NATIONAL BANK OF ROMANIA

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Investment activity of non-financial companies in Romania: evolution, drivers and constraints

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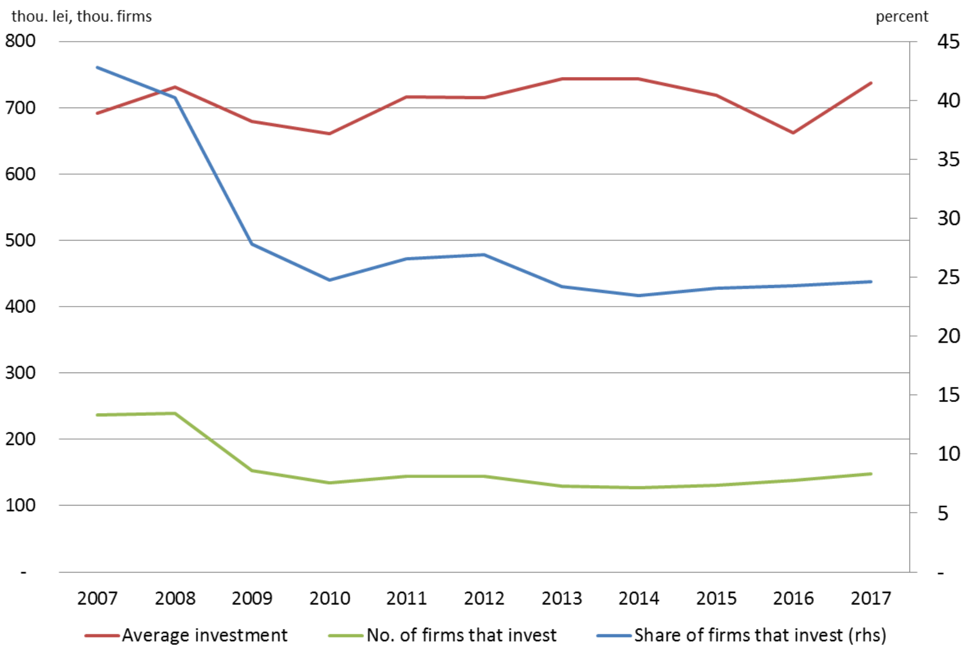
Note: The opinions expressed in this presentation are those of the author and do not necessarily reflect the views of the National Bank of Romania

Investments drivers and constraints: literature review

- Koop, E., 2018, investigated the slow pace of U.S. business investments recorded in the recovery phase after the financial crisis. Results suggest that cautious expectations of future aggregate demand growth explain most of the weakness in investment.
- Chen S., Lu Y., 2016, used firm level data in order to investigate the factors behind the slow recovery of fixed capital investments in Cyprus after the financial crisis, even when the overall economy expanded. The key finding is that overall corporate indebtedness is negatively associated with investment over the entire boom-bust cycle.
- Gebauer S. et al., 2017 investigate the link between corporate debt and investment for a group of five peripheral euro area countries. They found that even moderate levels of debt can exert a negative influence on investment for smaller firms or when profitability is low.
- Erden, L., Holcombe, R., 2005, prove that public investment stimulates private investment in developing countries

Investments in Romania had a mixed evolution in the past 10 years

Dynamics of average investment and of share of firms that invested



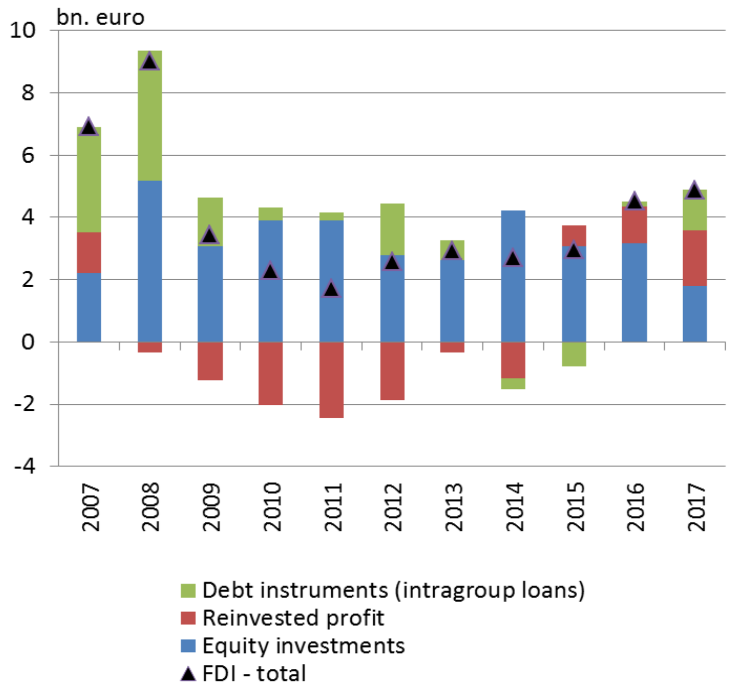
Source: MPF, NBR calculations

- Investments* before the financial crisis were sustained by long-term foreign direct investments
- The degree of concentration became higher, due to lower number of firms that invest

*Investments were computed as annual change in gross fixed assets of over 3% of the total assets

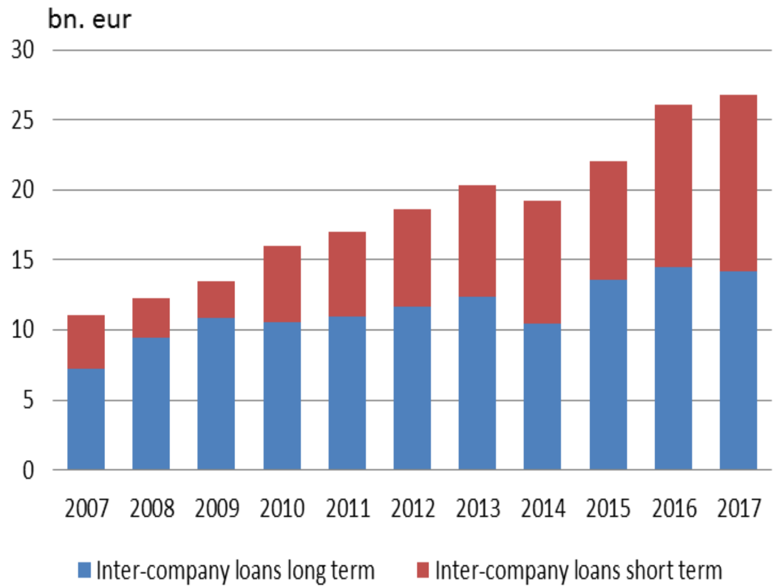
Investment activity was supported mainly by FDIs, which diminished after the financial crisis especially due to reinvested profit component

FDI flows structure



Source: NBR

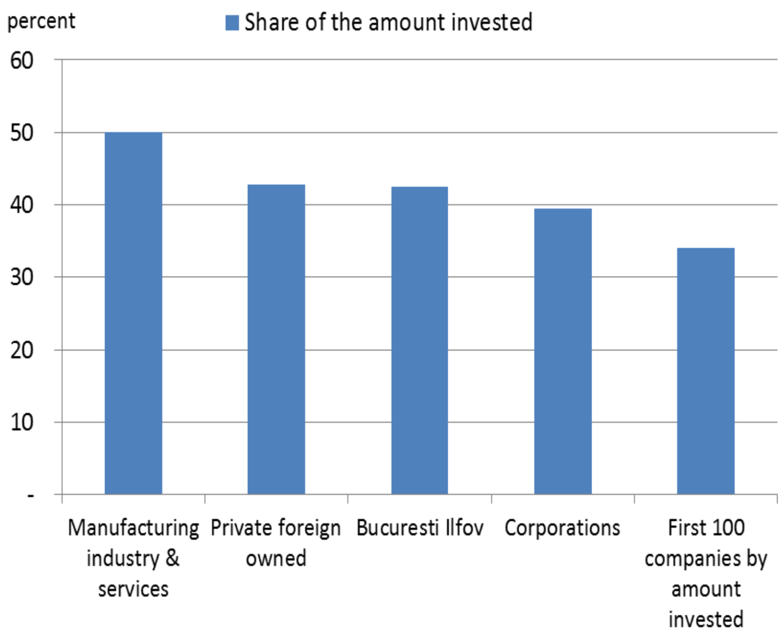
Intra-group loans structure



Source: NBR

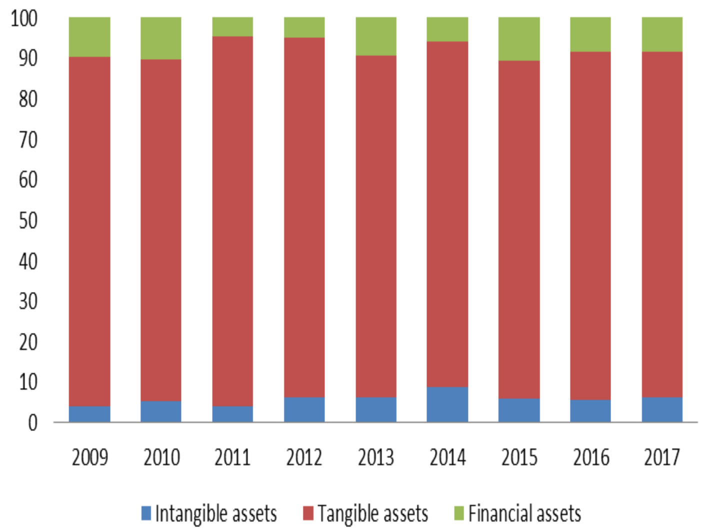
Investment activity in Romania is highly concentrated and directed mainly towards tangible assets, with intangible assets slightly increasing over the past years

Investment concentration



Source: MPF, NBR calculations

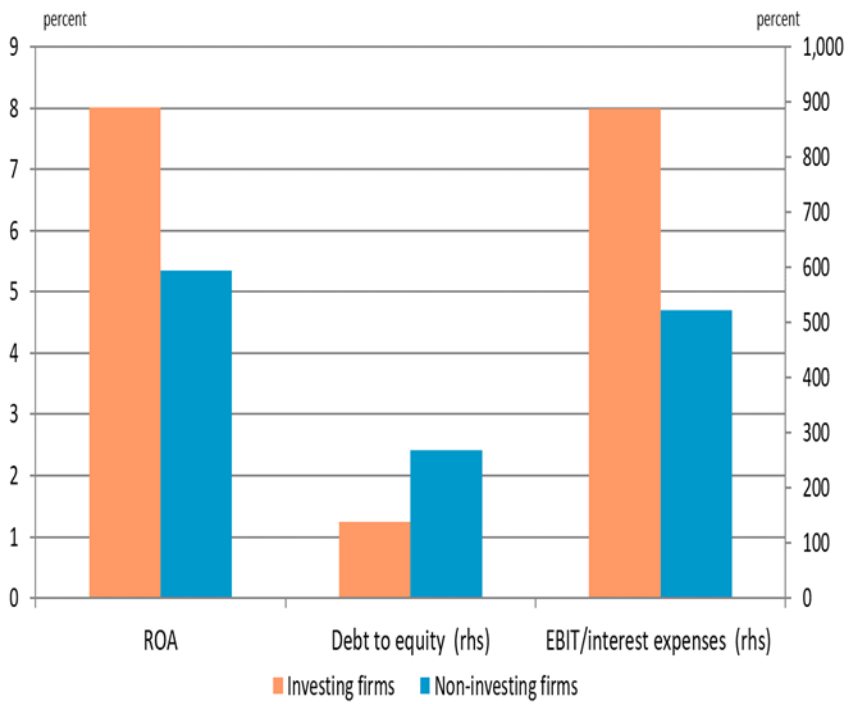
Investment by fixed assets category



Source: MPF, NBR calculations

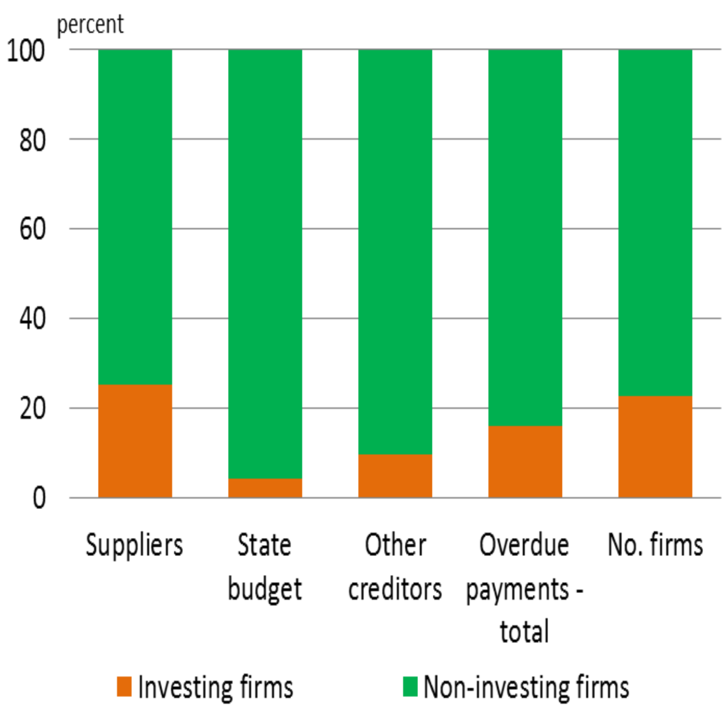
As expected, investing firms have a better economic stance than non-investing companies

Financial soundness indicators



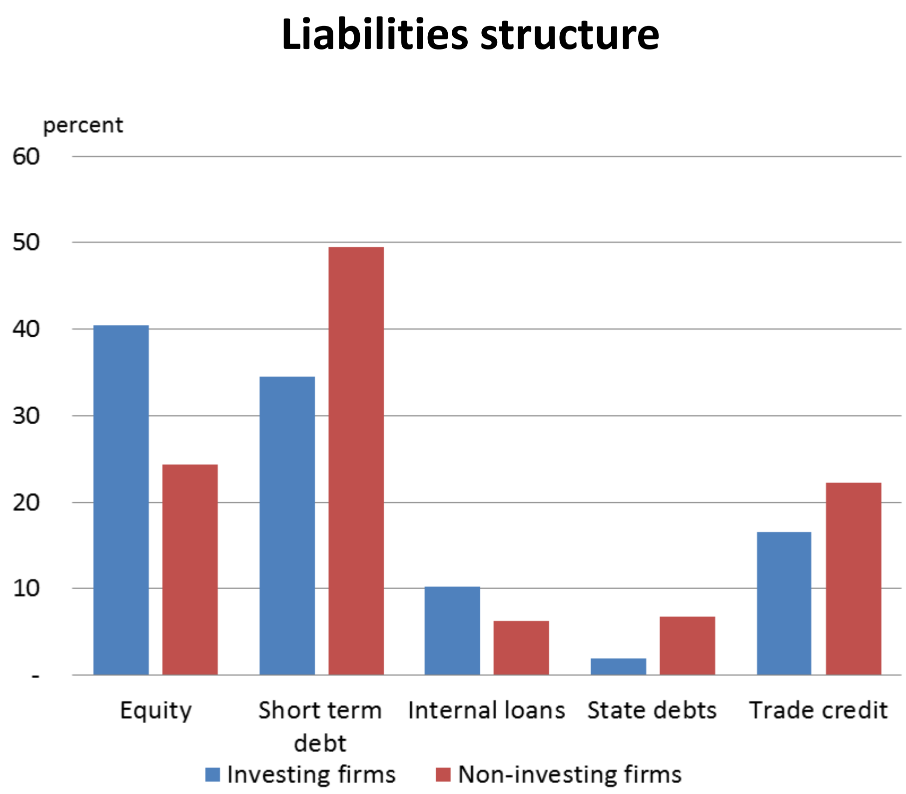
Source: MPF, NBR calculations

Structure of overdue payments



Source: MPF, NBR calculations

There are several differences in the liabilities structure between investing firms and non-investing firms

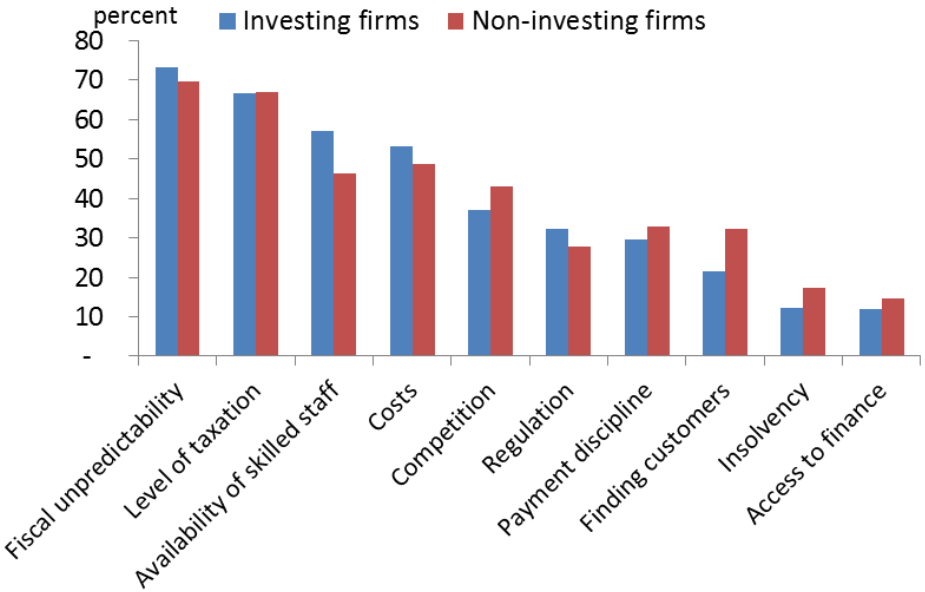


Source: MPF, NBR calculations

- Investing firms are better capitalized in comparison with non-investing firms
- Non-investing firms are more prone to use short-term debt
- Firms which are investing have a better access to MFIs and NBFIs financing, while non-investing firms are using trade credit to a larger extent than investing firms

Access to finance is the least pressing problem for firms and fiscal unpredictability may determine a conservative behavior of the companies

Most pressing problems faced by companies

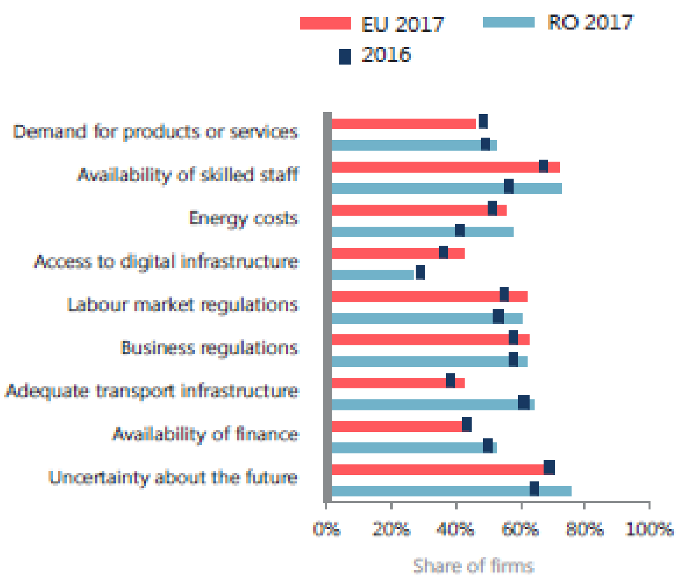


- Unpredictability of fiscal policy and level of taxation are the main factors that hamper investments
- Availability of skilled staff is seen as a more pressing problem for firms that invest than for the firms that do not invest

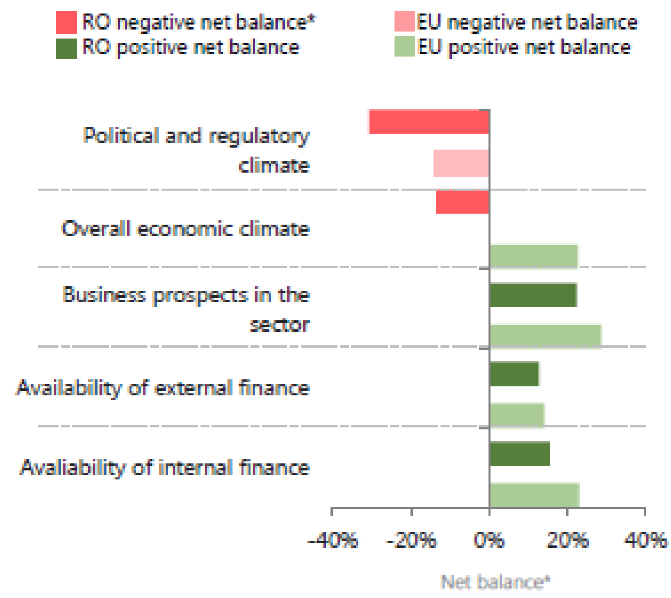
Source: Survey on the access to finance of the non-financial corporations in Romania, June 2018

Business prospects in the sector and availability of finance have positive short term influence over investments

Long term barriers to investment



Short term influences on investment



Source: EIB Investment Survey, 2017

Balance sheet soundness and investment

Methodology and data (1)

Logit methodology, using as explanatory variables financial ratios derived from firms' financial statements

$$\begin{cases} y_i = \begin{cases} 1 \leftrightarrow invested \\ 0 \leftrightarrow otherwise \end{cases} \\ y_i^* = x_i\beta + \varepsilon_i \end{cases} \Longrightarrow P(y_i = 1) = F(x_i\beta) = \frac{1}{1+e^{-x_i\beta}}$$

Data

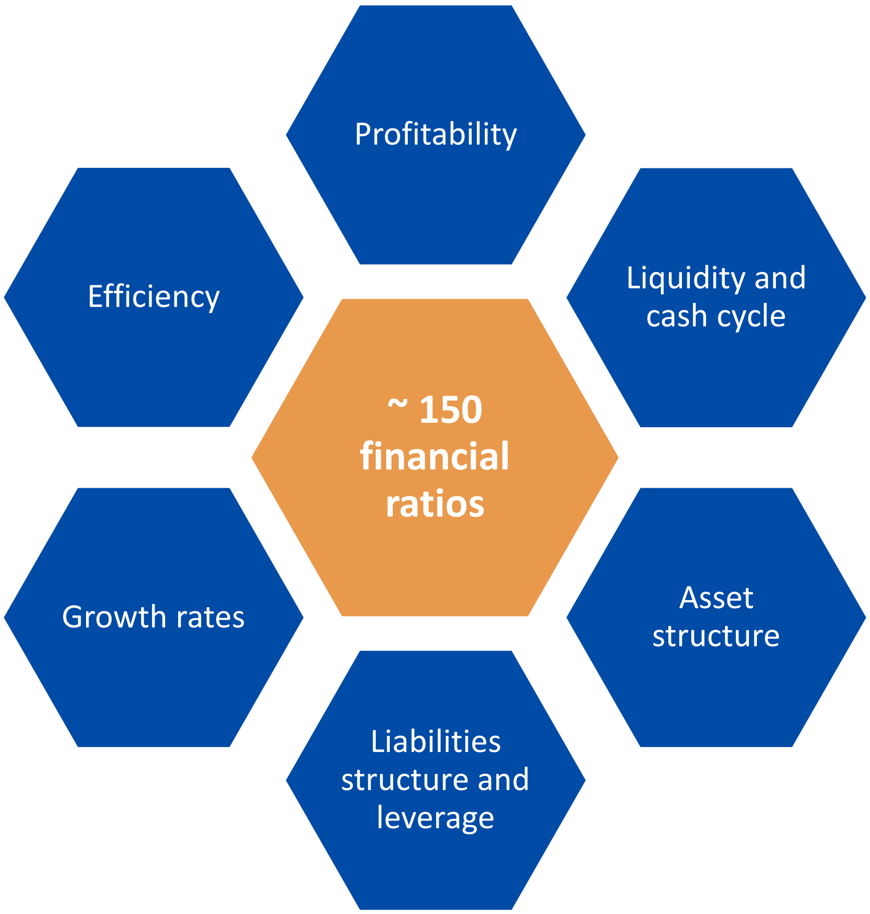
- time span covered: 2009 - 2017
- firm-level financial indicators: 1,868,232 observations
- sources: Ministry of Public Finance, Central Credit Register

Balance sheet soundness and investment

Methodology and data (2)

Model selection:

- estimate a series of logit models using a backward selection method, in a bootstrapping exercise
- select variables to enter final model based on frequency of explanatory variables and model specification
- re-estimate final model with selected explanatory variables



Balance sheet soundness and investment

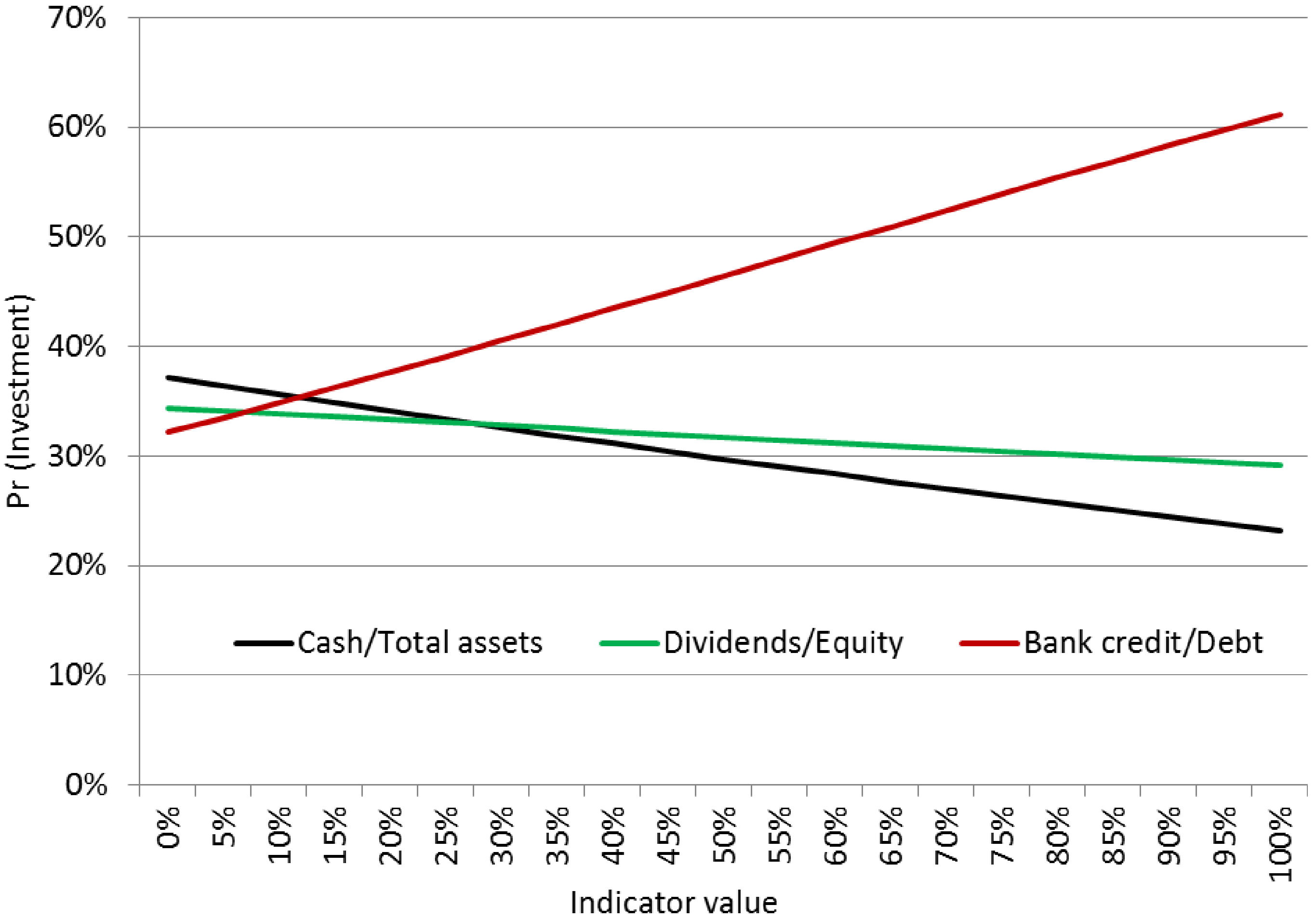
Logit model results (1)

	(1)	(2)	(3)	(4)
Variables		**Investment (dummy)**		
ROE	0.195***	0.0991***	0.203***	0.200***
Sales/Total assets	0.117***	0.116***	0.116***	0.121***
Debt/Equity	0.00342***	0.00828***	0.00343***	0.00444***
Cash/Total assets	-0.696***	-0.746***	-0.687***	-0.665***
Value added/Number of employees	0.355***	0.327***	0.350***	0.365***
Bank credit/Debt	1.243***	1.102***	1.223***	1.173***
Dividend/Equity	-0.252***	-0.263***	-0.252***	-0.253***
Dummy_Large_Corporate			0.731***	
Dummy_Industry				0.312***
Constant	-4.669***	-4.335***	-4.632***	-4.836***
Lags	1	2	1	1
Area under ROC curve	61.9%	61.1%	62.0%	62.2%
Observations	1,293,290	974,372	1,293,290	1,293,290

****** p<0.01, ** p<0.05, * p<0.1***

Balance sheet soundness and investment

Logit model results (2)



Conclusions and potential policy measures

- A sound financial standing represents a prerequisite for a sustainable investment activity
- Firms making investments have, in general, a better economic and financial situation than of those that do not invest
- Credit institutions should be encouraged to change their business models in the sense that credit activity should be shifted mainly to finance companies through long term loans for investments purposes.
- Non-investing companies should be encouraged to improve their capitalization taking into consideration that a significant share of the investments flows are represented by equity
- Public authorities should ensure a favorable climate for companies' investments

Thank you!

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