflator Coef.	-218206.5	-106442	-315409.4	32314.34	-234724	4496.407	-227924	-179876.8	-180315.2
t	-5.60	-4.59	-6.02	0.85	-5.81	0.13	-5.38	-4.00	-4.73
P> t	0.000	0.000	0.000	0.394	0.000	0.898	0.000	0.000	0.000
Unemployment Rate Coef.	-304818.9	-158626.9	-326213.8	-253858.9	-256525	-375717	-295155.3	-344717.9	-334453.4
t	-10.52	-8.54	-8.95	-8.64	-8.65	-13.62	-9.41	-10.16	-11.60
P> t	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Year : Coef.	-58341.41	-103320.8	-94536.39	-177167.5	-88019.05	39535.07	-57265.89	-125401.6	-52566.5
t	-3.71	-11.09	-4.94	-11.63	-5.64	2.09	-3.35	-7.20	-3.33
P> t	0.000	0.000	0.000	0.000	0.000	0.037	0.001	0.000	0.001
Const. : Coef.	1.25e+08	2.13e+08	1.97e+08	3.49e+08	1.85e+08	-7.23e+07	1.20e+08	2.56e+08	1.11e+08
t	3.97	11.46	5.15	11.49	5.97	-1.92	3.51	7.37	3.53
P> t	0.000	0.000	0.000	0.000	0.000	0.055	0.000	0.000	0.000
Wald chi2(5)	608.02	1812.57	362.99	645.13	536.19	594.01	515.52	409.65	609.22
Prob > chi2	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Number of obs	1288	1288	1288	1288	1288	1288	1288	1288	1288
AR(1): z	-1.34	2.94	-2.25	-1.33	-1.65	0.07	-2.25	-0.70	-0.80
Pr > z	0.180	0.003	0.024	0.183	0.098	0.944	0.025	0.486	0.423
AR(2): z	4.61	6.72	5.09	-1.48	5.17	-1.26	-2.25	1.13	3.15
Pr > z	0.000	0.000	0.000	0.139	0.000	0.207	0.000	0.257	0.002

PANEL 2

Dependent Variable: Gross Domestic Product									
	Financial Development Index	Financial Institutions Access Index	Financial Institutions Depth Index	Financial Institutions Efficiency Index	Financial Institutions Index	Markets Access Index	Financial Markets Depth Index	Financial Markets Efficiency Index	Financial Markets Index
FI: Coef. t P> t	2.415595 1.82 0.068	-2.564735 -1.69 0.091	2.052888 1.55 0.122	2.626984 1.63 0.103	-.6929906 0.43 0.670	3.356198 3.28 0.001	2.506372 2.61 0.009	-.8483092 1.07 0.286	2.735216 2.62 0.009
Deflator Coef. t P> t	.2591987 4.31 0.000	.2079573 3.58 0.000	.2644205 4.22 0.000	.2437003 4.19 0.000	.2333613 3.86 0.000	.2893459 4.76 0.000	.2716893 4.54 0.000	.2322403 4.05 0.000	.2681625 4.52 0.000
Unemployment Rate Coef. t P> t	-.5332416 -9.66 0.000	-.5685317 -10.61 0.000	-.5240212 -9.00 0.000	-.5491506 -10.24 0.000	-.5534003 -9.99 0.000	-.5111621 -9.18 0.000	-.5193076 -9.37 0.000	-.5545216 -10.40 0.000	-.52504 -9.58 0.000
Current account Coef. t P> t	-.0000178 -0.92 0.358	-.0000238 -1.22 0.224	-.0000285 -1.40 0.162	-.776e-06 -0.38 0.704	-.0000185 -0.96 0.338	-.0000197 -1.01 0.311	-.0000164 -0.85 0.396	-.0000175 -0.91 0.364	-.000017 -0.88 0.377
Year : Coef. t P> t	.0696607 4.16 0.000	.1034165 5.21 0.000	.0788925 5.09 0.000	.0584279 2.77 0.006	.0775416 4.16 0.000	.0649783 3.99 0.000	.0607595 3.50 0.000	.085421 5.48 0.000	.0720927 4.57 0.000
Const. : Coef. t P> t	-134.5527 -4.04 0.000	-198.923 -5.07 0.000	-152.8509 -4.92 0.000	-112.5346 -2.71 0.007	-149.2858 -4.06 0.000	-125.4943 -3.85 0.000	-116.5493 -3.37 0.001	-164.9672 -5.25 0.000	-139.335 -4.42 0.000
Wald chi2(5) Prob > chi2	184.22 0.000	183.05 0.000	181.84 0.000	183.52 0.000	180.76 0.000	188.81 0.000	187.84 0.000	182.81 0.000	188.20 0.000
Number of obs	784	784	784	784	784	784	784	784	784
AR(1): z Pr > z	-6.19 0.000	-6.09 0.000	-6.19 0.000	-6.14 0.000	-6.12 0.000	-6.26 0.000	-6.32 0.000	-6.08 0.000	-6.21 0.000
AR(2): z Pr > z	-4.04 0.000	-4.330 0.000	-4.04 0.000	-4.16 0.000	-4.20 0.000	-3.95 0.000	-3.85 0.000	-4.20 0.000	-3.95 0.000

Dependent Variable: Deflator									
	Financial Development Index	Financial Institutions Access Index	Financial Institutions Depth Index	Financial Institutions Efficiency Index	Financial Institutions Index	Markets Access Index	Financial Markets Depth Index	Financial Markets Efficiency Index	Financial Markets Index
FI: Coef. t P> t	-7.241948 -7.20 0.000	-9.100274 -0.87 0.386	-9.405777 -11.29 0.000	-9.004562 -5.98 0.000	-9.227621 -7.74 0.000	-5.234783 -6.33 0.000	-5.689604 -7.71 0.000	-1.147486 -2.00 0.045	-5.27902 -6.32 0.000
Gross Domestic Product Coef. t P> t	.0712459 1.77 0.077	.0775942 1.87 0.061	-.0266994 -0.65 0.513	.0989597 2.31 0.021	.0173878 0.41 0.679	.1139732 2.78 0.006	.0806606 2.00 0.045	.092603 2.29 0.022	1042803 2.59 0.010
Unemployment Rate Coef. t P> t	-.110111 -2.64 0.008	-.0354815 -0.85 0.395	-.2015785 -4.75 0.000	-.004773 -0.11 0.911	-.120551 -2.82 0.005	-.0851996 -2.04 0.041	-.1367942 -0.001 0.001	-.0339549 -0.84 0.400	-.093147 -2.25 0.024
Current account Coef. t P> t	-.0000571 -6.26 0.000	-.0000638 -6.42 0.000	-.000032 -3.43 0.001	-.000079 -7.78 0.000	-.0000687 -7.34 0.000	-.0000594 -6.43 0.000	-.0000547 -5.98 0.000	-.0000557 -5.90 0.000	-.000051 -5.58 0.000
Year : Coef. t P> t	-.0270903 -1.83 0.068	-.0853579 -4.29 0.000	-.0088178 -0.66 0.510	.0174202 0.77 0.444	.0271994 1.37 0.170	-.0639514 -5.16 0.000	-.0222802 -1.50 0.133	-.1042488 -9.39 0.000	-.067334 -5.61 0.000
Const. : Coef. t P> t	61.45074 2.10 0.036	174.3231 4.44 0.000	26.55747 1.00 0.316	-25.9196 -0.58 0.562	-44.96907 -1.15 0.248	133.2791 5.41 0.000	50.37013 1.71 0.087	212.0266 9.51 0.000	140.1463 5.87 0.000
Wald chi2(5) Prob > chi2	269.43 0.000	214.33 0.000	351.92 0.000	228.50 0.000	268.38 0.000	251.40 0.000	276.27 0.000	221.52 0.000	258.63 0.000
Number of obs	784	784	784	784	784	784	784	784	784
AR(1): z Pr > z	-6.54 0.000	-6.56 0.000	-6.19 0.000	-6.41 0.000	-6.09 0.000	-6.88 0.000	-6.65 0.000	-6.48 0.000	-6.70 0.000
AR(2): z Pr > z	-3.92 0.000	-3.83 0.000	-5.25 0.000	-3.48 0.000	-4.28 0.000	-3.46 0.001	-3.61 0.000	-3.87 0.000	-3.67 0.000

Dependent Variable: Unemployment Rate									
	Financial Development Index	Financial Institutions Access Index	Financial Institutions Depth Index	Financial Institutions Efficiency Index	Financial Institutions Index	Markets Access Index	Financial Markets Depth Index	Financial Markets Efficiency Index	Financial Markets Index
FI: Coef. t P> t	-19.29218 -31.44 0.000	-15.71735 -16.82 0.000	-17.07775 -32.45 0.000	-13.33944 -13.29 0.000	-20.96909 -25.23 0.000	-15.39333 -31.74 0.000	-14.37974 -34.15 0.000	-11.65237 -20.53 0.000	-15.8488 -33.02 0.000
Gross Domestic Product Coef. t P> t	-.1481611 -5.89 0.000	-.1952424 -7.25 0.000	-.1943293 -7.67 0.000	-.0962372 -3.94 0.000	-.1728677 -6.33 0.000	-.1851051 -7.43 0.000	-.1224836 -4.98 0.000	-.0919504 -3.02 0.003	-.125972 -5.12 0.000
Deflator Coef. t P> t	-.4967662 -10.89 0.000	-.4496282 -9.07 0.000	-.5263625 -11.43 0.000	-.304645 -7.01 0.000	-.524341 -10.47 0.000	-.3909023 -8.75 0.000	-.479581 -10.79 0.000	-.3468205 -6.38 0.000	-.436242 -9.85 0.000
Current account Coef. t P> t	-.0000132 -2.07 0.038	-.000062 -8.26 0.000	.000017 2.62 0.009	-.0000212 -3.41 0.001	-.0000299 -4.28 0.000	7.29e-06 1.15 0.250	2.41e-06 0.39 0.699	-.0000114 -1.48 0.139	2.30e-07 0.04 0.971
Year : Coef. t P> t	.1739172 18.98 0.000	.1995439 15.03 0.000	.0911143 11.15 0.000	.1194594 11.60 0.000	.1903624 17.74 0.000	.1311382 15.50 0.000	.2152274 22.71 0.000	.0334664 3.52 0.000	.1426929 16.86 0.000
Const. : Coef. t P> t	-328.0163 -18.00 0.000	-379.765 -14.52 0.000	-163.842 -10.02 0.000	-219.8505 -16.86 0.000	-357.4686 -16.86 0.000	-246.5349 -14.58 0.000	-415.6046 -21.97 0.000	-52.36791 -2.74 0.006	-269.514 -15.93 0.000
Wald chi2(5) Prob > chi2	1114.12 0.000	393.66 0.000	1177.04 0.000	312.98 0.000	743.53 0.000	1135.61 0.000	1297.62 0.000	508.04 0.000	1221.63 0.000
Number of obs	784	784	784	784	784	784	784	784	784

AR(1): z	4.58	5.71	4.13	8.13	4.21	2.39	4.34	2.59	5.01
Pr > z	0.000	0.000	0.000	0.000	0.000	0.017	0.000	0.010	0.000
AR(2): z	-2.67	-0.82	-3.54	0.81	-2.06	-2.30	-2.87	-2.43	-2.84
Pr > z	0.008	0.411	0.000	0.420	0.039	0.022	0.004	0.015	0.004
Dependent Variable: Current account									
	Financial Development Index	Financial Institutions Access Index	Financial Institutions Depth Index	Financial Institutions Efficiency Index	Financial Institutions Index	Markets Access Index	Financial Markets Depth Index	Financial Markets Efficiency Index	Financial Markets Index
FI: Coef.	-51721.08	-256530	70894.73	-315456.6	-261750.9	10217.27	-43154.45	55548.6	28954.25
t	-1.39	-7.29	2.80	-3.46	-3.92	0.26	-1.69	5.06	1.33
P> t	0.163	0.000	0.005	0.001	0.000	0.791	0.091	0.000	0.184
Gross Domestic Product									
Coef.	-3.889661	832.3253	-699.2263	1832.121	1417.351	-412.2798	169.4409	1368.399	-245.799
t	-0.00	0.23	-0.36	0.54	0.35	-0.15	0.06	0.68	-0.10
P> t	0.999	0.816	0.721	0.592	0.729	0.878	0.955	0.495	0.917
Deflator Coef.	-28156.26	-33590.67	-17941.53	-30727.22	-38852.29	-24073.35	-28698.26	-17675.64	-21959.1
t	-5.91	-6.82	-5.13	-6.33	-5.92	-6.49	-6.03	-5.96	-6.01
P> t	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Unemployment Rate Coef.	-10368.44	-6633.533	-7766.35	-8843.075	-11138.92	-9741.278	-10781.54	-8466.63	-9282.98
t	-4.68	-2.50	-4.85	-3.55	-3.70	-5.18	-4.69	-5.73	-5.27
P> t	0.000	0.012	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Year : Coef.	3208.122	3729.973	3313.941	2400.174	2641.973	2874.373	3546.495	2633.354	2685.872
t	4.19	4.12	6.54	2.77	2.56	3.79	4.26	5.22	4.25
P> t	0.000	0.000	0.000	0.006	0.010	0.000	0.000	0.000	0.000
Const. : Coef.	-6237095	-7175270	-656761	-4428131	-4932656	-5614065	-6921285	-5180931	-5253371
t	-4.07	-3.94	-6.40	-2.52	-2.37	-3.71	-4.15	-5.12	-4.15
P> t	0.000	0.000	0.000	0.012	0.018	0.000	0.000	0.000	0.000
Wald chi2(5)	86.26	111.44	202.13	77.13	59.98	113.35	83.97	214.50	136.36
Prob > chi2	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Number of obs	784	784	784	784	784	784	784	784	784
AR(1): z	-4.06	-4.68	-3.31	-4.35	-4.26	-4.07	-4.06	-3.82	-3.89
Pr > z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
AR(2): z	-3.61	-3.78	-3.24	-3.44	-3.65	-3.82	-3.59	-2.57	-3.48
Pr > z	0.000	0.000	0.001	0.001	0.000	0.000	0.000	0.010	0.001
Dependent Variable: Net international investment position									
	Financial Development Index	Financial Institutions Access Index	Financial Institutions Depth Index	Financial Institutions Efficiency Index	Financial Institutions Index	Markets Access Index	Financial Markets Depth Index	Financial Markets Efficiency Index	Financial Markets Index
FI: Coef.	-1099713	-1697443	-887560.3	-2686031	-1946245	-1534390	-644407.3	-272306.3	-683143
t	-7.65	-17.60	-4.25	-7.86	-9.08	-9.77	-5.94	-4.53	-6.53
P> t	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Gross Domestic Product									
Coef.	-30947.86	-43433.91	-29409.51	-28280.19	-34628.64	-13395.54	-27481.97	-34334.2	-29792.0
t	-2.78	-6.01	-2.08	-2.54	-2.88	-1.37	-2.26	-3.57	-2.80
P> t	0.006	0.000	0.037	0.011	0.004	0.171	0.024	0.000	0.005
Deflator Coef.	-114603.2	-26248.72	-156541.7	-78259.17	-121562.3	-89375.68	-130803.5	-87656.03	-107661
t	-4.32	-1.53	-4.15	-3.01	-4.26	-3.96	-4.40	-3.89	-4.25
P> t	0.000	0.125	0.000	0.003	0.000	0.000	0.000	0.000	0.000
Unemployment Rate Coef.	-109415.9	-66276.84	-123631.6	-97249.58	-102792	-112882.1	-115946.6	-105183.5	-111103
t	-15.78	-13.48	-12.45	-14.07	-13.84	-18.73	-14.87	-17.73	-16.63
P> t	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Year : Coef.	-26969.96	-18402.94	-37291.74	-38196.02	-24922.32	-16678.65	-25734.8	-40734.35	-29918.4
t	-5.32	-5.65	-6.27	-8.42	-4.69	-3.44	-4.38	-10.27	-6.15
P> t	0.000	0.000	0.000	0.000	0.000	0.001	0.000	0.000	0.000
Const. : Coef.	5.59e+07	3.86e+07	7.66e+07	7.95e+07	5.24e+07	3.52e+07	5.32e+07	8.29e+07	6.15e+07
t	5.53	5.93	6.46	8.80	4.96	3.65	4.54	10.45	6.33
P> t	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Wald chi2(5)	623.94	1669.86	371.38	630.85	568.70	853.31	511.77	785.90	663.40
Prob > chi2	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Number of obs	784	784	784	784	784	784	784	784	784
AR(1): z	-1.47	-0.62	-2.20	0.25	-2.00	-0.59	-1.89	0.00	-1.00
Pr > z	0.141	0.537	0.028	0.806	0.045	0.556	0.059	0.999	0.318
AR(2): z	-3.78	-2.82	-3.45	-1.93	-3.85	-2.38	-3.62	-3.42	-3.64
Pr > z	0.000	0.005	0.001	0.054	0.000	0.017	0.000	0.001	0.000

Source: Author's calculations using STATA statistical software.