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Firms' financial surpluses in advanced economies: the role of net foreign direct investments[1]

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[1] This presentation was prepared for the meeting. The views expressed are those of the authors and do not necessarily reflect the views of the BIS, the IFC or the central banks and other institutions represented at the meeting.

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

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Workshop on the Use of Financial Accounts

Central Bank of the Republic of Turkey and Irving Fisher Committee

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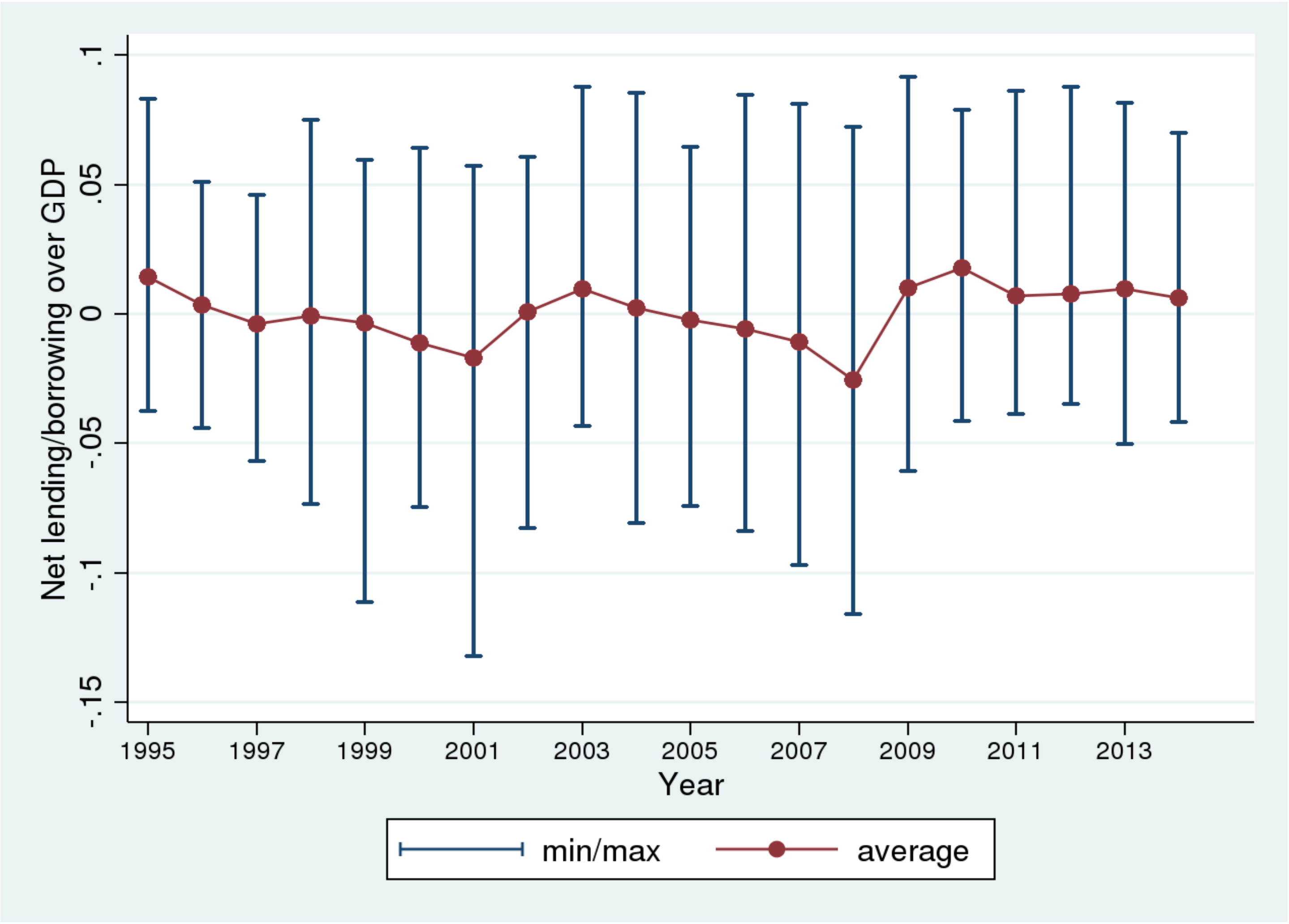
Motivations of the paper

- Non-financial corporations usually act as net borrowers
- In last years, in many countries firms *have turned thrifty*
- This paper attempts to shed light on this evidence:
  - *How spread is the excess savings?*
  - *What are the main forces driving the phenomenon?*
  - *Are there differences across countries?*
- Our exercise is performed on a large number of developed countries over a long time horizon

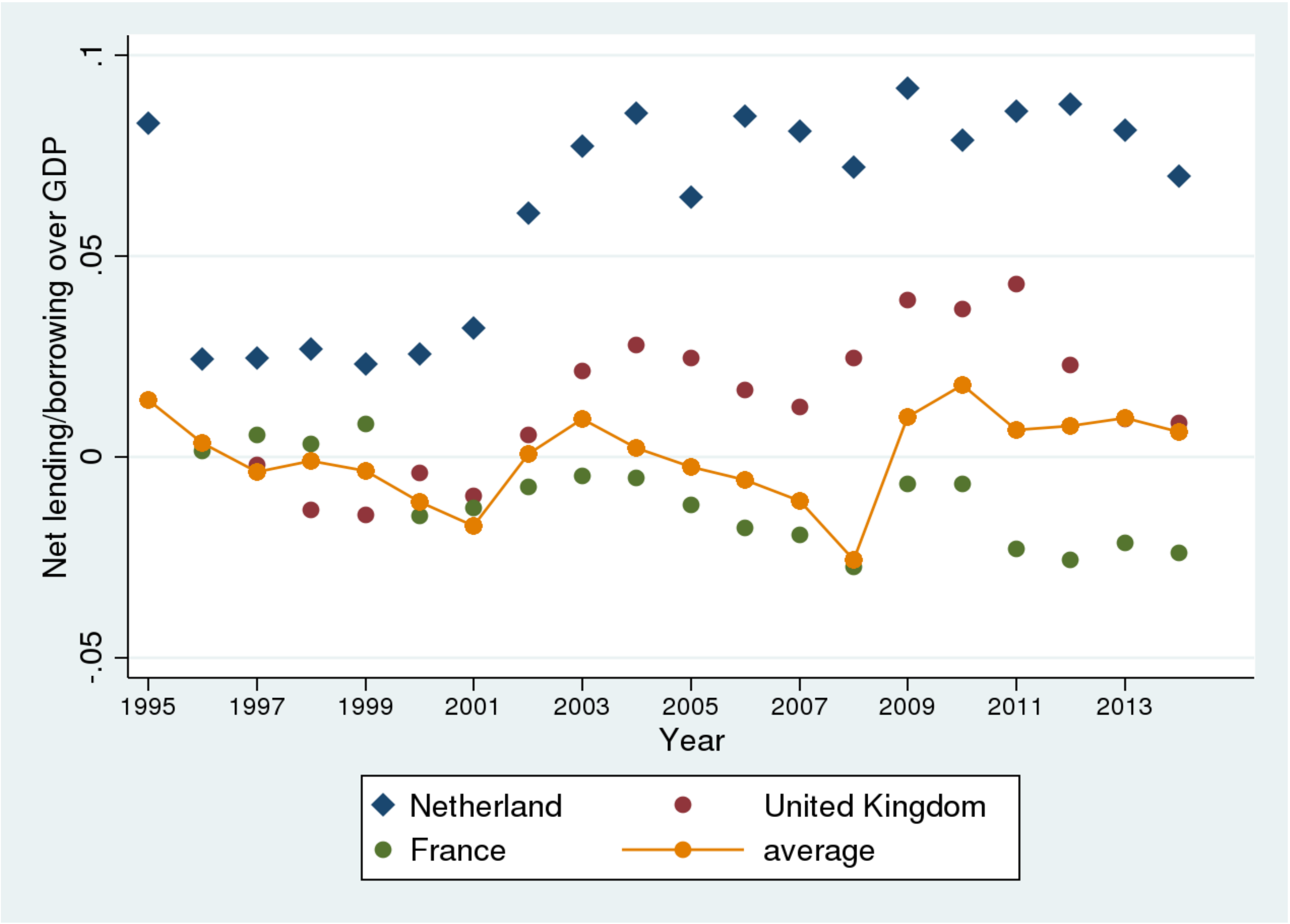
Literature and previous evidence: a glance

- The corporate *net lender status* during the first mid of 2000s was considered the reaction to: the excess debt and accumulation of physical capital during the 1990s (IMF, 2006)
- Further factors for the same period have been investigated: the fall of corporate investment, the growth of net foreign investment abroad (Andrè et al, 2007)
- Recently, Gruber and Kamin (2015) still stressed the low investment level 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)

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

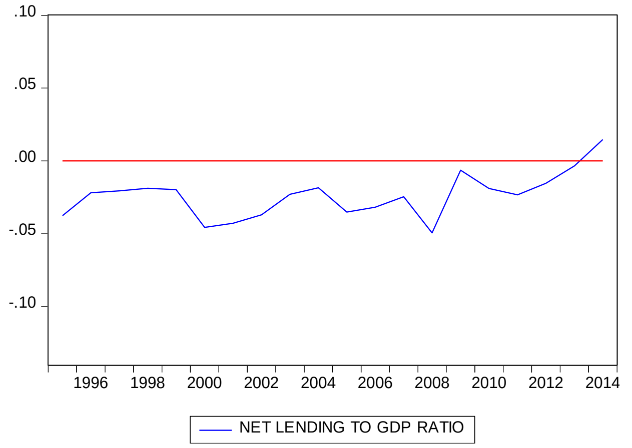


Non-financial corporations net lending/borrowing: selected countries

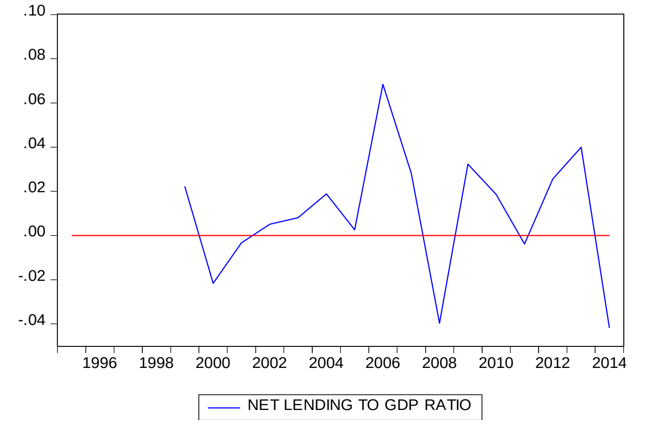


Non-financial corporations net lending/borrowing: selected countries [2]

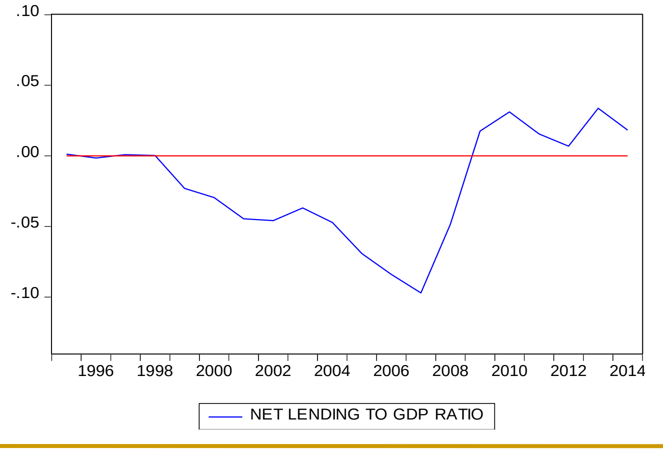
Italy



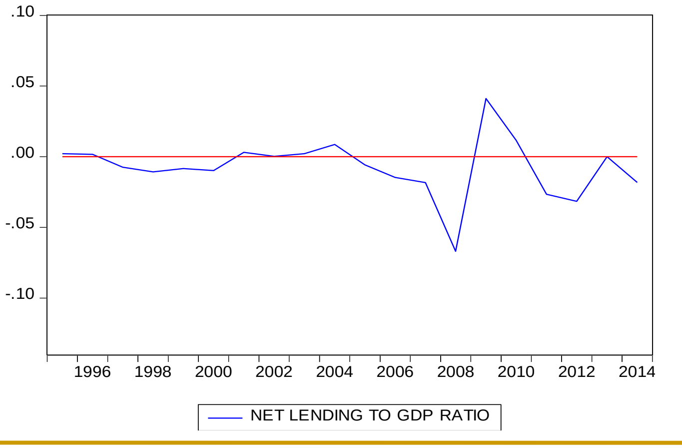
Germany



Spain



United States



Data set description

- Country level analysis, data are mainly related to non-financial corporations
- Data come from Flow-of-Funds statistics (ESA2010 and SNA2008)
  - 18 countries => 16 European countries plus US and Japan
  - Time spans from 1995 to 2014
  - Annual data
- The explanatory variables try to catch:
  - Structural changes
  - Aggregate Demand and Supply factors
  - Uncertainty
  - Debt level

The variables used: definitions

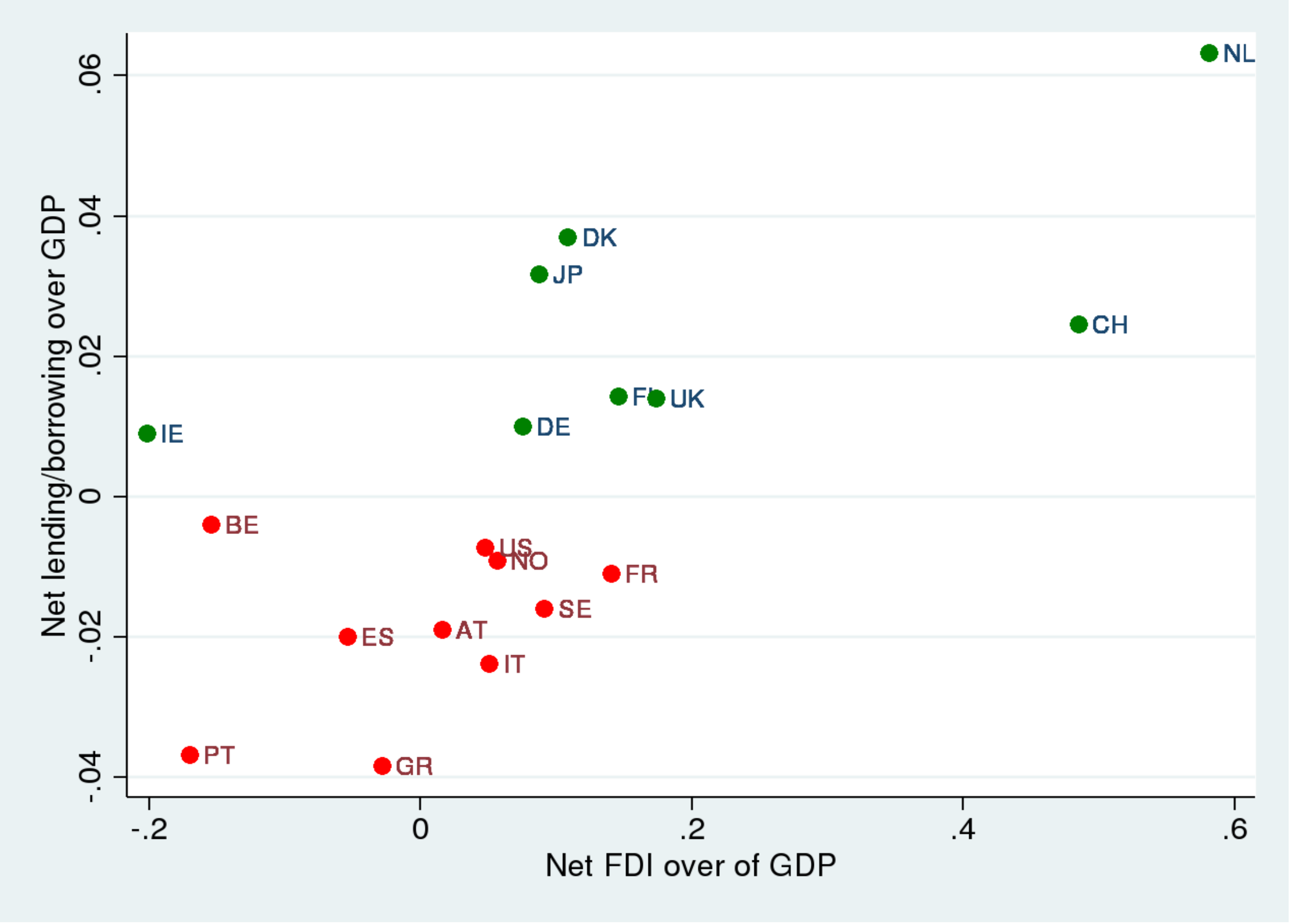
Variable	*Description*	**Source**	*Expected sign*
Net lending/net borrowing (NLBGDP)	Net lending/net borrowing as a percentage of GDP.	Financial accounts	**Dependent variable**
Net FDI/GDP	Net foreign direct investment (stocks) as a ratio to GDP.	OECD	Positive
Output gap	(Effective GDP – Potential GDP)/Potential GDP*100.	OECD	Negative
Investment/GDP	Gross investment rate of corporate sector as a ratio of GDP.	National accounts	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 (IMF 2006).	National accounts	Positive
Oil price	Price of Brent in US dollars.	OECD	Negative
Interest rates spread	Long term – short term interest rates on deposits.	OECD	Positive
Leverage	Ratio of financial debt (loans plus bonds issued) to equity and financial debt.	Financial accounts	?
Financial openness (Finopen)	Ratio of foreign financial assets and liabilities to GDP.	OECD	Positive
Taxation	Taxes on production and imports, and on income and wealth (over GDP).	National accounts	Negative

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

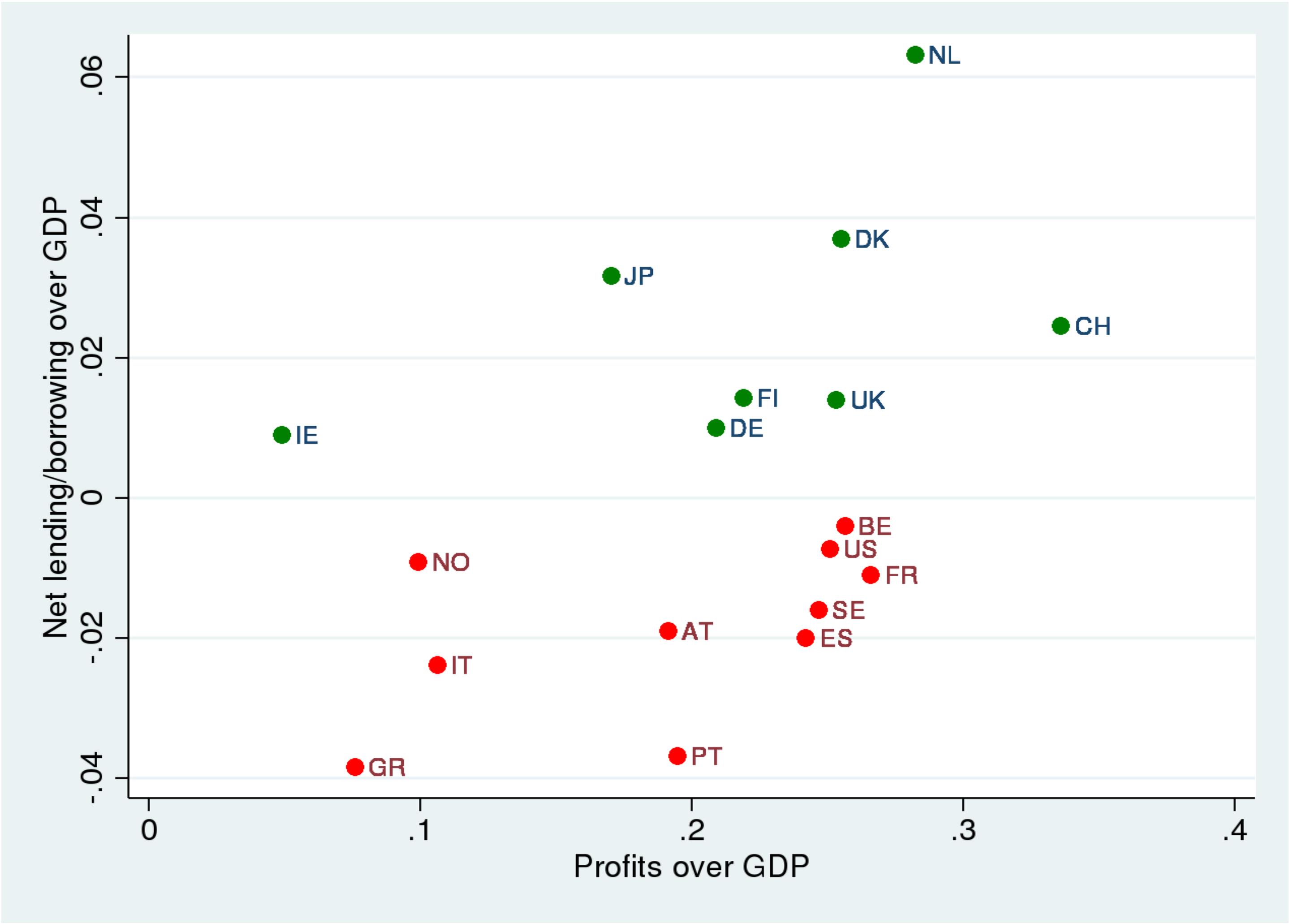
The relationship between the net lending/borrowing and FDI

(averages: 1995-2014)



…and between the net lending/borrowing and NFC profits

(averages: 1995-2014)



A simple econometric exercise

- The data are combined and used in an econometric test aimed at verify the role played by the variables in the net lending/borrowing behaviour of non-financial corporations
- We use a simple regression analysis as follows:

$$\mathbf{Y_{it} = \alpha_i + \beta_1{*}FDI_{it} + \beta_2{*}Igdp_{it} + \beta_3{*}profitsgdp_{it} + \beta_4{*}outputgap_{it} + \beta_5{*}controls_{it} + e_{it}}$$

- Panel data with country fixed effects
- Robustness exercises on the definition of internationalisation and further control refinements
- In order to investigate the role of heterogeneity between countries 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	0.27
N. of observations	299	299	299	299
N. of groups	18	18	18	18

(***), (**) and (*) denote significance at the 1%, 5% and 10% respectively. Standard errors in parenthesis.

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

Conclusions

- Traditional corporate sector theory predicts that firms run deficits to finance investment spending...
- ...since mid-1990s many industrial countries have been experiencing surpluses
- Our results suggest that net lending/borrowing is clearly negatively associated to investment spending and in turn to demand condition
- At the same time, globalization affected the organization of the production within countries increasing the convenience to invest abroad. Foreign direct investment therefore turns out to be positively associated to net lending/borrowing
- The debt plays an important role in our story, while it seems that in good time the leverage negatively affects the balance of non-financial corporation, firms try to deleverage during the global financial crisis

THANK YOU FOR YOUR ATTENTION