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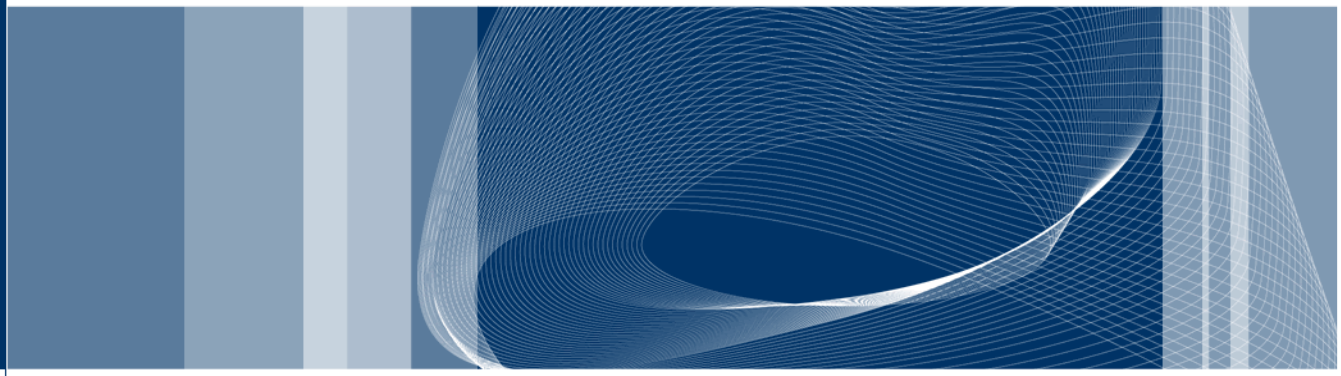

# The Certification Effect of Sovereign Wealth Funds on the Credit Risk of their Portfolio Companies

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Bocconi, 17 November 2011

# Goals of this presentation



- Show empirical evidence on the impact of Sovereign Wealth Funds (SWFs) investments on the credit risk (CDS spread) of invested firms
- Provide a theoretical justification for the observed phenomenon: SWFs, given their idiosyncratic characteristics, are (or perceived as) likely to provide an implicit insurance against short-term liquidity shocks to their portfolio companies
- Discuss some sources of SWFs heterogeneity less emphasized in other studies and discussions on the issue
- Describe how these SWFs characteristics moderate their impact on firms credit risk

# Summary of empirical results



- A clear *reduction* of CDS spreads (adjusted using matched peers) around investment announcements, even when there is no capital injection
- A *stronger* impact on 1 year than on 5 years maturity CDS premia
- A *stronger* impact on smaller firms exhibiting an higher level of financial distress before the investment, especially when it is mainly concentrated in the short-term
- A *stronger* impact of SWFs characterized by an higher level of financial capacity (bigger, no leverage, protected from withdrawals)
- A *stronger* impact of SWFs with an explicit mandate to make direct, strategic investments

All these results are strongly suggestive of a *certification effect* provided by SWFs

# What is a Sovereign Wealth Fund?



- According to IWG(2008), SWFs are funds:
  1. Created by general governments
  2. Pursuing (also) financial objectives
  3. Investing (also) in foreign financial assets

- They are something different from:
  - Public Pension Funds (ex CALpers)
  - Government-linked Holdings (ex IRI)
  - Simple Central Banks Vehicles

# What is a Sovereign Wealth Fund?



They have thus some characteristics in common with other private and public institutional investors and others that are highly idiosyncratic

- Stand-alone unregulated pools of capital allowed to pursue significant stakes in foreign firms
- Pursuing long-term objectives
- Big
- Can generally rely on new capital inflows on a regular basis
- Potentially pursuing other-than-financial goals
- No or really low short-term liabilities
- Generally shielded from “bank-running” situations

→ The ideal countercyclical, long-term investor

# The impact of SWFs on invested firms



Literature so far has focused on a shareholder perspective:

- Short-term abnormal positive CARs
- Mixed evidence on medium-term financial and operative performances

Two main explanations proposed so far:

1) SWFs as large investors
2) SWFs as government-related entities

# 1. SWFs as large investors



- SWFs, as large institutional investors with a long-term perspective, could effectively monitor management behavior. On the other hand, they could destroy value by extraction of private benefits (Dewenter, Han and Malatesta, JFE 2010)

VS

- SWFs, representing the interests of foreign governments, may be restrained from challenging existing management (Bortolotti, Fotak and Megginson, 2010)

Empirical Evidence

- Non monotonic effect of shares acquired on CARs (Dewenter et al., 2010) [+]
- *Scarce management turnover and SWFs representation in BoD* (Bortolotti et al., 2010) [-]
- Statistically insignificant or even negative relationship between BoD representation and medium-term performances [-]

# 1. SWFs as large investors



- Overall, SWFs alleged monitoring activity is hardly a sound explanation for the positive market reaction to their investments

- Empirical evidence suggests SWFs are not active shareholders (at least by official, observable governance means)

- This could be likely to change….

*"We frequently meet with foreign regulators whose attitude is that we should give them money and leave everything to them. Nothing comes for free in this world […]. The attitude some people have is that we can go and invest, leave our money there and just depart. We won't get seats on the board, we won't have any say in how a place is run. That's not how things are done."*

Gao Xiqing, CIC General Manager

15 November 2011

# 2. SWFs as government-related entities



- SWFs, as government-related entities, could negatively affect invested firms for the same reasons government-owned firms tend to underperform private firms (Megginson and Netter, 2001)

VS

- SWFs, as government-related entities, could be actively networking with invested firms and provide them with a preferred access to their domestic capital.

<u>Empirical Evidence</u>

- Higher level of internationalization and number of Government contracts after SWFs investment (Sojli and Tham, 2010) [+]
- Active networking and political decision favoring invested firms (Dewenter, Han and Malatesta, JFE 2010) [+]

# 2. SWFs as government-related entities

Overall, a more sound explanation for a potentially positive impact of SWFs

*"This transaction is an endorsement of Teck's future and provides an immediate and very positive impact on Teck's balance sheet. [. . . ] It puts Teck back on the growth track and allows us to deepen our relationship with the largest customer of our core products. [. . . ] Clearly, CIC knows so much about the Chinese economy and all the people who run those [state-owned] companies. And not every mining company has a very friendly relationship with China right now"*

Don Lindsay, Teck CEO

6 July 2009

What about credit risk?

# SWFs certifying financial viability: two factual examples



The example of Unicredit:

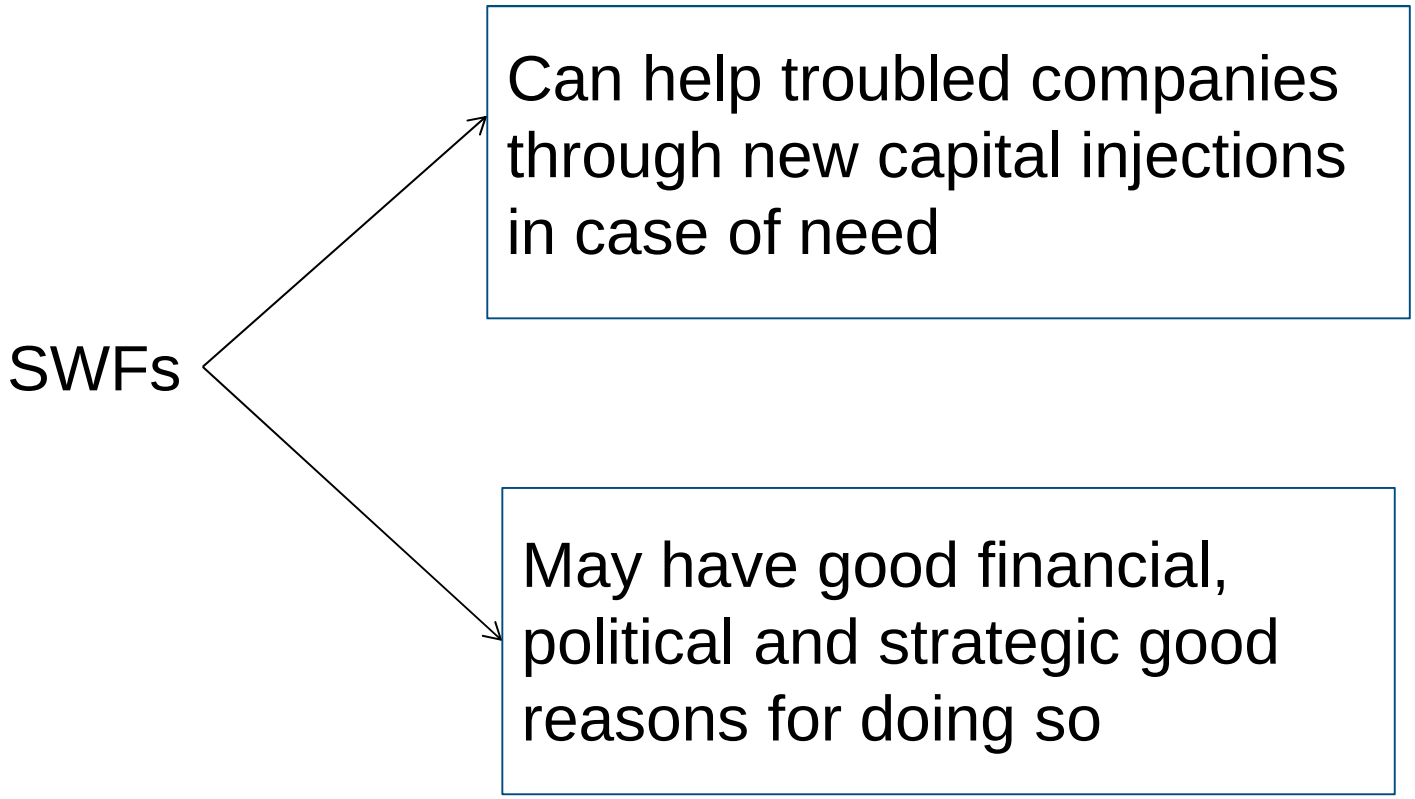
- February 2009: issue of € 3 billion convertibles bonds
- *Fondazioni* are expected to underwrite € 1.3 billion ( € 500 million Cariverona, € 300 million Carimonte).
- Cariverona holds back.
- Libya's Central Bank decides to compensate by buying as much as 25% of the issue.

The example of Credit Suisse:

- Qatar Investment Authority became in February 2008 a CS shareholder via an open market transaction.
- In October 2008, QIA subscribed the bulk of a $ 8.75 billion new issue.

# The certification hypothesis






They could, they should → They would

# The certification hypothesis: SWFs can support financially distressed firms



- **Institutional investors** generally increase invested firms credit risk (e.g. Cremers, Nair and We, RFS 2007; Klein and Zur, RFS 2011).

- On the contrary, the certification of affiliated firms liabilities is an accepted phenomenon in:
  - **government ownership** literature (e.g. Borisova and Megginson, RFS 2011)
  - **business groups** literature (e.g. Gopalan, Nanda and Seru, JFE 2007)

# The certification hypothesis: SWFs can support financially distressed firms

Samson (2006) S&P corporate rating criteria for subsidiary firms.

The parent company can be considered likely to support financially its affiliates if:

A. It has a proved **track-record** with this respect
B. It has the **financial capacity** to do so

SWFs rank generally high in these dimensions (even though with a certain degree of heterogeneity).

Moreover, the likelihood of financial support is higher the more the source of risk is idiosyncratic rather than systemic

# The certification hypothesis: SWFs can support financially distressed firms



Sovereign Wealth Funds Financial Capacity:

1. *Dimension*

   Bigger funds can afford more easily to increase their stake in a financially troubled firm, as the investment as a minor impact on its portfolio balancing and diversification.

2. *Protection from Withdrawals*

   Funds with an explicit protection from withdrawals can afford to keep their long-term view

3. *No leverage*

   Resort to debt create a contingent short-term liability (debt service) and can indicate the Government will not inject new capital to manage in the fund

# Protection from withdrawals



**Shield**: Some SWFs enjoys explicit protection from withdrawals by the Government, while other doesn't.

| Funds shield | Shield typology |
|---|---|
| Future Fund | No withdrawals up to 2020 |
| GIC | No more than 50% of the long-term expected real return |
| GPF | Oil revenues spending < 4% SWFs size |
| IPIC | "In terms of credit risk, impossible to differentiate IPIC from the Government" |
| Mubadala | New capital injections every year so far |
| QIA | "Benefits from being a central part of […] State economic vision"; " Invest in a manner that trascends economic cyclicality" |
| Temasek | Less than 50% of net income, protection of past reserves |

# Leverage



**Debt**: some SWFs resort to debt financing (bonds or sukuk).

| SWF | Country | Since | Moody's SWF rating | Moody's Government rating |
|---|---|---|---|---|
| Temasek Holdings | Singapore | 2005 | Aaa | Aaa |
| IPIC | UAE (Abu Dhabi) | 2009 | Aa3 | Aa2 |
| Khazanah Nasional | Malaysia | 1999 | A3 | A3 |
| Mubadala | UAE (Abu Dhabi) | 2009 | Aa2 | Aa2 |

# Temasek vs Government of Singapore bond yields

# The certification hypothesis: SWFs incentives



**Financial**

- SWFs tend to invest more in big, financially distressed firms because they have a comparative advantage there (Kotter and Lel, 2011).
- Their long-term perspective allows them to bear short-term high risk while seeking liquidity premium ( Ang et al., 2009)
- However, they can hardly improve firms performances by engaging existing management (e.g. Bortolotti et al, 2010)

*"In 2010 the QIA will also focus on business acquisition. It will seek to acquire businesses with good management and good products, but which have cash flow problems.* ***We are not interested in distressed assets*** *or distressed debt. We are* ***interested in distressed sellers****"*

(Dr. Hussain Al-Abdulla, QIA Executive Board Member)

- ✓ Is the certification effect stronger for firms with high short-term credit risk (distressed sellers)?
- ✓ Is the certification effect weaker for firms with high medium-term, structural credit risk (distressed assets)?

# The certification hypothesis: SWFs incentives



**Political**

- SWFs target distressed firms because of the lower political resistance they can face (Bortolotti et al., 2010).
- SWFs could be more keen to help distressed firms due to “political goodwill” seeking
  - ✓ Is the impact of “non-western” SWFs stronger?
  - ✓ Is the impact of small country SWFs stronger?

**Strategic**

- Sovereign Wealth Funds may have a strategic interest in their portfolio companies which can increase the likelihood of financial support (Samson, 2006)
  - ✓ Have SWFs with a mandate to make direct, strategic investments a stronger impact?
  - ✓ Have Central Bank-related SWFs (lower strategic interest and higher degree of risk aversion) a smaller impact?

# Strategic Incentives



**Direct**: Some SWFs have an explicit mandate to perform direct, strategic investments

| SWF | Typology |
|---|---|
| KIC | Small amount invested in passive index replication |
| LIA | Strategic investments account for more than 50% of its portfolio |
| Mubadala | Active partner, focus on social returns for Abu Dhabi |
| QIA | Firms synergies with Qatar is a factor influencing portfolio allocation |
| IPIC | Focus on strategic partnerships |
| Khazanah Ns. | Strategic investor in new industries and markets |
| Temasek | Active shareholder |
| CIC | Direct investments are the largest positions |
| Future Fund | 20% maximum in each company |

# The certification hypothesis



Overall, we expect SWFs investment to bring a ***significant abnormal reduction in the credit risk*** of the firm as perceived by the market

We study *CDS spread*: a measure of credit risk which is

- more direct (Hull, Predescu and White, JBF 2004)
- timely (Blanc, Brennan and Marsh, JF 2005)
- less affected by liquidity risk (Longstaff, Mithal and Neis, JF 2005)

than bonds spreads.

# Data



Data sources:

- List of SWFs investments from the SWF Institute transaction database
- 1y and 5y CDS data from CMA via Datastream
- SWFs and deals characteristics from the SWF Institute
- Firms characteristics from Worldscope via Datastream
- 1,112 investments in listed firms → 371 with complete information set

SWF characteristics:

- Logarithm of **Size** [+]
- Mandate of making **Direct**, strategic investments [+]
- Resorting to **Debt** capital [-]
- Explicit **Shield** against withdrawals by the Government [+]

Firm characteristics:

- Logarithm of **Size** [-]
- **Leverage** and **CDS** premium [+]
- Credit risk term structure curve **Slope** [-]

# Data
# SWFs characteristics

| SWF | Country | Assets | Origin | $LM$ | Direct | Shield | Debt | Events |
|---|---|---|---|---|---|---|---|---|
| KIA | Kuwait | 202.8 | Oil | 6 | 0 | 0 | 0 | 70 |
| GIC | Singapore | 247.5 | Non-oil | 6 | 0 | 1 | 0 | 65 |
| GPF | Norway | 512 | Oil | 10 | 0 | 1 | 0 | 63 |
| KIC | South Korea | 37 | Non-oil | 9 | 1 | 0 | 0 | 58 |
| CIC | China | 332.4 | Non-oil | 7 | 1 | 0 | 0 | 38 |
| SAFE | China | 347.1 | Non-oil | 2 | 0 | 0 | 0 | 29 |
| ADIA | UAE | 627 | Oil | 3 | 0 | 0 | 0 | 25 |
| Temasek | Singapore | 133 | Non-oil | 10 | 1 | 1 | 1 | 6 |
| QIA | Qatar | 85 | Oil | 5 | 1 | 1 | 0 | 4 |
| BIA | Brunei | 30 | Oil | 1 | 0 | 0 | 0 | 3 |
| IPIC | UAE | 14 | Oil | 1 | 1 | 1 | 1 | 2 |
| Khazanah Na. | Malaysia | 25 | Non-oil | 4 | 1 | 0 | 1 | 2 |
| Mubadala | UAE | 13.3 | Oil | 10 | 1 | 1 | 1 | 2 |
| SAMA | Saudi Arabia | 439.1 | Oil | 2 | 0 | 0 | 0 | 2 |
| Future Fund | Australia | 67.2 | Non-oil | 9 | 1 | 1 | 0 | 1 |
| LIA | Libya | 70 | Oil | 2 | 1 | 0 | 0 | 1 |
| Total | | | | | | | | 371 |

# Data



Measuring abnormal CDS spread variation:

- Define an estimation window ( [-24, -15], *PRE*) and different non overlapping event windows (*POST*) for each observation *j*
- Treat veracity scores higher than 3 as missing (Hull et al., 2004)
- Exclude observations where more than half of the CDS spreads in each window are missing.
- Match each firm-event with 10 peers exhibiting the same average level of CDS premium in [-24, -15] and the same CDS spread availability.
- Average the 10 peers CDS spread in each window for each event to build index I
- Average the CDS spread for each j in each time window (CDS)

$$ADS_j = (CDS_j^{PRE} - CDS_j^{POST}) - (I_j^{PRE} - I_j^{POST})$$

- The correlation between 1y $\Delta CDS$ and $\Delta I$ is 0.79: the index is effective in capturing spreads variation due to common underlying factors.

# Empirical Results
# 1. Event Study



*Panel A: Full Sample*

| | | [−5, +4] | [+5, +14] | [+15, +24] | [+25, +34] |
|---|---|---|---|---|---|
| *1 year maturity* | Mean | 7.019*** | 8.265*** | 6.933*** | 6.464** |
| | St. dev. | 1.740 | 2.207 | 2.552 | 3.052 |
| | Median | 1.791*** | 2.154*** | 1.946*** | 1.574*** |
| | Percent positive | 63.61 | 61.62 | 60.99 | 59.50 |
| *5 years maturity* | Mean | 2.833 | 5.512** | 3.359 | 3.013 |
| . | St. dev. | 2.130 | 2.134 | 3.046 | 2.906 |
| | Median | 2.434*** | 2.137*** | 2.404*** | 2.774*** |
| | Percent positive | 60.65 | 59.19 | 56.32 | 58.13 |
| | N | 371 | 370 | 364 | 363 |

1y ADS mean significant and stable across event windows

5y ADS mean is weakly significant

Highly significant median values

# Empirical Results
# 1. Event Study



*Panel B: Excluding capital injections*

| | | [−5, +4] | [+5, +14] | [+15, +24] | [+25, +34] |
|---|---|---|---|---|---|
| *1 year maturity* | Mean | 6.644*** | 6.271*** | 5.588** | 5.803* |
| | St. dev. | 1.774 | 2.175 | 2.493 | 2.971 |
| | Median | 1.559*** | 1.924*** | 1.656*** | 1.489*** |
| | Percent positive | 63.40 | 60.40 | 60.00 | 58.70 |
| *5 years maturity* | Mean | 2.463 | 4.260** | 2.212 | 1.858 |
| | St. dev. | 2.067 | 2.100 | 2.993 | 2.860 |
| | Median | 2.034*** | 1.677*** | 1.933** | 2.323* |
| | Percent positive | 59.65 | 57.80 | 54.71 | 56.43 |
| | N | 347 | 346 | 340 | 339 |

Is not a mere «capital injection effect» unrelated to the source of capital

# Empirical Results
## 1. Event Study



| | | Quartile $CDS^{PRE}$ | | | |
|---|---|---|---|---|---|
| | | 1 (low) | 2 | 3 | 4 (high) |
| *1 year maturity* | Mean | 0.227 | 2.557*** | 7.996*** | 17.407** |
| | St. dev. | 0.381 | 0.892 | 1.700 | 6.620 |
| | Median | 0.113 | 1.947*** | 4.692*** | 13.603** |
| | Percent positive | 54.84 | 67.74 | 68.82 | 63.04 |
| *5 years maturity* | Mean | 0.226 | 3.851*** | 6.342*** | 0.893 |
| | St. dev. | 0.508 | 0.959 | 1.735 | 8.358 |
| | Median | 0.243 | 3.768*** | 5.521*** | 7.236 |
| | Percent positive | 53.76 | 69.89 | 64.52 | 54.35 |
| | N | 93 | 93 | 93 | 92 |

Distressed Sellers?

Distressed Assets?

The effect is stronger the more the firm is financially distressed, but only for 1y CDS

# Empirical Results
# 2. Analysis of Determinants (1/2)

Bigger SWFs [+] →

Bigger Firms [-] →

Higher Credit Risk [+] →

Central Bank related SWFs [-] →

Average positive impact →

| Model | (1) | (2) | (3) | (4) | (5) | (6) |
|---|---|---|---|---|---|---|
| $Size_{SWF}$ | 5.305*** | 5.082*** | 5.104*** | 5.211*** | 4.739** | 5.327*** |
| | (1.973) | (1.878) | (1.905) | (1.903) | (1.898) | (2.039) |
| $Size_{Firm}$ | -2.382** | -1.87* | -1.835* | -2.277* | -1.785* | -1.812* |
| | (1.039) | (0.961) | (0.962) | (1.155) | (0.951) | (0.936) |
| $LM$ | -0.482 | -0.028 | -0.055 | -0.007 | -0.219 | -1.073 |
| | (0.489) | (0.517) | (0.588) | (0.52) | (0.519) | (0.678) |
| $Oil$ | -8.252** | -7.196* | -7.103* | -7.101* | -6.418* | -8.715** |
| | (4.015) | (3.732) | (3.972) | (3.716) | (3.634) | (4.328) |
| $Leverage$ | 29.107** | 9.991 | 9.881 | 10.548 | 8.266 | 9.96 |
| | (14.691) | (12.326) | (12.315) | (12.228) | (12.396) | (12.587) |
| $Q$ | -0.289 | -1.617 | -1.625 | -1.582 | -1.628 | -1.287 |
| | (1.579) | (1.6) | (1.614) | (1.592) | (1.619) | (1.544) |
| $Injection$ | 7.392 | 4.803 | 4.717 | 4.778 | 3.108 | |
| | (4.613) | (4.917) | (5.152) | (4.964) | (5.223) | |
| $CDS_{1y}^{PRE}$ | | 0.055** | 0.055** | 0.054** | 0.065** | 0.064** |
| | | (0.024) | (0.025) | (0.025) | (0.026) | (0.025) |
| $First$ | | | 0.494 | | | |
| | | | (4.522) | | | |
| $Financials$ | | | | 2.610 | | |
| | | | | (4.65) | | |
| $Vix$ | | | | | -0.405 | -0.430 |
| | | | | | (0.305) | (0.298) |
| $CBE$ | | | | | | -14.673** |
| | | | | | | (5.906) |
| $Cons.$ | 10.36*** | 10.51*** | 10.24*** | 9.85*** | 10.37*** | 12.84*** |
| | (2.88) | (2.691) | (3.796) | (2.931) | (2.668) | (3.19) |
| N obs. | 371 | 371 | 371 | 371 | 370 | 370 |
| $R^2$ | 0.06 | 0.146 | 0.146 | 0.147 | 0.158 | 0.167 |
| $Adj.\ R^2$ | 0.042 | 0.127 | 0.125 | 0.126 | 0.137 | 0.146 |

# Empirical Results
# 2. Analysis of Determinants (2/2)



Protection from withdrawals [+] →

Mandate to make direct investments [+] →

Levered SWFs [-] →

Western Funds [-] →

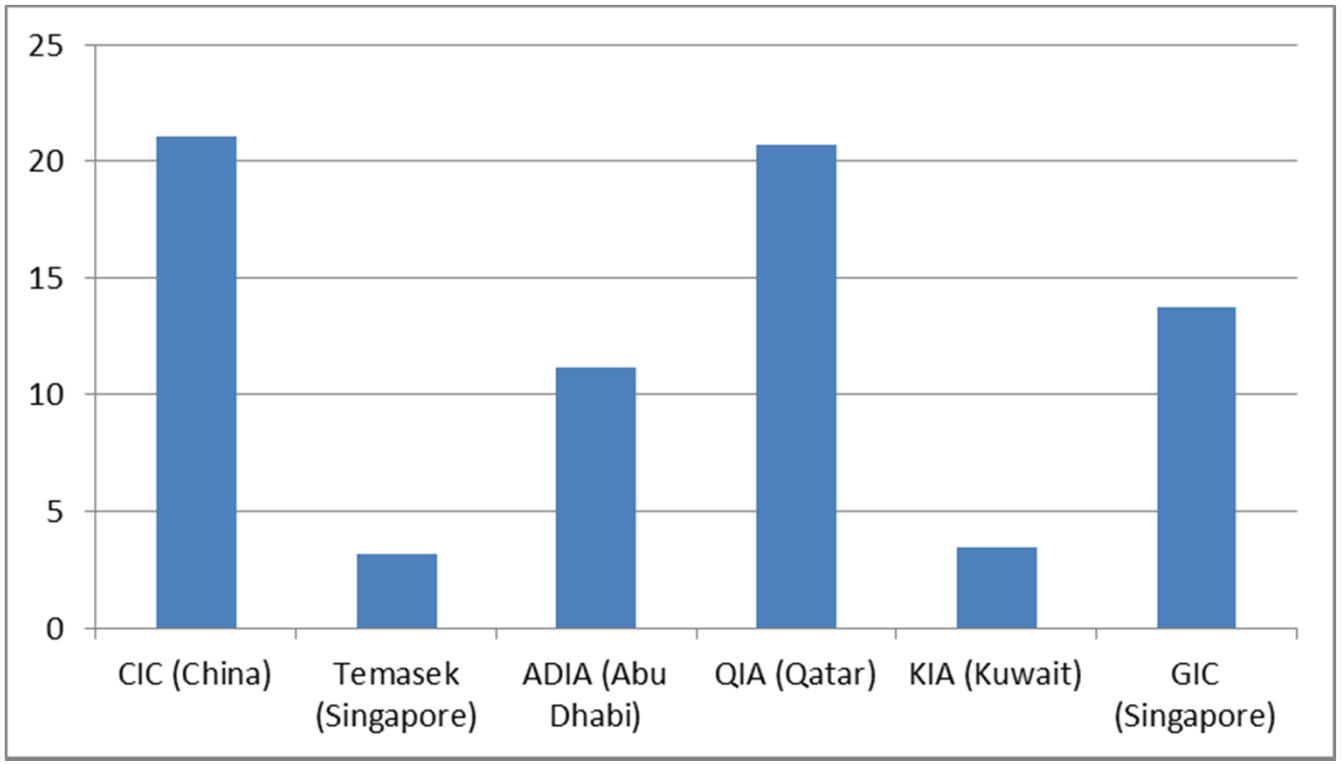
Potentially structural problems [-] →

| | | | |
|---|---|---|---|
| *Shield* | 10.295* | 9.91 | 8.932 |
| | (5.996) | (6.91) | (5.768) |
| *Direct* | 12.424** | 12.954** | 14.247*** |
| | (4.881) | (6.301) | (4.732) |
| *Debt* | -24.762** | -25.373** | -20.564** |
| | (10.788) | (11.15) | (8.906) |
| *Conv* | 7.535* | 7.487 | 11.738* |
| | (4.233) | (4.588) | (6.323) |
| *Western* | -12.413** | -12.505** | -11.401* |
| | (6.203) | (6.331) | (5.91) |
| *Domestic* | 17.190* | 17.409* | 13.119 |
| | (9.952) | (10.197) | (8.044) |
| *GDP* | | -0.000 | |
| | | (0.001) | |
| *Slope* | | | -0.067* |
| | | | (0.036) |
| *Cons.* | 3.431 | 3.231 | 3.656 |
| | (2.451) | (3.165) | (2.486) |
| N obs. | 370 | 333 | 370 |
| $R^2$ | 0.168 | 0.166 | 0.180 |
| *Adj.* $R^2$ | 0.142 | 0.134 | 0.153 |

# Predicted impact for some SWFs



## Impact on 1y CDS spread (bps)




«Average Firm» characteristics :

- 141.55 bps 1y CDS spread → For CIC and QIA implies a 15% abnormal reduction
- 180.74 bps 5y CDS spread
- 0.58 market leverage
- 60.95 USD billions market cap + liabilities BV

# Conclusions



- SWFs bring a significant reduction in invested firms perceived credit risk, even when the deal is secondary and especially for short-term risk (1 year CDS)
- The reduction is:
  - Higher for  smaller firms with higher short-term credit risk (distressed sellers)
  - Higher for firms with relatively low medium-term risk (distressed assets)
  - Stronger for bigger and unlevered SWFs
  - Stronger for SWFs protected from withdrawals
  - Stronger for SWFs with a mandate to make direct, strategic investments

*Overall, results strongly support the Sovereign Wealth Funds Certification Hypothesis*