Firms' financial surpluses in advanced economies: the role of net foreign direct investments

Tatiana Cesaroni, Riccardo De Bonis, and Luigi Infante

Bank of Italy – Economics, Statistics and Research Directorate

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Motivations of the paper

- According to macroeconomic manuals non-financial corporations usually act as **net borrowers** …
- … but, in last years, in many countries firms have been **net lenders**: on average the change of their financial **assets** has been **greater** than the change of financial **liabilities**.
- Firms have been on average **net lenders** in the UK, Switzerland, Ireland, the Netherlands, Denmark, Germany, Finland, and Japan.
- Firms have been on average **net borrowers** in the US, Italy, Greece, Belgium, France, Spain, Portugal, Norway, Austria, and Sweden.

Motivations of the paper (*follows*)

- This paper tries to answer the following question: *What are the main forces driving firm net lending/net borrowing?*

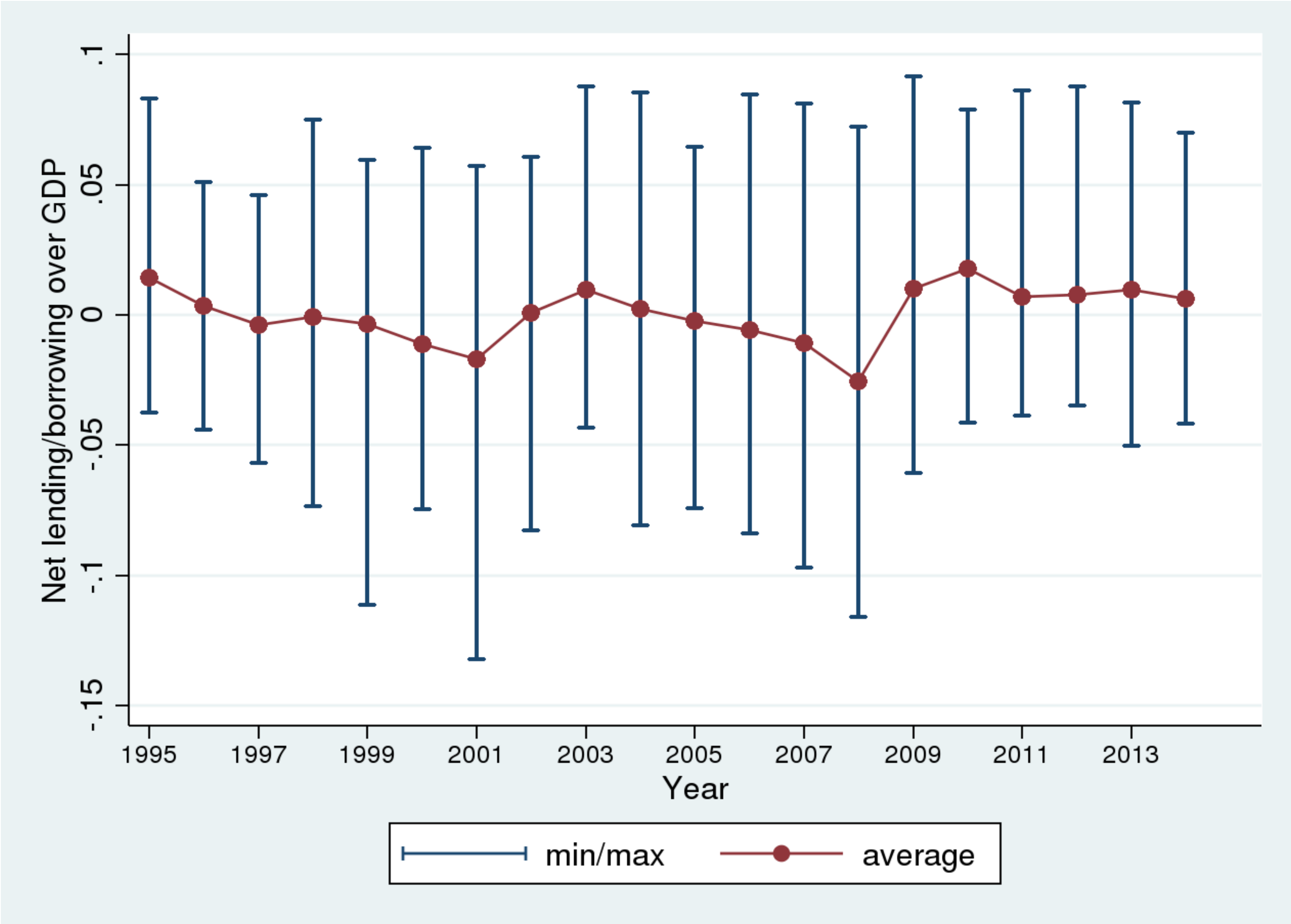
- Our exercise takes into account 18 advanced countries from 1995 to 2014

Taxonomy

- Net lending (+) implies that the flow of financial **assets** is **greater** than the flow of financial **liabilities**. Net lending is a synonym for financial surplus.

- Net borrowing (-) implies that the flow of financial **assets** is **smaller** than the flow of financial **liabilities**. Net borrowing is a synonym for financial deficit.

Non-financial corporations net lending/borrowing: an *average* view



Outline

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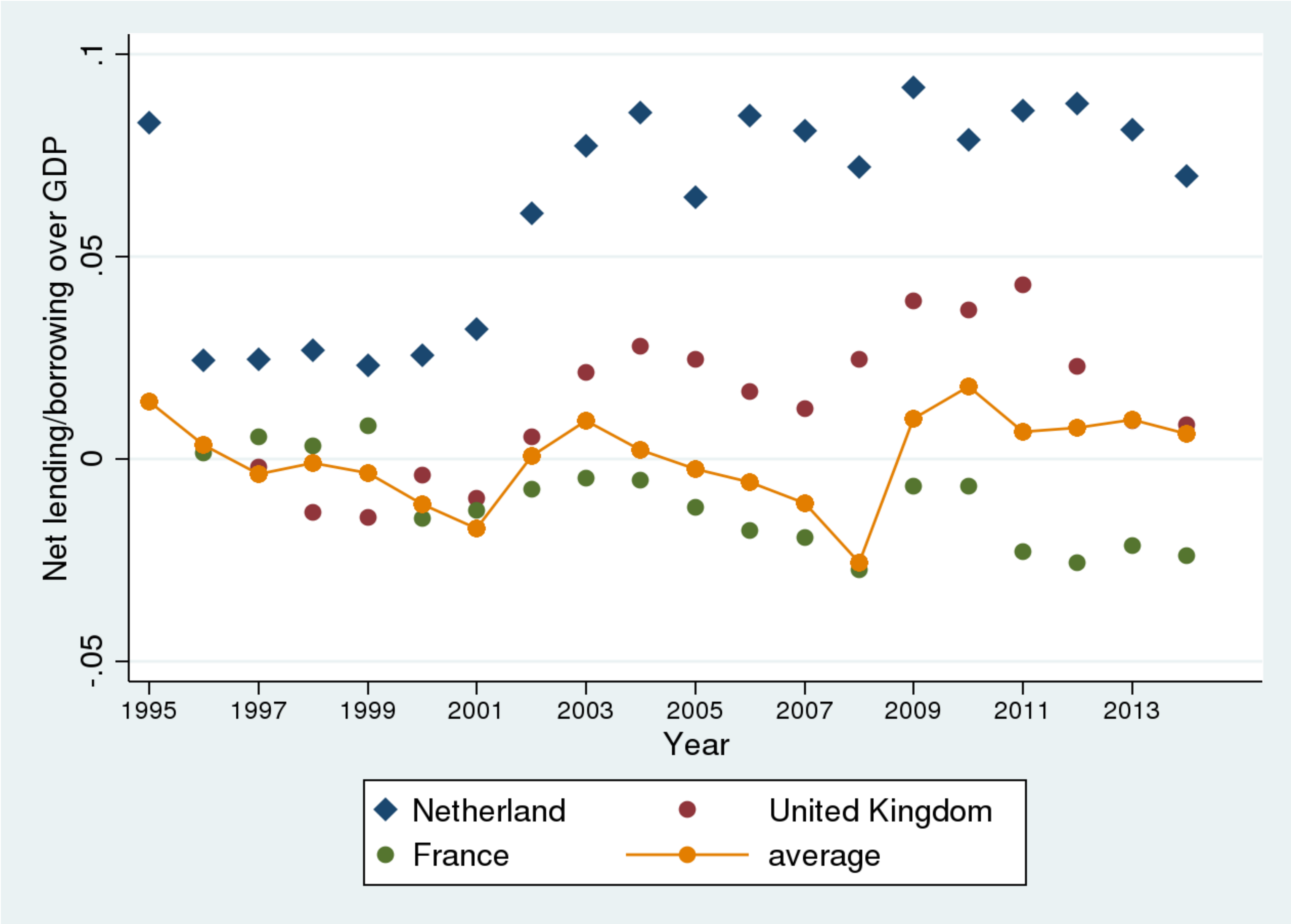
Non-financial corporations net lending/borrowing: selected countries



1. Literature: a glance

- In the mid-2010s the prevalence of corporate net lending was considered the reaction to excess debt and accumulation of physical capital during the 1990s (IMF, 2006).
- Further factors for the same period were the fall of corporate investment and the growth of net foreign investment abroad (Andrè et al, 2007).
- Recently, Gruber and Kamin (2015) still stressed the low investment along with an increase in corporate payouts.
- Theoretical papers emphasize the precautionary motive of firms: the accumulation of financial assets avoids future constraints (Armenter and Hnatkovska, 2014).

2. The data set

- Country level analysis taking into account non-financial corporations.

- Data come from Flow-of-Funds statistics
  - 18 countries: 16 European countries plus US and Japan
  - Time span: annual data from 1995 to 2014.

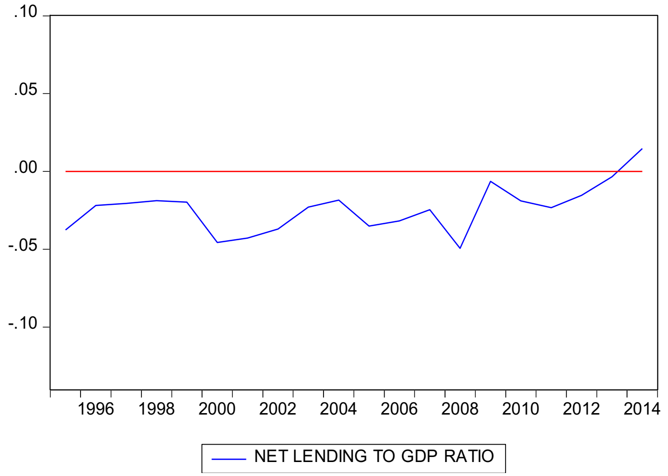
- The independent variables try to catch:
  - Structural change: net foreign direct investment is the key factor.
  - Aggregate demand and supply factors: output gap, investment, profits, uncertainty, leverage and other variables.

The variables used: definitions **and expected signs**

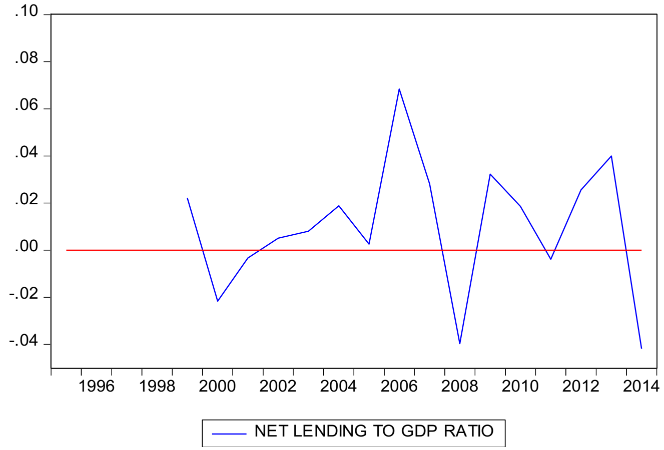
Variable	*Description*	*Expected sign*
Net lending/net borrowing (NBLGDP)	Net lending/net borrowing as a percentage of GDP.	**Dependent variable**
Net FDI/GDP	Net foreign direct investment (stocks) as a ratio to GDP.	Positive
Output gap	(Effective GDP – Potential GDP)/Potential GDP*100	Negative
Investment/GDP	Gross investment rate of corporate sector as a ratio of GDP	Negative
Profits/GDP	Profits after net interest and taxes as a ratio to GDP: profits are defined as the sum of gross operating surplus and property income minus the sum of interest rate paid and taxes (as in IMF 2006).	Positive
Oil price	Price of Brent in US dollars.	Negative
Interest rates spread	Long term – short term interest rates on deposits.	Positive
Leverage	Ratio of financial debt (loans plus bonds issued) to equity and financial debt.	?
Financial openness	Ratio f foreign financial assets and liabilities to GDP.	Positive

Non-financial corporations net lending/borrowing: other countries

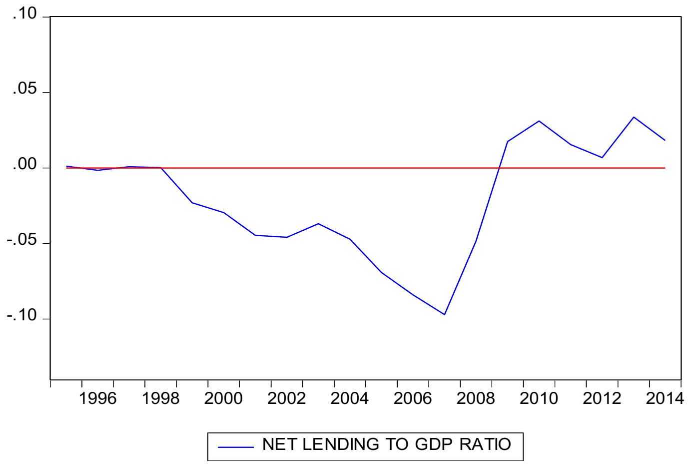
Italy



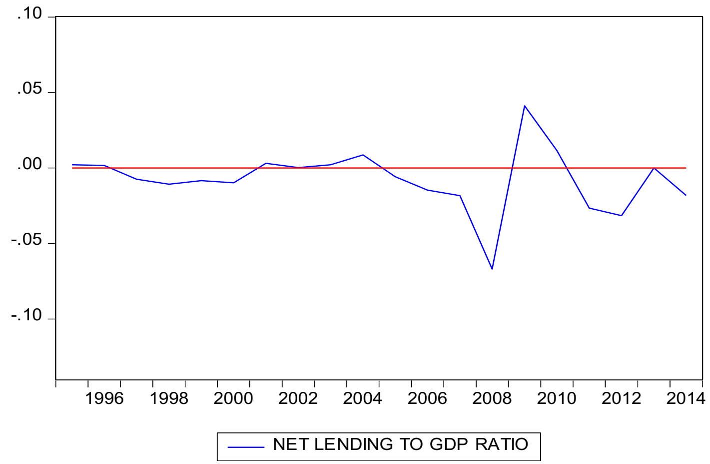
Germany



Spain



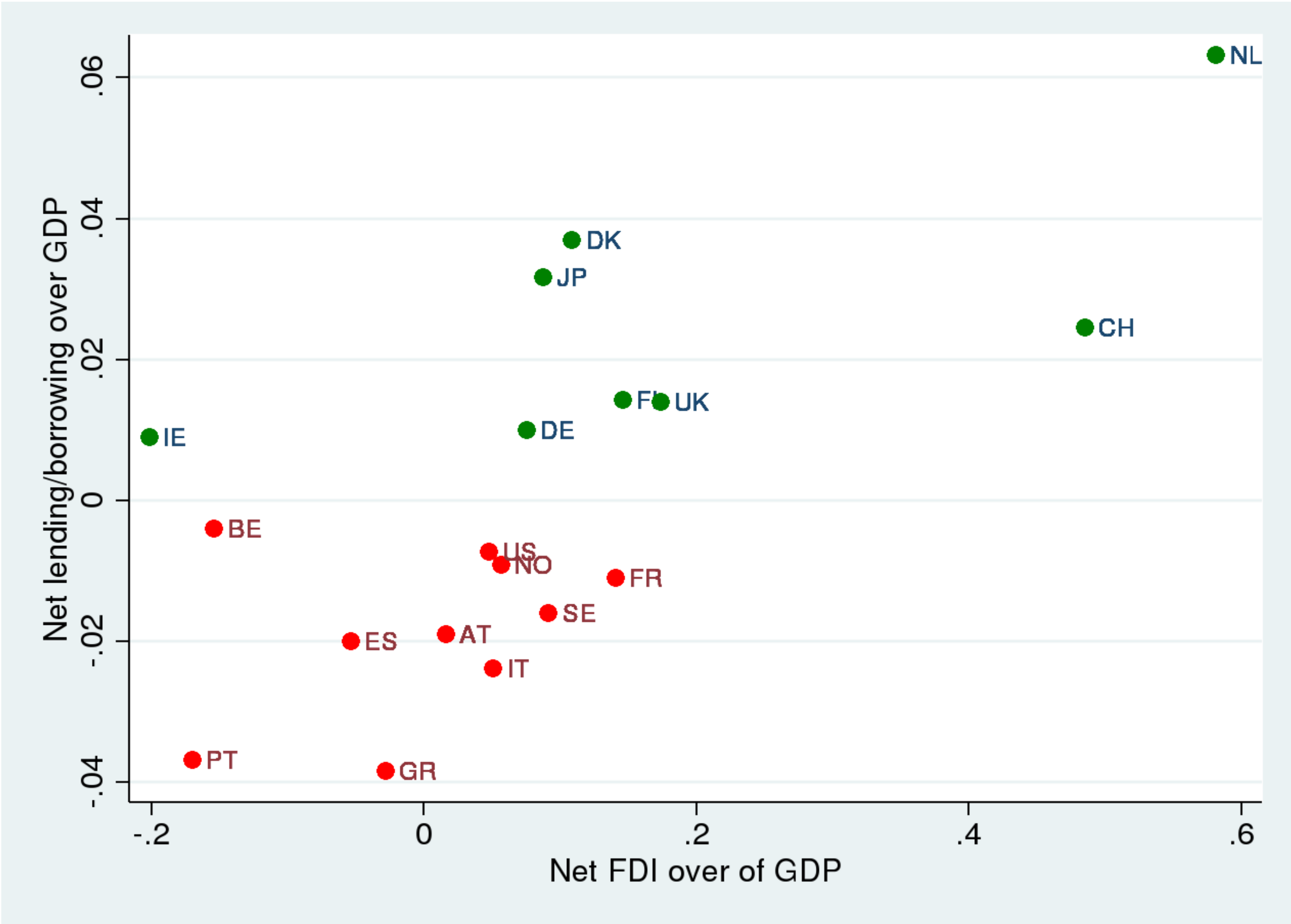
United States



Descriptive statistics

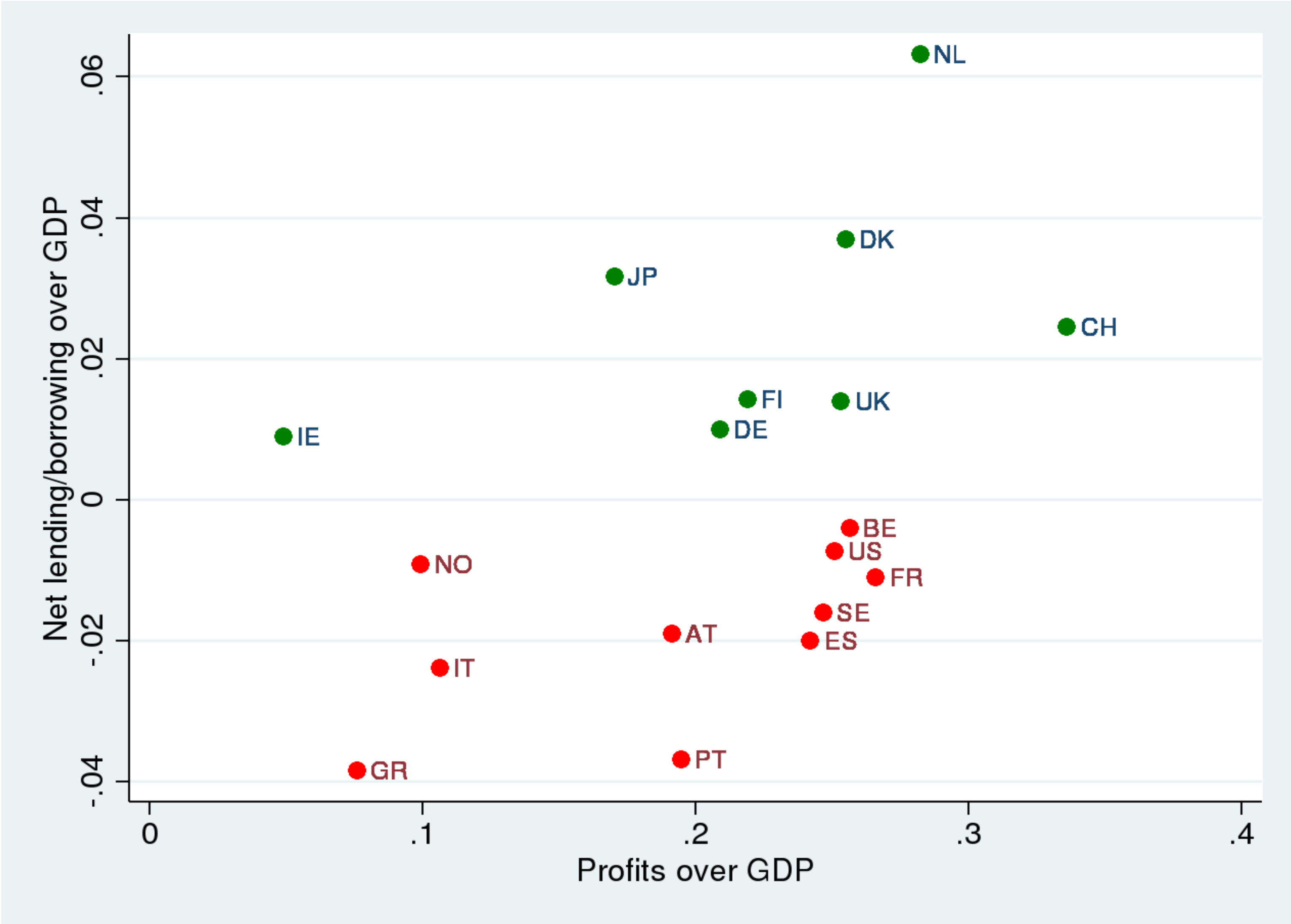
Variables	Net Lender Countries			Net Borrowers Countries		
	Number of observations	Mean	Std. dev.	Number of observations	Mean	Std. dev.
Net Lending/borr. (over GDP)	139	0.027	0.031	197	-0.019	0.033
Output gap	160	-0.138	2.930	201	-0.333	3.212
Net FDI / GDP	160	0.182	0.333	200	-0.000	0.109
Investment/GDP	153	0.120	0.019	182	0.119	0.025
Brent	160	55.93	33.83	200	55.93	33.81
Consumption / GDP	153	0.535	0.061	182	0.560	0.079
Profits / GDP	153	0.225	0.079	182	0.198	0.071
Spread rate	152	1.343	1.207	197	1.780	2.467
Leverage	146	0.645	0.193	200	0.650	0.226
Financial Openness (over GDP)	160	7.840	7.327	200	3.540	1.947

The relationship between the net lending/borrowing and FDI
(averages: 1995-2014)



…and between net lending/borrowing and NFC profits

(averages: 1995-2014)



3. A simple econometric exercise

- Dependent variable: net lending/borrowing of non-financial corporations.
- We use a simple regression as follows:

$$\mathbf{Y_{it} = \alpha_i + \beta_1{*}FDI_{it} + \beta_2{*}Igdp_{it} + \beta_3{*}profitsgdp_{it} + \beta_4{*}outputgap_{it} + \beta_4{*}controls_{it} + e_{it}}$$

- Panel data with country fixed effects.
- Robustness exercises on the definition of internationalization and further control refinements.
- In order to investigate the role of country heterogeneity we finally split the main coefficients between net lenders and net borrowers.

A panel data regression analysis

(fixed effects estimator; 1995 – 2014)

Dependent variable Net Lending/Borrowing	[1]	[2]	[3]	[4]
FDI / GDP	0.041*** (0.01)	0.038*** (0.01)	0.042*** (0.01)	0.033** (0.01)
Investment/GDP _l1	-0.917*** (0.18)	-0.953*** (0.18)	-0.94*** (0.18)	-0.91*** (0.18)
Output gap_l1	-0.001* (0.00)	-0.002** (0.00)	-0.001 (0.00)	-0.0003 (0.00)
Oil price	-0.0001* (0.00)	-0.0001** (0.00)	-0.0001** (0.00)	-0.0001*** (0.00)
Profits / GDP_l1		0.168*** (0.07)	0.251*** (0.07)	0.14*** (0.07)
Spread rate			0.002** (0.001)	0.003*** (0.001)
Leverage				-0.043** (0.016)
Constant	yes	yes	yes	yes
Country fixed effects	yes	yes	yes	yes
R2	0.14	0.30	0.34	0.32
Observations	307	307	299	299
Groups	18	18	18	18

Testing for financial openness, crisis, taxation and banking intermediation

(fixed effects estimators; 1995 – 2014)

Dependent variable Net Lending/Borrowing	[1]	[2]	[3]	[4]
FDI / GDP		0.029** (0.01)	0.030*** (0.01)	0.026** (0.01)
Investment/GDP _l1	-0.893*** (0.18)	-0.827*** (0.18)	-0.915*** (0.18)	-0.973*** (0.17)
Output gap_l1	-0.001 (0.00)	-0.001 (0.00)	-0.000 (0.00)	-0.000 (0.00)
Oil price	-0.0001*** (0.00)	-0.0001* (0.00)	-0.0001** (0.00)	-0.0002*** (0.00)
Profits / GDP_l1	0.161*** (0.07)	0.120* (0.07)	0.068 (0.08)	0.144** (0.07)
Spread rate	0.003** (0.00)	0.003*** (0.00)	0.003** (0.00)	0.001 (0.00)
Financial Openness_l1 (over GDP)	0.002*** (0.00)			
Leverage	-0.042** (0.02)	-0.046*** (0.02)	-0.044*** (0.02)	-0.042** (0.02)
Crisis dummy		-0.041*** (0.01)		
Leverage*Crisis		0.062*** (0.02)		
Taxprod/GDP			-0.473** (0.23)	
Bank funding flow				-0.139*** (0.039)
Constant	yes	yes	yes	yes
Country fixed effects	yes	yes	yes	yes
R2	0.24	0.27	0.26	0.003
Observations	299	299	299	299
Groups	18	18	18	18

Splitting the main coefficients across countries

(fixed effects estimators; 1995 – 2014)

Dependent variable: firms' net lending/net borrowing	[1]	[2]
FDI / GDP net lenders	0.032*** (0.01)	0.032*** (0.04)
FDI / GDP net borrowers	0.046 (0.04)	0.044 (0.04)
Investment/GDP _l1	-0.904*** (0.18)	
Investment/GDP _l1 net lenders		-0.764*** (0.26)
Investment/GDP _l1 net borrowers		-0.997*** (0.22)
Output gap_l1	-0.000 (0.00)	-0.000 (0.00)
Oil price	-0.0001** (0.00)	0.0001** (0.00)
Profits / GDP_l1	0.136* (0.14)	0.145** (0.07)
Spread rate	0.003** (0.00)	0.003** (0.00)
Leverage	-0.043** (0.02)	-0.043* (0.02)
Constant	yes	Yes
Country fixed effects	yes	yes
R2	0.24	0.25
Observations	299	299
Groups	18	18

4. Conclusions and extensions

- (i) Firms' net lending is positively linked to net foreign direct investment. Firms' that strongly invest abroad tend to reduce their net borrowing, i.e. to increase their surpluses. Globalization affected the organization of production within countries: it is easier to invest abroad.
- (ii) Net lending/borrowing is negatively associated to national investment spending and to demand conditions.
- (iii) The association between net lending/borrowing and leverage is negative: an higher leverage implies greater flows of financial liabilities. However firms tried to deleverage during the global financial crisis.
- (iv) There is a positive link between firms' profits and net lending/net borrowing.

4. Conclusions and extensions (*follows*)

- We would like to scrutinize the substitution effect between domestic investments and foreign investments …

- … and to study the links between corporate sector surpluses and decreasing household saving and decline of labor share in advanced countries.

- THANK YOU FOR YOUR ATTENTION!