UNIVERSITÀ DEGLI STUDI DI MILANO

DIPARTIMENTO DI ECONOMIA, MANAGEMENT E METODI QUANTITATIVI

SWFs in banks during the crisis

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Outline

- Research questions
- SWFs market
- Literature review
- Sample and methodology
- Results

Research questions

- SWFs investment activity has been intensive during the crisis

- They targeted especially banks and the financial sector
  - What characterized the investment activity of SWFs?
  - Which banks were targeted by SWFs?
  - Do they show any differences compared to a peer group of banks?

SWFs market (1/3)

- ## A SWF is defined as

  «a state-owned investment fund or entity that is commonly established from balance of payments surpluses, official foreign currency operations, the proceeds of privatizations, govermental transfer payments, fiscal surpluses, and/or receipts resulting from resource exports» (SWF Institute)

- ## SWFs can be

  - stabilization funds
  - savings funds
  - reserve investment funds
  - development funds
  - contingent pension reserve funds (IMF, 2008).

SWFs market (2/3)

- SWFs are not a new phenomenon, but their size has been increasing over the last 10-15 years
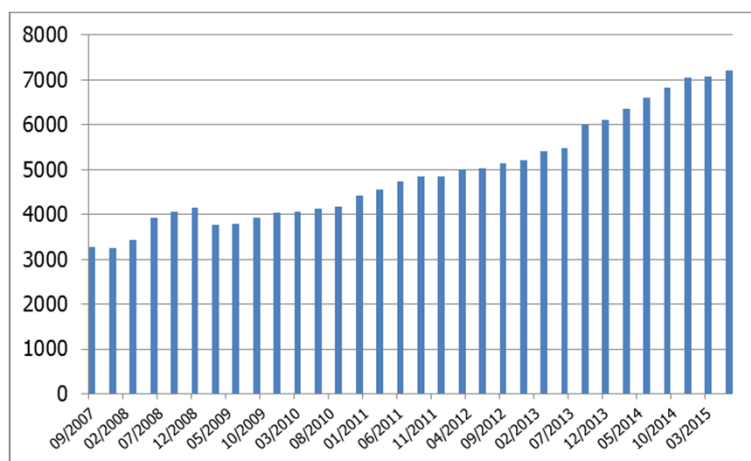
Source: Elaboration on SWF Institute data

- The estimated size as at June 2015 was $7,207 billion;

- The largest:
  - Norway Government Pension Fund ($882 bln)
  - ADIA ($773 bln)
  - SAMA Foreign Holdings ($757 bln)

SWFs market (3/3)

- The interest of SWFs in banking and financial sector has been especially strong during the crisis. Recently has slightly diminished

  - High investments especially in 2007 and 2008: recapitalization of home and Western financial institutions

  - More recently: investmens mainly in foreign markets to gain exposure to high expected recovery rates with growth potential [Bortolotti et al., 2015]
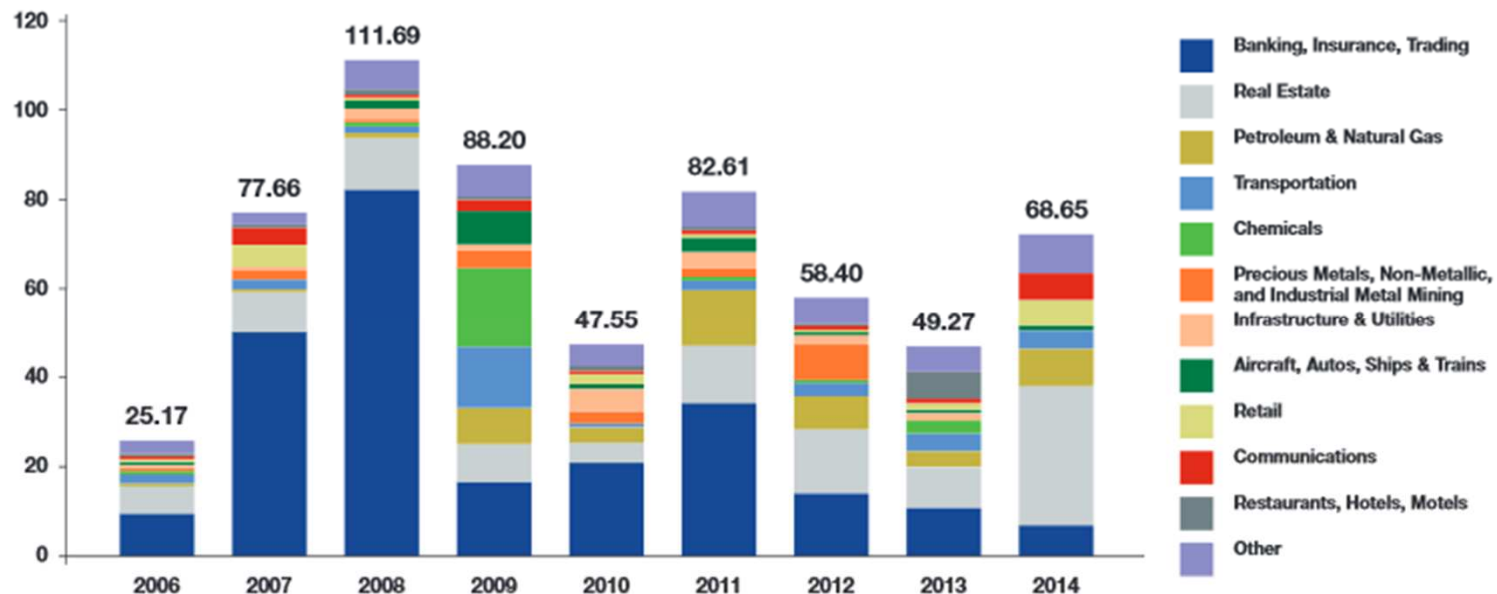
Publicly available data for direct SWF equity & real estate deals, joint ventures and capital injections. Source: Sovereign Investment Lab, Università Bocconi

Literature review (1/2)

- Literature is quite recent

- The research lines:
  - Macroeconomic issues: financial stability, transparency and political concerns (Baker and Boatright, 2010; Das, 2009; Gieve, 2009; Sun and Hesse, 2009)

  - Microeconomic issues:
    - Investments pattern and corporate governance behavior
    - Effects on performance

Literature review (2/2)

Microeconomic issues

- Results are very heterogeneous

  - Some specifically target distressed companies [Chhaochharia and Laeven, 2008; Kotter and Lel, 2011]

  - Often invest in banks and financial companies [Bortolotti et al., 2010; Fotak et al., 2008]

  - SWF obtain representation in Boards on average in around 28% of the cases, but there is high variation [Bortolotti et al., 2010]

  - Effects on performance can be positive in the short or long run [Bortolotti et al., 2010; Kotter and Lel, 2009, 2011; Dewenter et al., 2010; Chhaochharia and Laeven, 2008; Raymond, 2009; Knill et al., 2009], negative or unclear [Beck and Fidora, 2008]

  - Financial targets have better performance than non-financial ones [Knill et al., 2009]

  - Investments are mainly determined by economic reasons [Avendano and Santiso, 2009; Chhaochharia and Laeven, 2008; Drezner, 2008; Reisen, 2008]

Sample selection

- Individuate SWFs investments in banks during the crisis
    1. Identify the top 25 banks in European countries and US
    2. Search for SWFs among shareholders
    3. Cross check with other sources (SWF Institute, Monitor Group, FEEM, regulatory files)

    – As additional check, also did the reverse (3→1)

    – Exclude domestic investments
    – Exclude holdings < 2%
    – Exclude Norway's Government Pension Fund-Global (passive investor)

- Ended up with 37 banks with at least one SWF among the shareholders (SWF banks)
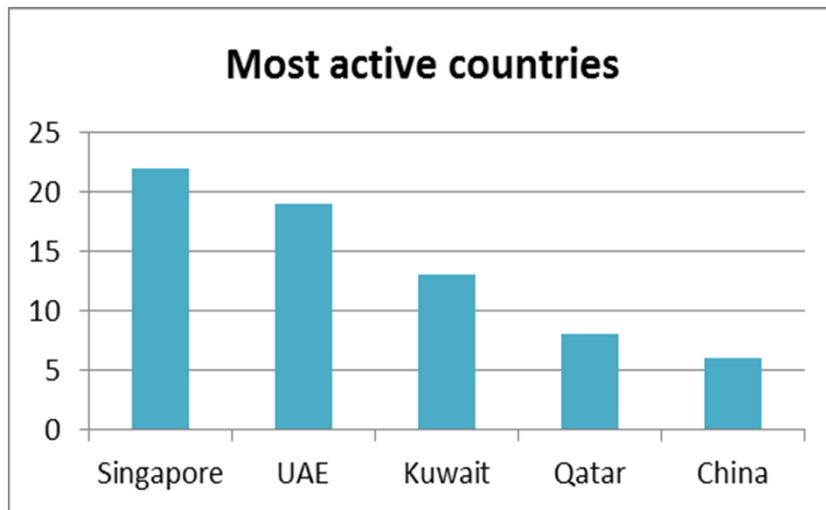
Data – SWF investments (1/2)

- Most of the investments occurred between 2006 and 2008 (acute phase of the financial crisis)
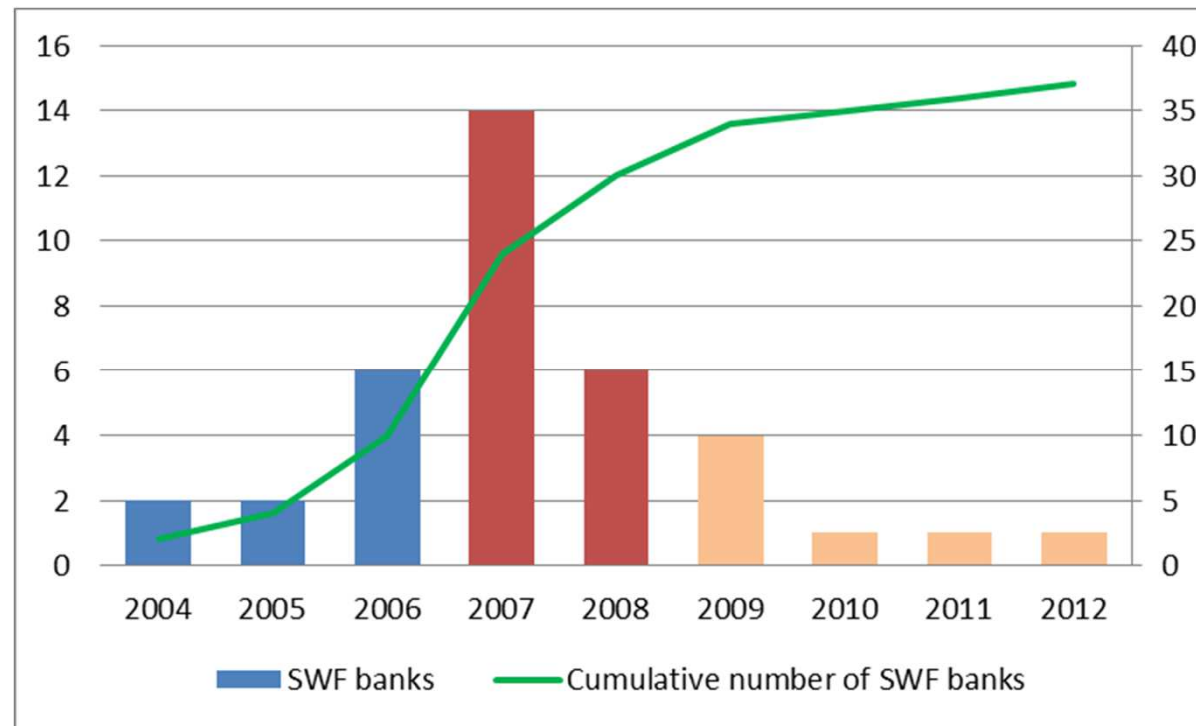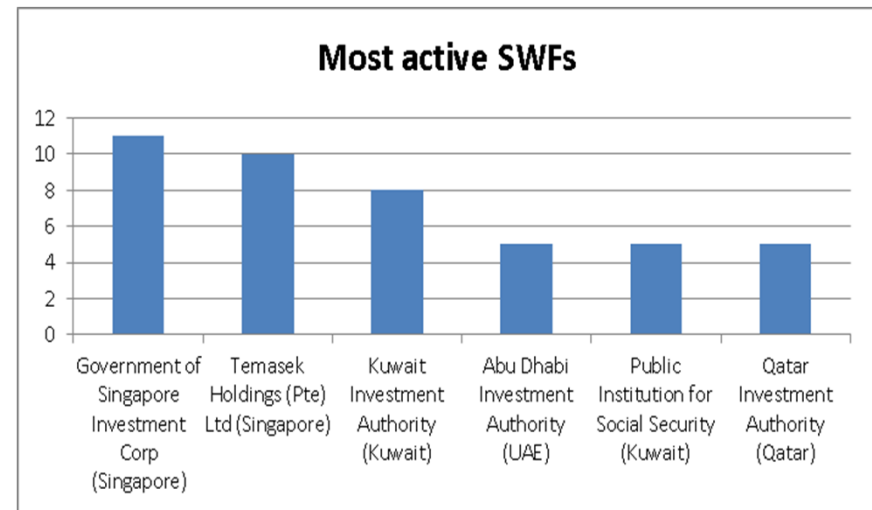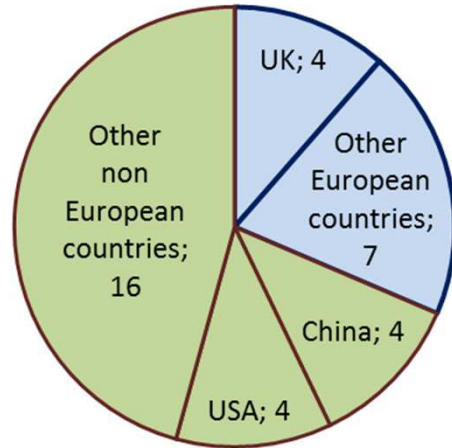
Data – SWF investments (2/2)
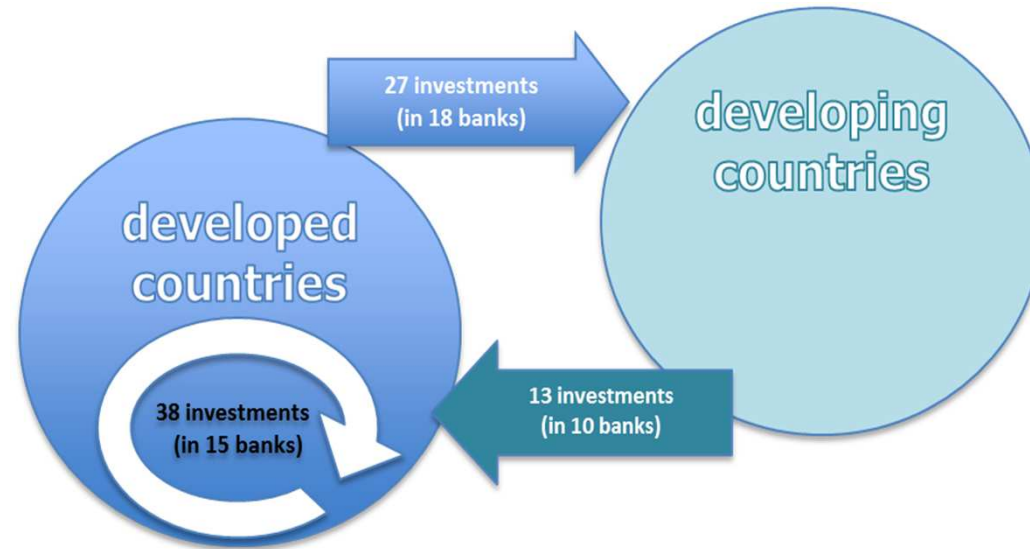
Data – SWF banks (1/2)

Bank	N. of SWFs among shareholders	Bank	N. of SWFs among shareholders
Australia and New Zealand Banking Group	1	Jordan Dubai Islamic Bank	1
Commonwealth Bank of Australia	1	B.L.C. Bank S.A.L	1
National Australia Bank Limited	1	RHB Capital Berhad	1
Arab Banking Corporation BSC	3	NIB Bank Ltd	1
Banco Santander (Brasil) S.A.	2	Nordea Bank	3
Corporate Commercial Bank AD	1	Skandinaviska Enskilda Banken	1
Agricultural Bank of China Limited	2	Credit Suisse Group AG	1
Bank of China Limited	2	UBS AG	1
China Construction Bank Corporation	2	Société Tunisienne de Banque	1
Industrial & Commercial Bank of China (The) - ICBC	3	Turkiye Halk Bankasi A.S	1
Bank of Cyprus PLC Marfin	1	**Barclays Plc**	8
Commercial International Bank (Egypt) S.A.E.	1	**HSBC Holdings Plc**	4
Deutsche Bank AG	1	**Lloyds Banking Group Plc**	4
HDFC Bank Ltd	1	**Standard Chartered Plc**	6
ICICI Bank Limited	4	Bank of America Corporation	2
Bank Danamon Indonesia Tbk	1	Citigroup Inc	3
Bank Internasional Indonesia Tbk	1	**Merrill Lynch & Co., Inc.**	6
PT Bank Mayapada Internasional TBK	1	Morgan Stanley	1
UniCredit SpA	4		

Data – SWF banks (2/2)

Banks' country
- UK; 4
- Other European countries; 7
- China; 4
- USA; 4
- Other non European countries; 16

Customers deposits
- median
- mean

Total Assets
- median
- mean

Main specialization
- universal 24%
- investment 14%
- commercial 62%
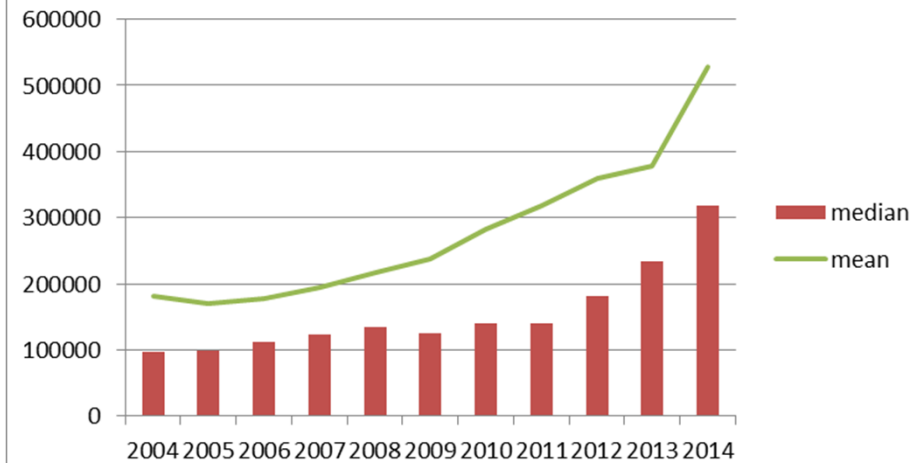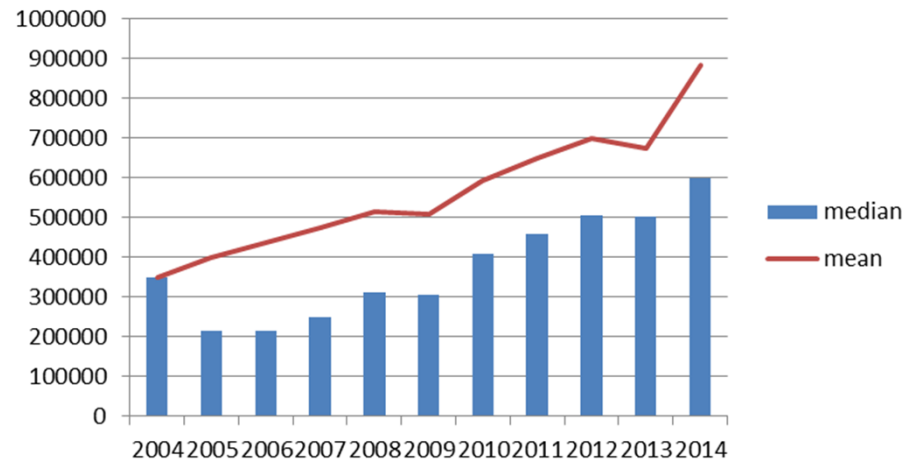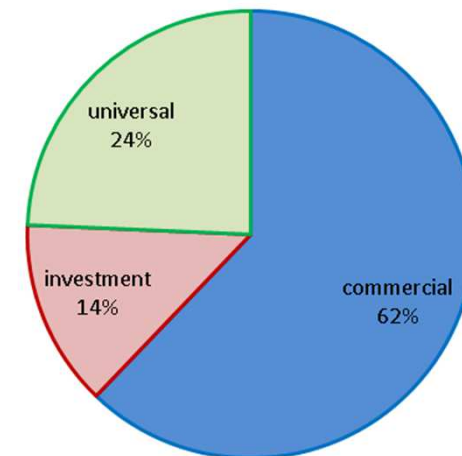
Performance

- Looking at the characteristics of SWF banks, we build a sample of matched banks in terms of country of incorporation, size, activity

- We use:
  - ROA
 - Cost/Income

Variable (%)		SWF banks	Non-SWF banks	p-value
ROA	Mean	0.88	1.12	0.052
	Median	0.82	0.96	0.027
Cost/income	Mean	62.91	56.39	0.000
	Median	55.65	53.98	0.008

Evidence on performance

ROA	SWF banks	Non-SWF banks	p-value
pre-crisis	0.865	0.965	0.400
acute crisis	0.82	1.02	**0.047**
crisis	0.74	0.92	0.242

ROA
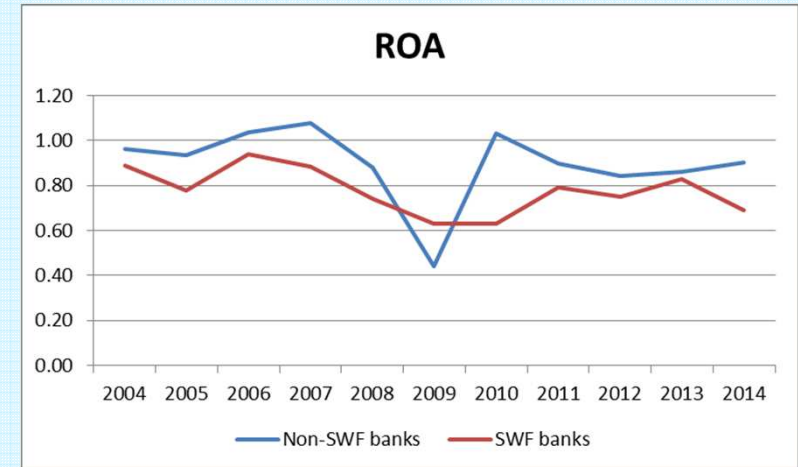
Cost Income	SWF banks	Non-SWF banks	p-value
pre-crisis	56.34	57.06	0.590
acute crisis	54.87	54.31	0.589
crisis	55.82	51.85	**0.014**

Cost/Income
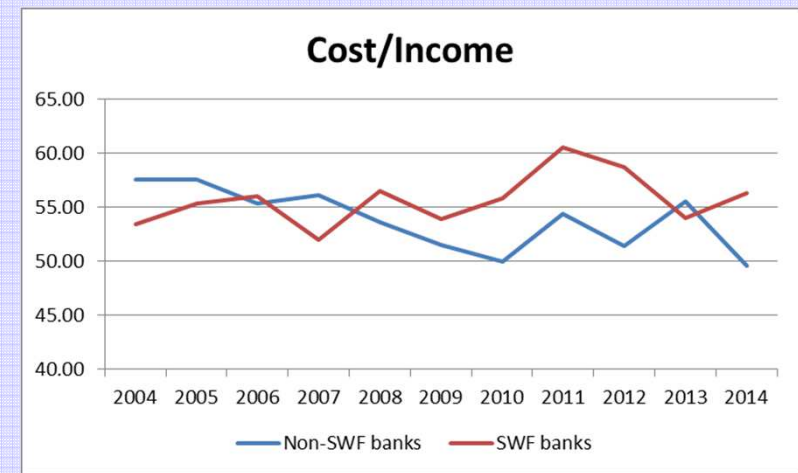
Determinants of performance

$$\text{Performance}_{i,t} = \alpha + \beta_1 \text{SWF}_i + \beta_2 \text{Size}_{i,t} + \beta_3 \text{NPLs}_{i,t} + \beta_4 \text{Cap}_{i,t} + \beta_5 \text{GDP}_{i,t} + \varepsilon_{i,t}$$

- Performance might be different according to:
  - SWF presence (-)
  - Bank characteristics:
    - size (+/-)
    - credit risk (-)
    - capitalization (-/+)
  - Macroeconomic conditions:
    - gdp growth (+)
    - also year dummies, crisis period dummies

Roa

roa	mod1	mod2	mod3
SWF	-0.037	-0.04	-0.041
size	-0.055	25045	-0.053
npls	-0.118***	-0.110***	-0.118***
capital ratio	0.011*	0.010*	0.011*
gdpgrow	0.054***	0.066***	0.056***
acute			-0.233**
crisis			-0.064
constant	1.740***	1.653***	1.782***
year dummies	N	Y	N
N	476	476	476
r2	0.2099	0.2317	0.2154

legend: * p<0.10; ** p<0.05; *** p<0.01

Cost/Income

cost/income		mod1	mod2	mod3
SWF		6.476*	6.437	6.458*
size		0.555	0.902	1.006
npls		1.035***	1.296***	1.279***
capital ratio		0.284	0.384*	0.355*
gdpgrow		-0.863**	-0.781	-1.113***
acute				7.503**
crisis				-3.929
constant		42.691***	36.176***	36.226***
year dummies		N	Y	N
N		478	478	478
r2		0.0879	0.1251	0.1165

legend: * p<0.10; ** p<0.05; *** p<0.01

Robustness checks

- Other definitions of performance
  - Roe
  - Total operating income/ta = (Net interest margin + non-interest margin)/total assets
  - Tobin's Q

- Other control variables
  - Tier 1 capital ratio
  - Deposits to funding ratio

- Eliminated 2004 and 2014 (low number of observations)

- Results remain similar

Conclusions

- SWFs targeted low performing banks: support during the financial crisis

- Mainly acted as passive investors

- Limits
  - Small sample (due to data availability and limited number of deals)
  - Limited availability of accounting data for several banks
  - Limited information on deals: e.g. unclear entrance date of the SWFs. How to measure performance before and after SWFs investment? If more than one SWF?

Thank you!